

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

The author completes this project with the following steps:

1. Search for References.

At this stage, the authors look for reference journals of existing projects, to be developed and to address similarities in project creation.

2. Prepare the Device.

The author prepares the required devices, namely Arduino Uno, Ethernet Shield W5100, RJ45 cable, Water Flow Sensor, two Water Level Sensors, Servo, Water Pump, two Infrared Sensors, Rain Sensors, male-female and male-male jumper cables, and Breadboard.

3. Find and learn how to use sensors and search for IoT servers.

After setting up the device, the next step is to check and learn how to use Water Flow sensor, ethernet shield, water level sensor, rain sensor, servo, water pump, infrared sensor and arduino. And the author found Domoticz as IoT server. The next step is to try Pub / Sub in the IoT server. Once everything is in search and studied, then go on making project.