Smart Waste Management System

Installation:

Python installation:

sudo apt install python

Required modules:

1) Adafruit-MCP3008 : Python code to use the MCP3008 analog to digital converter with a Raspberry Pi.
   pip install Adafruit-MCP3008

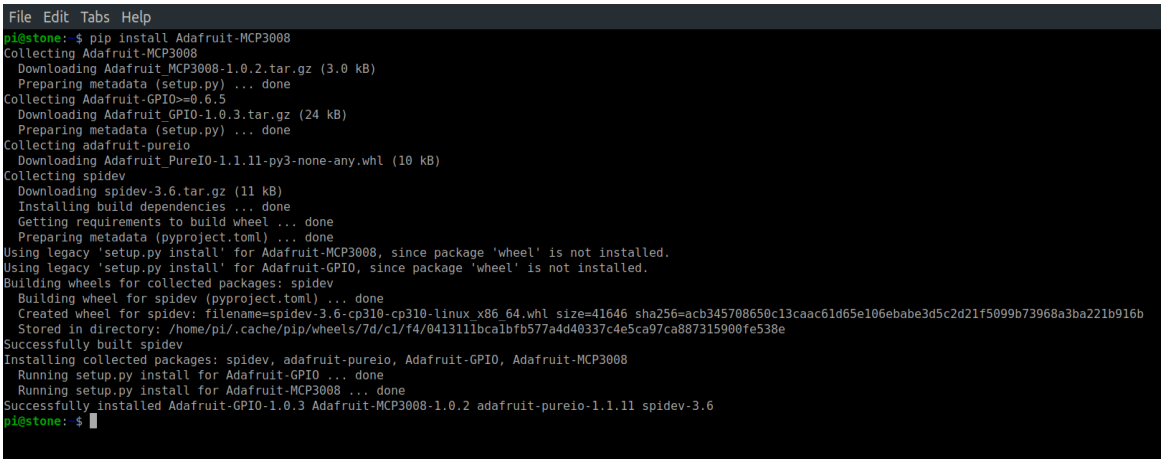

Figure 1 : Installation of Adafruit-MCP3008 module

2) RPi.GPIO : A module to control Raspberry Pi GPIO channels.
   pip install RPi.GPIO

3) Flask : A simple framework for building complex web applications.
   pip install flask

Figure 2 : Installation of flask

Execution:

web application can be run by executing the following commands

cd final-site

Figure 3 : Going in to final-site directory

python app3.py

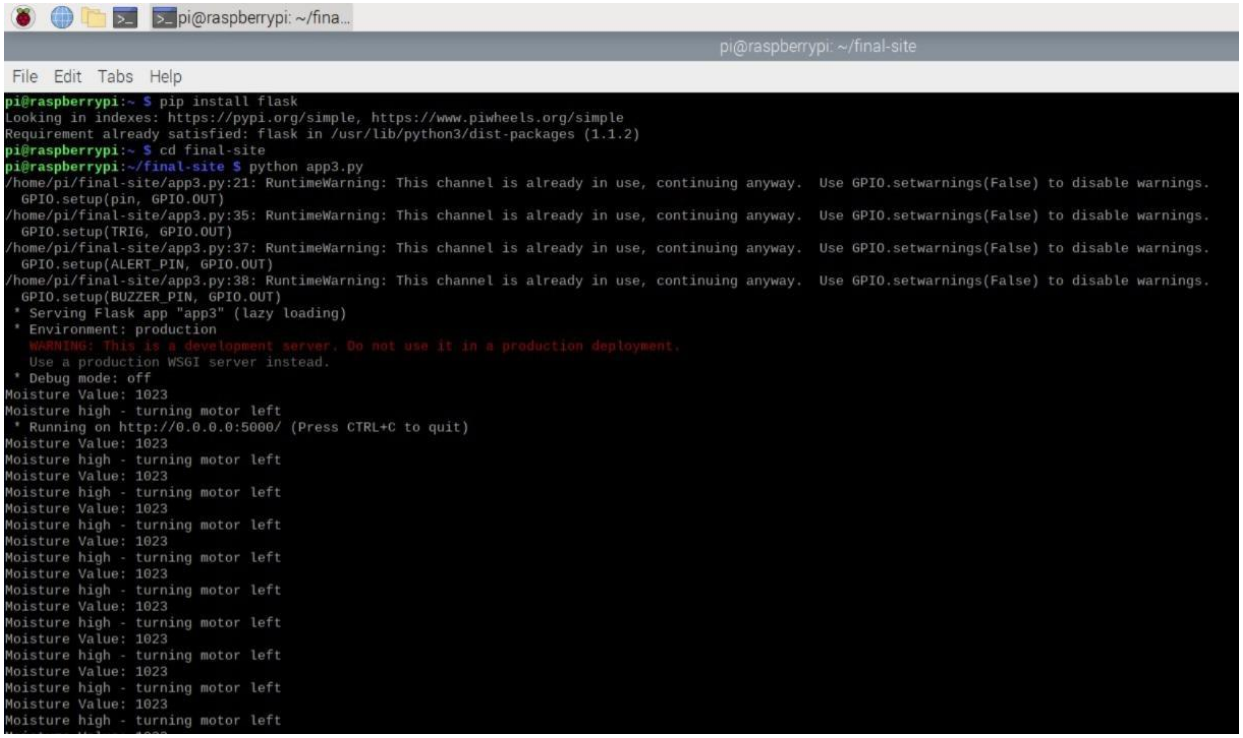

Figure 4 : Running the website

Login page

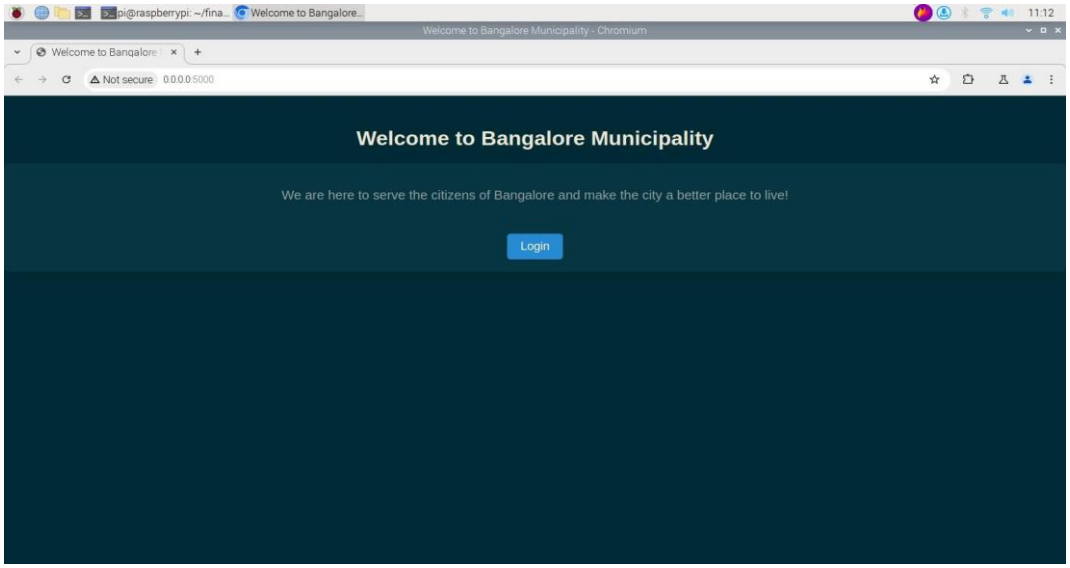

Figure 5 : Opening website and logging in

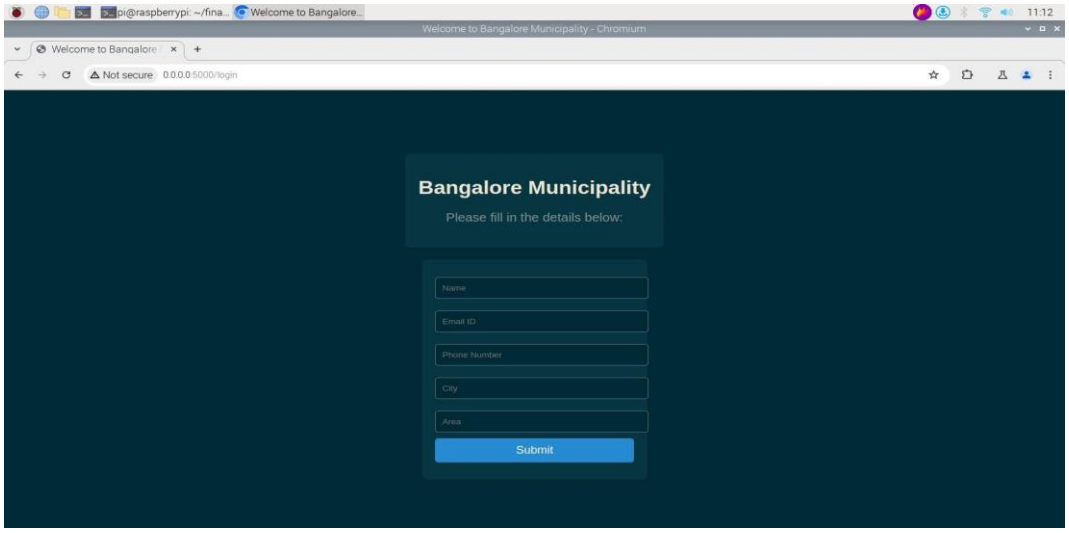

Figure 6 : Opening user form

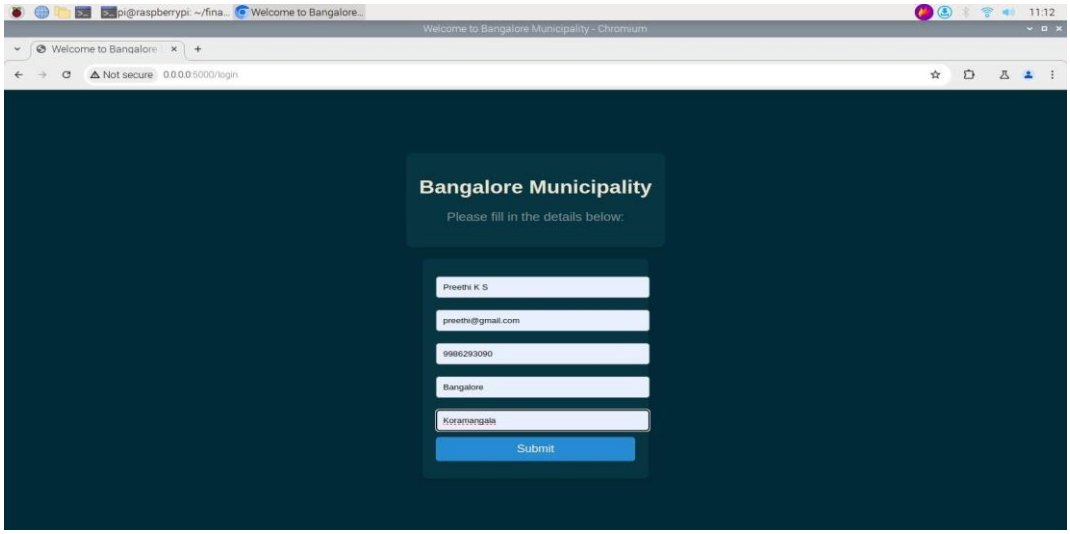

Figure 7 : Filling user form and submitting

Street Selection

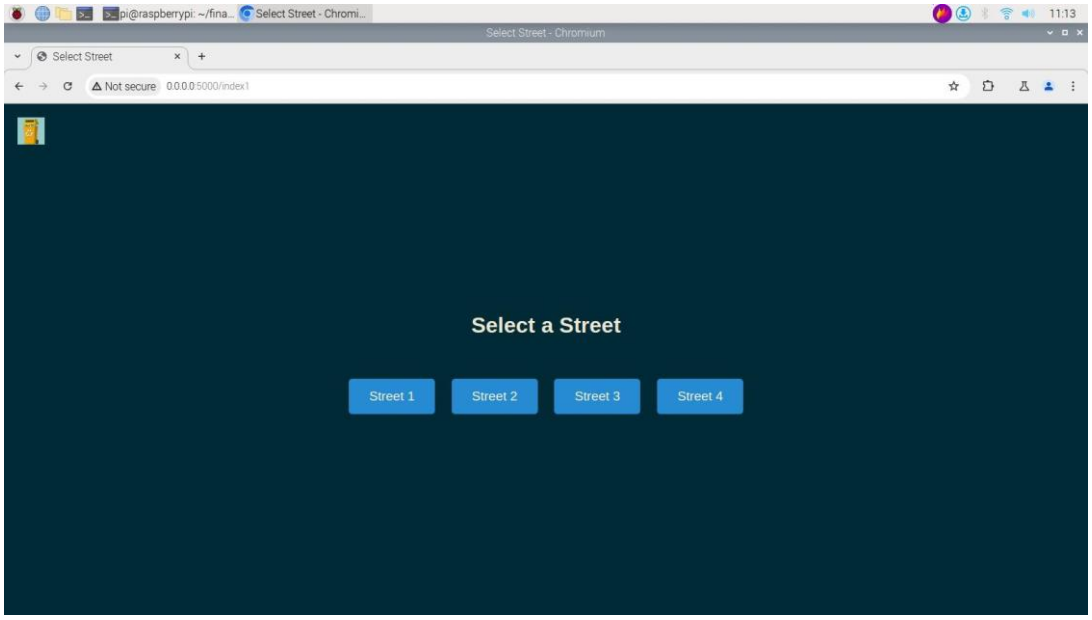

Figure 8 : Selection of streets

Bin Status

1) Dry Waste

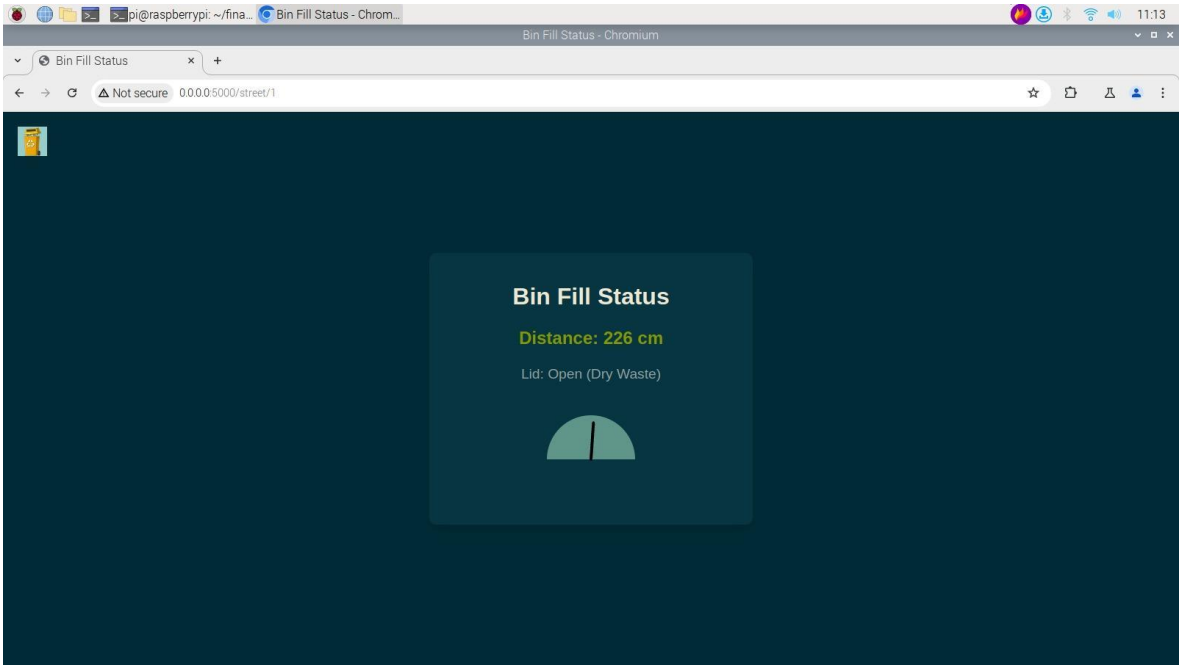

Figure 9 : Bin filled with dry waste

2) Wet Waste

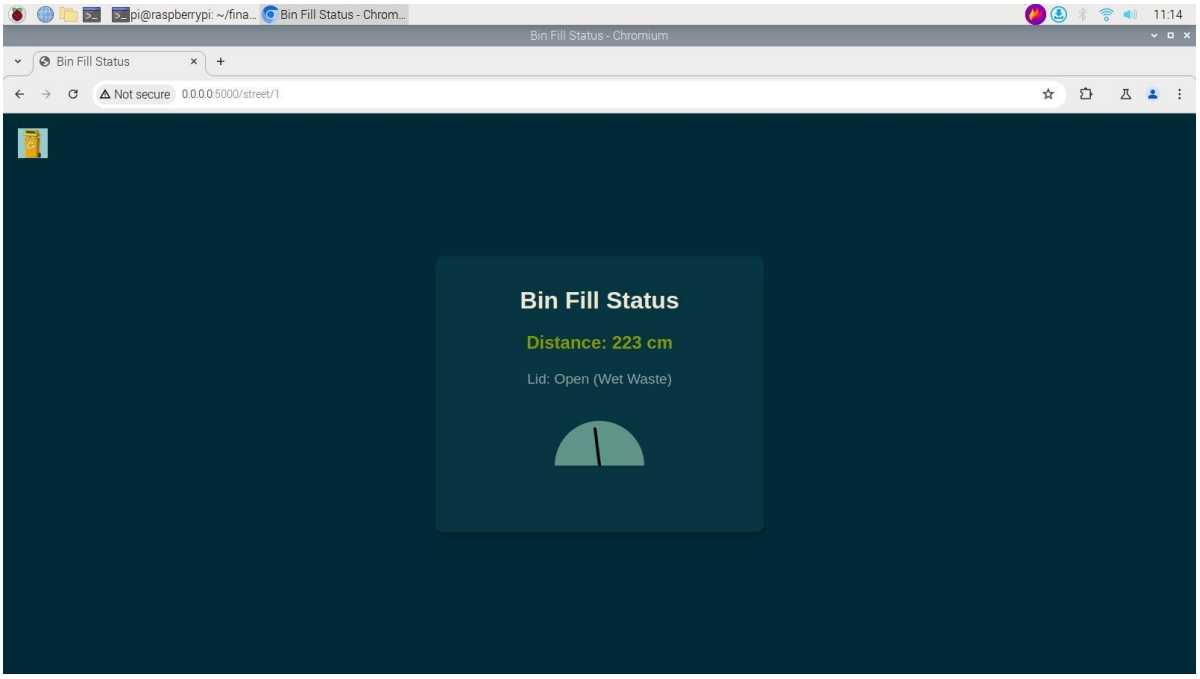

Figure 10 : Bin filled with wet waste

3) Almost filled

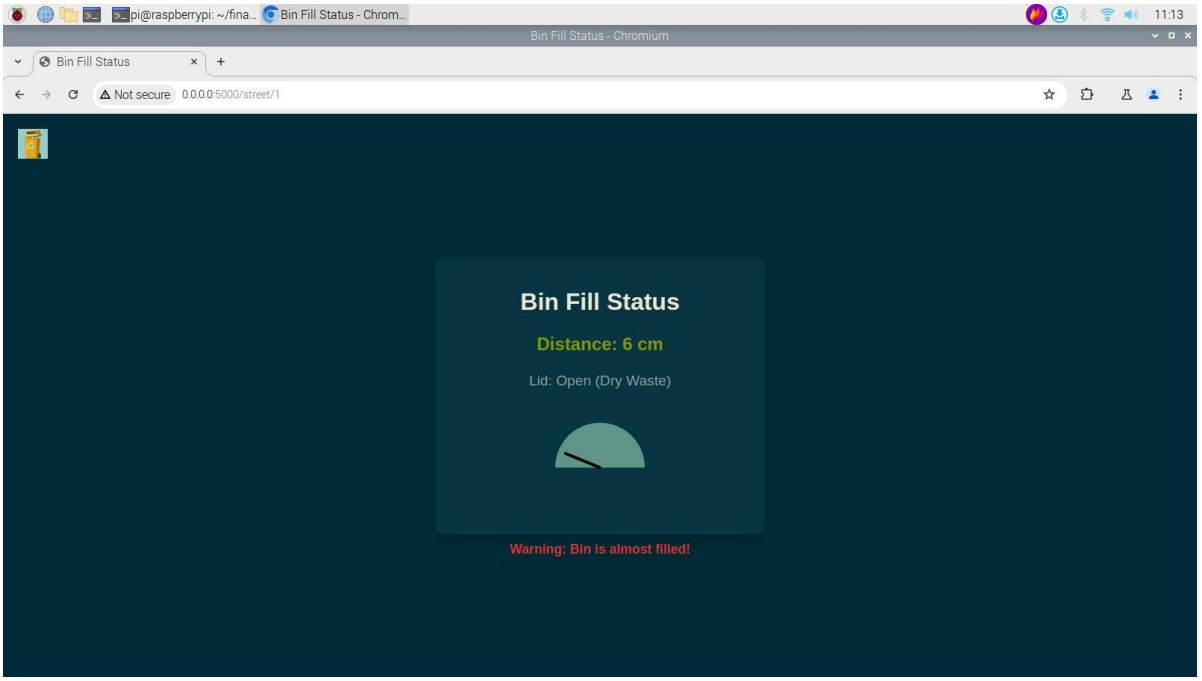

Figure 11 : Displaying alert message