

# REPORT 5

## PROJECT TITLE :

SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

## DOMAIN : IOT

## TEAM MEMBERS:

1. Indhumathi S
2. Kodali Gireeshma Chowdary
3. Meena M
4. Iswarya S P

## MENTOR NAME :

Banupriya N

**Phase 3 Description: Project Design Phase -I (Proposed Solution, ProblemSolution Fit, Solution Architecture)**

**3.1 Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc.**

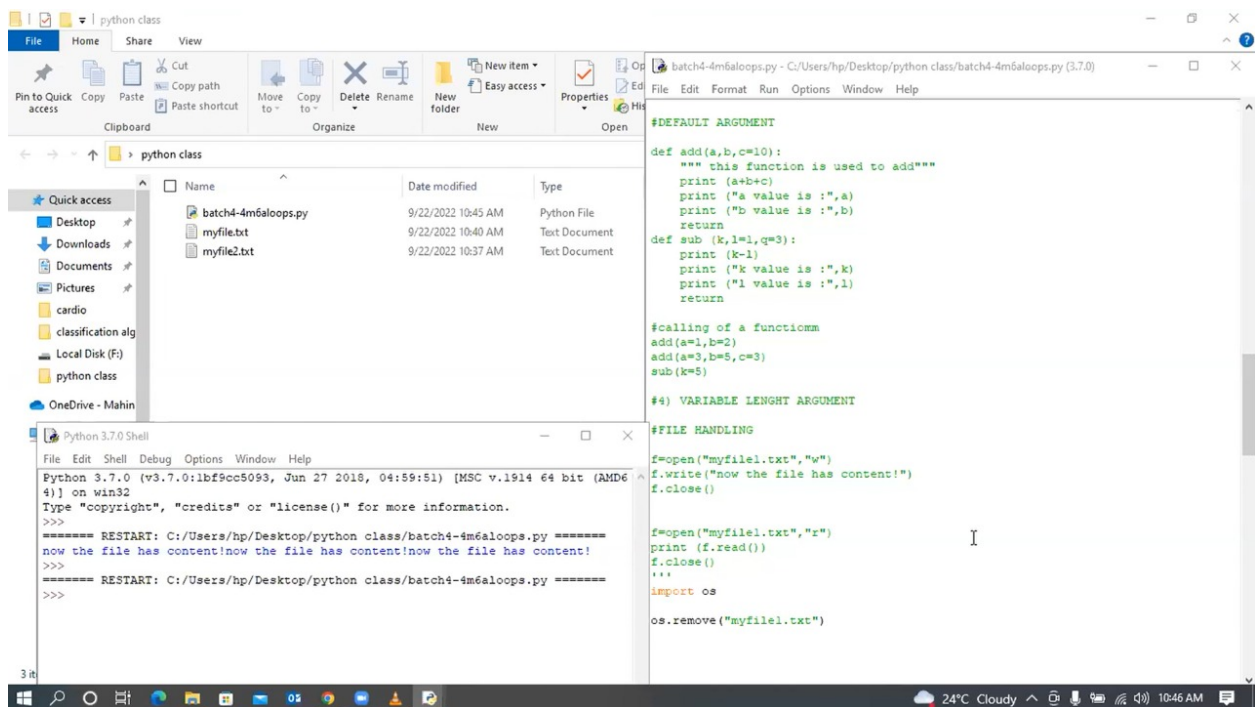
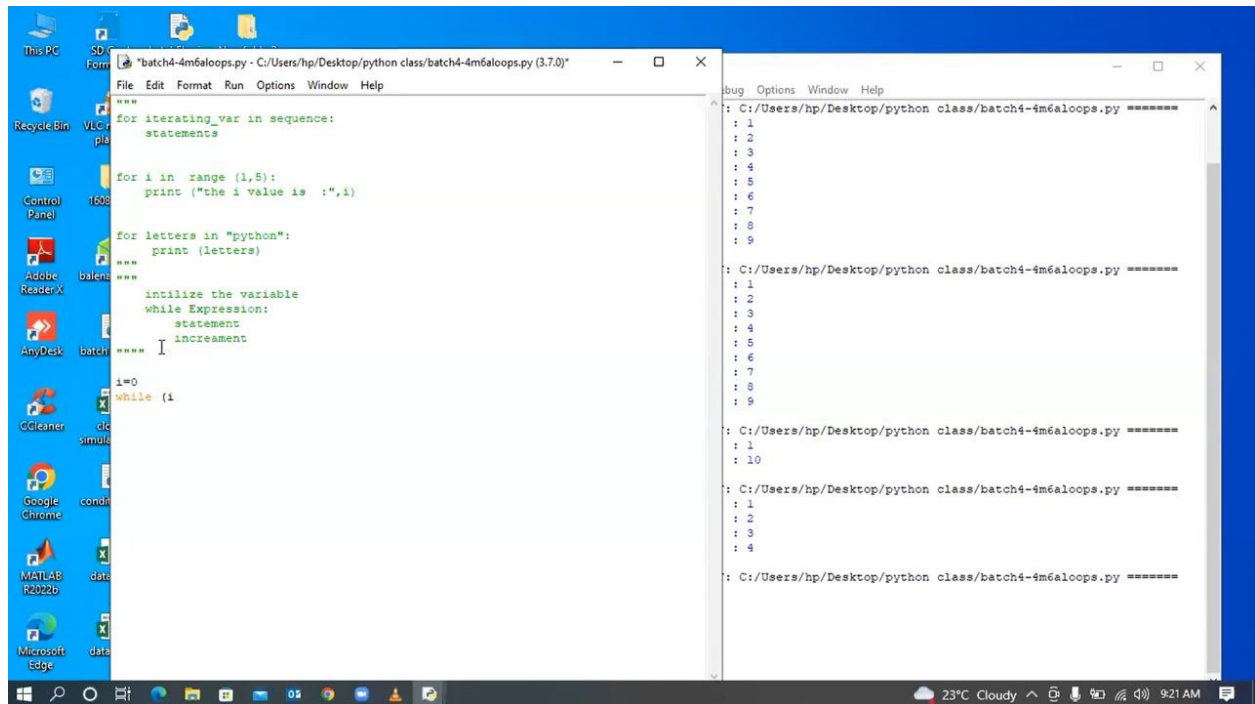
## Proposed Solution

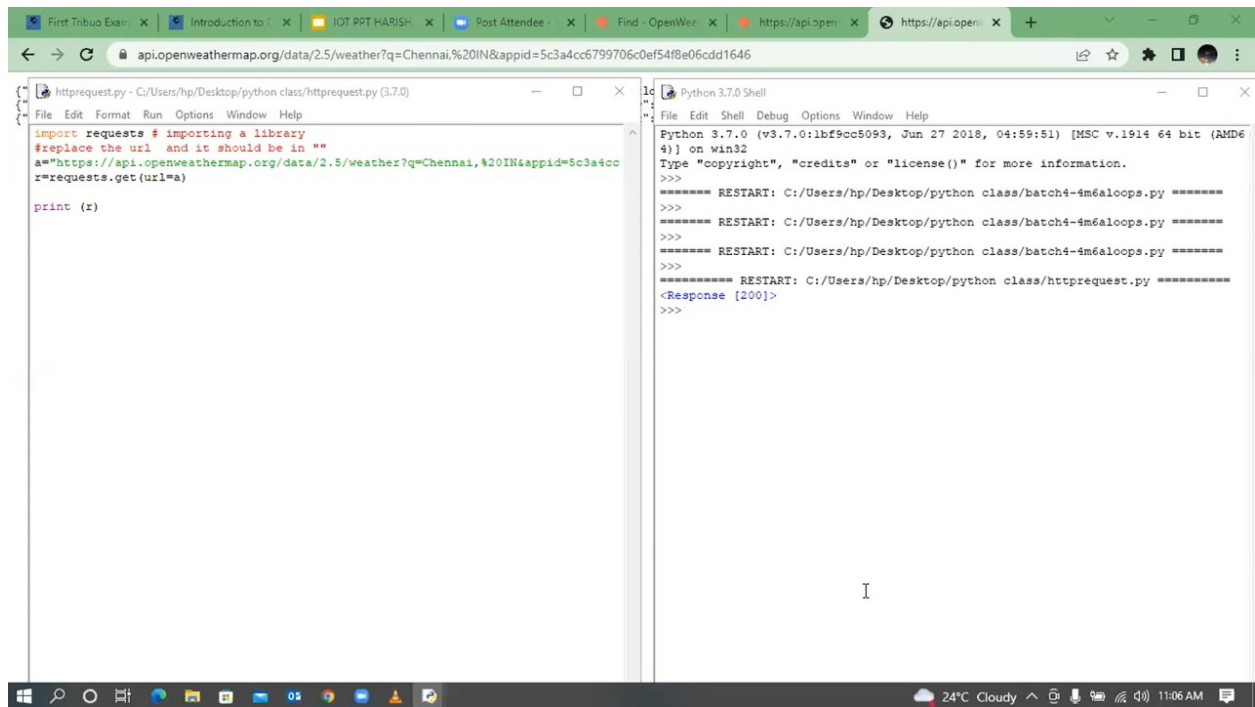
S.No.	Parameter	Description
1.	<b>Problem Statement (Problem to be solved)</b>	A growing population and economy, which means increased volumes of waste is generated. This puts pressure on waste management facilities, which are already in short supply.Hence <b>IOT Based smart net bins</b> can be used to overcome this problem.
2.	<b>Idea / Solution description</b>	The idea is to produce a stable equipment of weighing sensors and other communication-iOT devices to create a best and efficient Smart-Waste Management System. The idea includes, initially-building a stable and durable stand to which the weighing and communication sensors/devices are added and are used to update and send the

		information to the nearest waste collector. The normal dustbins are inserted into the stand and removed as needed. The communication sensor consists of applications including giving notification to the waste collectors about the weight and capacity of the dustbin that is filled.
3.	<b>Novelty / Uniqueness</b>	The existing system makes use of IOT devices and sensors for communication. But in our model we have used <b>IBM Cloud services</b> data storage. <b>IBM Watson IoT platform</b> is used <b>as the mediator</b> to connect the web application to IoT devices, so create the IBM Watson IoT platform.
4.	<b>Social Impact / Customer Satisfaction</b>	The main impact of this smart bin is people don't have to wait for the waste collector. The app takes the information to the waste collector directly. This saves the time of the customer. The cost of the product is also less so this will help all kinds of people to manage the waste properly .
5.	<b>Business Model (Revenue Model)</b>	This business model is to target all the residents of the city to dispose of the waste properly. The total cost for producing the model using the is around 7000 - 8500. This smart bin is very efficient for day today use.
6.	<b>Scalability of the Solution</b>	Traditional means of waste management do more harm than good to the environment and human life. For a country like India where the huge population is already exerting tremendous pressure on the resources, sustainable waste management to reduce environmental impact is desperately needed. If we can add more

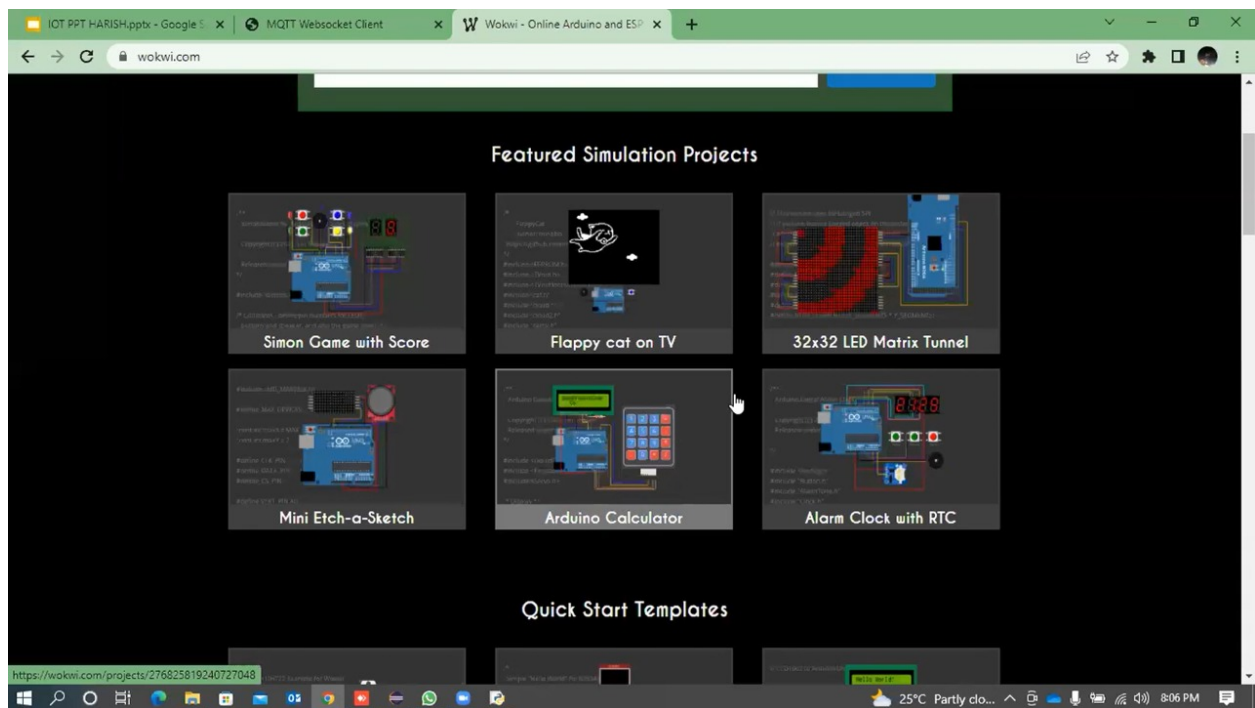
### 3.2 Attend the technology trainings as per the training calendar

IoT-B4-4M6E (Morning Session)-Day-7 (22.09.2022)





## IoT-B4-4M6E (Morning Session)-Day-8 (22.09.2022)



IOT PPT HARIISH.pptx - Google S x MQTT Websocket Client x W New ESP32 Project - Wokwi Sim x +

wokwi.com/projects/new/esp32

WOKWI SAVE SHARE Docs

sketch.ino diagram.json Library Manager

```
1 void setup() {
2   // put your setup code here, to run once:
3   Serial.begin(115200);
4   Serial.println("Hello, ESP32!");
5 }
6
7 void loop() {
8   // put your main code here, to run repeatedly:
9   delay(10); // this speeds up the simulation
10 }
11
```

Simulation

