CHAPTER 4
ANALYSIS AND DESIGN

4.1 Analysis

In this project, the author uses mosquitto as server, bash script and php language. Php Programming is used to create a username and password. The author uses bash script because php can not control terminal. Bash script works to add username and password and reload mosquitto configuration, because to add username and password on server side, mosquitto configuration need to reload and must use terminal. Bash script retrieves username and password data from txt created php and bash script will reload mosquitto configuration every 10 seconds. Php needs paho client to receive data from arduino. Paho client makes from java script. This server can access from global ip but this server is still not listed in dns.

4.2 Design

Login and Sign up php

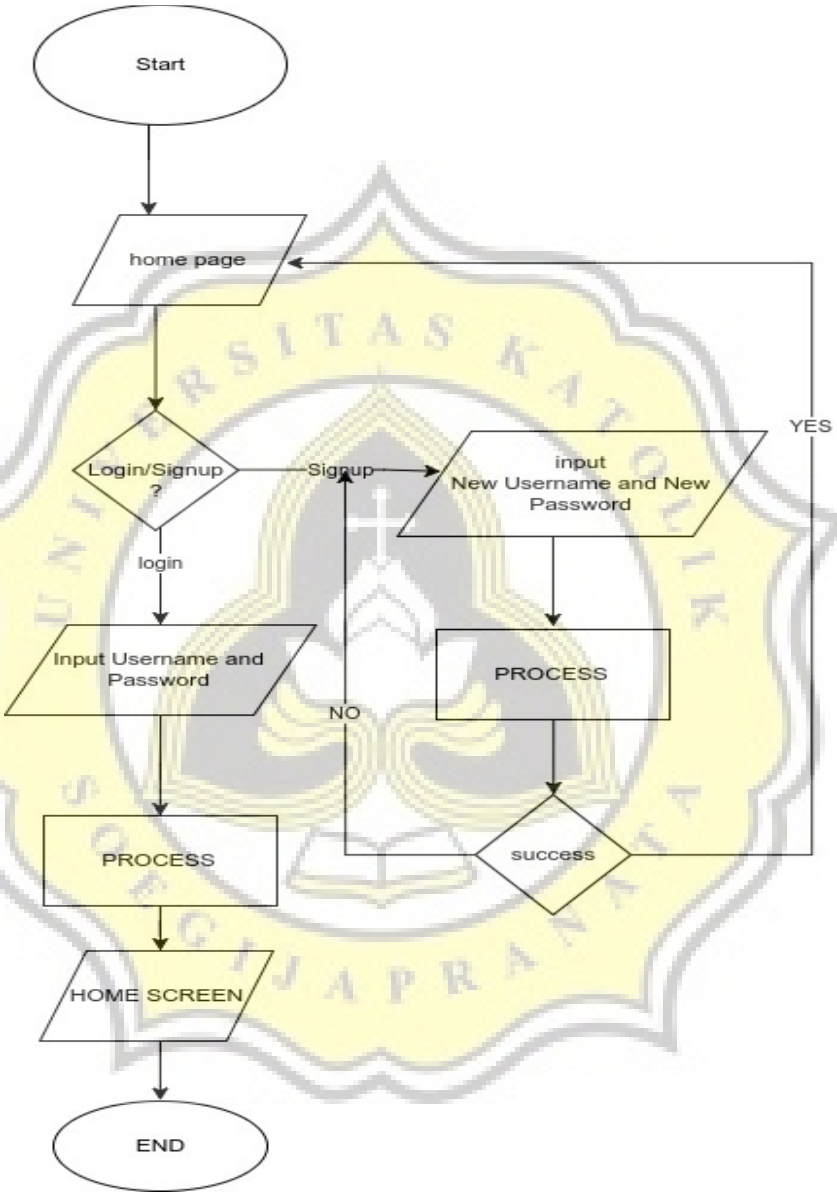

Illustration 4.2.1: login & signup

First, the user will choose to login or register, if user chooses login, login form will appear and user can login using their account, but if user choose to sign up by filling up the sign up column.

User Subscribe

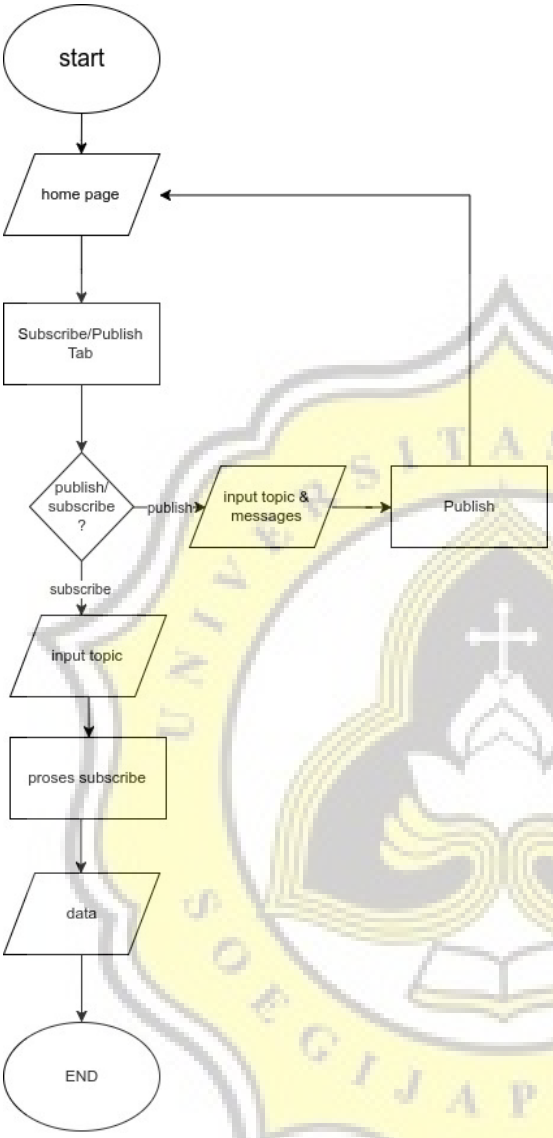

Illustration 4.2.3: subscribe & publish

user search

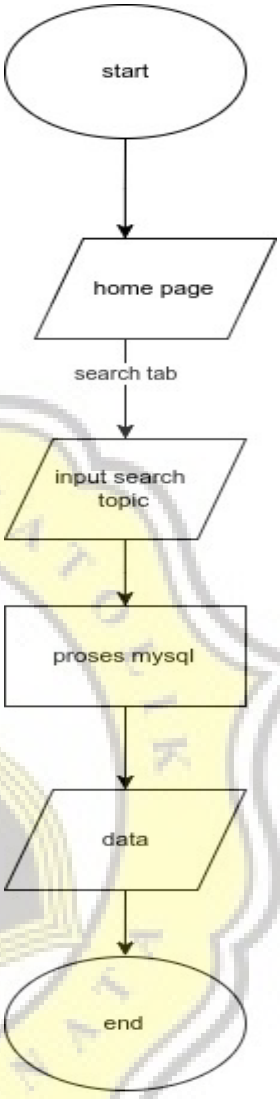

Illustration 4.2.2: search

After the user selects the input data menu there are two first option is subscription, the purpose of subscription is to receive sensor data from arduino by using the topic that has been predetermined in arduino. Secondly if the user wants to publish there are two columns, the first column is used for the topic id and the second column for the message.

On the search tab the user can search their data.

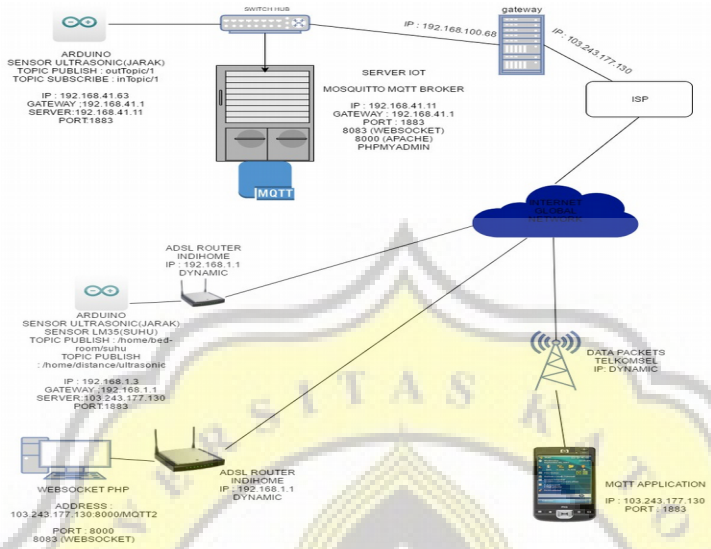

Illustration 4.2.4: server mosquitto

1. First, the arduino sends the sensor data over the internet to the server
2. After that process the server and send data to client via internet
3. The client subscribes to the same topic on the arduino sensor
4. The client receives data from the server