REPORT 5

PROJECT TITLE :
SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

DOMAIN : IOT

TEAM MEMBERS:
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B.JEYAPOORNIMA

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.

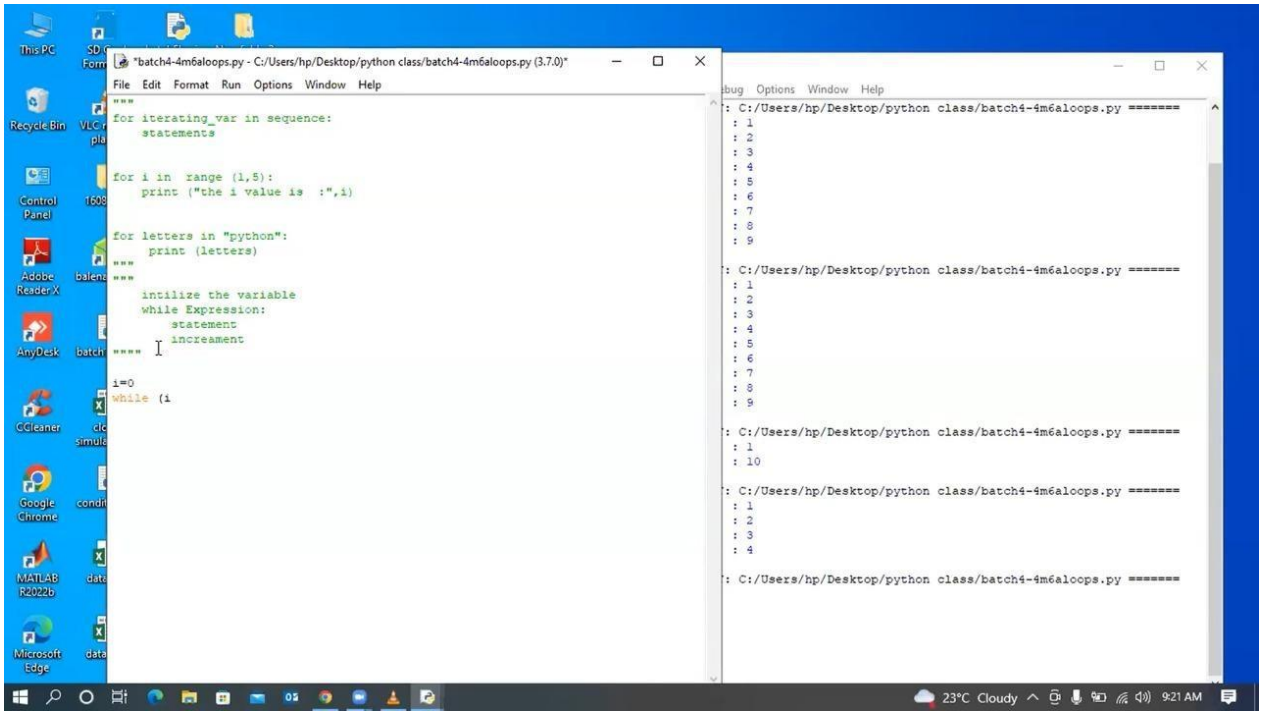
Proposed Solution

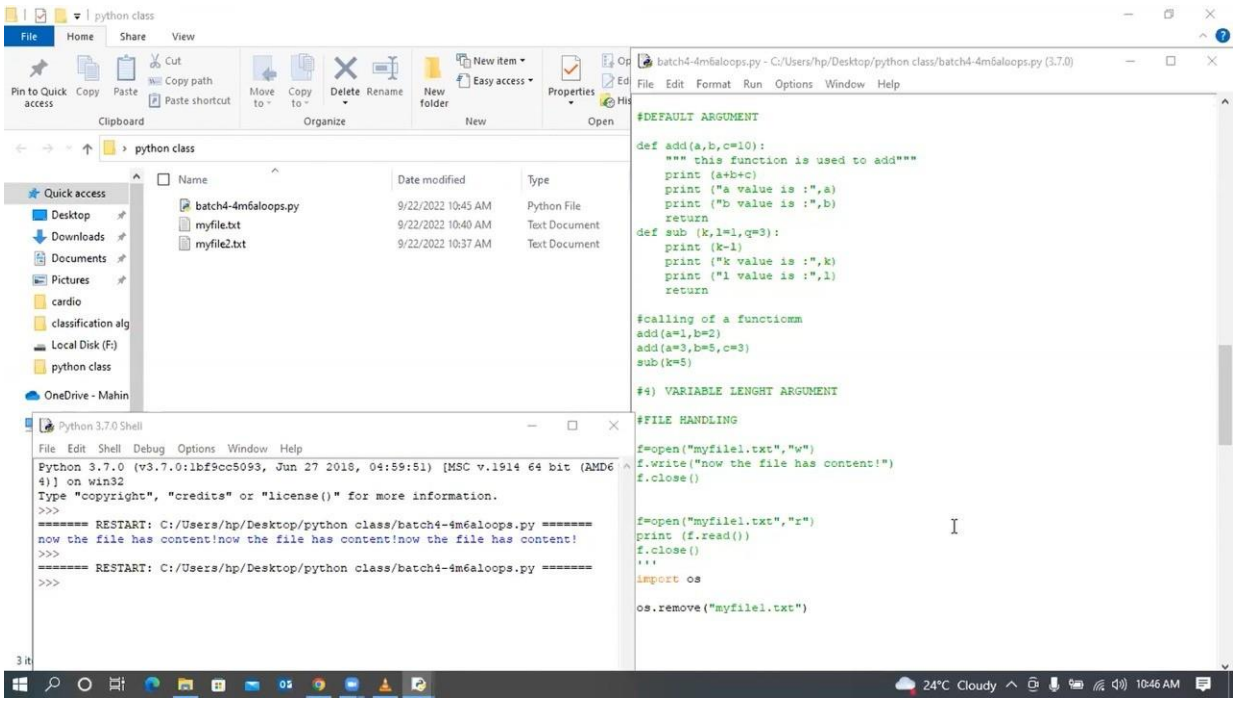
S.No.	Parameter	Description
1.	**Problem Statement (Problem to be solved)**	A growing population and economy, which means increased volumes of waste is generated. This puts pressure on waste management facilities, which are already in short supply.Hence **IOT Based smart net bins** can be used to overcome this problem.
2.	**Idea / Solution description**	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

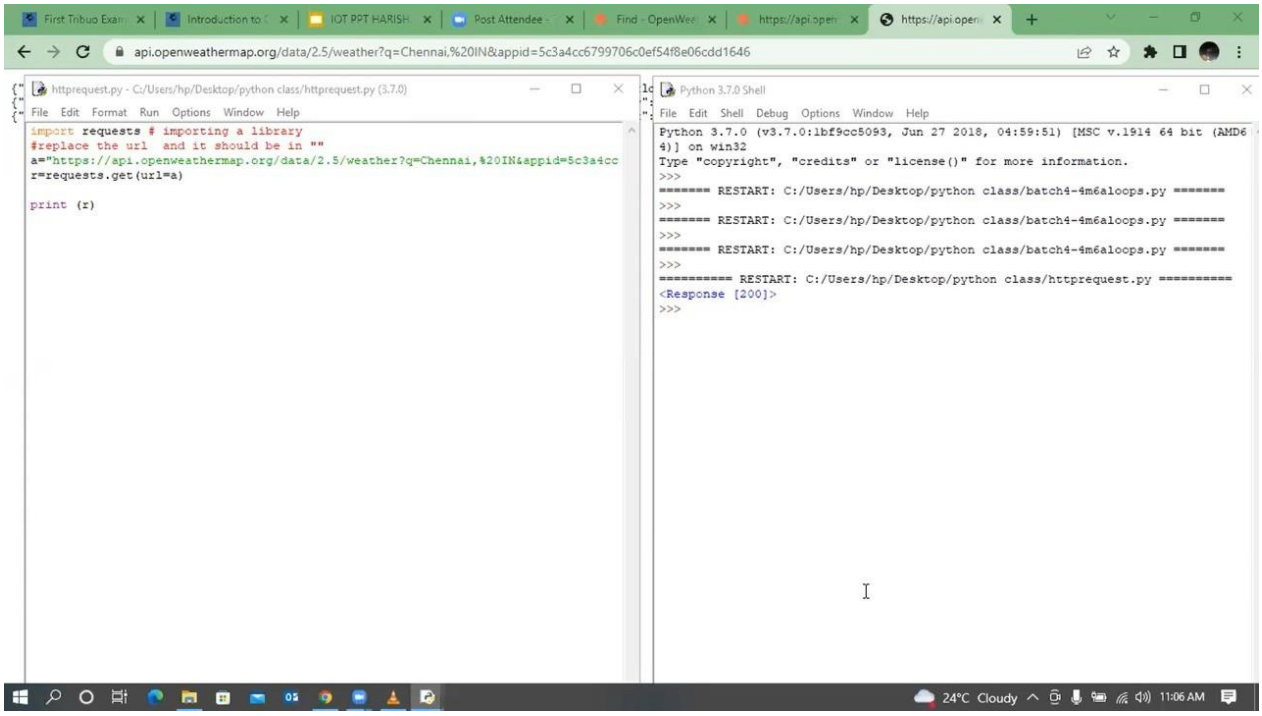
		information to the nearest waste collector. The normal dustbins are inserted into the stand and removed as needed. The communication sensor consists of applications including giving notification to the waste collectors about the weight and capacity of the dustbin that is filled.
3.	**Novelty / Uniqueness**	The existing system makes use of IOT devices and sensors for commuication. But in our model we have used **IBM Cloud services** data storage. **IBM Watson IoT platform** is used **as the mediator** to connect the web application to IoT devices, so create the IBM Watson IoT platform.
4.	**Social Impact / Customer Satisfaction**	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.	**Business Model (Revenue Model)**	This business model is to target all the residentials 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.	**Scalability of the Solution**	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

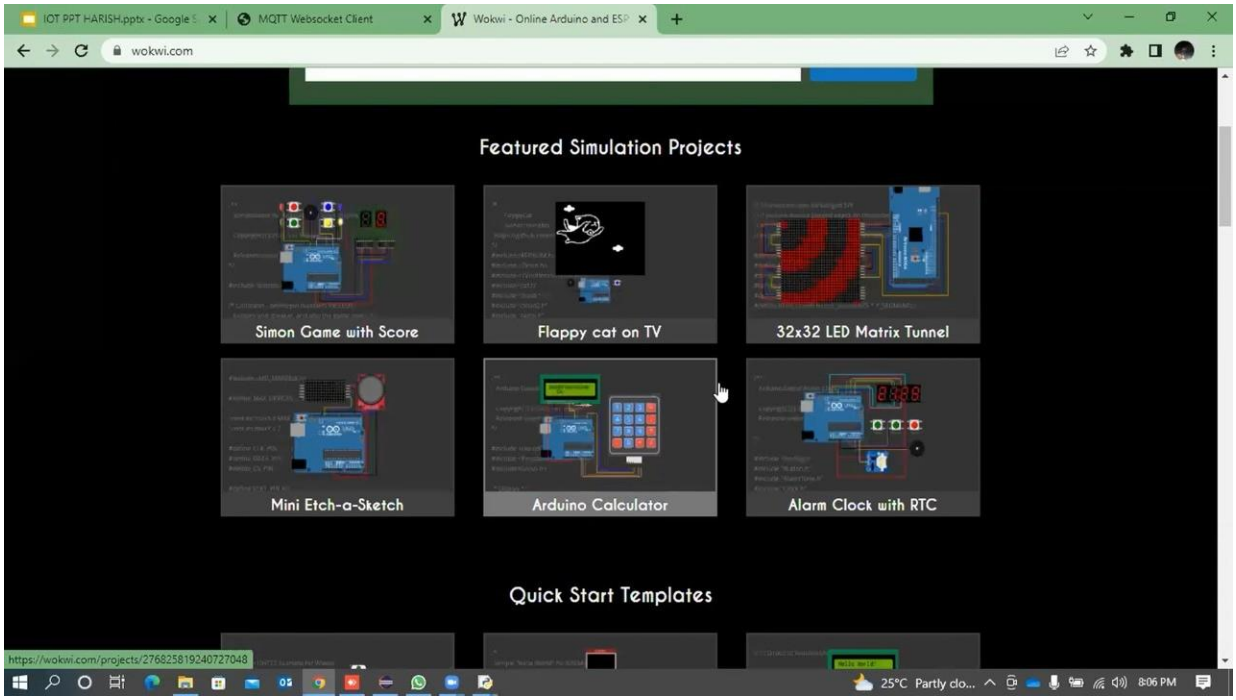
IoT-B4-4M6E (Morning Session)-Day-7 (22.09.2022)

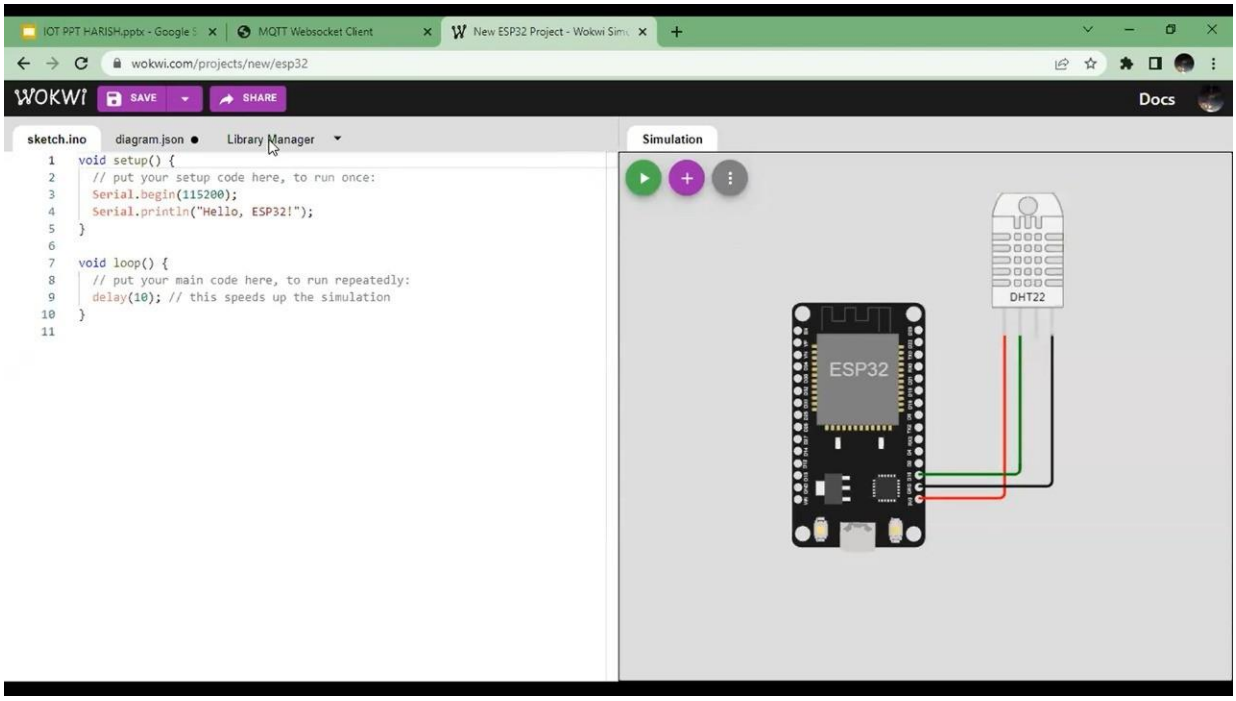

batch4-4m6aloops.py - C:/Users/hp/Desktop/python class/batch4-4m6aloops.py (3.7.0)
File Edit Format Run Options Window Help
"""
for iterating_var in sequence:
statements
for i in range (1,5):
print ("the i value is :",i)
for letters in "python":
print (letters)
"""
"""
intilize the variable
while Expression:
statement
increament
"""
i=0
while (i
: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
: 1
: 2
: 3
: 4
: 5
: 6
: 7
: 8
: 9
: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
: 1
: 2
: 3
: 4
: 5
: 6
: 7
: 8
: 9
: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
: 1
: 10
: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
: 1
: 2
: 3
: 4
: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
23°C Cloudy
9:21 AM


python class
File Home Share View
Pin to Quick access
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organize
New item
Easy access
New folder
New
Properties
Open
python class
Quick access
Desktop
Downloads
Documents
Pictures
cardio
classification alg
Local Disk (F:)
python class
OneDrive - Mahin
Name
Date modified
Type
batch4-4m6aloops.py 9/22/2022 10:45 AM Python File
myfile.txt 9/22/2022 10:40 AM Text Document
myfile2.txt 9/22/2022 10:37 AM Text Document
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
now the file has content!now the file has content!now the file has content!
>>>
======= RESTART: C:/Users/hp/Desktop/python class/batch4-4m6aloops.py =======
>>>
batch4-4m6aloops.py - C:/Users/hp/Desktop/python class/batch4-4m6aloops.py (3.7.0)
File Edit Format Run Options Window Help
#DEFAULT ARGUMENT
def add(a,b,c=10):
""" this function is used to add"""
print (a+b+c)
print ("a value is :",a)
print ("b value is :",b)
return
def sub (k,l=1,q=3):
print (k-l)
print ("k value is :",k)
print ("l value is :",l)
return
#calling of a functionm
add(a=1,b=2)
add(a=3,b=5,c=3)
sub(k=5)
#4) VARIABLE LENGHT ARGUMENT
#FILE HANDLING
f=open("myfile1.txt","w")
f.write("now the file has content!")
f.close()
f=open("myfile1.txt","r")
print (f.read())
f.close()
'''
import os
os.remove("myfile1.txt")
24°C Cloudy
10:46 AM



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




IOT PPT HARISH.pptx - Google S
MQTT Websocket Client
New ESP32 Project - Wokwi Sim
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
DHT22
ESP32