

Project Three Final Project

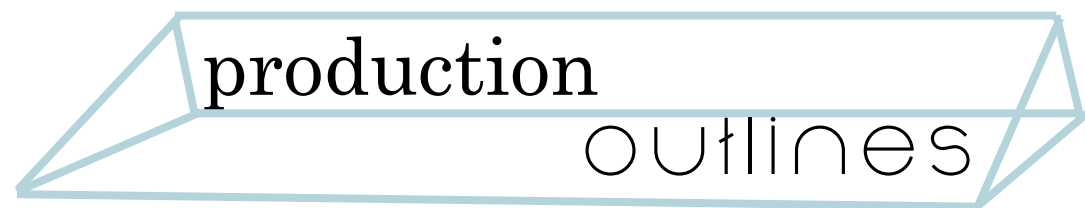
Holomina

||| 300333893



concept design

Holomina is an eye illusion lamp. It uses 2D drawing which gets illuminated by the RGB led and manipulates the drawing to make it look almost 3D, giving it a hologram like effect. Holomina allows the user to wirelessly change the colour of the RGB led, it's changeable 2D designs and by touching the casing you can decrease the brightness of the lamp. Holomina was created to inspire people and to achieve an illusionistic design. I was really inspired by Studio Cheha's Bulbing to create Holomina, I wanted to achieve the same kind of design because when I encountered it I was really taken a back how simple but ingenious the design was. Instead of replicating the design I added my own style and more functionality so that this lamp has more functions. Not only is it visually appealing, thought-provoking but it also has more functions.



_planning

I was having a really hard time coming up with an idea for my final project. I wanted to create and have a different goal that would focus on design rather than heavily focusing on functionality and need. I am considering a project that was easy to execute but still very interesting and visually appealing.

Aim: Create a different type of lamp with added functions and interaction.

Purpose: To inspire the audience and create a different type of light drawing.

Response: I hope to make people think about the drawings being used for Holomina.

_research

I did a lot of research for this project, I heavily researched on drawings and light as those were the two components that I really want to work with in this project. Light has always intrigued me, and I think the most inspirational projects that are created are the ones that use light. This project is more like a desk lamp, but it also tries explores 3D line drawings and combining it with light to produce a 3D effect to 2D images.

_concept design

Inspired by Studio Cheha's Bulbing I want to create a similar device but with more functionality and control on the lamp, I also want to make my own 2D design something inspirational and relevant to me, (maybe to some people) rather than a random or fit design. While brainstorming I thought I would focus on the map of the world as a design, purely because for my travel lust and to relate this with my first project which I was inspired to create a device that could help me save money for future travel plans. I also did a lot of asking in my community on what inspires them the most, apart from friend's family they all said travel and religion, so I thought travelling would be a good design to implement with Holomina, since a lot of people seem to also want to travel.

_stages of development

//Electronics Stage

RGB Focus

The RGB LED was chosen as my final LED type I would use purely because it can create different hues that can fit different moods and might also represent the country the user wants to go to. This was the first part of my project that I made sure I finished first.

Sound Sensor

I did my second circuit design, it was relatively easy to create a circuit for the sound sensor and coding the electronic was really simple as I did a tech tutorial using this electronic in a project before. When I tested my circuit with my code to check if it was working properly, I was able to analyse how I would integrate the RGB circuit with my sound sensor circuit. To dim the light for 20 seconds.

Connect to the internet

Using the application Blynk I made my arduino communicate with the user using their personal device (phone, computer, and tablet) and allow the user to change the colour of the lamp wirelessly. I did several test to see if this was working properly and efficiently. I also want to further implement a way for the light to turn off for a certain duration and then would turn off if the timer has reached the number set by the user.

Design housing

For this project I created my own housing rather than buying an existing object. Therefore, I did a couple of 3D designs so that I have a rough idea on what my housing would look like and create this housing using a 3D printer. I will be using a gold like filament to create my design because gold looks elegant and can blend with any colour.

//Assembly Stage

3D print

I 3D printed my housing because this is the easiest way to create my housing, and it also allowed me to learn a new skill as I've never 3D printed before. I decided to give it a hexagon shape because of the hologram effect I want the housing for my project to have a different shape that almost has a futuristic theme but still simple, hence why I chose a hexagon shape, which was really good to use.

Laser cut

I laser cut my glass design using an acrylic glass, purely because they are good light conductors. The last printing machine only accepted acrylic glass so there was also a limitation on which type of glass to use. I also learnt this new skill as I've never laser cut before.

Final Package

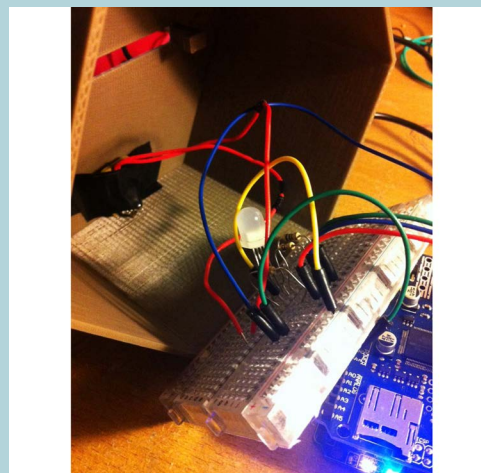
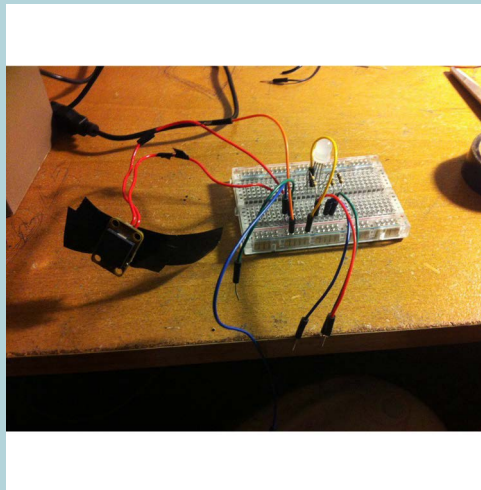
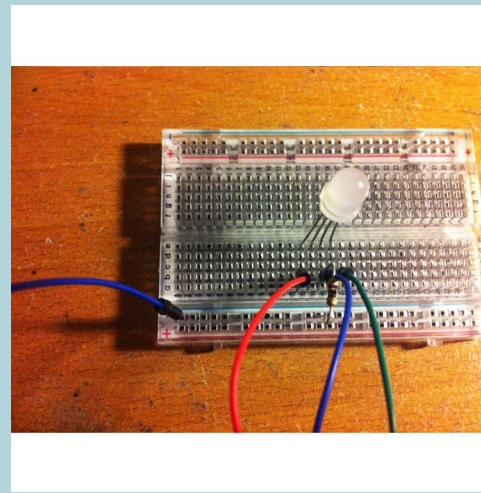
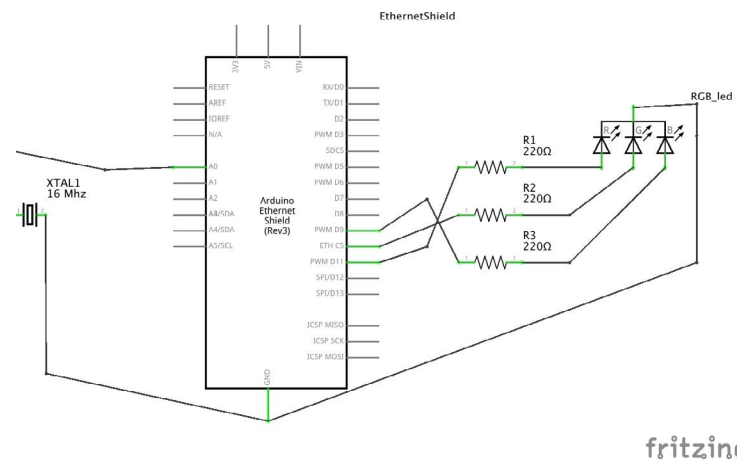
This project has got to be my favourite purely because I learnt a lot of new important skills and it also allowed me to think creatively and to create something different rather than my usual take on projects which is to create something to make my life easier. This project's purpose is to inspire me and hopefully others too, create an awe for 3D and fool people to think it's actually a Hologram.

_testing

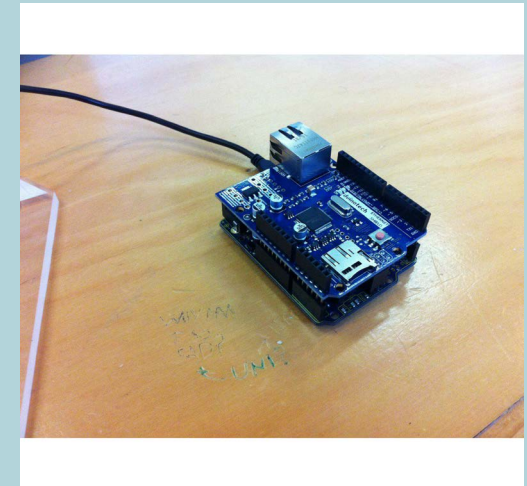
I tested my project by using it multiple times in different environments that might affect Holomina, so I played with the tapping to check if the sound sensor was working, I also checked if the LED would decrease if it was touched. I also tested the internet connection with my lamp.

_evaluation

Overall I am pretty happy with the outcome of my work! I think the design is really beautiful and elegant and the functionality of the lamp makes it really useful and advance compared to ordinary lights. The things I want to develop with this project is to create a better line drawing because the way my world map looks doesn't look absolutely 3D, so I would make more drafts and make sure the designs and the iterations would actually look 3D so that when it is combined with Holomina it would look like a hologram than just a standard glowing line drawing.



photos



assembly

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