

Task Analysis

Brief

You are to design, modify and make your own jewellery for your chosen target audience. The jewellery should meet the target audiences criteria, standards and taste of fashion. Additionally, it has to be currently in fashion.



Target Profile

The user for my product would be a woman in an estimate age of 70 named Caroline, she is a classical/vintage type of person who goes for the sophisticated look but wants it too look like an antique. Caroline likes to go for jewellery that is from the Victorian era to the Gatsby era and through both world wars as they have a unique an authentic look to them.

These are sapphire & diamond half hoop earrings from Ernest Jones and cost £199.00 at retail price. The material used for these are a 9ct yellow gold and blue sapphire stones. The reason for the blue sapphire stones on this design is that these earrings are to symbolise the birthstone and in this case it would be September. The use of yellow gold is because it is malleable and ductile so that it can be crafted into any shape easily. I like this product as it gives the design a personal feature as it would be your birthstone.



This is a Jon Richard Crystal embellished silver spider brooch from Debenham's. This costs £15.00 at retail price. The materials used for this brooch are a silver plated metal and glass crystals. There is also a pin and catch at the back of the brooch so that it can be securely fastened. The dimensions of this brooch is 60mm x 60mm. The colour of this product is silver to make it aesthetically pleasing, it also gives the product a sophisticated and expensive look. What I like about this product is the how they use two black glass crystals for the eyes of the spider. I think using black makes it stand out as the two colours oppose to each other making it more eye-catching.



Table lamp / contemporary / in wood

ARBA by M. Thun & A. Rodriguez

INTRO

In this page is a lamp which I have found later on in the process. The reason why I am including this design is because it is a similar structure of what I had in mind.

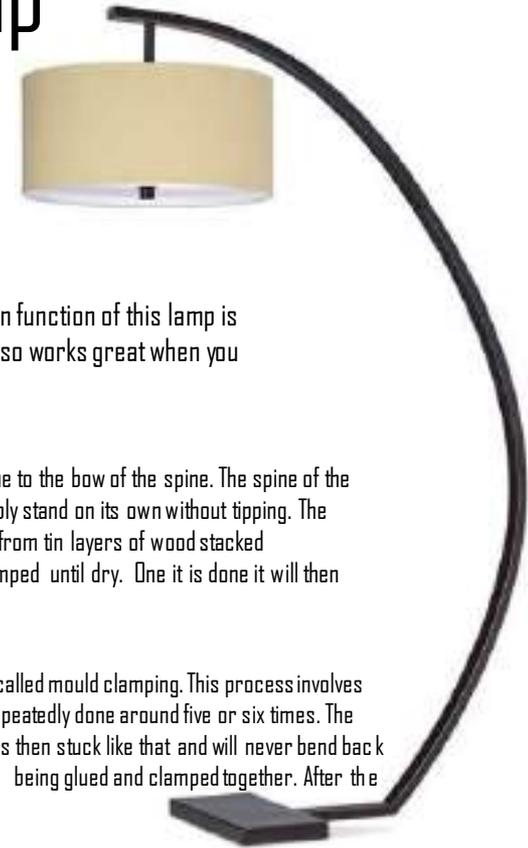


Classic but with an eye for the contemporary, the urbane as well as the natural: this is the essence of ARBA. Ecological materials from the immediate region, while using energy-saving luminaries, modern lighting electronics, long-lasting materials and timeless aesthetics, are basic features to ensure that ARBA is in perfect harmony with nature.

SUMMARY

What I found out about this design is that it is a great representation of what I had in mind for my design. This is because the legs are of a similar nature of what I want. However, I think that I will use hinges for my legs because I think it would be much more strong.

Further research into existing lamp



During the researching of excising an existing lamp I came to the conclusion that my client would like the lamp on the right so I have gained large amounts of information about the product and the way that it has been structured. I have also learned the processes methods to successfully construct the lamp.

Purpose

The purpose of this lamp is to add a touch of style to any room that it is put in as it adds a feel of style and elegance to any room. The main function of this lamp is to provide light to an area where it is placed. This is because the bulb supply's light so that not so visible areas can be made visible. It also works great when you do not have the room fully lit but you want to read a book as it will give you the ability to read without having a room over lit.



Structure

The structure of this lamp is very peculiar in the way that it stands. This is due to the bow of the spine. The spine of the lamp seems to be defying the laws of physics as it looks like it couldn't possibly stand on its own without tipping. The reason why it is stable is because of balance and gravity. This lamp is made from thin layers of wood stacked repeatedly on each other one by one. They are fixed together by glue and clamped until dry. Once it is done it will then be sanded and sprayed.

Process

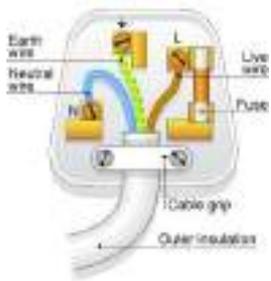
As I briefly talked about in the last paragraph the lamp is made by a process called mould clamping. This process involves the use of thin pieces of wood being laid down on a curved surface. This is repeatedly done around five or six times. The wood is first softened and then clamped into place. Once the wood is dried it is then stuck like that and will never bend back unless re-softened. The next step is assembling it which involves the layers being glued and clamped together. After the structure is sanded and sprayed/painted.

materials & part

This lamp is powered by a suitable for use with low energy bulbs.
Bulbs required 1 x 46W ES eco halogen or 1 x 60W ES GLS (not included).

From what I found from my existing product research I have found some very interesting things about how it is going to influence my design process. To begin with, my research and users research has brought me to the decision that the design is going to have to be bold and eye-catching. This is because with decor in this period of time is about simplicity with strong statement pieces and detail. This means that with my design I am going to have to do something which is odd and peculiar to stand any chance of it meeting the user's needs of something to be modern and contemporary. I also found that designs are quite sleek in form of design. I have decided that my design is going to have to have this kind of look, whether it be long and windswept, or pointy and alien-like. Lampshades are also quite important and need to be a part of the focal point. If I do all of these things in one design it should meet the user's needs completely by ticking all the right boxes.

This lamp is a metal construction with a oiled bronze finish. The lamp also has a beige linen drum shade which looks very stylish. That lamp also has an acrylic diffuser and takes a 100-watt bulb which is attached to an on/off switch. This lamp stands at 73" in height and the shade measures at 21.5" X 10". From the back of the shade to the front of the shade it measures to 49". The base measures a total of 17" X 8" X 18" deep. The black cord is 16" in length.



IDEAS

Brief summary

My over all thoughts and feelings of this lamp is that I am very happy with how it has turned out and I think that it looks great. However, I think that the main issue with this lamp is balance. This is because this structure looks a little un sturdy and a lot of time and hard work will have to go into trailing this lamp. I personally do not think that I have enough time or martial to try different as and stands until I find the correct one.

Material evaluation

The materials which I will be using for this design will be mostly ply wood and other types of wood. This is because the structure will be the easiest to replicate by wetting and jiggung wood. This is because I world be ale to bend wood and have it set into a solid position. The lamp would be made out of a few layers glued on to of each other. Secondly, the lampshade would be made out of a wooden or sting material. This would be wrapped around a inflatable ball and the burst once dry to reveal a circular skeleton for my bulb to fit into. The rest of the material will be the fixings which are mostly plastic/rubber.

Time scale

I believe that I would be able to complete this design in the time scale I have been given. I estimate that this would tale me around6 weeks onto erect once I have completed all of the design work.

Predicted cost of lamp: £48

This lamp is simple yet complicated. The appearance of this lamp is modern yet has a touch of the 60's because of the curves. The lampshade has an appearance of a birds nest. This is because the shade looks quite twiggy. The structure of this lamp would be made from thin stacks of wood glued and clamped to each other. The wood would be clamped in a jig in a curved position. This means when the glue fully dries that it will be fixed in that position. The appearance of the lamp will give of a very woody and natural feel as it is made from an organic material
this lamp will cost around £48 to make an should sell for around £45 to buy. This is a reasonable price because I will have to build a jig which will take a good amount of time to make. It will also take a large amount of time to perfectly align the strips of wood strips and to allow time to dry. Over all the creation process will take a long time. The customer for this product would be a person around the age 30+. This is because this lamp is not as modern as it looks more of a mature design. This product will fit perfectly into a cosy home or into a office space. This light acts as the perfect book reading light as it will fit snugly above a chair.
This lamp will mostly be made from wood. The only parts of this lamp that will not be wood will be the plastic fittings and the shade made from string (or acrylic depending design changes). I would try to get the wood from a forestry commission which is apart of the Stewart ship which harvests forests as they plant new ones in its place. This means that it is better for the environment and ecosystem. To manufacture this lamp I would need to set up a jig and layer strips of wood cut to the correct length and glue them into place before clamping them together to avoid natural moving in the drying process.

The environment in which this lamp would fit into could range from a home to a study to even a office. This is because this lamp it tall and will easily fit into a small area of ground space and it only uses space height wise and not floor wise. This lamp would also fit into those environments because the lamp is quite relaxing to look at because of its curved lines which makes it very therapeutic to the eye.
The height of this lamp would be around 2m. This is a good might for a stand lamp because it means that it should stand clear of anything below it such a tables and chairs.
Safety for this lamp would mean that it would need to undergo professional testing bore being used but individuals. This is to avoid risk of electrocution. Another area that needs to be controlled is the is the steadiness of the lamp. This means that the base of the lamp needs to be very stable so the lamp does not wobble and risk of falling over.
The function of this lamp is to provide light to an area of space to which you choose. It is not only used to provide light but it is also used to provide style to a room. It does this by using a bulb that emits a good amount of light onto an area of space. This allows a room to be more viewable as more light is travelling around the room. Secondly, this lamp is stylish thanks to its clean cur curves.



Here is a wicker ball that is similar to the one that I would make. I would make the lampshade this way because it adds great effect to the room around it because this style gives off reflections and casts shadows around the room which looks amazing.. The process in making this wicker ball would involve me dipping string into pva glue and then wrapping it around a thin football that is easily bursts once the string has dried. One the string has dried it you can then remove the ball from inside by bursting it the puling it out the hole you leave for the bulb to go in.

further research

for this design I wanted to take it to the next level by looking into the way that a palm tree stands.. the reason for this was because I thought that it would be a relaxing element to the common room. this is because a palm tree is associated with relaxing white sand beach's. I done some further research into for the reason that I thought that for the common room would be the perfect place for it as it is this place where students are able to unwind and chill.

Another set of further research that I took was into the various types of lamp shades as I wanted to see which kind works best with the palm tree structure. I found a number of different types of shades but the ones which I like the best was the one which resembles a birds nest / coconut. this is very fitting with the palm tree design a nests are normally in trees and you find coconuts at the top of palm trees.

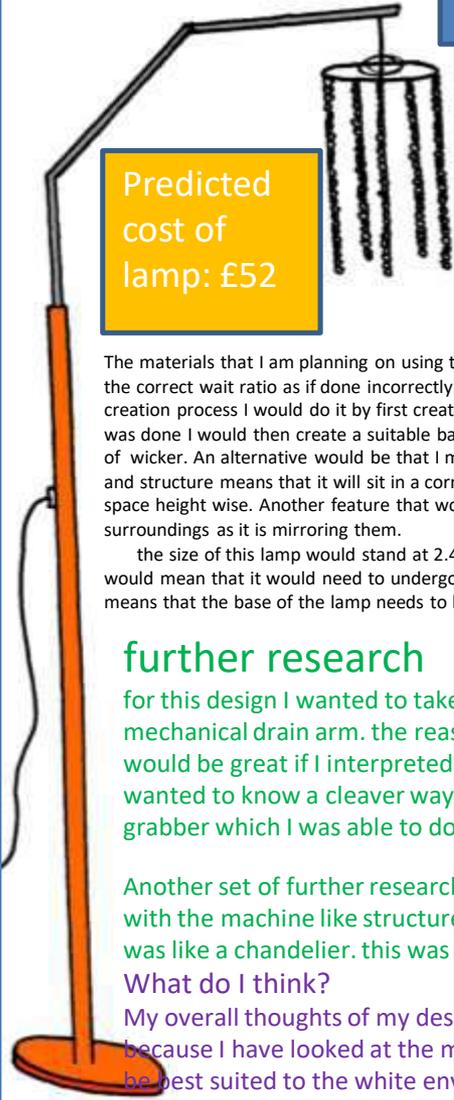
What do I think?

my initial thoughts on this design which I have made is that it is defiantly one of my best which I have done. I love the way that the three legs look against the curved lamp shade. this is because I believe that they complement each other very well. another thing which I love about this design is the way that the wire effortlessly hangs through the middle of the structure.

2 meters

.7 meters

IDEAS



Predicted cost of lamp: £52

Brief summary
Overall I am very happy with this lamp and I love the elements and characteristics and the way that they work together. I like the bronze effect of material that is used and also the way that it complements the rest of the frame.

Material evaluation
The materials which I have decided to use are copper tubing, stainless steel tubing and beaded chains. These are all quite reasonable materials and I think that they are all workable with the tools I have available to me. The copper tubing will give me the colour and effect that I want, however, I think that the cost of that tube might run me a little over budget. Secondly, the stainless steel upper tubing is quite realistic and it will give me the effect that I want and also I am able to work with this material with the tools that I have available.

Time scale
I believe that I would be able to complete this design in the time scale I have been given. I estimate that this would take me around 6 weeks to erect once I have completed all of the design work.

This design is similar to the first one, however, it is more in one piece. This design is quite tall and robotic in structure. The inspiration for this light came from a robotic arm that you find on car assembly lines. I liked this idea because it is quite unusual and unique. Firstly, it appears very tall and strong, the arc at the top is bent in 2 places to achieve an arch that would be found in a factory. One of my favourite parts about its appearance is the circular base that keeps the lamp upright and stable. This is because it complements the rest of the lamp very well. This takes on the role of supporting the whole of the lamp as it supplies improved stability to the rest of the structure. The metal tubing would be shiny silver stainless steel and the beading on the lamp shade would be cut out on the laser cutter that would also be shiny silver. The total cost for this piece would cost around £52 to make and would sell at around 40-52 at a retail shop. To make the product cheaper to make I would consider making it out of a cheaper metal such as copper. The audience that this would be dedicated to would be people who enjoy modern furniture and who want to add a touch of style to their living/working space. This product would also fit perfectly into an office space as it doesn't take up much space which is important because most office spaces are limited to the amount of room they have as they aren't often that spacious. The customer would need this product because it will supply a steady supply of light to the room or area that they choose to put it in. This lamp design would make an amazing present to a person who has just moved into a new house because it will be a perfect starting point to building up the interior in a new home.

The materials that I am planning on using to build this lamp would be made from stainless steel, acrylic plastic, rubber fitting and a light fixture. The design is pretty straightforward although it may be tricky to get the correct weight ratio as if done incorrectly the object could become unstable and could lead to a hazard because it means that the lamp could become unsteady and wobble leading it to fall over. To begin the creation process I would do it by first creating a jig which will provide a mould for me to keep everything together. Next I would measure out the stainless steel poles and cut them according to length. Once that was done I would then create a suitable base for the lamp by vacuum moulding acrylic to a shaped heavy block of wood as that will give it weight. Once that is completed I would then create the lamp shade out of wicker. An alternative would be that I make it out of acrylic plastic that has been cut out on the laser cutter. This lamp would fit perfectly into any modern home or office. This is because the sleek cut lines and structure means that it will sit in a corner of a room or over a chair or table. This is because it is tall and slim which means that it will easily fit into a small space because it is quite skinny and only takes up space height wise. Another feature that works well with this lamp is the stainless steel pole which is highly reflective when polished. This means that because metal is reflective that it will pick up any colours in its surroundings as it is mirroring them.

The function of this lamp is to provide light to an area of space to which you choose. It is not only used to provide light but it is also used to provide style to a room. The size of this lamp would stand at 2.45m. This is a good height for a stand lamp because it means that it should stand clear of anything below it such as tables and chairs. Safety for this lamp would mean that it would need to undergo professional testing before being used by individuals. This is to avoid the risk of electrocution. Another area that needs to be controlled is the stability of the lamp. This means that the base of the lamp needs to be very stable so the lamp does not wobble and fall over. The lamp will need to stand without tilting or wobbling.

further research

For this design I wanted to take the design of the lamp further so I decided that I would further research into the structure of a mechanical crane arm. The reason I chose to look into a crane is because I find them very interesting to look at so I thought that it would be great if I interpreted it into my design. I did some further research into this product for the simple reason because I wanted to know a clever way of attaching the top arm to the rest of the body. I also wanted to make the lamp shade look like a grabber which I was able to do by including chains and beads.

Another set of further research that I took was into the different types of lamp shades as I wanted to see which kind works best with the machine-like structure. I found a number of different types of shades but the ones which I like the best was the one which was like a chandelier. This was because it looked like a claw.

What do I think?

My overall thoughts of my design for this lamp is that it looks great, although it may not be as suitable as I had first thought. This is because I have looked at the materials used such as the copper/iron piping and have realized that this shade of colour would not be best suited to the white environment of the common room in which it is being made for. Another issue I have found with this design is that it is going to cost quite a lot of money for the materials as they are not cheap for what I want which may be an issue if it starts to go above budget. However, this does not mean that I don't like this design. I personally really like this design as I think that it is very interesting to look at and also in the right environment it would make an amazing extra.



2.45 meters

1.5 meters

Predicted cost of lamp: £55

Brief summary

My final thoughts about this design is that I think it looks great and the legs really do set the whole thing off. This is because the pointy legs contracted by the large round lamp shade balance each other out and give a great look about it off. I love the way that the colour of the wooden legs are going to look and be like if this design is taken forwards.

Material evaluation

The materials for this lamp have been well thought out. This is because it is important that the different materials work together. For the lampshade I decided that I would have it made by having a round wooden frame covered by a layer of canvas wrapped around it. This material has been used in my design as when the map id switched on you will be able to see a nice texture on the canvas from where the light is getting through the material. Secondly, the legs will be made from wood as it will look great once it has been stained and varnished. The wood would add lots of texture to the design and the light when it hits the

Time scale

I believe that I would be able to complete this design in the time scale I have been given. I estimate that this would take me around 6 weeks onto erect once I have completed all of the design work.



The design of this lamp is very stylish and modern. This design is quite technical in the way that it looks which makes it very interesting to look at. The inspiration for this lamp came from a tripod. I liked this idea because it is quite unusual and unique. Firstly, the lamp is quite small and well suited to be situated on a table. One of my favourite parts about its appearance is the pointy legs because it gives a very stylish look to it. This is because it complements the rest of the lamp very well because of the roundness of the lamp in contrast to the pointy legs. This takes on the roll of the supporting the whole of the lamp as it supplies improved stability to the rest of the structure. The wooden legs would be made from oak because it is very strong and has a very attractive look to it because of its mature grain. The lampshade will be made from a canvas like material which has been wrapped around a frame made out of metal. Any other materials will consist of the plastic and rubber fixtures that makes up the light fixing. The total cost for this piece would cost around 19 to make and would sell at around £35- £55 at a retail shop. The reason that this product would cost this much is because of the oak material. Oak is a very expensive material because it is a wood that is very strong because the tree that it is made from has taken a very long time to grow because it is a mature tree once harvested. To make the product cheaper to make I would consider making it out of a cheaper metal such as beech wood. Beech wood is a soft wood but it is also very easy to sculpt because of this. The audience that this would be aimed at would be people who enjoy modern furniture and who want to add a modernism to their workspace or home. This product would also fit perfectly into an office space as it doesn't take up much space which is important because most office spaces are limited to the amount of room they have as they aren't often that spacious. The customer would need this product because it will supply a steady supply of light to the room or area that they choose to put it in. This lamp design would make a great present to a wife or partner because it is very sleek and sophisticated and you can tell that a lot of work and thought has gone into making it.

This product would arrive in a slim box with the legs folded in. I would also try and design the lampshade foldable so that the cylinder shade can compress to a flat circle. This product would also be recyclable because I will try and use recycled fibres to make up the lampshade. The metal fixing can also be melted down and the wood will be from a stewardship company so that the forest where the wood comes from will be replanted immediately.

The function of this lamp is to supply light to an area of room so that you are more able to see your surroundings. It also supply's style to an area of space wherever you put it. The legs are also adjustable which means that you can make the lamp taller or smaller to your pleasing. This lamp will run off a plug power source from an average socket found in any home. The lamp will also have an on and off switch that is situated 3 quarters of the way up the wire. This lamp will stand just under a meter in higher and it is able to be made to go lower or higher as you please. This height is perfect as it is just the right height to be put on a table. However this lamp could also be put on the floor if you please.

Safety for this lamp would mean that it would need to undergo professional testing before being used by individuals. This is to avoid risk of electrocution. Another area that needs to be controlled is the steadiness of the lamp. This means that the base of the lamp needs to be very stable so the lamp does not wobble and risk of falling over.

further research

for this design I wanted to take it a little further as I looked into the formation of a camera tripod. the reason for this was because I recognized that all tripods have three legs just like my design which meant that I recognized the connection between the design which I was going for. I done some further research into this product for the simple reason because I wanted to know a clever way of connecting the legs together at the top.

Another set of further research that I took was into the various types of lamp shades as I wanted to see which kind works best with the tripod type structure. I found a number of different types of shades but the ones which I like the best were the circular shape as it complements the pointy legs very well.

What do I think?

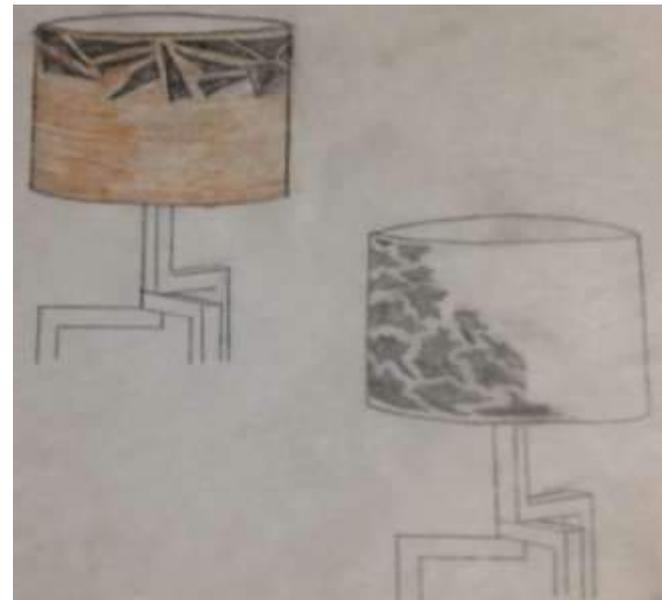
my initial thoughts on this design which I have made is that it is defiantly one of my best which I have done. I love the way that the three legs look against the curved lamp shade. this is because I believe that they complement each other very well. another thing which I love about this design is the way that the wire effortlessly hangs through the middle of the structure.

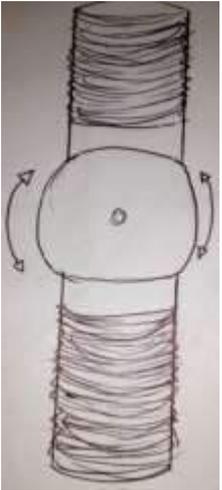
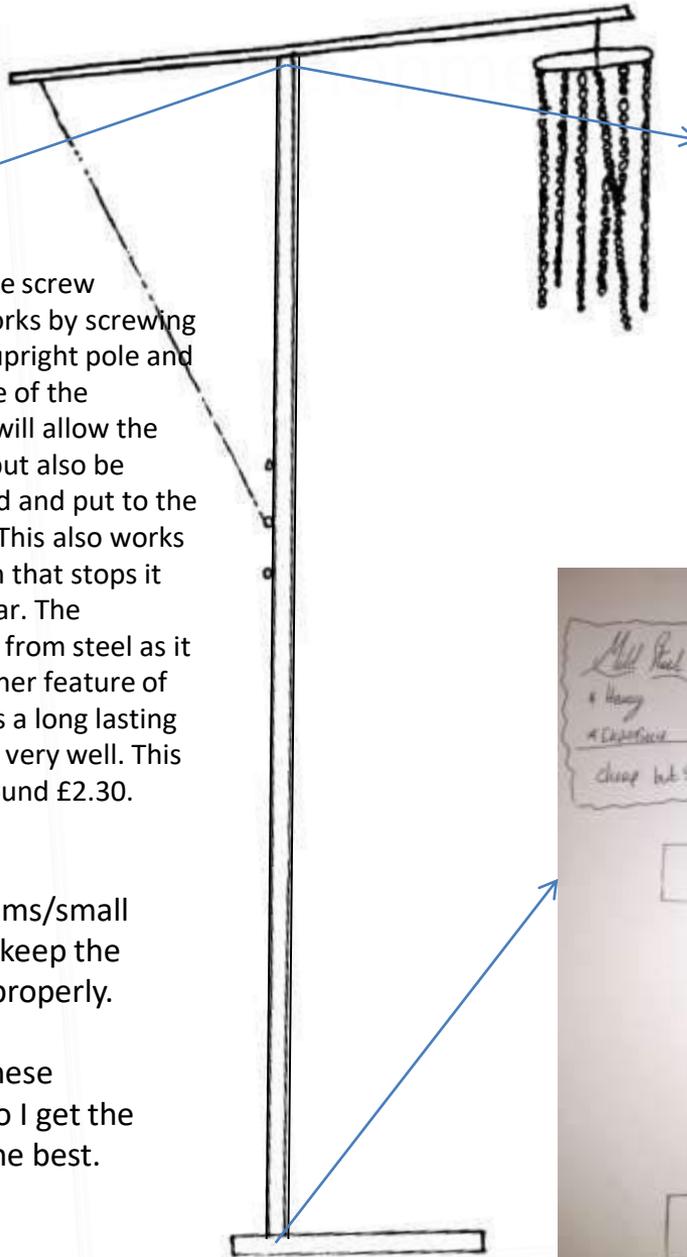


.5 meters

Further development

As you can see, the design is staying the same although the lampshade is changing. I design these lampshades will all different patterns cut into them. The image to the right of the page has a design which is interesting as it has two channels cut into the canvas lampshade. This is done as it adds an interesting look to the design and makes it look stylish and more detailed. Moving on, the images on the bottom right are in the same style just without the channels cut out. Instead, they have patches cut out on the shade. This will be good as the light will escape from these holes.

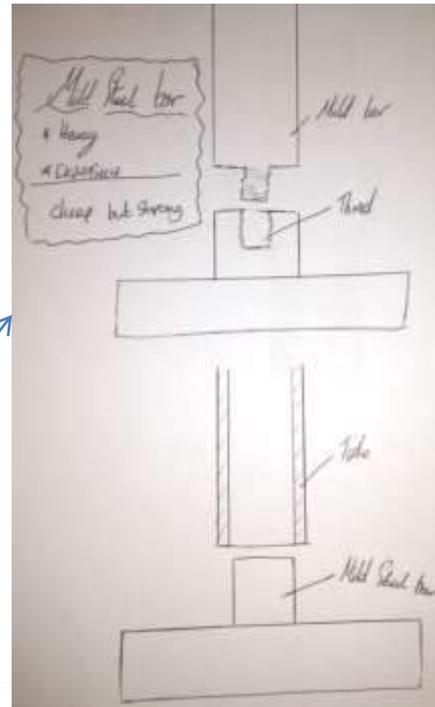




This works as a hinge screw mechanism. This works by screwing into the top of the upright pole and then into the middle of the adjacent pole. This will allow the pole to stay stable but also be about to be adjusted and put to the angle that you like. This also works along with the chain that stops it from swinging too far. The mechanism is made from steel as it will be strong. Another feature of this piece is that it is a long lasting hinge that will work very well. This part should cost around £2.30.



This is an alternative to the other design. However this one is more appealing to look at though it is less stable than the other one. This is because it relies more on gravity and balance whereas the other design is fixed and more stable. This will work by screwing into the top of the upright pole and the adjacent pole slide into the middle of it. The chain plays a huge role in this part because it stops the adjacent (top pole) from sliding out of place.



This is the base design that will keep the lamp upright. The first design will work by screwing into place. This works because the part that is attached to the base has a thread cut into the middle of it. The upright middle pole will then screw straight into it. The second base design works by simply placing into base. This works quite well because it is a very tight fit so it won't wobble unless you pull hard. What I can also do to guarantee it stays together is by drilling a hole that will run through both poles on the base and then inserting a nut and bolt.

These are the few key mechanisms/small parts that will work together to keep the lamp together and functioning properly.

I will have prototypes of all of these mechanisms made and tested so I get the best idea of what would work the best.

Development sketches

On this page will be including development to my design (old design). I will then list some things about how it can be redesigned and adapted to make an even better design.



Combine

I think that it would be a very good idea that if I combined this design with the other design which I made earlier on in the process. The design I am talking about is on the left. The reason why I like this Design is because I think that If the design had 3 legs mixed With the other design with the overhanging arm then it would look extremely interesting

Adapt

I think that I would adapt the legs of the design. This is because the legs in the design look quite weak as they are way too thin. Although they look good, they would snap very easily. I think that I am going to keep the three legs just thicken them up and completely change the way that they are attached. I am also going to add hinges to make them more adjustable.

Modify

I think that I would adapt the top half of the design. This is because I want the light source to be in a different position other than on top of the legs. I want the light to be hanging off something, maybe a overhanging arm which is found on previous designs. I think that I could Do this by modifying it by adding a neck to the top of the legs to give it some height. I would then have a arm fixed onto the top of that.

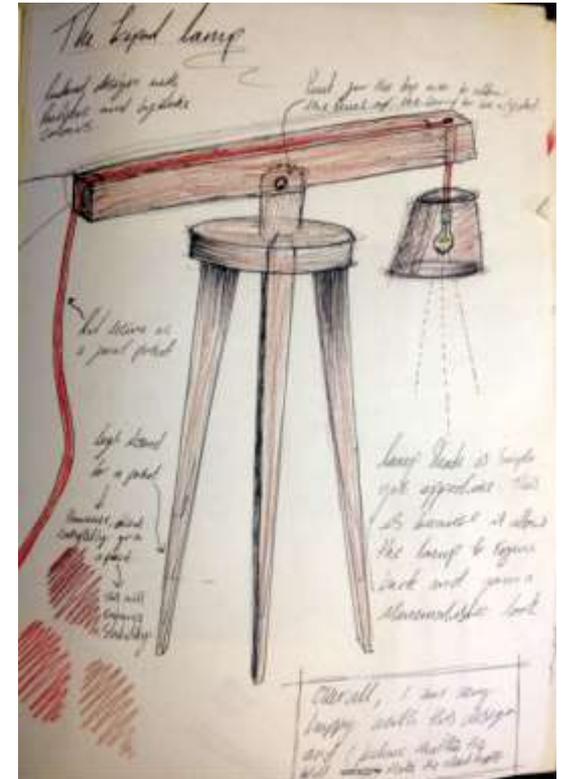
Put to another use

Something which could be put to another Use is the plug connection. This is because The connection to the power source is a Typical 3 pin socket. What I think could be Usable with a usb socket. This would mean that it could be use by a laptop.

Summary

Overall I have found out many things through doing my intensive research into the old design. Thanks to all of these things which I have found it now means that I have been able to design a whole new design which includes everything which means it is the ultimate design in my mind.

DEVELOPED DESIGN



Substitute

If I was going to substitute something on this lamp it would be the lampshade . This is because I think that The lampshade is way too Basic for the sleek look which I am going for. I think I will Make it detailed.

Reverse

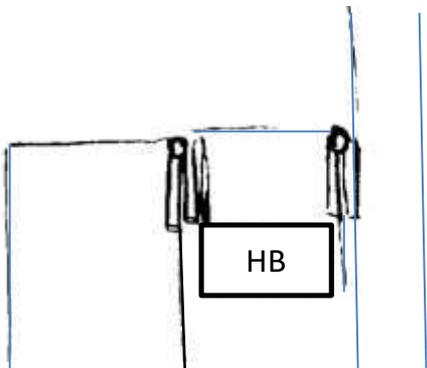
If something was to be reversed I would flip the design around and have 3 individual bulbs in the legs pointing upward. This would be extremely odd and peculiar. However it would be interesting to look at.

Eliminate

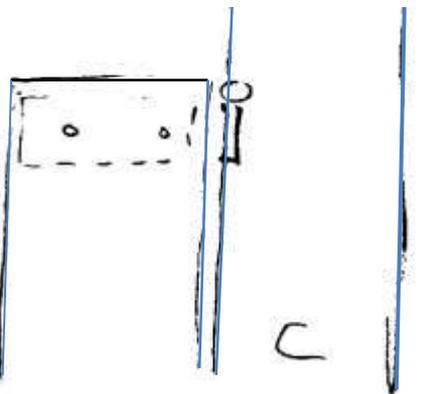
I think that I would eliminate the lampshade. This is because I think that I need to make it look far more interesting. I don't think that the lampshade does enough for the design. I think that I would make it more detailed. Maybe I would make it out of wood.



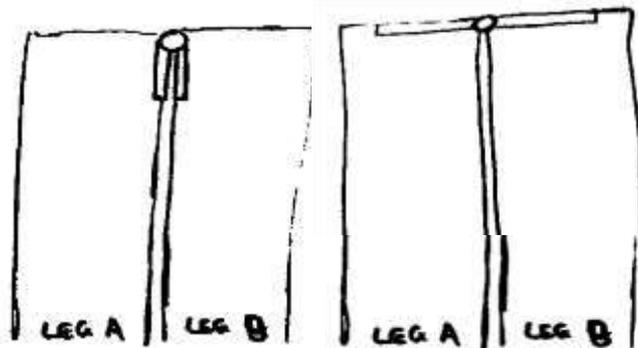
Leg connection thought process



Here is a hinge mechanism which is using a normal butt hinge. I am using this hinge because it is a simple yet effective way of making two objects connect and work incoherent with each other. The block in the middle is used because it means that all of the legs can open up with each other.

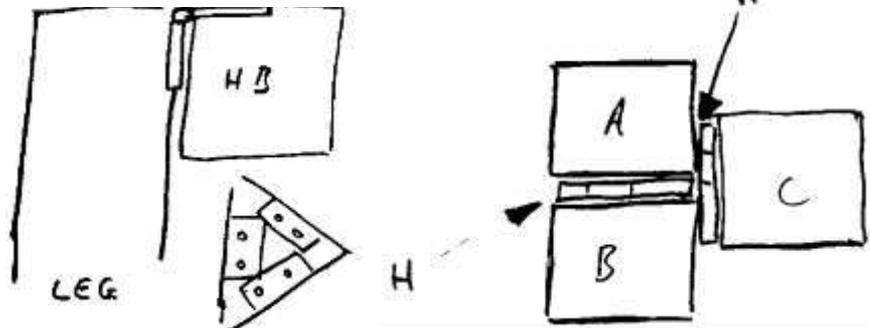


With this diagram you can see that I have shown a section in the outline of the hinge connected to leg C. This is done because it will make the hinge more invisible to the eye. This is because the butt hinge will be imbedded into the wood.

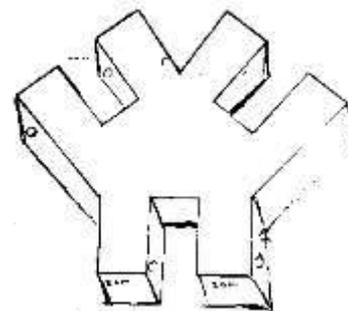


Here are two different idea concepts of leg A and leg B together. The two things that are different from each other are that the hinges are in different places to each other. The reason why these two hinges were placed differently is because it means that they will both be able to bend in different ways. In the first one you can see that the hinge is inside which makes it less noticeable. However, in the second one you can tell that the hinge is more noticeable and is made fore of the aesthetics.

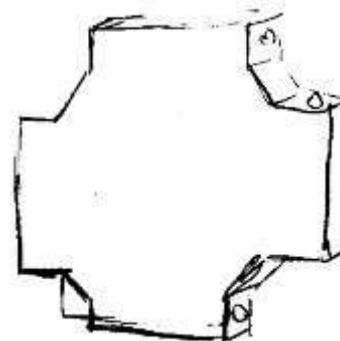
This diagram/idea shows that the middle block is a triangle. I done this because it allows the three legs to all be joined on each side. All of the hinges will be visible from the top because its is a part of the aesthetics. I like this idea because I think that the soft/smooth looking wood with the shiny bras hinges.



This diagram/idea shows that the middle block is a triangle. I done this because it allows the three legs to all be joined on each side. All of the hinges will be visible from the top because its is a part of the aesthetics. I like this idea because I think that the soft/smooth looking wood with the shiny bras hinges.



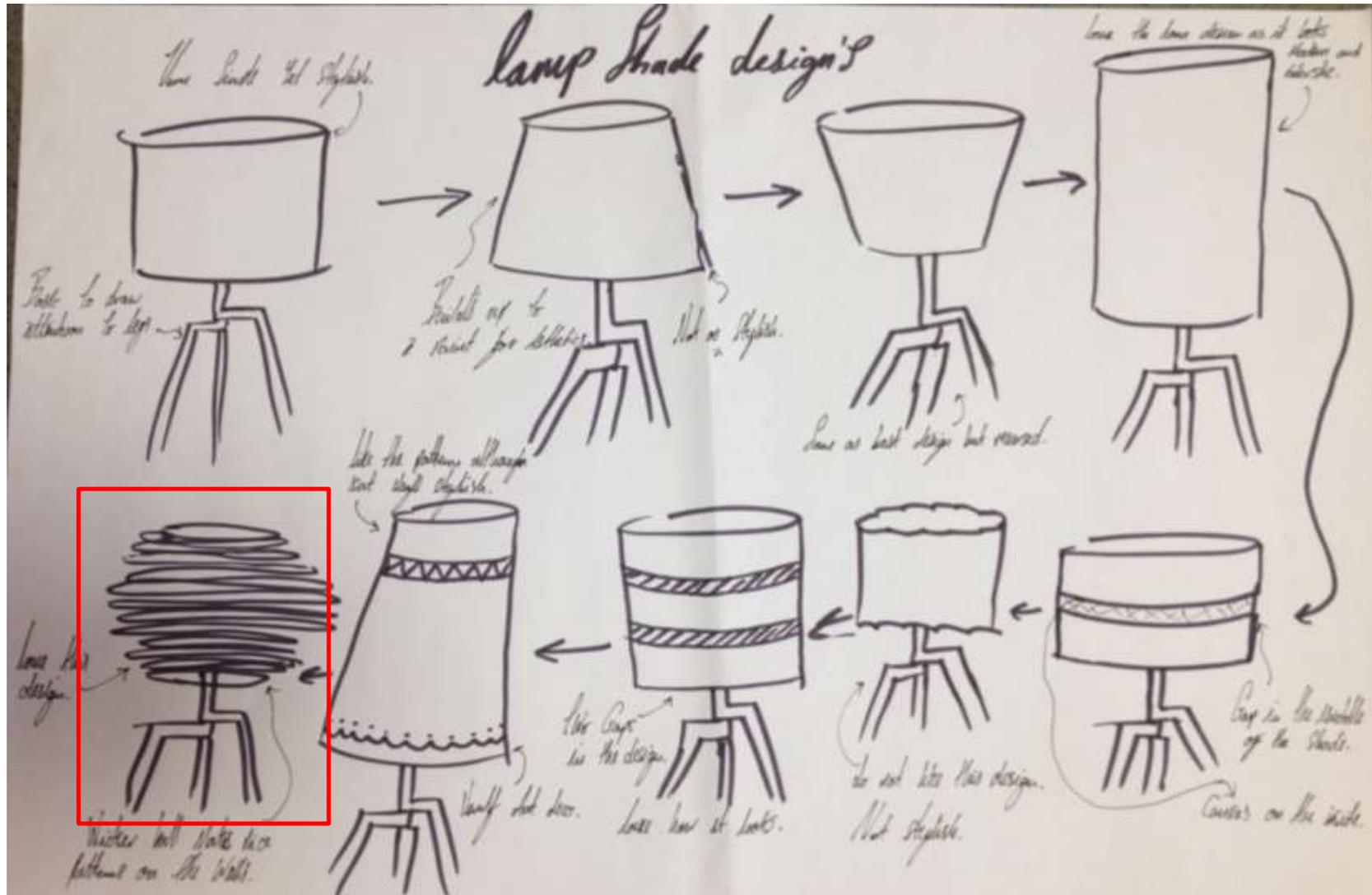
This is an alternative to the hinges. With this design no hinges are needed because all of the legs are bolted into the cut out jigs. This is very effective because all of the legs are all fully adjustable and can be altered by simply unloosening the bolt/butterfly nut. This will make the whole product look much less messy and more smart.



This is an alternative to the hinges. This design will be a little different from the others because unlike the other designs this one will have four legs. This may make it a little more stable although the three legs will be just as stable. This is very effective because all of the legs are all fully adjustable and can be altered by simply unloosening the bolt/butterfly nut. This will make the whole product look much less messy and more smart.

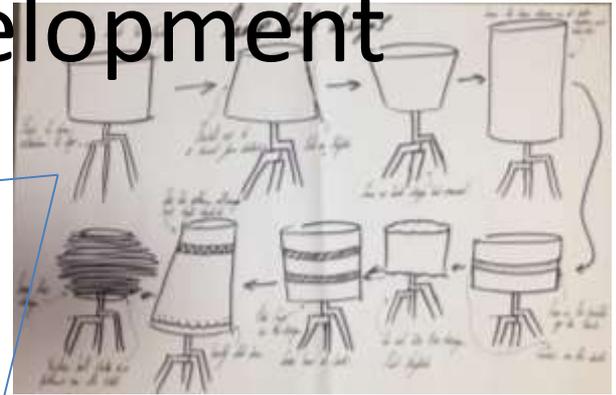
Quick sketch development

Here is a page of hand drawn designs that I have created showing my thought process of various designs of different types of lamp shades that I could design for my lamp.



Summary
This page has allowed me to come to the conclusion that I want more of a wicker ball look to the design of the shade. This is because this will allow me to be able to achieve an extremely interesting look. I think that I could also be in keeping with this design by building the shade up with different layers of laser cut circles piled up on top of each other.

Further development



This lamp will be made out of wood to begin with but I think with further development I will trial it in acrylic plastic as it will hopefully add a touch of modernism to the design.

To make this design work I will need to carefully tweak and adjust the rings to get them to the perfect size and shape to allow it to all slot together perfectly.

When I was looking at how my development was going I was unsure to weather or not that I liked how it was going. Because use of this I looked across my previous designs when I came across this one which I overlooked. This lamp consists of rings applied on top of each other in a way that it looks like an exoskeleton to a birds nest. However unlike birds nest this design will look structured and perfect in terms of layout.

The way that I would make this design is by carefully making a model/template on CAD of a group of rings which will become larger towards the middle and smaller towards the top and bottom. This will create a sphere which I am looking to achieve. This will also be cut out and made on the laser cutter as this will give me a fast and quick answer to the formation of the structure.

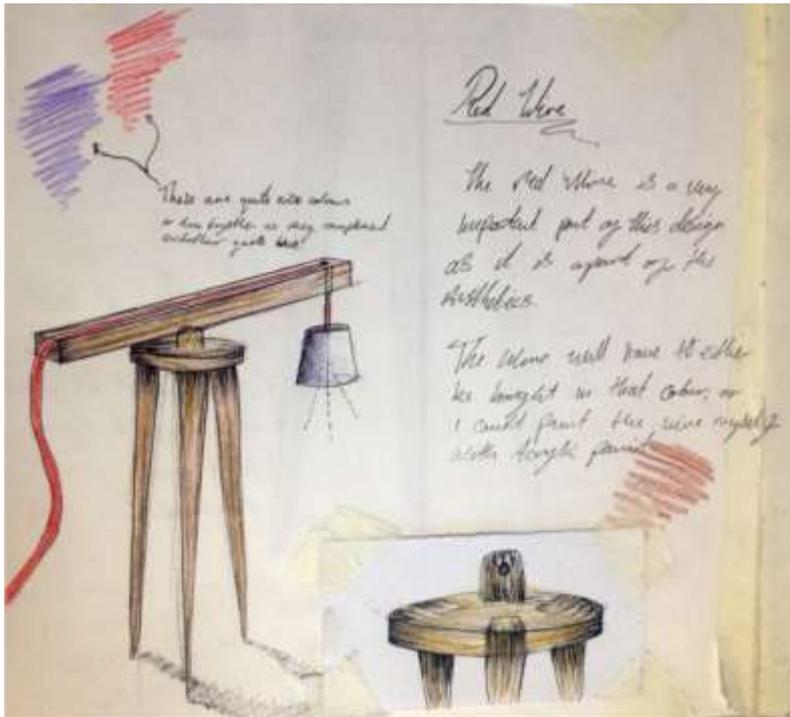
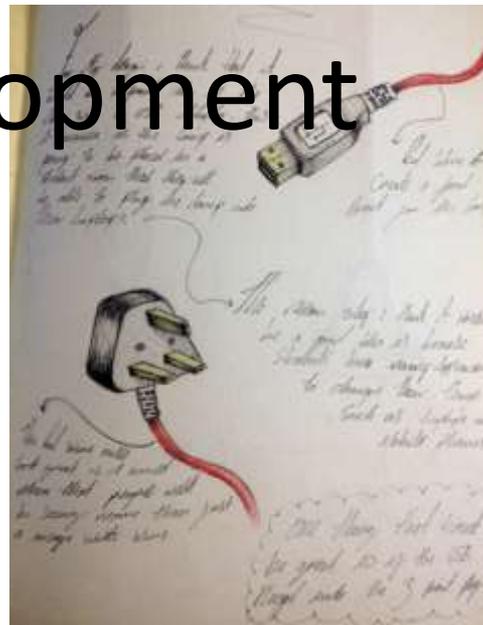
Summary

I have come up with the decision that this lampshade is the look that I am going for. This is a little like a wicker ball. I want this design because this will allow me to be able to achieve a extremely interesting look. I think that I could also be in keeping with this design by building the shade up with different layers of laser cut circles piled up on top of each other.

development

Here are a few rough ideas on my final design in regards to structure and power source.

Below I have made a quick sketch on how I have designed my lamp to operate. What I have done is created a way in which the top arm as able to be adjusted to fit the users needs. This basically just means that the height of the lamp shade can be moved to the height hat is best suited to the client/user. The over all posture of this lamp I am very happy with and I think that his lamp is 98% complete with only a few little adjustments to be made.



Here I have came up with a power source idea which will be very useful to the students who are using it. I have made it part of the design for the lamp to be powered through a USB adaptor as students ill be able to run it off their laptops if there are no sockets spare. The reason why this is apart of the design is because plug sockets are usually all taken up due to students charging up their phones. However if a plug socket is spare the USB adaptor will fit into normal 3 point plug.

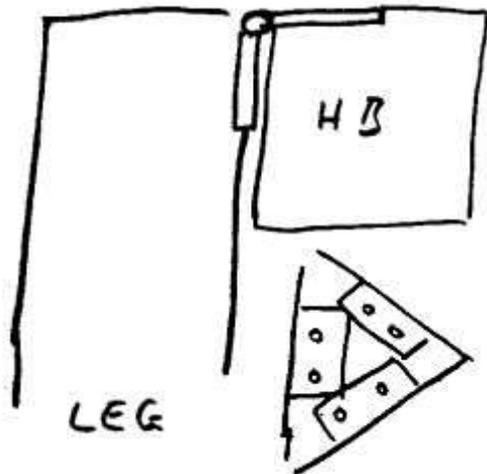
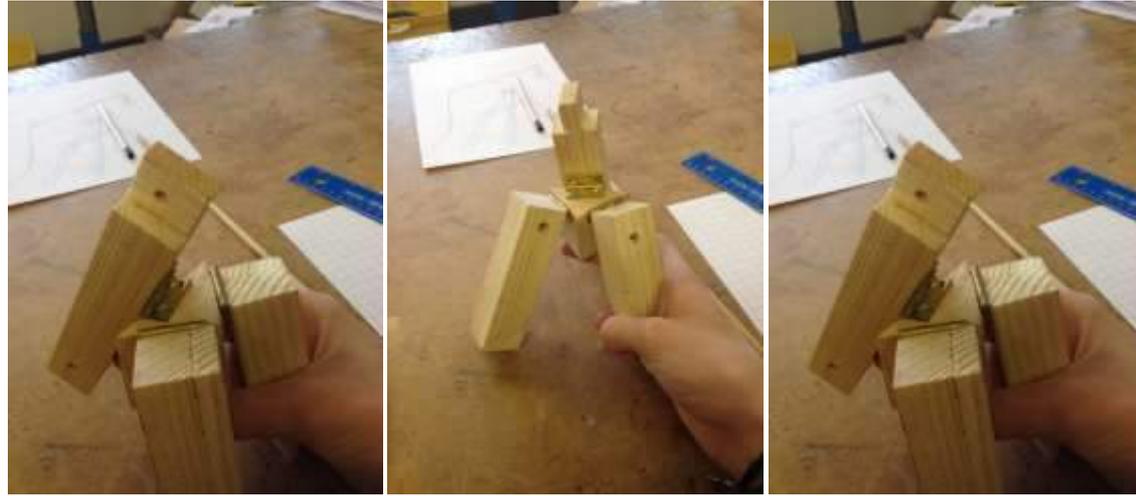
Summary

To summarise, the design of the lamp will have a arm hanging over the top of the base. This is because I think that it will look far more interesting to look at. Also this new design will look much more user friendly. This is because the lamp will allow the user to adjust the height of the lampshade and you are also able to spin it around.

The design shows some other inspiration that I had got fort my design. As you can see the structure strongly represents the aesthetics of a jelly fish with its long leg appearance. I love the way that this looks as it really does give off a unusual feel to the design. I believe that is this type of characteristics that will be highly favoured by the clients as it meets t he sleek/'futuristic look that he was looking for.

First Prototype

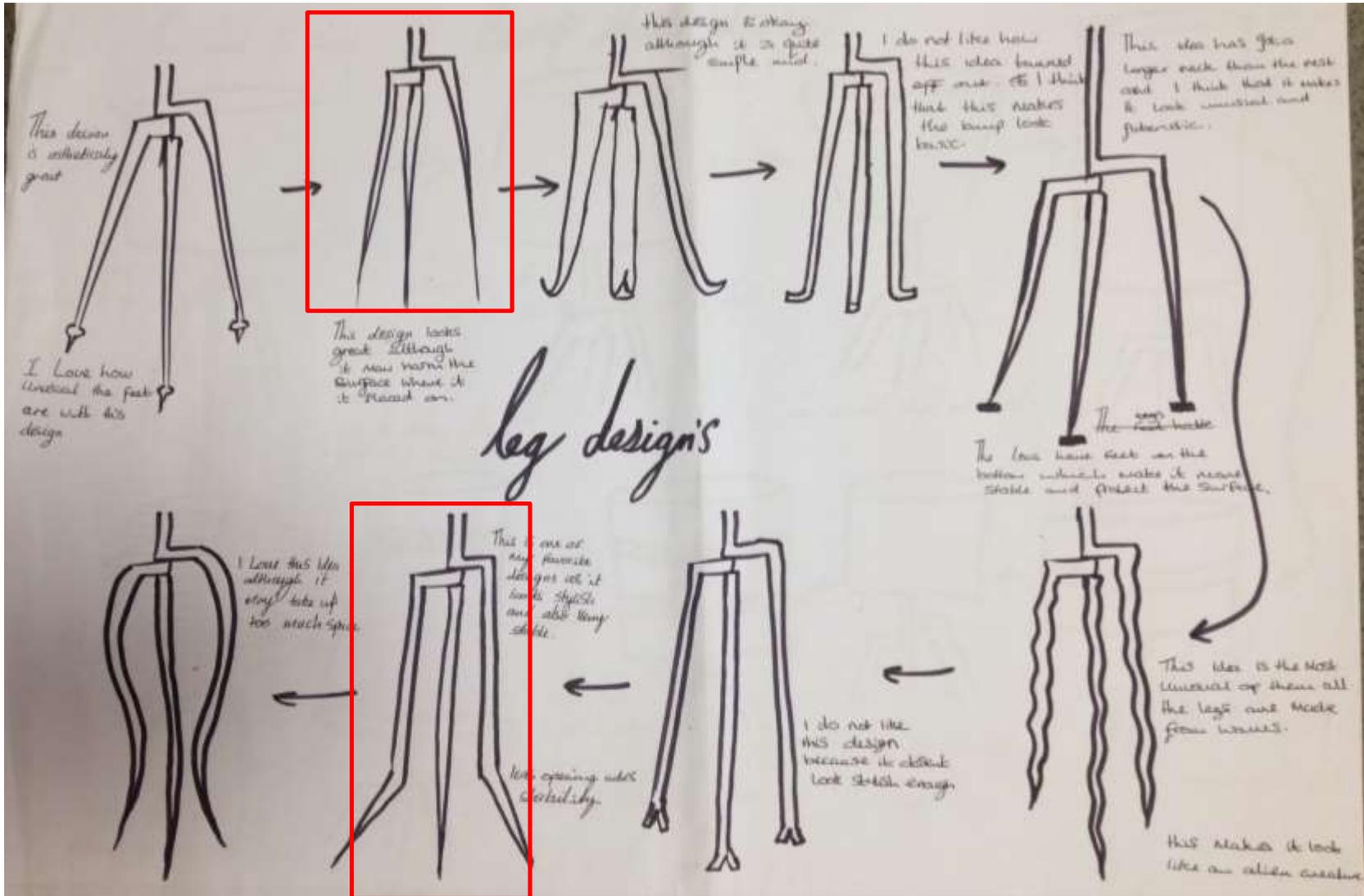
This design you will see that I have created a prototype from the sketches. The reason why I proceeded with trailing this design is because I thought that it looked like a good looking kind of design. I thought that the way that all of the legs were able to bend and open was a great idea functions. I thought this because it meant that you could have your lamp at any height that you want. This design had some good and some bad points. One of the good points of this design is that the three legs make the design look like a tripod/telescope. I think that this is a good design concept because as it is being put into a learning environment that the subconscious idea of it being a telescope will enhance the idea of thinking and exploring. I think that this is a good trait because thinking and exploring are the best ways of learning new things.



Another good thing about this design is that the three legs will allow it to be stable and secure. However, some things about this lamp concept are not so good. One of the things that is not so good is that because of the size of the wood that I am going to use it means that the size hinge will have to be to be the size shown in the pictures. These hinges will do the job and the lamp will stand, however, the hinges over a period of time because they are so small will result in them bending and becoming loose under the weight of the structure. The reason why this will happen is because the size of the hinge is quite small in comparison to the size of the lamp. Another aspect of this lamp that is not quite up to scratch is the fact that when I was putting the screws into the wood that it was beginning to split because of the direction of the wood grain. This will be a problem because if the legs split on my final design that I will have to completely remake the leg which will cost time and money. Overall, this was a promising prototype design and it would do the job although it may not be as stable and effective to some of the other designs that I could create. I think that this was very helpful and that it have me a lot of new ideas on how to make my project successful.

Quick sketch development

Here is a page of hand drawn designs that I have created showing my thought process of various designs for alternative leg designs.



Summary
The design of these legs are all equally different but all workable. However, some designs outshine others. Out of these designs the ones that I love the most are the ones that are circles in red. I like these designs more than the others as I believe that they look more stylish and smart compared to the rest.

Patterns for the legs



Here I have collected a selection of patterns that I like and which I think would look great on the surface of the legs. The reason for these patterns is because my clients wanted 'something which is not just a piece of furniture, but something nice to look at'. I spoke to the client about including patterns on the sides of the legs and he thought that it would look great and would be an interesting characteristic. The thing which drew me to these patterns are the interesting detail which draw your eyes in and make you have a second look.

After narrowing down the patterns which I like, I decided that I would go with a one like this.



Summary

As you can see I have researched a fair amount of patterns which all have huge potential to be used on the surface of the lamp. Every single one of these designs I love but for obvious reasons I can only use one. After great thought I have found that the one I prefer to use will be the one which is highlighted in red. I like this one as it will look amazing once it has been stained and varnished. Also this design is not too plain and not too busy which is what I love about it. I think because of this that it is the best design out of them all for this lamp. I will not be engraving this design directly onto the legs and upper arm.

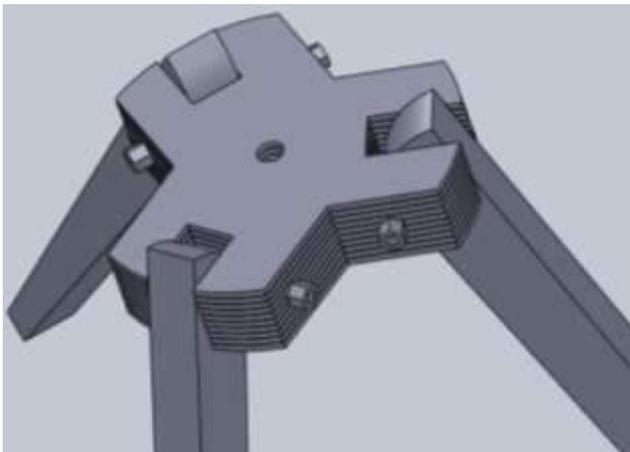
CAD Development



Here is how the light fixing looks without the lampshade on.. This is a standard bassinette with is functional with any push and twist bulb. The shade fits onto the bassinette by screwing it in half and adding the shade before crewing the other half of the bassinette back on clamping it together.



Base



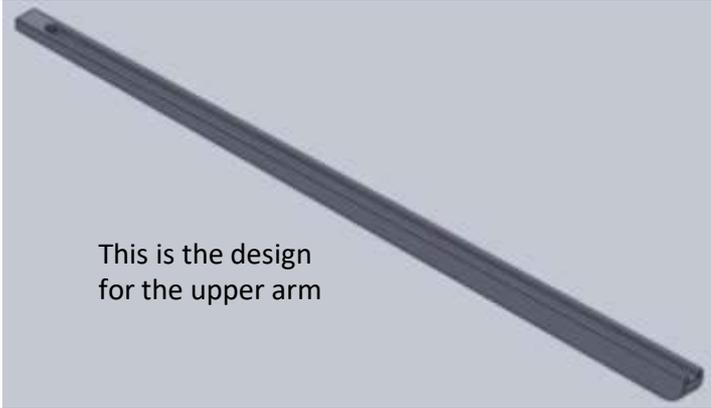
This is the CAD model for the base of the lamp. This is the thing that connects everything together and makes it strong. Without this piece it would mean that this lamp would be useless and unable to function. This means that this part of the lamp had to have allot of time put into it to ensure that it stays strong and sturdy. I done this buy making the base out of individual layers. I done this to that the design could be perfect ad that also it would be stronger as layers is stronger than one block. The base also had holes running through the it which is just big enough to fit a metal bolt through. Each gap in the base also has enough room to fit a leg in to keep it tightly together.



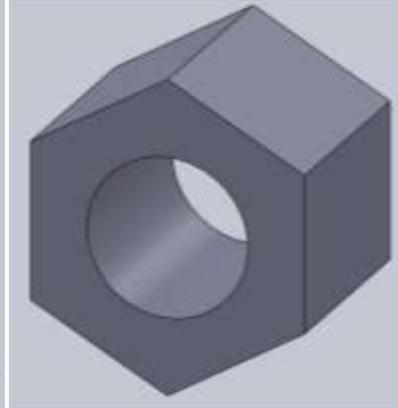
CAD Models of parts of the lamp

Intro

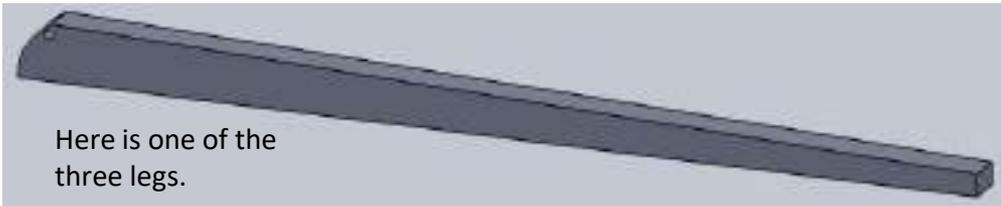
On this page you will see a number of different parts of the lamp which I have individually made on CAD. These will all give you a better idea of what they will look like and how they would work together.



This is the design for the upper arm

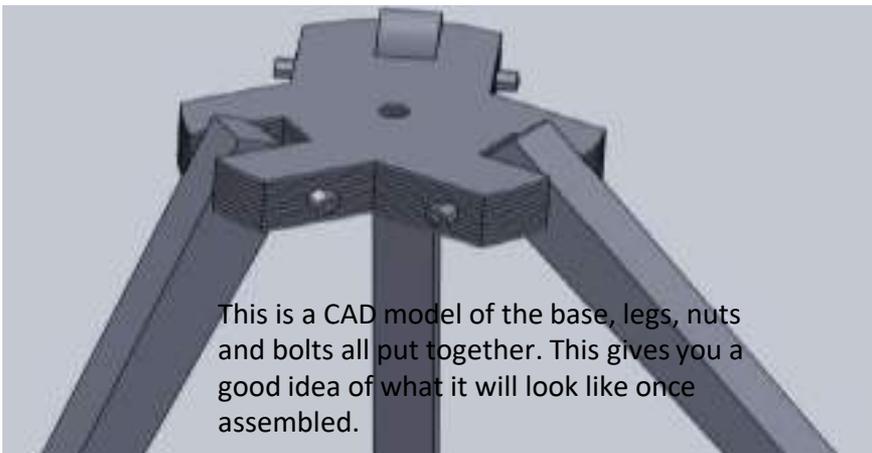
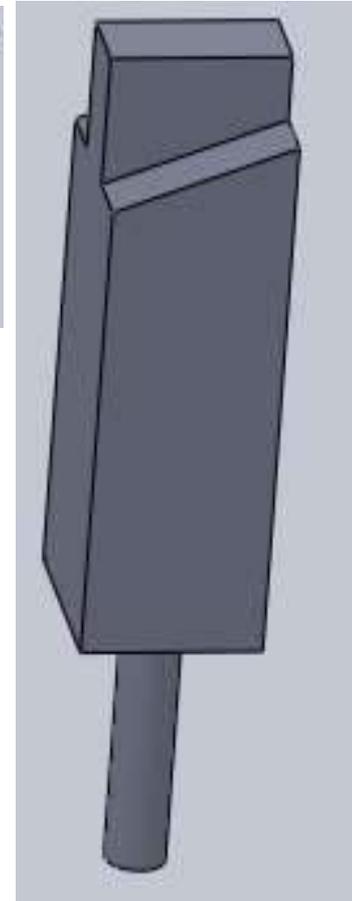


this is the bolt which will run through the base and the legs



Here is one of the three legs.

This is the design for the metal bolt for the base



This is a CAD model of the base, legs, nuts and bolts all put together. This gives you a good idea of what it will look like once assembled.



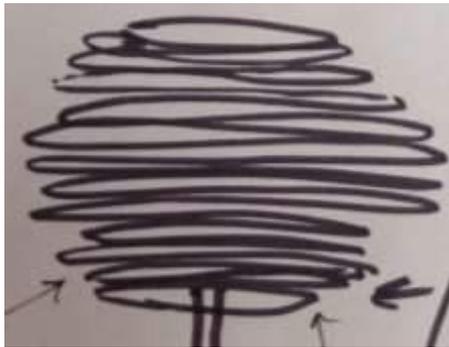
Summary
Over all I am very happy with all of these different parts and the way that they will all go together.

CAD Development

Intro

This following page will give you insight to the old design of the lampshade against the design of the new lampshade. These two lampshades are defiantly my favourite of them all, however, I just think that the new design takes first place as it is fun, interesting and stylish all in one. In the following document I will be explaining these reasons for this thought process and decision

Old design



This is my first serious design of the lampshade which doesn't look that great but you can get the idea. This lamp is made in the same way as the new design just the slats are going round whereas the new design the slats are going straight up and down. This design looked nice and interesting, although there was an issue with fitting your hand up the bottom of the lampshade if you were to change the bulb. This is because to have the design looking good you have to have many circular slats. This is why I moved onto the next design where I was able to make it so you are able to fit your hand up the bottom without removing any of the slats.

New design



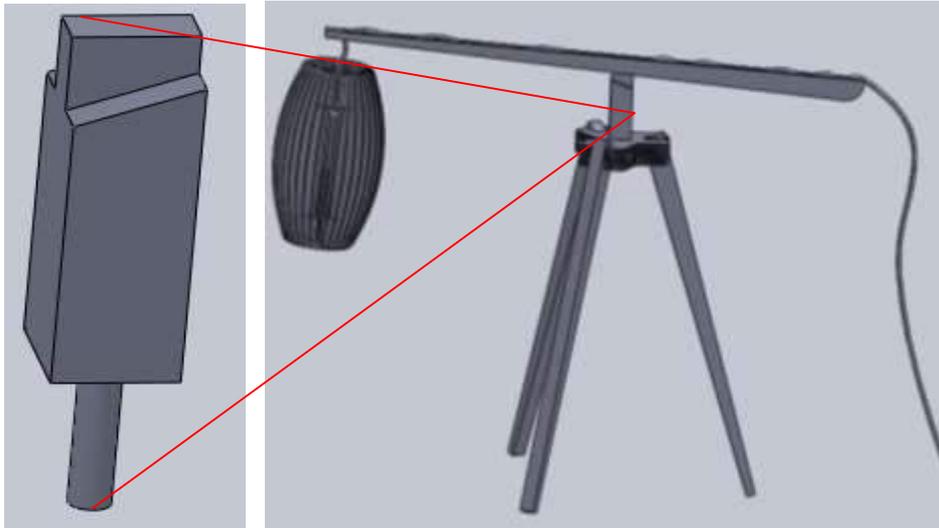
Here is the new and improved design. This design in my opinion is much better than my previous design as it is more futuristic and sleek. This allows for a more modern design. This lampshade is also far more user friendly as it is easier to assemble and you are able to change the light bulb without having to remove any slats or even having to remove the lampshade. I also found that this lampshade is far more stronger and easier to build and the way that the structure I set out. I am also making this shade available in many colours.

CAD Development

Intro

On this page what you will see is the comparisons of the two designs and how they differ in form. This is because this page includes two different ways to which the upper arm is connected to the base. I will be discussing why I believe the plastic tubing is the best option in terms of looks and safety.

Old design



Here is the first design that I rendered. This design was my first indicial design and it was what I thought I was going to go with. However, this design brought up some issues when I analysed it. This is because with this design the wire runs the full length of the upper arm which leaves the wire hanging off at the end. Although this looks fun and quirky it could pose as a safety issue as people could get caught in the wire and fall. This is why I changed designs to the one that you can see in the next image.

New design



Here is the new and improved design. This design is different in the way that the upper arm is attached to the middle base of the lamp. The difference is that with the first lamp the neck which connects the arm to the base is wood, whereas with the new one is a hollow plastic tube. The reason for the change is because with this design the wire is able to run half way down the upper and carefully stay tucked in and run down the leg and out the bottom of the base keeping it well out the way of people tripping over it.

Summary

What I found out about this design is that they both do the job but one of them does it better. This is because the new design has a way of hiding the wire and keeping it perfectly tucked in and allows it to run directly down the tube. This keeps the wire out of the way of people walking by. This basically stops people from tripping over it and injuring themselves. I also believe that it looks better in form of aesthetics.

Final render

This is my final render for my lamp. I have made the lampshade in both red and natural wood. This shows the entire design in perfect detail and also give a perfect idea on how the lamp looks without seeing it in person. I am very happy it the way that it has turned out and also I think that the client will feel the same.

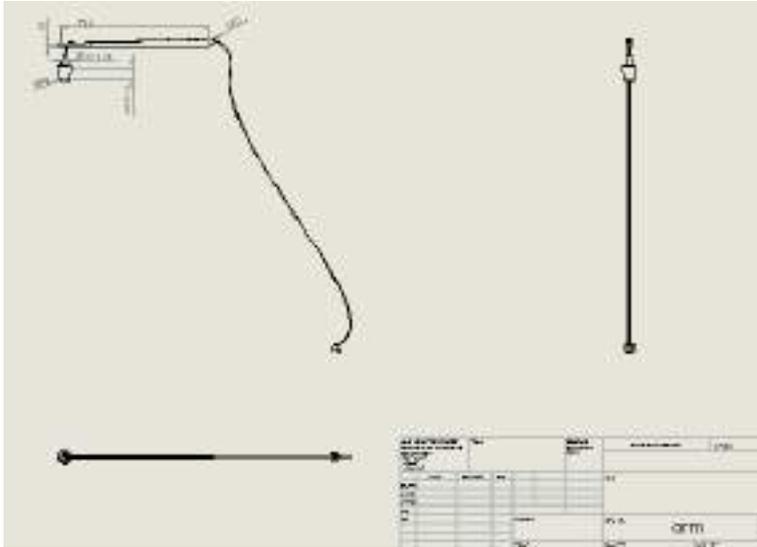
The legs of this lamp are extremely interesting ant they look very sleek this is because once they have been stained and glossed it has emphasized the shape and contour of the pattern which has been engraved into the legs.

Another thing which I love about this final render is for well the clear plastic tube had turned out ad how it brings a modern touch to it. This adds to the sleekness and modernists that I was going for with this design.

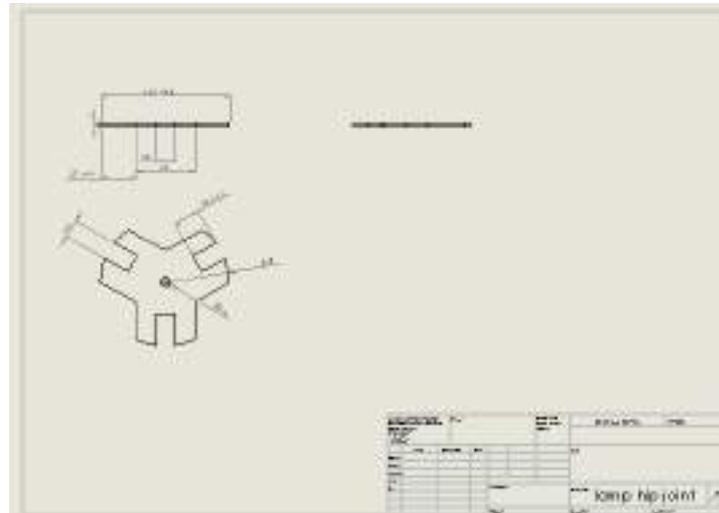
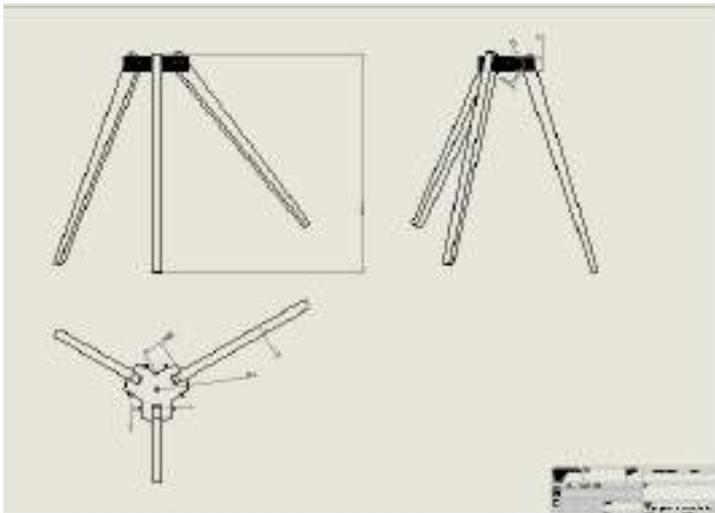
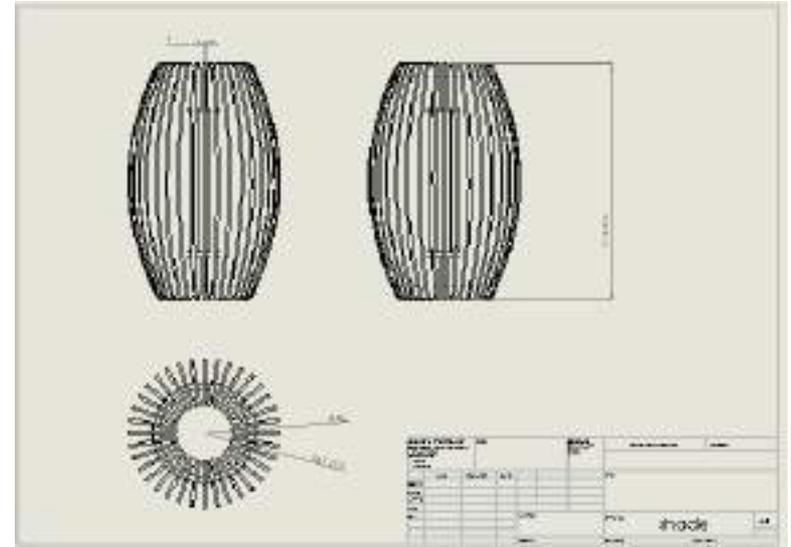
The lampshade is the highlight of the design and it really des tie everything together and gives it a sleek effect.



Technical Drawings



These are the technical drawings for my product. They show the dimensions of the parts. I will use them to make the product and to check the parts are the right size.



This drawing shows the full product assembled. I will use these images for the instructions for my product.

Base Jig

Intro

On this page you will see the jig which I have made and also the technique of how I stuck all of the layers of wood on top of each other by gluing them together. You will also see the way in which the jig works to keep everything together.

Here you can see that I have created a jig which will allow me to be able to stack the laser ply wood onto of each other without the risk of it gluing uneven and looking messy. This is because the thin layers of ply need to be stacked onto p of each other without any of then being out of line as this may result in the legs not being able to function correctly as they may not even fit.

To solve this from becoming an issue I have created a accurate jig which has allowed me to individually glue each of the layers on top each other one by one without them being un even. This jig has worked exactly how I wanted it too because ii have been able to successfully stack and glue them in a way that I achieved a flawless finish.

The Jig consisted of a square piece of ply with three blocks of perfectly cut wooden blocks that imitated the shapes and sizes of the legs. Once this was all set out together it allowed me to one by one glues the pieces together on top of each other.



Summary

To summarise, the way in which I have made the jig and how it works is extremely clear. I have also found whilst using this jig how much better it is in the long run if you make a jig. This is because it is far quicker to get the everything aligned and dry quickly.

The lathe machine



In these images you can see me using the lathing machine to create a bowl type effect to the bottom of the support for the top arm. I wanted to use this method as opposed to just simply inserting a separate dowel into the bottom as I knew that it would be more strong if it was all



on solid piece and the chances of it snapping were reduced. I found that this procedure was very straightforward and I picked it up quite quickly. This is a very hands-on way of creating this effect to the wooden structure as you are physically sculpting the shape out of a solid piece of wood. This method does not come without its risks. This is quite a dangerous method as the use of spinning objects and sharp tools are involved. This meant that I had to use the correct protective equipment. I made sure I was doing this by making sure I was wearing my professional eye guards and also wearing an apron to keep any chances of my clothing being tangled within the machine to a minimal. I also made sure that my thumb was firmly pressed onto the top of the chisel/cutter. This would prevent it from becoming loose and repelled towards my face. I kept checking the width of the attached wooden cylinder with the use of a vernier callipers to check it against the hole that it would be fitted into. Once it was the correct size I was then able to sand it down to smooth the surface. I then tested it in the hole it was designed for to find that it was a perfect fit.



When I was using this machine I was aware of its dangers and all of its difficulties which could happen. One of the main issues was that this machine works at a very high speed which makes it a threat to anyone around it. For me to stay safe I had to take a few precautions. Firstly, I wore an apron at all times so that so items of clothing would become stuck in the machine. Secondly, I wore thick protective goggles so that any pieces of wood which could be shot off the wood that I was cutting would not hit me in the eye. Lastly I made sure that my thumb was pressed firmly against the top of the chisel. This was to stop it from becoming loose and repelling of the spinning device. As I followed all of these safety precautions I remained safe through the entire process.

Summary – the lathe machine went much better than expected. This is because I was expecting it to take more skill than I thought. Surprisingly I took to this machine very quickly and I was able to achieve a very good job. The piece which I made fits perfectly into the place where I need it and the part is very strong and accurate.

Process of the threaded bolt

Intro - this process is where I am cutting down and inserting a thread onto a bolt. This process is potentially one of the hardest which I have to do in this entire unit as it needs to be extremely accurate to stand any chance of it working like it should. If the thread is not the correct separating or if the bolt is too thin or too fat for the bolt then that would mean that this part is unfunctional and will not stand a chance of working.

As you can see, in this first image I am using a hack saw to carefully cut the metal rod down to the size that I want it. I am using a hack saw because it is a fast and easy way to separate a rod of metal in half in under a minute. I used a metal clamp to keep the metal in place so it didn't slip and come loose.

In this image I used a tool called a **tap and die**. I used this tool to put a thread on the fresh cut metal rod. The reason why I was using this tool was because it was a quick and effective way to create a thread on the metal rod. This tool works by spinning the tool slowly around the metal rod and you will see a thread starting to appear on the rod. This process is not the easiest or the fastest but it is the best way to get the outcome you want.



Here is a closer up image of me using the hack saw. As this is a sharp tool I had to ensure that I remained safe throughout. Here is what I did to keep safe:

Firstly, I ensured that all loose clothing was secured and tucked in. Secondly, I used a strong metal clamp to make sure that the metal would not slip and fall.

Lastly, I made sure I was holding the hack saw in the correct way and kept all my fingers away from the blade. This stopped me from cutting myself

In this image I am using a machine called a router. This machine works by sculpting metal rods to the width that you want them. This basically means that you can carve the metal with it which is exactly what I wanted to do whilst creating the threaded rod to the correct width that I needed. This technique looks hard, although it worked quite well for me as I found it quite easy and simple to do once everything is all set up.

Summary

Overall, this process was not as difficult as I first anticipated, however, it did not come without its difficulties. This was because the part where I had to use a tool to engrave a thread into it was difficult to get started off. It took me a few first attempts to start the engraving of the thread.

Diary of making

These pages show the steps of making my product as a diary. They also show where I considered quality check and health & safety. I have also looked at ways to adapt my product so that it is suitable for mass production.

Image	Deadline: 9.1.15	12.1.15	16.1.15	23.1.15	30.1.15
					
Description	The first part of making was to glue all the layers of the product together using the jig.	I used the pillar drill to drill the holes into the side of the hip joint. These are the holes for the bolt thread to go through.	I then cut the legs down to the right length using a tenon saw.	I used the laser cutter to cut the decorative pattern into the legs of the product.	I cut down the metal rod to make the thread to secure the legs in place using bolts.
Quality Check	I made sure that the quality of this part was good by using a jig to assemble the parts. The jig makes sure that the parts cannot be put in the wrong way around because it is used like a template.	I checked I was drilling the product in the right place by using a spirit level to make sure that the bed was flat. I will also check that the holes are in the right place by checking them against the technical drawings.	I checked that I had cut the legs to the right length by measuring them accurately using a rule. I used a tri square to make sure that the parts were square and I checked them against the technical drawings.	I made sure that I cut the legs correctly on the laser by monitoring its progress. I also did a test piece first to check that the bed and parameters were set up correctly.	I checked that the metal was the correct length using a rule and I made sure that it was correct by comparing it to the technical drawing.
Health & Safety	<ul style="list-style-type: none"> • Don't mess about with the glue • Keep it away from your mouth and eyes. • Wash it off skin after use. 	<ul style="list-style-type: none"> • Put the guard down on the drill. • Keep loose clothing away from it. • Wear goggles to protect your eyes • Wear an apron to protect your clothes. 	<ul style="list-style-type: none"> • Be careful of your hands • Don't mess about with the tools. • If you're not sure what you're doing then ask. 	<ul style="list-style-type: none"> • Do not look at the laser. • Make sure that the lid is kept down. • Put the extraction on to remove the dust. 	<ul style="list-style-type: none"> • Be careful of your hands • Don't mess about with the tools. • If you're not sure what you're doing then ask.
Mass Production	If I was to mass produce that part then I could use a jig, but it might make more sense to get thicker wood to use on a bigger laser cutter because that would be more time efficient.	I could create a jig for doing this process if the product was going to be mass produced.	If I mass produced these parts then I would cut them on a circle saw and use a thicknesser to make them the right size.	Laser cutting would be appropriate for mass production although I might try to do more parts at once.	If I mass produced these parts then I would cut them on a guillotine or I could buy in standard components to make sure they were the right size.

Diary of making

Image	Deadline: 6.2.15	13.2.15	27.2.15	6.3.15	13.3.15
					
Description	<p>I then used a tenon saw to cut out the arm of the product.</p>	<p>I used the router to cut a channel into the arm which is for the wire of the lamp to rest into.</p>	<p>I used the lathe to manufacture the wooden option for the arm joint. I cut the plastic version using the band saw.</p>	<p>I then stained and varnished all the bits of the product.</p>	<p>I made the packaging using a craft knife and then put the finished parts into the packaging ready for sale.</p>
Quality Check	<p>I checked that I had cut the arm to the right length by measuring them accurately using a rule. I used a tri square to make sure that the parts were square and I checked them against the technical drawings.</p>	<p>I checked that the router depth was set correctly and I made sure that all the parts were working correctly. I did a test piece first to check the outcome and compared the arm to the technical drawing.</p>	<p>I did a trial piece on the lathe to make sure that it was going to give the outcome I wanted. I also measured the piece throughout the cutting process using vernier callipers to make sure that I hadn't taken too much off. I knew the size I needed from the technical drawing.</p>	<p>I made sure that I did a test piece first to see what the stain would look like. I applied the coats with a brush in thin layers. I applied a few coats to get an even colour and I let it dry in between each coat.</p>	<p>I made sure that the packaging fit by making it to the correct size for the product. I did this using the net that I had made and cutting the piece out slowly and accurately using the net for guidance.</p>
Health & Safety	<ul style="list-style-type: none"> • Be careful of your hands • Don't mess about with the tools. • If you're not sure what you're doing then ask. 	<ul style="list-style-type: none"> • Keep loose clothing away from it. • Wear goggles to protect your eyes • Wear an apron to protect your clothes. • Get proper training before you use it. • Put the extraction on to remove the dust. 	<ul style="list-style-type: none"> • Keep loose clothing away from it. • Wear goggles to protect your eyes • Wear an apron to protect your clothes. • Get proper training before you use it. • Put the extraction on to remove the dust. 	<ul style="list-style-type: none"> • Don't mess about with the wood stain. • Keep it away from your mouth and eyes. • Avoid contact with hands and wash it off skin after use. 	<ul style="list-style-type: none"> • Be careful of your hands • Don't mess about with the tools. • If you're not sure what you're doing then ask.
Mass Production	<p>If I mass produced these parts then I would cut them on a circle saw and use a thicknesser to make them the right size.</p>	<p>I could create a jig for doing this process if the product was going to be mass produced.</p>	<p>If I mass produced this part then I would buy wooden rod in the right size and assemble the part as a separate piece to save time.</p>	<p>I would look into a spray finish for mass production or maybe making the part from pre treated wood.</p>	<p>I would use a die cutter to cut the packaging if it was mass produced as this cuts lots of the same net very quickly.</p>

The lampshade

Intro

This page is all about the different lamp forms which I have designed. This is in terms of colour. For something different I have decided that this lamp will come with a choice of two different coloured shades. This is because I wanted to give the user the ability to make the colour of the shade the one that suits them the best. I believe that this is a very good selling point as this is not normally provided by designers.

The lampshade which I have created comes in two colours, natural wood and cherry red. These two colours are what I think look the best. I believe that they look the best in these colours as they complement the colour of the stain of the wood. The natural wood looks great with the frame as it gives it the sense of realness and obviously matches as it is the same material just untouched. The cherry red works well with the fiery stain which I have applied to the frame of the wood.

The lampshade was cut out on a laser cutter which means that both lampshades are an identical shape and are both perfect in proportion. I designed these lamps myself with software called 2d design. To assemble this product all you have to do is slot the frame together which should take around 3-5 minutes depending on how many slats that you want on the shade.

To change the bulb all you have to do is simply reach your hand through the bottom of the shade and screw the bulb out. It fits to the lampshade by simply placing onto the base and screwing it tight.

Summary

Overall, I am extremely happy with the way that this has worked out. This is because this process has been quick and effective. This is because as it was cut out on the laser cutter it means that it is a quick and effective process. This is down to the sheer quickness and accurateness of the laser cutter. I believe that this is a very good selling point as this is not normally provided by designers.



Instruction Leaflet

This is an instruction leaflet which will go on top of the product inside the packaging. I have included it because it shows the customer how to build the product effectively. I could also include some spare fixings and I could give details of a helpline if they have any problems.

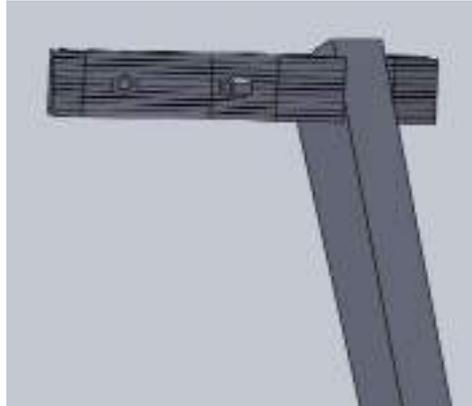
The product is quite easy to put together. There is only the legs which need tools. To fix them you will need a spanner to tighten the bolts and maybe mole grips or another spanner to hold the bolt on the other side. Apart from this the parts all click together. There are no safety risks when the product is put together. All the electrical sections of the product are safely sealed.

Summary

I think that these instructions will work and will help the customer to make the product safely and correctly.

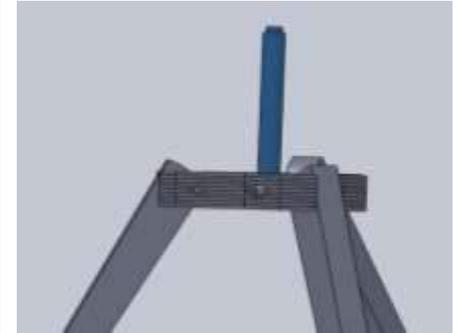
1

Use the spanner provided to fix the legs securely at the desired angle.



2

Click the plastic tube in place to secure the cable.



3

Click the arm onto the plastic tube.



4

Click the desired number of light shades onto the shade fitment.



Final Design

Intro

As you can see this following page is a collection of final photographs. These pictures are of the final product when it is all assembled. These images give you a very good representation for the users to see what it will look like if they purchase it for themselves. I have also gave a very good selection of photos that have been taken at different angle and it also shows you the different colours of the shades. I believe out of all of the colours that I have tested that the two which worked best with the lamp was the natural wood and the cherry red.



Existing Product

Research



The building was built in 2001. The highest point is 230 m high and it has a floor space of 471000 square meters. Concrete floors inside help support the building, but outside a system of diagonal grid exoskeleton has been taken on the external surface to a pipe that will oppose any force, the placement of the steel columns and diagonal tubes oppose the force as well. The thing that stands out about this building is the unusual shape of the building and how the structure stands.



This building was built in 1958. It is 185 m long, 120 m wide at its widest point and the highest room vault is 67 m high. The walls and ceilings are made out of laminated glass, the roofs are made from fungus ceramic tiles, pre cast concrete was used for the ribs of the shells and lastly steel, lenden and epoxy resin were used to hold the roof. The thing what stands out most about this building is the strange design of it.



The building was built in 2012. It is 180m deep and its diameter at its base is 49m, 56m at its widest and 26.5m at the top. The overall area is 1400 square meter. The structure has a core surrounding of a grid of interconnecting steel. The bearing system is secured by the outer shell armour. The grid of the external facade is made up of 3 panels of thick laminated glass. The thing that stands out most about this building is the unique shape of it and the unusual design.



This building is inspired by the lotus flower and was built in 1986. Has 27 free-standing marble clad "petals" arranged in clusters of three to form nine sides. The nine doors of the Lotus Temple open onto a central hall slightly more than 40 meters tall that is capable of holding up to 2,500 people. The surface of the House of Worship is made of white marble. Along with its nine surrounding ponds and the gardens, the Lotus Temple property comprises 26 acres. The thing that stands out most about this building is the amazing design of it and how much it looks like a lotus flower.



The building was built in 1962. It is 41.06 m in width and 184.41 m in height. The piers are made from steel and the shaft is made from reinforced concrete. The thing that stands out most about this building is the size of the building in height.



The building was built in 1997. It covers 2400 square meters. It is made from a steel frame with sinvour, glass and titanium orthogonal and organic volumes. The volumes are linked by glass curtain walls. The thing that stand out most about this building is the unusual shape and design of it.

Material Research



Advantages of brick are that there is an increase in the thermal mass of a building, giving increased comfort in the heat of summer and the cold of winter, and can be ideal for passive solar applications, Will not require painting and so can provide a structure with reduced life-cycle costs, The appearance, especially when well crafted, can impart an impression of solidity and permanence, very heat resistant and thus provides good fire protection and more resistant to projectiles, such as debris from hurricanes or tornadoes than walls of wood or other softer, less dense materials. Disadvantages are that extreme weather causes degradation due to frost damage and tends to be heavy and must be built upon a strong foundation .



Advantages of steel are that it has very high strength, Its properties do not change, Does not stretch, Is ductile and is very tough. Disadvantages of steel are that it can buckle, Strength decreases in fire, Maintenance cost is high and brittle fractures can occur.



Advantages of concrete are that high-strength concrete resists loads, increases the strength per unit cost, per unit weight, and per unit volume and increased modulus of elasticity, which increases stability and reduces deflections. Disadvantages are that increased quality control is needed in order to maintain the special properties desired, High-strength concrete must meet high-performance standards consistently in order for it to be effective, cost more than materials of lower quality and very weak under tension.



Advantages of hardwoods like mahogany and walnut are that they are high durability and the ability to resist warping and shrinking. These woods also resist moisture and have immense strength. Some disadvantages of hardwoods are that they change colour when exposed to light, like cherry wood, and have a distinct fragrance, like rosewood. Some are so tough you need to create a starter hole before driving screws in them. Softwoods, like fir and spruce, have a uniform texture and a low resistance to decay. Others, like hemlock, work well in machines and are used mainly in construction. They are also easy to carve and can be used for detail work. A disadvantage to using softwoods is that they absorb moisture, so they are not as stable as hardwoods.

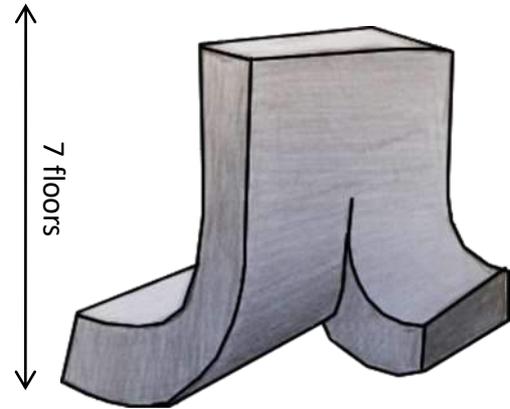


Advantages for glass are that Glass can be made into objects of different shapes or sizes, Glass can be colourless or coloured, Glass does not rust and glass does not let water to pass through. Disadvantages are that it is a very expensive material, It breaks easily and it can melt under very high temperatures.



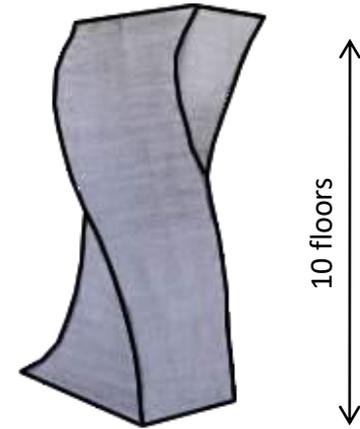
Advantages for stone are that it is generally Low price, Natural pattern, more selection, Good hardness, High density and Anti-abrasion. Disadvantages are that stone is heavy, There will be gap between two, It is difficult to connect, It is impossible to be seamless, High permeability, Stains are hard to clean, Insufficient elasticity, if hit it a thump will make it crack.

Initial Ideas



I like the unusual shape of this building. However, the design of the building will make it hard to build as it splits into two. Also which side would the entrance be on, or would it have two?

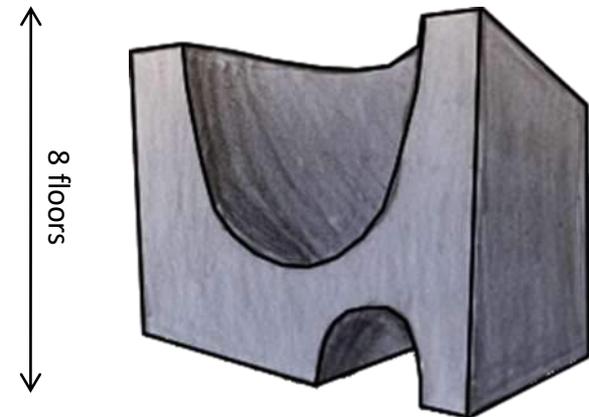
This design is developed from a rectangular building into a twisted one due to the thought of a twister. I don't like the design of this building because it not very interesting and there is already buildings existing similar to this one.



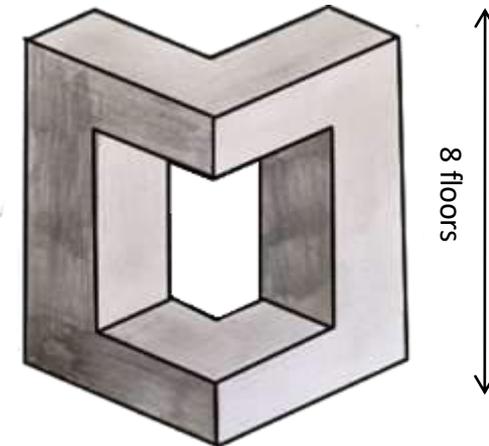
Even though this building looks modern, I don't like the fact it is mainly square shaped with a few hollowed out sections. Therefore, feel this design is very dull.



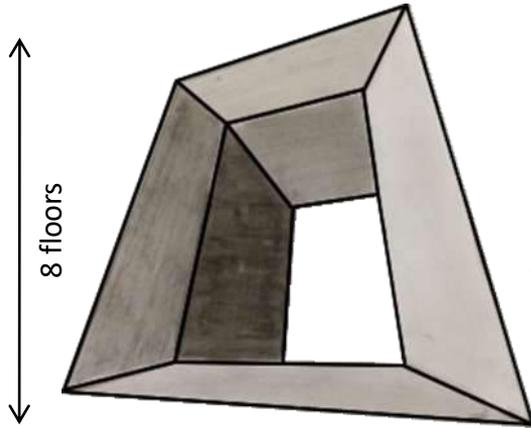
I like this design because it is futuristic, which is what Hilton asked for, and the shape is diverse. If Hilton want to develop this design, there is limited changes that can be made; but personally I don't think this design needs any further development.



This design originated from a lotus flower; which I do like the design of but it not futuristic or unique so does not suit Hilton's requirements. Also due to the structure of the building room design will be difficult and varying from each other.

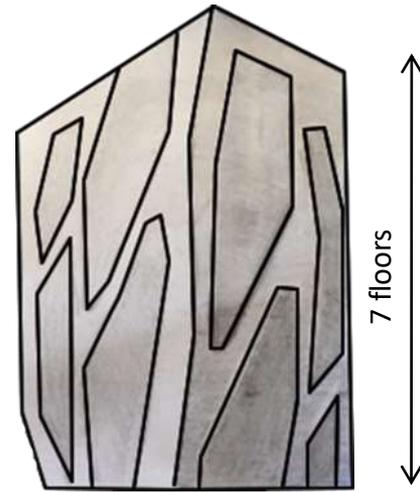


Initial Ideas

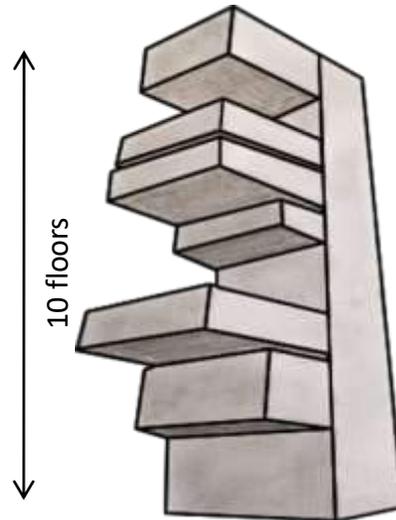
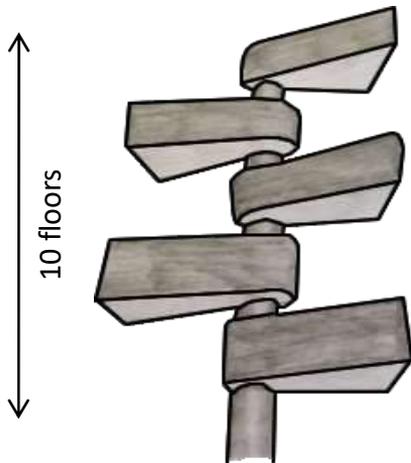


This design is not ultramodern. I do not like the idea that this is a square design with a square shape removed out the middle as it is very boring. However the slanted parts does make the design a little more exciting.

While looking at army camouflage it came to my attention that I could design a building like that, and this is where I got this idea from. Even though this building is square shaped I still think it looks futuristic because of the shape of the design being slanted up and down in some places and the lighter and darker parts on the building.

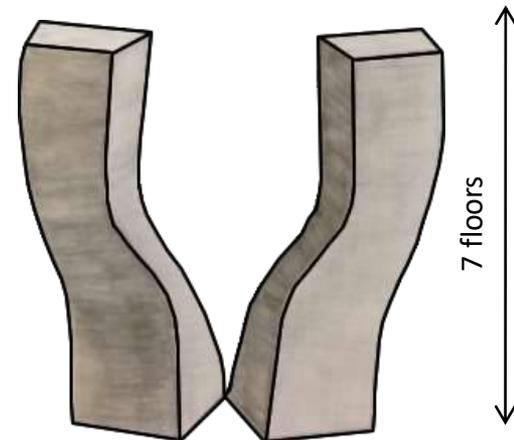


I got the idea for this design from a sign post. I like this unique design of this building because there are no other like it. I do like the thought of having a lift taking everyone to there rooms via the pole in the middle. However due to the requirements Hilton have set I don't think they will like this design because of the size.



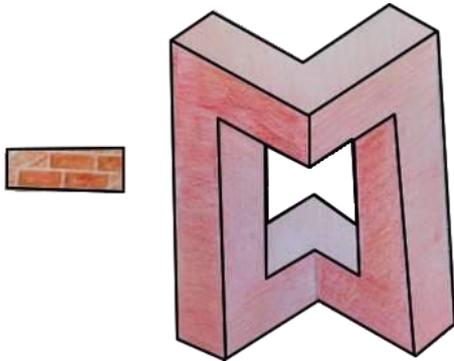
The thought of this design came from the game Jenga. I like how the building has pulled out parts instead of it just being a boring rectangle skyscraper shape. However I do not think Hilton will like this building because it is not breathtakingly good looking and neither is it unique.

This design is developed from a rectangular building into a curved one due to the though of a wave. I do like how this design has two buildings which are symmetrical and not just one. Nevertheless I still do not like this building as it is a uninteresting shape.



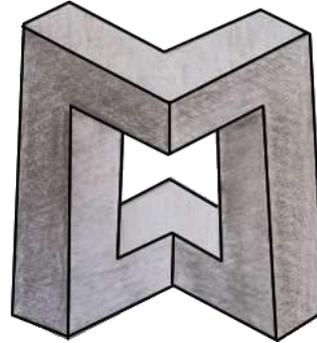
Development

Brick



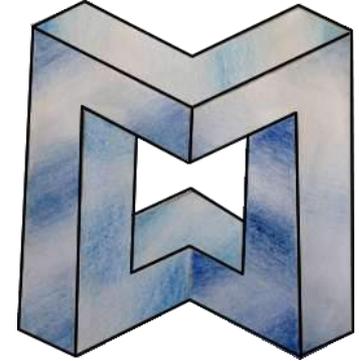
I don't like the idea of using bricks for the hotel because I associate brick being on houses and everyday structures, which you want to get away from since your going to a hotel. Also brick is old fashioned but Hilton want a futuristic design. The main advantage of using brick is that not much life-cycle cost is needed. The main disadvantage of using brick is that it can be damaged by the weather easily.

Concrete

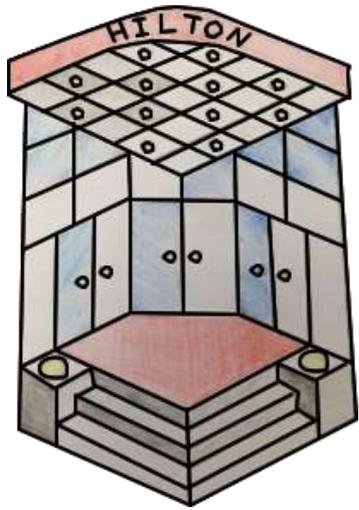


I don't want to use the original grey coloured concrete as it is bland looking, but I would use a different colour concrete such as white. The main advantage of using concrete is that it is high in strength. The main disadvantage of using concrete is that it is weak under tension.

Glass

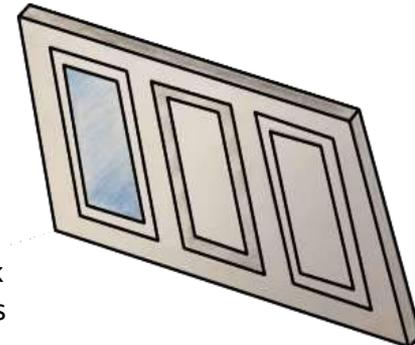


I liked the idea to use glass as it is a modern look; glass also goes with many other materials such as concrete. However, having the building made of glass would mean guests have no privacy from onlookers. The main advantage of using glass is that it looks modern. The main disadvantage of using glass is that the material is expensive.

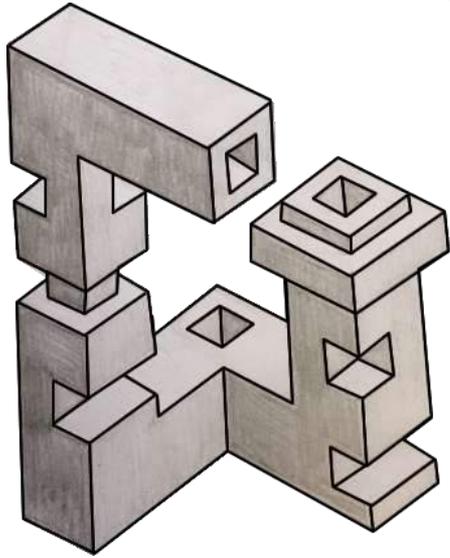


This is an idea for the entrance of the hotel. I like the idea of having different shaded metal tiles on the underside of the roof with spotlights in as it looks very modern. However I do not like the idea of the red carpet on the floor as it would easily get dirty. Also I do not like the black sign with the red background because it looks out of place, but I think that the Hilton sign should be red as all Hilton signs are red on a background such as white.

This is an idea for the windows of the hotel. These windows are awning windows(windows that open slightly at the bottom) because it keeps the rain out but also lets a breeze in. I do not like this design of windows because they are stereotypical square windows. The windows could deviate in shape to make the hotel have a look no other hotel has and that no one has seen before.

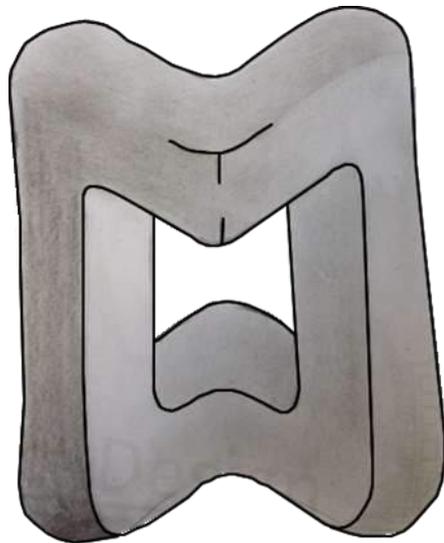
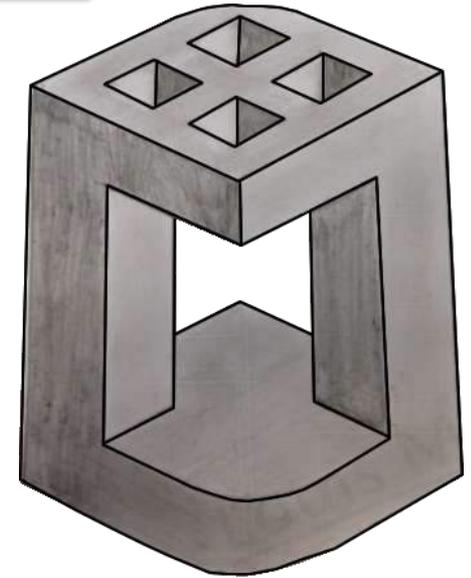


Development



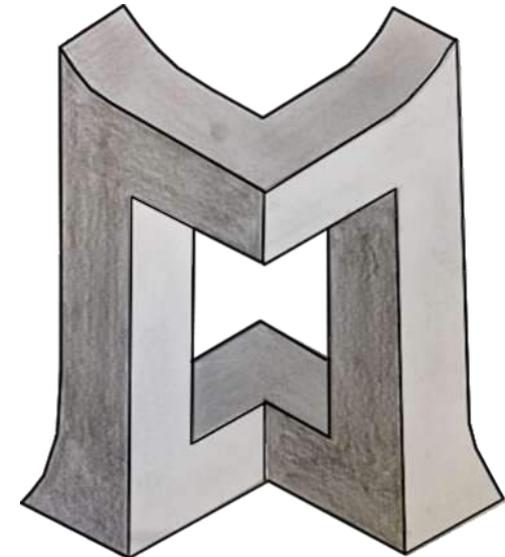
This is a development of my initial design with parts eliminated and added extra parts. I like how every single parts of the design is different, every part which has been taken out or added are varied. However the structure of this design will make it extremely tough to construct. Another bad point is that the total number of hotel rooms will have decreased due to the size being cut down.

This is a development of my initial design with a rounded bottom and a rounded roof, the roof also has four cut out square shapes. I like this design because it looks smart. The cut out square shapes in the roof give an extra kick to the design and makes it look even more exciting.

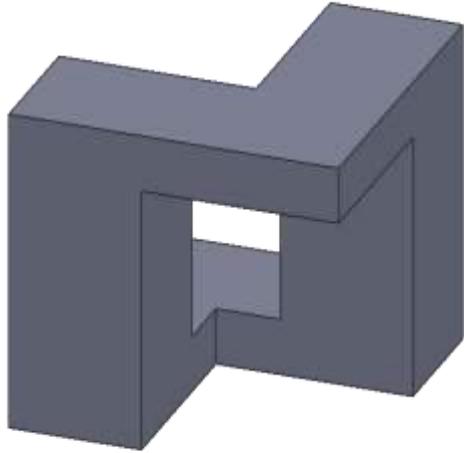


This is a development of my initial design but alternated so that the structure is rounded. Even though this gives the design a individual look the only thing that has changed is the overall shape of the building, it has changed from square to circular. Because of this I think it is a uninteresting design.

This is a development of my initial design with two of the 8 sides and roof sloped. I do not like this design because not much has changed from the original design. As a result of this change the design looks unattractive. Also this design is not high-styled and due to this it does not meet Hiltons requirements.

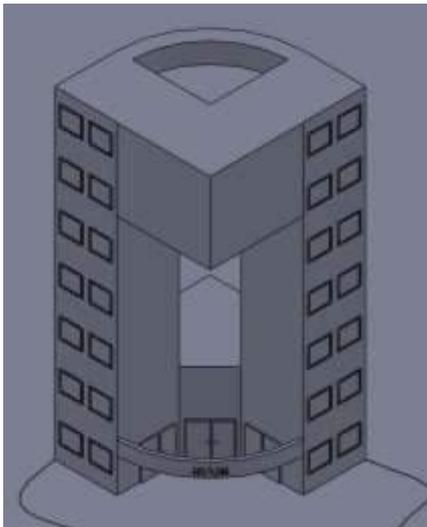
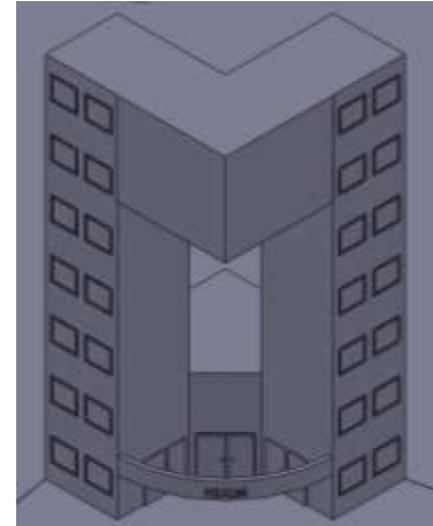


Modeling



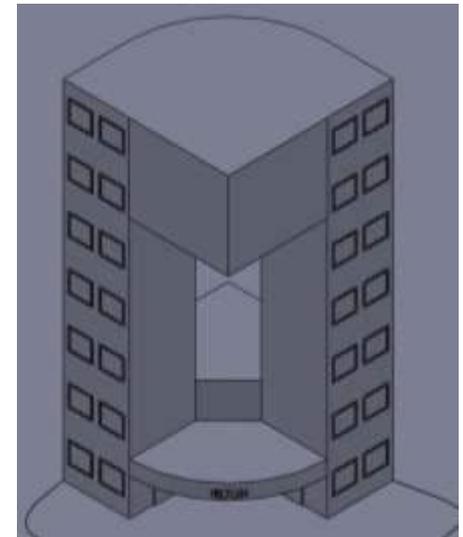
This is an idea for the basic shape of my building without any the details such as the windows etc. I do not like this shape because it is bigger width ways than height ways and I think it will look better vise versa. Also another down side to this design is that it will take up more floor space than the taller design.

I have developed this idea from the first design by making it taller rather than wider. Since I liked the basic shape of the building I decided to add all of the detail to this design. I like where the windows are positioned and the U shaped entrance is much more useful than the L shape entrance because it has more doors but on the other hand it also looks more welcoming. However I do not like the semi circle strip which the Hilton sign is on because I think it would look better if it was designed like a overhanging roof.

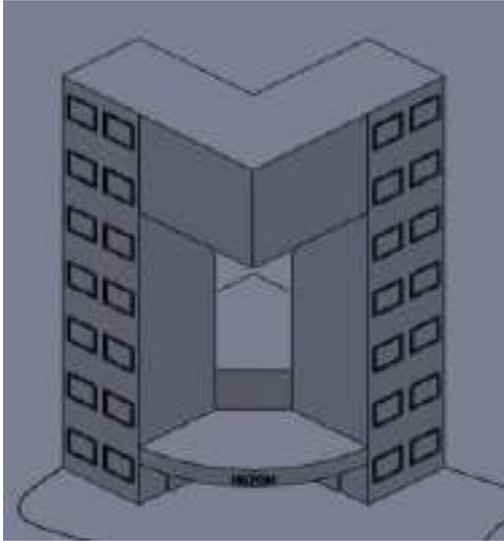


I have developed my second design into this building. Instead of having a basic L shaped roof I have joint the two ends of the L shape together with a semi circle strip. I do not like the idea of this because It is wasted material (meaning wasted money) because no one can walk through it and nothing can be placed inside of it because the strip is to small in height and width.

I have developed my third design into this building. Instead of having a missing piece in the roof I have filled it in, also I have created a overhanging roof over the entrance with the Hilton sign on it. I do not like the idea of the new roof because it looks extremely top heavy . On the other hand I like the idea of the overhanging roof as it makes the building look allot more professional and extravagant.

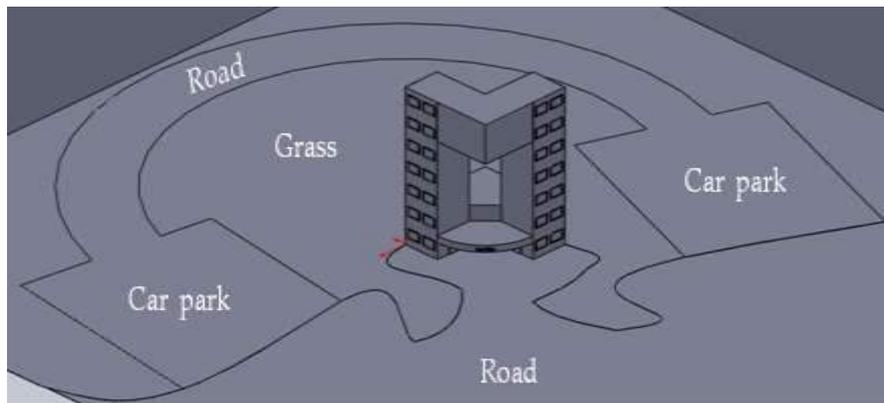


Modeling



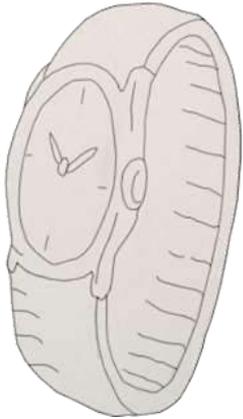
This is my final model design. I decided to keep the original L shaped roof because I like how it is pointed and square instead of rounded and circular. I also decided to choose the overhanging roof with the Hilton sign on for the entrance because of the reasons I said on the previous slide.

This is the layout of the surrounding area around the hotel. I like the idea of having two car parks either side of the hotel instead of just having one because it looks symmetrical. The idea of having the two car parks joint together is a clever idea because guests can access each car park easier if the other is full.



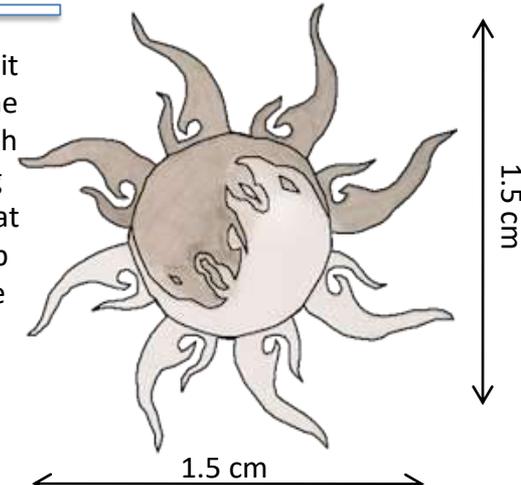
I think that the two columns will be made from light concrete because it is high in strength. The windows will be made from clear glass so the guests can see through them. The frame around the windows will be medium gloss beige to blend in with the colour of the building. The sky walk at the top of the building and exterior of the entrance is built from thick glass to give the building a unique quality. The over hanging roof above the entrance is made from shiny chrome to contrast with the low gloss plastic of the red Hilton sign , this makes the Hilton sign stand out. The underside of the overhanging roof is one large light to give the entrance a welcoming look. Finally the doors are made from thick glass and the space in between the doors and door handles are chrome.

Initial Ideas

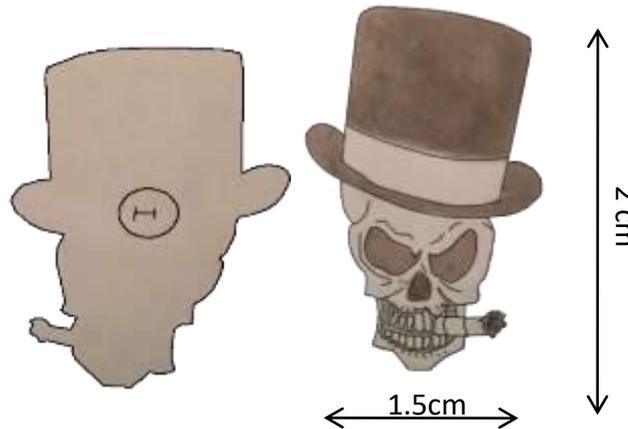


I do not like this watch design. This is because it is very dull and basic meaning it will not be eye-catching. On the other hand I like the idea of having the strap on the watch made from leather so it has olden day vintage look but this will not fit the specification because it is not modern.

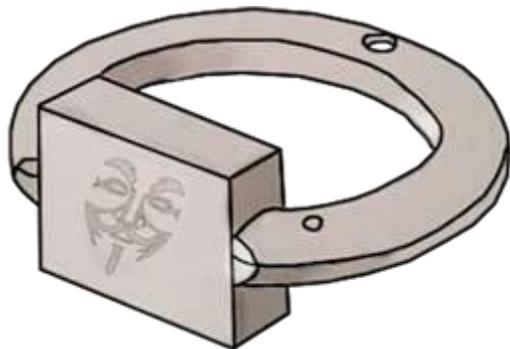
I like the shape of this earring because it is not a common look for a eye ring. The earring will be made from pewter which is coloured black and white. The thing that worries me about this design is that it could be dangerous due to the sharp points. This earring will have the same mechanism on the back as the skull earring.



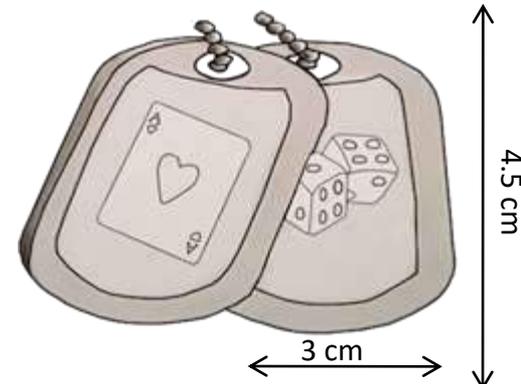
I do not like this bracelet because the bracelet looks like a handcuff which people would not like to wear. The square part of the bracelet is also a boring basic shape and could be a circle instead. However the design on the square species the bracelet up a bit and makes it have a unusual unique look.



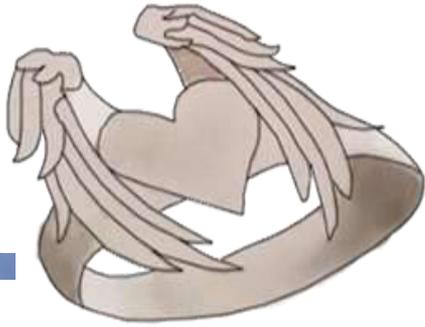
I do not like this necklace idea. This is because I associate dog tags to someone being in the army and my user has not been in the army so the necklace will have no meaning to him. However the card and dice design on the dog tags brings the design away from the bring associated with the army and more so to modern city day life.



I like the skull design of this earring because it is interesting. The colour of this earring will be black and white pewter meaning that it will not stand out so it will not fit my target user in that way, however it is a gothic design which is a interest of the user. The back of the earring is a simple mechanism where you squeeze and pull the stopper off to release the earring and vise versa.

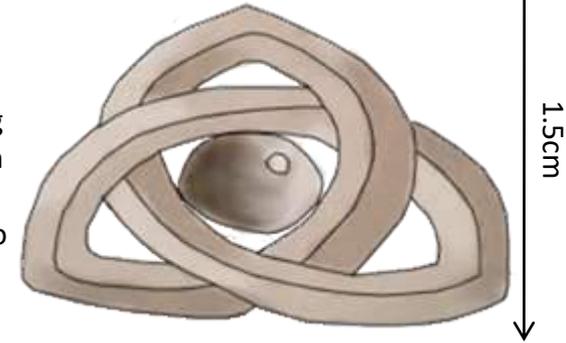


Initial Ideas



I like the detail of the wings on the ring. However I associate a heart being on women's jewellery so I do not think this will appeal to my user because he is a male. Another down side is that the wings could be dangerous as they are pointy.

I do not like this design because I do not think it is a suitable design for an earring due to the mechanism which enables you to take the earring off will be attached to the back of the jewel.



1.5cm

1.5cm

I do not like this design because it is just a plain simple circle, but an expander has to be a circle so it will fit into someone's ear. This will be made from plastic so it will not be too heavy for the user's ear. Also I associate an expander with Goths so I think the user will like this piece because he likes gothic designs.



5 cm

4 cm

I like how this is a perfect necklace design to fit my specification because it is religious and eye-catching. The centre of the cross could be made from pewter which is coloured gold to make it have an expensive look. The outer edges of the cross will be made from silver which is coloured black. However the wings of the cross will be quite hard to cast so I may remove them.

I like this ring because the shape of the ring is unusual as it is not like other rings which are just a perfect circle. It also has three jewels on which fits my specification and adds an expensive feature to the ring. On the downside I think the jewels may make the ring look like it is for women.



1 cm

2 cm

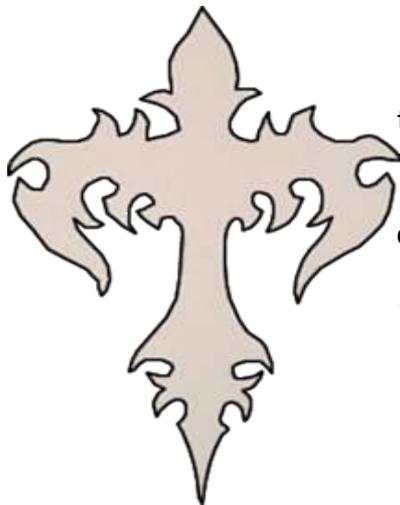
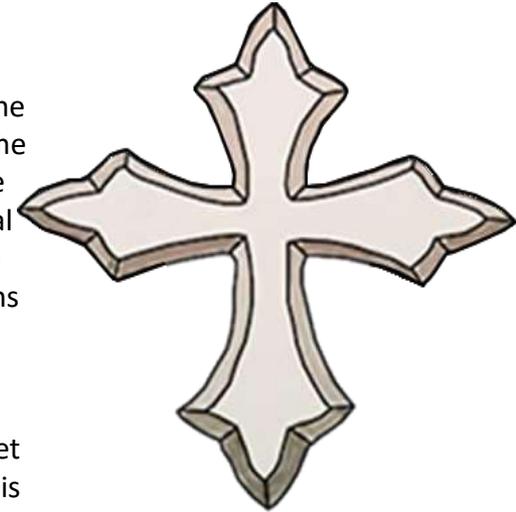


Development



This development is the same as the original design plus I have added a crown onto it now. The necklace will be created from the same materials as the original design however the crown will be made from pewter which is coloured gold. I do not like this development because it looks to crowded and also the crown will make the shape even more difficult to cast.

This development is the same as the original however I have removed the wings. This will be made from the exact same material as the original design. Since I have removed the wings from the necklace this means that the necklace will be much easier to cast. Also it will be allot easier to shape the slants on the cross because the wings will not get in the way. However I think that this design is lacking in interest.



This development is a gothic design of a cross which was inspired from flames. I think that this design is very attractive due to the altered shape of the cross. The material that it would be constructed from would be pewter which I all coloured gold. Due to the fact the complete cross will be one only one colour I think once the necklace is made it will be boring.

This development is the same as the original however it now has a jewel placed in the middle of it. This necklace will be made from the exact same material as the original however the jewel will be a plastic sapphire or diamond. I think that this design suits my specification very well as the materials used will make the necklace look eye-catching and expensive, it has a jewel on it and lastly the cross is religious but also looks gothic. For all of these reasons this will be the initial design I use.

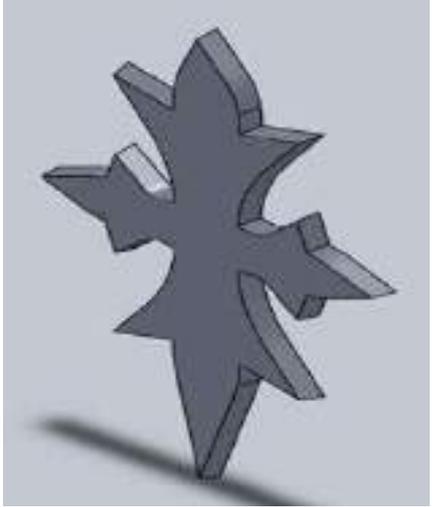


1.



This is my first mould. As you can see the runner is just a straight line This meant that the pewter could not flow into the mould and through the shape of the mould properly.

4.



This is the first solid works model I designed. I think this needs developed because it does not look very interesting and also it will be to heavy for the user.

This is the is the mould from my first modification . As you can see I have made the runner bigger in width meaning that the pewter can now flow through the mould properly.

3.



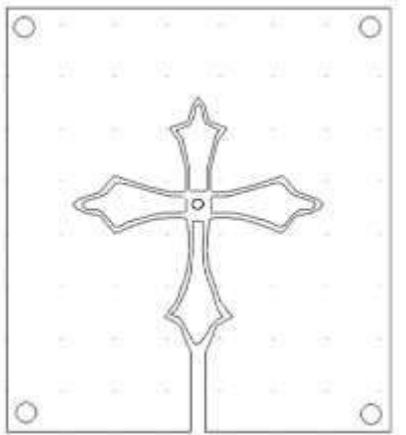
This is the product from my first modification. I think that this looks very boring and it may be to heavy for the user. I will make it more interesting and somehow lighter.

This is my mould from my second modification. This mould was to damaged and I could not take a picture of it . It did not work at all as the pewter could not flow through the outline of the cross so I will make the outer line of the cross wider so the pewter can flow through it properly.

2.



5.



6.



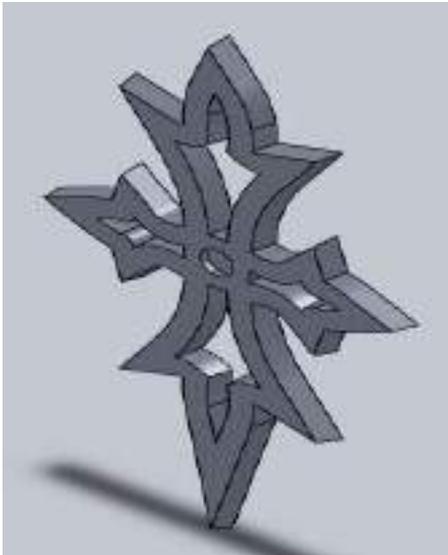
This is my mould from my third modification. As you can see I have made line outline of the cross thicker so the pewter could flow through the out line of the cross a lot easier. I think this design is very interesting and unique . But the corners of the edges are very sharp so they could be very dangerous

8.



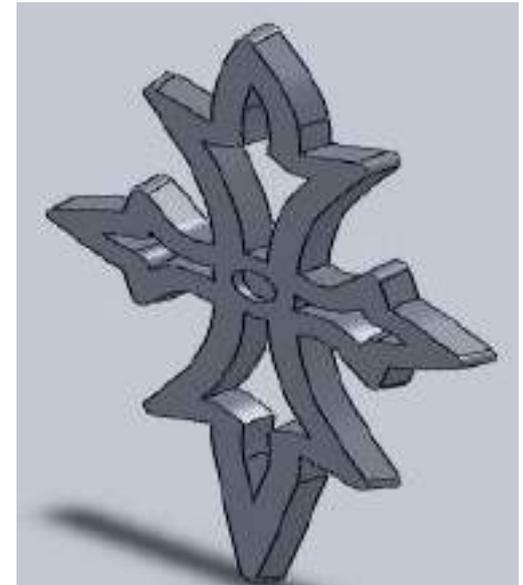
This is the product from my third modification. As you can see the sides are quite sharp and the design looks interesting. However the design will now be a lot lighter and it now can fit a jewel in it.

7.



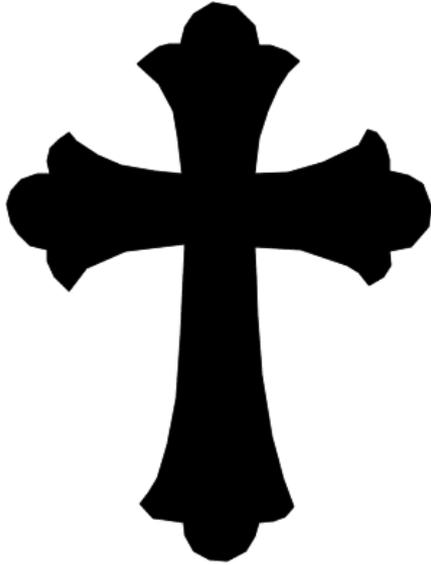
I developed my first solid works design so that the middle of all the ends of the cross were removed. Also so that the centre of the cross was hollowed out so a jewel could fit inside. I think that this model looks very realistic and professional but it has sharp edges which could be dangerous

9.



I then developed my solid works even further by curving all off the sharp sides to make it safer for the user. I did not make another mould to do this , I used a file to curve the sides instead.

Development



I like the design of this cross for my packaging as it looks gothic and also the box will have a cross necklace in, so the image of the cross on the packaging allows you to know what will be inside the packaging. Also if I place the cross correctly on the packaging it will open so that the cross splits right down the middle so it will be symmetrical on both sides.



I like the idea how it now has part of the moon in the image as it now looks not as boring as before so if the packaging was in a shop it will be eye-catching which will make the product sell more. However now it will not be symmetrical when cut in half .



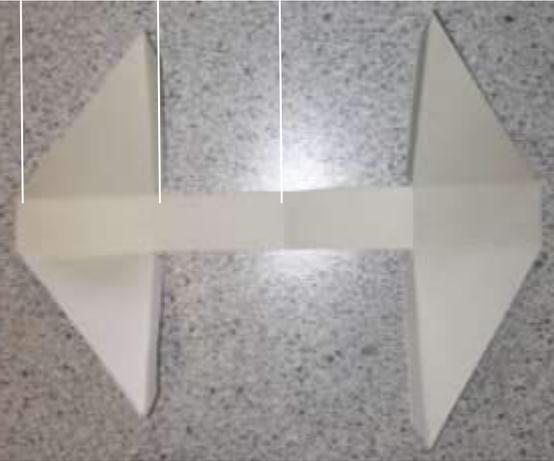
I like the idea how it now has a boarder around the cross and moon which is a perfect shape because the top of the box is square. This boarder is also very interesting but again the image will not split in two identically which I do not like.

I am going to use the design because now it will be completely symmetrical when split into two. I think this design looks gothic and the unusual design will draw people in. The black will be on a white background so that it stands out so it will be eye catching.



Development

4.8cm 5cm



This is the net for my Jewellery packaging. In the picture you can see that the two rectangles in the middles are 5 cm long however the other two outer rectangles are only 4.8 cm long. This meant that the net would not fit together properly. To resolve this problem I made the two outer rectangles 5 cm as well so that all of the rectangles are equal in size and the net went together properly.

I then developed my jewellery packaging by adding an image to it. The image I added is a black cross with a unusual black boarder around it. The cross and boarder also add to the specification as it looks gothic. Another good thing about the image is that the black stands out on the white packaging meaning it will be eye-catching. However I do think that more images could be added.

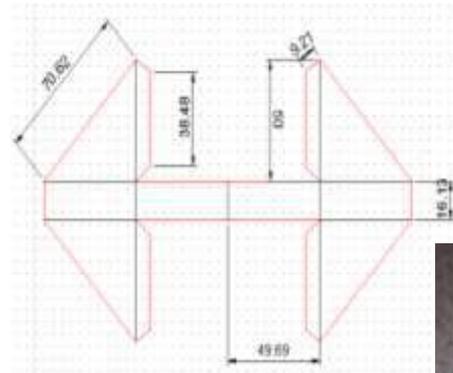


I developed my jewellery packaging by putting more images on the packaging. I have used part of the boarder on all of the sides of the box so that it looks like the it is running over the top onto the sides. I think that this is a very clever idea and gives the packaging a professional and different look. But I have realised I have not added a closing mechanism which is a key feature and the box will not fit its purpose without it. I will use a postal lock system for this.

I developed my jewellery packaging by adding a closing mechanism called a postal lock. This mechanism does not make the box look unattractive which is a good thing because people would not buy the box if it was unattractive. It also keeps the cross necklace securely inside the box without coming undone in the slightest.



Final Product



This is my final cross necklace. The cross is made from pewter which has been casted and sanded for a smooth finish to look like silver which fits the expensive-look part of my specification. The outer sides of the cross have been sanded so they are slanted and I then spray painted the slanted sides black to give a more gothic look. The necklace has 3 diamonds on it which I adds to the specification . The pewter is also hardwearing and I think that the cross appeals to a male user however the jewels chosen look like they appeal more to females. The cross has a chain attached to it which will fit round a users neck.

This is my final jewellery box for my cross necklace. The jewellery packaging is made from folding boxboard as well as the postal lock. The net of the box is stuck together by double sided sticky tape and the postal lock is also stuck on with double sided sticky tape. However the decorative art on the box is made from paper which is stuck on my glue. I love how the black gothic images contrast with the white card and also how the unusual image looks as if its overflowing from the top over the sides. The postal lock is very secure and the cross does not fall out. The only down side is that I think that the box could be a little bit smaller because the cross moves about a little in the box.