

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### 1. Literature Studies

The first step in this project is to collect project related information. Project related information is obtained from internet in the form of journal. 4 journals related to Naive Bayes method, 1 related journal IOT and 3 journals related to DHT22 sensor. Related information is also obtained from the book Data Mining for Data Classification and Data Clustering by Dr. Suyanto, S.T., M.Sc.

#### 2. Preparing The Tools

The second step is to prepare the tool. Prepared tool is temperature sensor DHT22, Arduino Uno, Arduino cable, Breadboard, Female Male cable, Male Male cable, ESP8266.

#### 3. Assemble Tool

The third step is to assemble the prepared tools. Arduino Uno as the main component in connecting with ESP8266 with Female Male cable. ESP8266 runs on voltage 3.3 (maximum 3.6). Connect the DHT22 sensor to the breadboard using Female Male cable. DHT22 can run on voltages 3 through 5. Connect Arduino Uno with breadboard.

#### 4. Arduino Uno Programming

The fourth step is to program the DHT22 and ESP8266 Sensors via Arduino Uno. Arduino Uno already in the raft is connected to the computer using Arduino cable. After that enter the program for ESP8266 and DHT22 sensors so that DHT22 can send data via ESP8266 to the server Thingspeak.

#### 5. Creating a Program

The fifth step is to create a program. Tools used are PHP. The program can retrieve existing data on the Thingspeak server and store it in text. The data in the

form of text in though by the program with Naive Bayes method so that data can be classified and generate output in the form of tables.

#### 6. Project Report

Step six is Typing Project report. Typing the project report is done after assembling the tool, programming the Arduino and creating the program. Project reports use the format prepared by the University and use English.

