**PROJECT TITLE**

**Monitoring and Managing of Home Electronic Devices through IOT**

**FYP Project Proposal**

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**Monitoring and Managing of Home Electronic Devices through IOT**

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# INTRODUCTION:

Home automation is a network of home appliances. It is a way of accessing your electrical home appliances at your fingertips. With home automation, we can now access our lights and fans and every other electrical appliance prevailing in our home with one click. Do you want to switch off your lights? Just click the button within the application and the blub goes off, you don’t manually need to turn the switch off. With Home Automation now all your electrical appliances are in your pocket.

# PROBLEM STATEMENT:

One of the major problems prevailing in society is the problem of water. As we are aware that every fourth house in Pakistan faces a problem that water in their home tanks runs low and the people of the house are unaware of the situation. Which deliberately results in the shortage of water within the home.

# PROPOSED SOLUTION:

We will develop a digital assistance app, which will monitor, through various sensors, the level of water both in the underground tank as well as the main supply tank of the house. The digital assistant will keep track of the water levels and will ping alerts and warnings to the application user who can automate the water supplying task or the application will provide the contact details of the water suppliers so they can be contacted as per the need.

# PROJECT SCOPE:

* + Automated monitoring of the water levels of the house water tanks
  + Control and management of the electrical devices of the house which includes the lights and fans of the house.

# WORKING:

The whole system is divided into two parts the hardware and the software. In order to solve the problem of water monitoring we will integrate our sensors in the house water tanks. The sensors will be responsible for the mapping of the water level with in the tank. If the water level of the tank gets lower than alert water level set by the user then the sensors will generate and interrupt which will be received on the application with in the user’s smart phone.

On the other hand, through our application the user will be able to set an alarm percentage for the water levels at which an automated generated message will be send to the water suppliers.

We will also be targeting the water pumping motors integrated with in the homes and societies prevailing in Pakistan. For the solution we will integrate a switch with the water pumping motor’s switch. The sensors integrated in the water tanks will measure water levels and if the water tank is near to overflow the sensors will ping the application which will send a ping to the switch integrated with the switch of the water pumping motor and the motor will automatically be turned off and the water inlet supply will be cut off.

Same scenario is applied to switch on the water pumping motor. The sensors will measure the water levels and generate an interrupt to the application if the water levels in the tank is low, which in return will generate and interrupt to the switch integrated with the switch of the water pumping motor and thus the motor will be started automatically.

On the software side the user will be able to set the schedule for the motor to be automatically turned off or on. The user will also be able to permanently turn off the switch of the water pumping motor.

Lights and Fans will be automated via application i.e. The user will be able to switch the lights and fans on or off through application. on the toggle of the button the application will generate an interrupt to the switch attached to the fan or the light to switch on or off.

# COMMERCIAL BENEFITS OF THE PROPOSED TECHNIQUE:

Home automation has made life much easier over the period. It provides you access to your electrical devices over the internet. We provide you with a lot of benefits through our project.

1. After installation of the devices, you won't need to worry about your water supplies anymore. With our automation, we have provided an automatic alert system for your water tanks.
2. As we all know that the problem of water is one of the most concerning problems prevailing within Pakistan. We will eradicate the problem of wastage of water that takes place in the scenario of water overflowing when using water pumping motors by giving the users an upper hand to schedule the timings of the motor i.e., the user will be able to schedule when the water pumping motor need to start and on which day. Also, the electric supply of the motor will be cut off if the water tank is near to overflowing.