**WATER MANAGEMENT ANDROID APPLICATION**

**TEAM**

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## 1 Introduction

A water meter is used for calculating the amount of water that is used by a particular household.

## 2 Description

The water meter works just like an odometer works. The flow of the water would turn spindle which in turn moves the meter and thus measuring the amount of water used. The amount could be calculated in terms of Litres, Gallons or m3 of volume (normally 1 unit = 1cum or 100 ltrs) which isn’t important for the development of this project but we would need to give all these options when making the application.

A smart water meter management is the need of today when we are discussing smart cities and many societies are taking up the practice of installing water meters for every house. The smart water meter would be helpful for timely and accurate billing of the water meters.

## 3 Objectives

The water meter app should be able to have the basic functionalities that will be discussed soon. Apart from that there are many further developments that can be taken up for this purpose. The app would be used by a S.S.C. pass person. He may not have proper education but we need to assume that he knows how to operate a smartphone.

### 3.1 Functionalities

1. Admin login (One admin can be related to one society only)
2. Admin is able to add new members to a society. (Any Society will have fixed numbers of dwelling units however the numbers of dwelling units will change for each different society. )
3. Member can view the his history of consumption of water in last 13 months in a proper format. Users should be given a login too.
4. Water meter reading to be taken by a particular person.
5. Report should be generated with statistics. (Advance feature)
6. Billing according to the amount of water used.

### 3.2 Requirements

1. Admin, after signing in would have an option to read the water meter levels of his own house. Or he should have an option to add a new member. Admin should have a name secretary\_<society\_name>. This account will have all the permissions as mentioned.
2. New member would have the following details:
   1. House No. (Comprised of alphanumeric characters. Format being \*\*-\*\*\*\*, where first two characters are alphabets from A-Z and the last four digits are number from 0-9)
   2. Initial (Zero) water meter reading
   3. Rate of water (**IMP**)
   4. No. of persons in the house
   5. Phone number
   6. Bill paid or unpaid (**IMP**)
3. Member after signing in should be able to view his history. He will only be able to see his history at any given point of the month.
4. Water meter reading process includes three things:
   1. House No
   2. Water meter reading
   3. Photograph of the water meter
5. Once every month after the reading process is completed the members should get a notification on app as well as a message stating the following details:
   1. Monthly consumption
   2. Last water meter reading
   3. Current water meter reading
   4. Total amount payable
6. The admin should get the report of all the houses in table format with the same fields discussed above along with his on house.

### 3.3 Advance Features

1. Online payment of bill to the society’s bank through gateway directly from the app.
2. The report so generated should be on the society letterhead and should be in a printable format.
3. Automatic reading using image processing just by clicking a picture.
4. Optimizing the time taken to upload images to server.