# Automatic Irrigation System

The project aims in designing a smart irrigation system which is capable of detecting moisture level in the soil and capable of taking the decision of switching ON/ OFF water motor automatically using Arduino UNO..

The system makes use of an Arduino UNO microcontroller. Soil moisture sensor, water motor along with relay are interfaced to the Arduino. The microcontroller will continuously compare output from soil moisture sensor. When there is no moisture in soil then microcontroller will turn ON the water motor through relay and that shown on lcd display. There is sufficient water in soil microcontroller will turn OFF the water motor automatically. The Arduino is loaded with a program written in embedded 'C' language to perform the task.

**Features:**

1. Automatic irrigation using soil moisture sensor.
2. Relay switch-based water pump control.
3. Using Arduino to achieve this task.

**Main blocks in this project:**

- Adapter power supply.
- ARDUINO Microcontroller.
- Relay with Water Motor.
- Soil moisture sensor.
- LCD.

**Software's used in this project:**

1. Arduino IDE studio compiler.
2. Express SCH for Circuit Design.
3. Embedded C language.

**Block diagram:**

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