H_2O-
Integrated Water Conservation System

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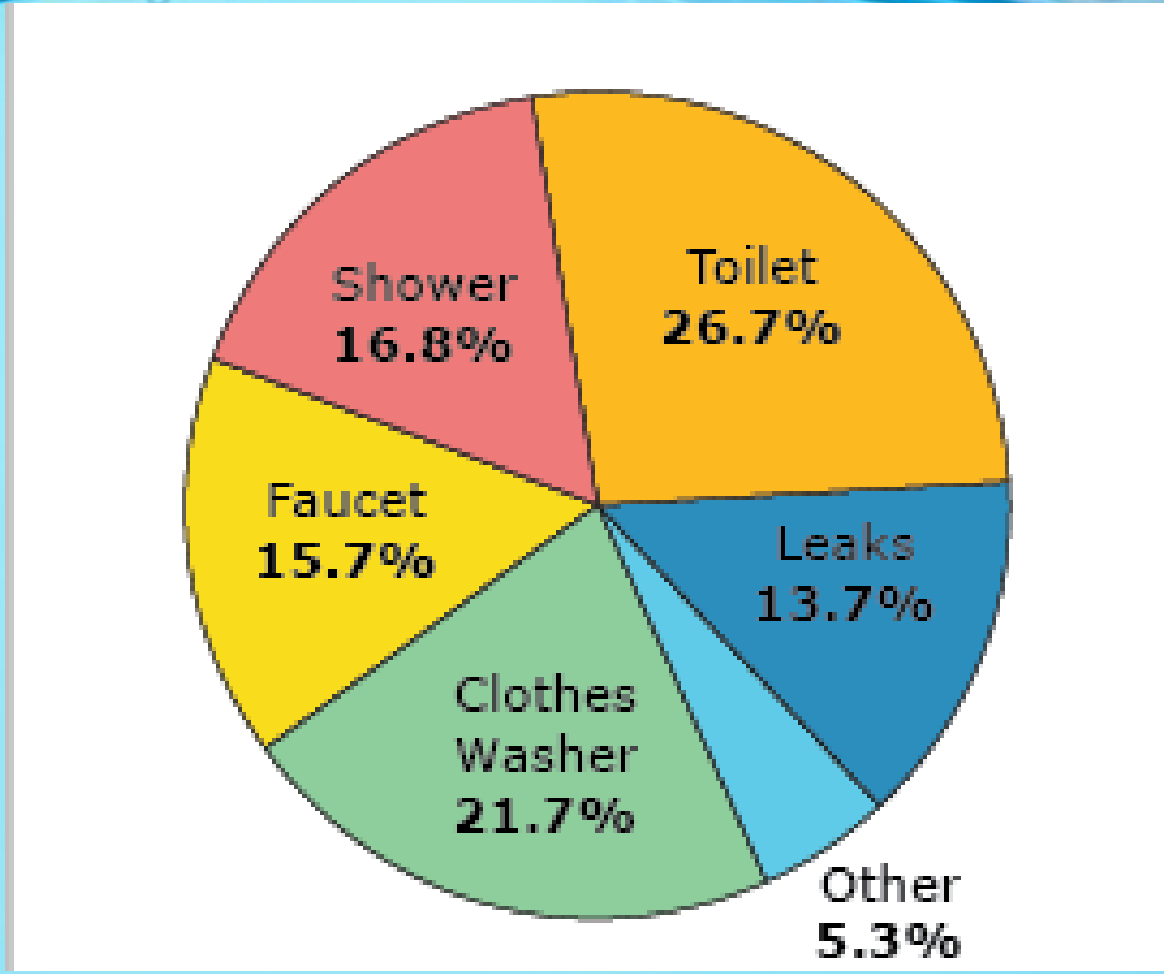
Introduction

Water is a very important necessity of life. However, large amount of water is being wasted in our daily life with various domestic activities and have led to its shortage. H_2O has made it possible to save water in each and every pace of our daily life in a systematic and mechanized manner.

How much water do we use?



Components Used

- Arduino Uno [Microcontroller based board]
- BC547 NPN transistors
- Motor Pump(3V-6V)
- Ir Transmitter & Ir receiver
- Soil Moisture
- Wires, Pipes, Tubes & Stationeries

Exhibit -1: Automatic Tap

Objective

- In our daily life lots of water is being wasted due to improperly closed taps, intended wastage and its other inefficient uses.

- *With* H_2O, this wastage is reduced to a great extent with least manual efforts.

- This could be used in Public Taps, Homes, Community Taps

Exhibit -1: Automatic Tap

Working

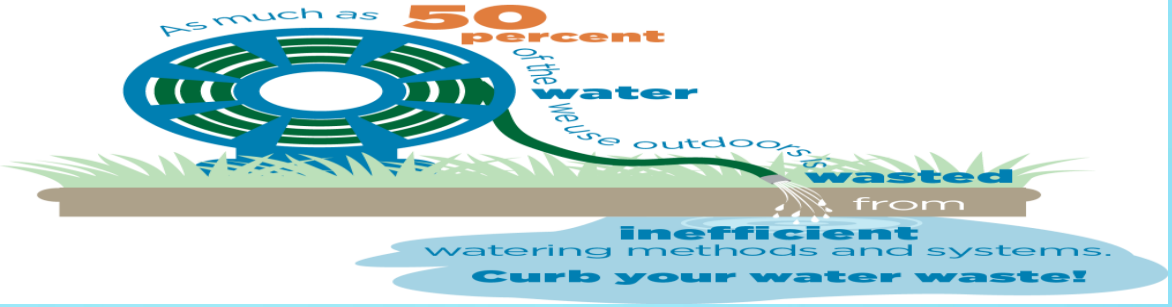
- It consists of an ir transmitter and an ir receiver aligned to each other in a line.
- The Ir Transmitter continuously transmits encoded data and Ir receiver receives and decodes it.
- When we seek water this transmission is blocked.
- The Arduino senses it and activates the pump to provide water.

Exhibit-2:Filtration unit and Automatic Pump

- Large amount of water is wasted in our daily life due to motor overflow.
- Further, mildly used water could be recycled to be used again using a filtration unit in this water scarce scenario.
- H_2O, satisfies this by sensing the water remaining in the tank. It also filters and recycles the used water efficiently.

Exhibit-3: Automatic Irrigation System

- Outdoor irrigation accounts for most of the water wastage in our daily life.



- H_2O solves this by using its automatic irrigation mechanism.
- It senses the moisture content by measuring the soil conduction and inputting it to the microcontroller which irrigates appropriately.