University of Moratuwa Faculty of Engineering

Module EN1190 - Engineering Design Project

Water Level Sensor Final Demonstration

Group:- EN-14 Team BROV06

Department of Electronic and Telecommunication Engineering

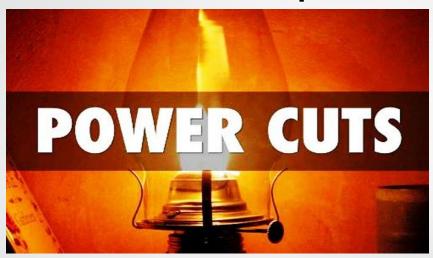
TEAM DETAILS [TEAM EN-14- BROVO6]

NAME	INDEX NUMBER
MADHUSHAN R.M.S.	200363R
MADUSAN A.K.C.S	200366E
MALANBAN K.	200373X
MANIMOHAN T.	200377M

Department of Electronic and Telecommunication Engineering

Problem In some houses, they have tanks at the backyard of their houses, and they may be far. So that, it is hard to hear the overflowing sound of the tank from the house. Then after switch on the motor, they have to go somewhat near the tank and wait until they hear the overflowing sound.



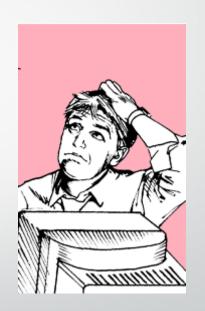


In these power cut days, what if their water tank is also empty. They can't refill at that time and without power and water it will be horrible to be in the house.



If a person is living alone in his house and the water tank is empty while he is the bathroom or toilet, what will he or she could do. It will be more uncomfortable to them to come and switch on the water tank.

At night time you are watching TV or doing some office work or playing mobile games and you have forgotten to switch off the motor. Then the motor will work for some more minutes.



Motivation for selection

There is a need of solution to handle following problems

- Water wastage.
- Power wastage.
- Motor coil will burn.
- Water level in well will get below the water pump inlet pipe and then you can't refill the tank if it got empty after some hours.

As Engineering graduates, We have the responsibility for find the solutions. That's why we motivated

Technical Feasibility

Inexpensive



Be easy to assemble. This eliminates the necessity for a highly functional software. (Just Bluetooth data receiving app)



Store the energy that we can use power for during power-cut also..(Re-chargeable)



Low Power consumption.



Technical Specifications for your product



The product has low power consumptions. (5 to 12 V D/C) (Rechargeable)



The product has low weight. That's why fix or hang it easily (450 g - 600 g)



No threats.
No pollutions

Technical Specifications for your product



The product can share the Bluetooth signal with same strength for 24 hours

for 24 hours



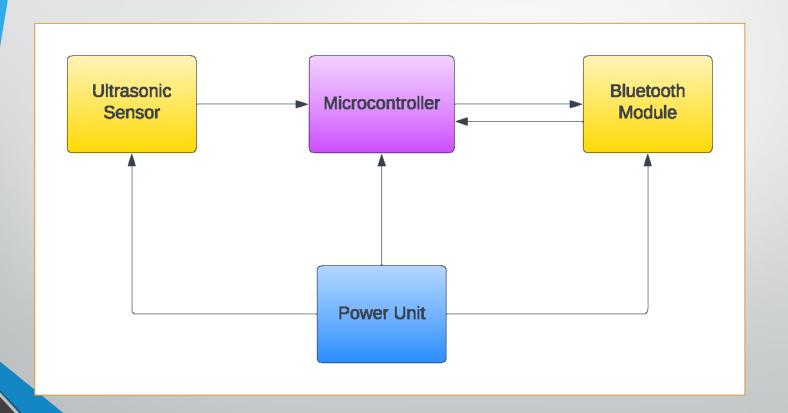
The product can be manually controlled.



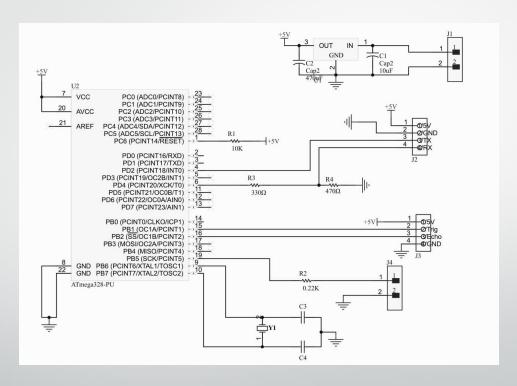
The product is more effective
Within a100 m radius.

willill alou ill ladius.

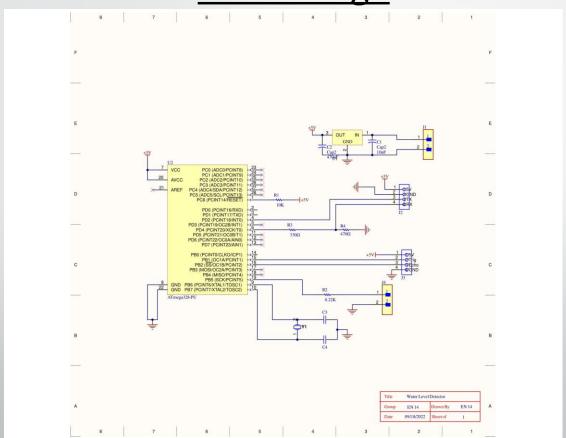
Product Architecture



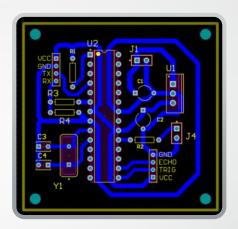
Circuit Diagram

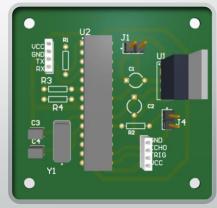


PCB Design

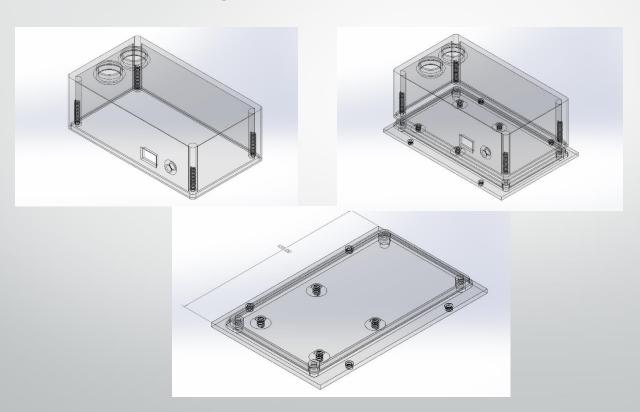


PCB Design





<u>Finalized sketches</u> <u>of the product enclosures</u>



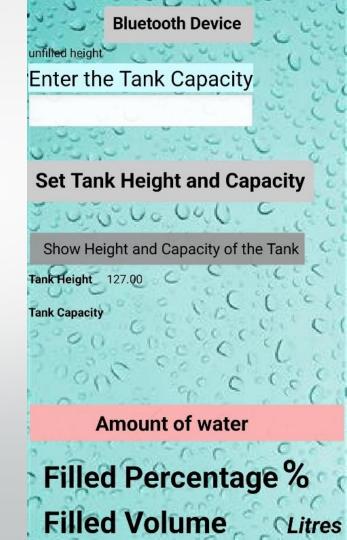
<u>product</u> <u>enclosures</u>

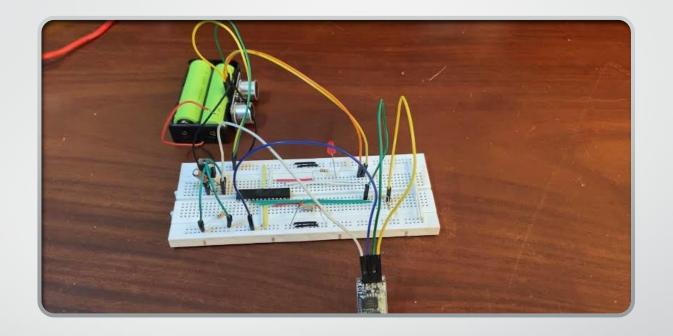


<u>UI Design</u>

Link:-https://bit.ly/3T5Wd2W







Breadboard Implementation

Product Packaging

Cardboard box with polythene cover wrapped seal



• Inside box(to keep device fits to space)

Details to be printed on the box

- Company Logo and Product name
- Images of the final product
- Price of the product
- Warranty period
- Technical specifications

Inside Box

- User Manual
- Warranty Card
- Our Device

Marketing

Promotion

- Through animated videos or GIF image ads
- Facebook paid promotion or ads
- Paid ads in websites using google ads
- Through Posters and Flyers

Sales

- Through company official webpage
- Through dealers





Online shopping platforms

ebay







Questions and Answers Session



THE END of Detail Design Project Proposal

Thank you!

EN- 14 Team_Brovo6

Department of Electronic and Telecommunication Engineering