**CHAPTER 2: OVERALL DESCRIPTION**

1. **Product Perspective:-**

The product is only meant to work with water. Moreover, this system/product is fully automated. Thus, it is independent from end-user interaction, interface and so on. All operations are performed by microcontroller on it own.

**2.1.1 Hardware Interface:-**

* Arduino Uno Microcontroller
* Ultrasonic Sensor
* Jumper Wires
* Male-Female and Female-Male wires
* M/F , M/M, F/M wires

**2.1.2 Software Interface:-**

* Editor: Arduino IDE

**2.1.3 Operations:-**

All the operations will be carried out by ARDUINO(Microcontroller) itself, the list of operations are given as below:-

* Measuring the density of traffic for particular lane/junction.
* Automatically allocating or updating time for particular lane.

1. **Product Function:-**

The major functions include:

* Stops the pumping motor when the tank is filled with water.
* Alerting end-user through buzzer when tank is filled with water.
* Automatically powers off motor in absence of end-user.

1. **User Characteristics:-**

This product does not requires user interaction at all. It will work on its own, end-user will sometimes need to monitor the water level displayed on display panel.

1. **Constraints:-**

* The project may get effected due to environmental assets.
* LED may fail anytime because it is electronic device.
* Ultrasonic sensor may fail anytime.
* Arduino may fail anytime.