

Project Development Phase

Sprint-3

Date	12 November 2022
Team ID	PNT2022TMID35841
Project Name	Gas Leakage Monitoring and Alerting System

Sprint Target:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Data Viewing	USN-6	As a user, I can view the parameters and statistics on the kitchen environment	20	High	SUDARSHAN A R, B ADITYA, PREETHI B

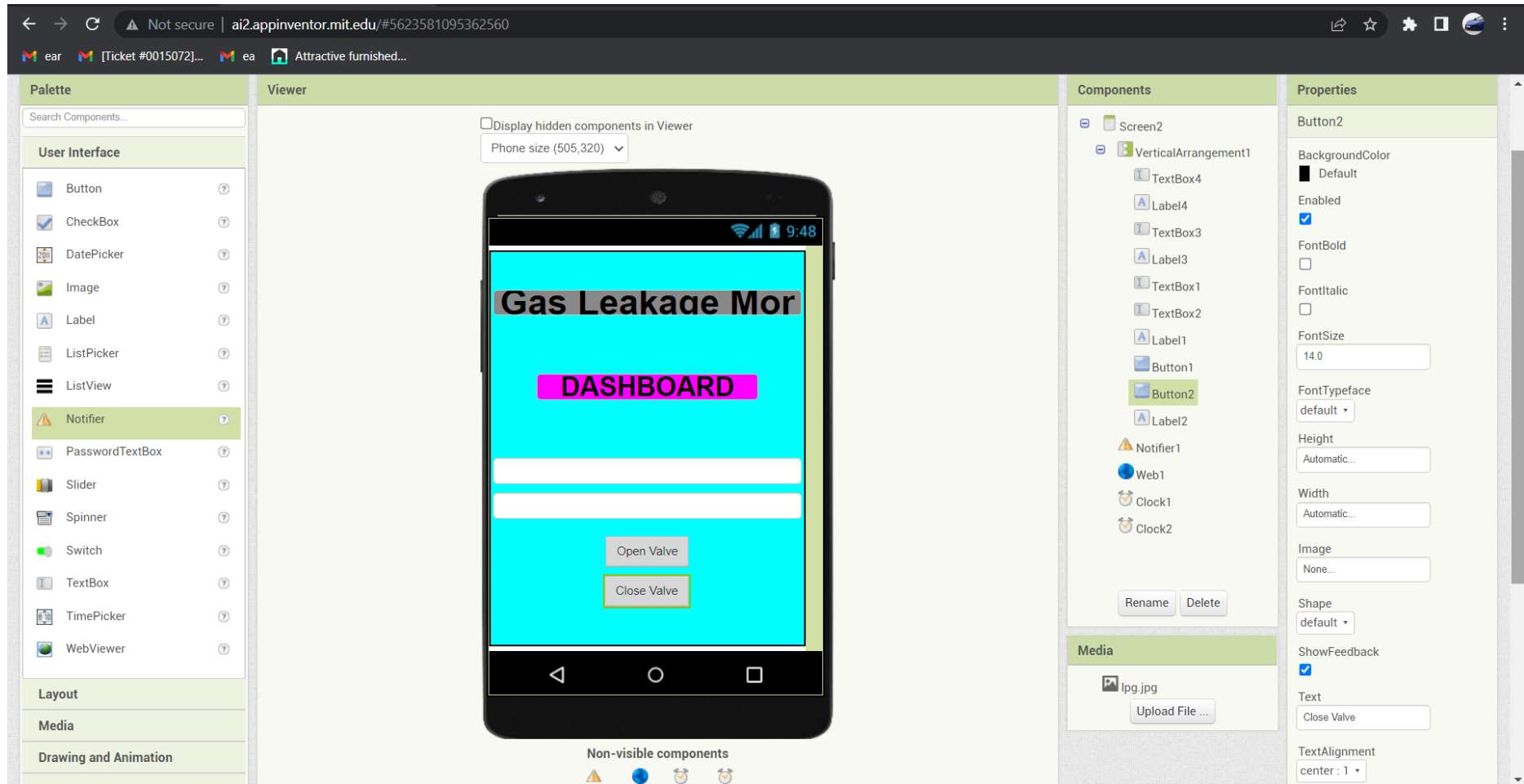
Introduction:

In this Sprint-3, we have developed the dashboard of the app to update the Gas concentration from the sensor data.

Dashboard Description

The Dashboard consists of 2 textboxes which display the Gas concentration in ppm and a valve status. The valve will automatically close when the Gas concentration increases 500ppm. This will gradually reduce the Gas concentration in the room to near 0 ppm.

App UI:



Blocks:

The screenshot displays the MIT App Inventor web interface for a project named "Gas_leakage". The browser address bar shows the URL `ai2.appinventor.mit.edu/#5418205422944256`. The interface includes a top navigation bar with links for Projects, Connect, Build, Settings, and Help, along with user information for "citroenmerc2@gmail.com".

The main workspace is divided into two panels: "Blocks" on the left and "Viewer" on the right. The "Blocks" panel shows a list of built-in blocks categorized by type: Control, Logic, Math, Text, Lists, Dictionaries, Colors, Variables, and Procedures. Under the "Screen2" category, a "VerticalArrangement1" container is visible, containing several UI components: TextBox4, Label4, TextBox3, Label3, and TextBox1. The "Viewer" panel shows the visual representation of the app, featuring a blue backpack icon in the top right corner and a vertical stack of three circular buttons (a target icon, a plus sign, and a minus sign) on the right side. The app's logic is implemented using a series of blocks:

- Three "initialize global" blocks: "v" to "false", "danger" to "0", and "val" to "500".
- A "when Clock1.Timer" block containing a "do" block with "set Web1.Url to" followed by a URL and a "call Web1.Get" block.
- A "when Web1.GotText" block containing a "do" block with "set TextBox1.Text to" followed by a "join" block that concatenates "Gas Level: " with the response content.

At the bottom left of the "Viewer" panel, there are two warning icons (a yellow triangle and a red X) and a "Hide Warnings" button. The "Media" panel at the bottom left is currently empty.

← → ↻ ⚠ Not secure | ai2.appinventor.mit.edu/#5418205422944256

MIT APP INVENTOR

Projects ▾ Connect ▾ Build ▾ Settings ▾ Help ▾

My Projects View Trash Guide Report an Issue English ▾ citroenmerc2@gmail.com ▾

Gas_leakage

Screen2 ▾ Add Screen ... Remove Screen Publish to Gallery

Designer Blocks

Built-in

- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures

Screen2

- VerticalArrangement1
 - TextBox4
 - Label4
 - TextBox3
 - Label3
 - TextBox1

Rename Delete

Media

when Web1 GotText

do

- set TextBox1 Text to join " Gas Level: " look up in pairs key "level" pairs call Web1 .JsonTextDecode jsonText get responseContent notFound "not found"
- set global val to look up in pairs key "level" pairs call Web1 .JsonTextDecode jsonText get responseContent notFound "not found"
- set global danger to look up in pairs key "alert" pairs call Web1 .JsonTextDecode jsonText get responseContent notFound "not found"
- set TextBox2 Text to join " Valve Status: " look up in pairs key "valve" pairs call Web1 .JsonTextDecode jsonText get responseContent notFound "not found"

0 0

Hide Warnings

⦿

+

-

← → ↺

Not secure | ai2.appinventor.mit.edu/#5418205422944256

🔗 ⭐ ⚙️ 📱 🌐

🐼 MIT APP INVENTOR

Projects ▾ Connect ▾ Build ▾ Settings ▾ Help ▾

My Projects View Trash Guide Report an Issue English ▾ citroenmerc2@gmail.com ▾

Gas_leakage

Screen2 ▾ Add Screen ... Remove Screen Publish to Gallery

Designer Blocks

Blocks

Built-in

Control

Logic

Math

Text

Lists

Dictionaries

Colors

Variables

Procedures

Screen2

VerticalArrangement1

TextBox4

Label4

TextBox3

Label3

TextBox1

0

0

Hide Warnings

Rename Delete

Media

📷 🎵 🖼️ 📹

Viewer

if

look up in pairs key

pairs

notFound

call Web1 .JsonTextDecode

jsonText

get responseContent

notFound

not found

decimal

1

then

set Label1 .TextColor to

set Label1 .Text to

call Notifier1 .ShowMessageDialog

message

title

buttonText

set Clock1 .TimerInterval to

else

set Label1 .Visible to

when Button1 .Click

do

set Clock1 .TimerInterval to

set TextBox2 .Text to

call Notifier1 .ShowMessageDialog

message

title

🔍

+

-

🗑️

← → ↺

Not secure | ai2.appinventor.mit.edu/#5418205422944256

🔗 ⭐ ⚙️ 📱 🌐

🐼 MIT APP INVENTOR

Projects ▾ Connect ▾ Build ▾ Settings ▾ Help ▾

My Projects View Trash Guide Report an Issue English ▾ citroenmerc2@gmail.com ▾

Gas_leakage

Screen2 ▾ Add Screen ... Remove Screen Publish to Gallery

Designer Blocks

Blocks

Built-in

Control

Logic

Math

Text

Lists

Dictionaries

Colors

Variables

Procedures

Screen2

VerticalArrangement1

TextBox4

Label4

TextBox3

Label3

TextBox1

0

0

Hide Warnings

Media

Viewer

title Notice

buttonText "Ok"

set global v to false

when Clock2 .Timer

do

if get global danger = decimal 1

then

set TextBox1 .Text to join "Gas Level: " get global val " ppm"

set global val to round get global val / decimal 1.7

set Label1 .Visible to false

else if get global v = true

then

set TextBox1 .Text to join "Gas Level: " get global val " ppm"

set global val to round get global val / decimal 1.7

set Label1 .Visible to false

else

set Label2 .Visible to false

🎒

🎯

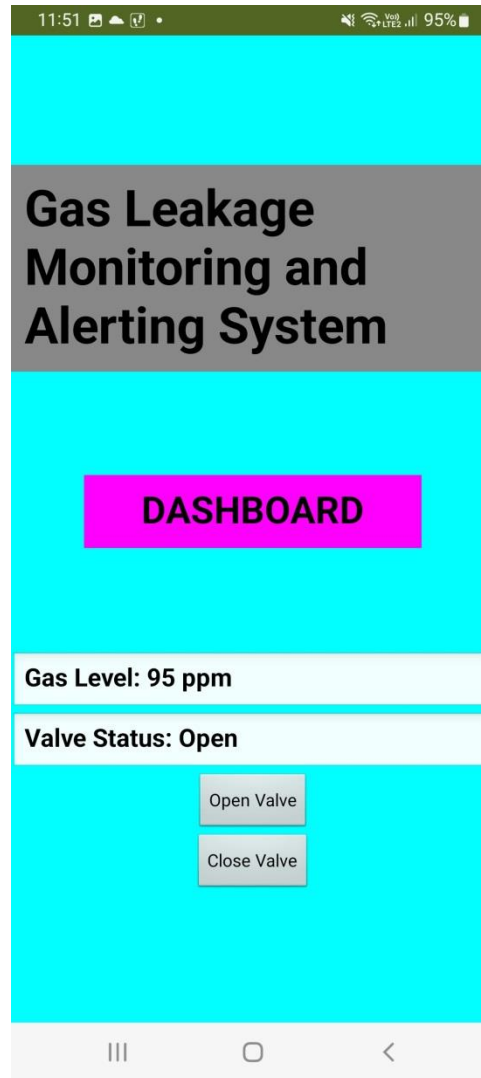
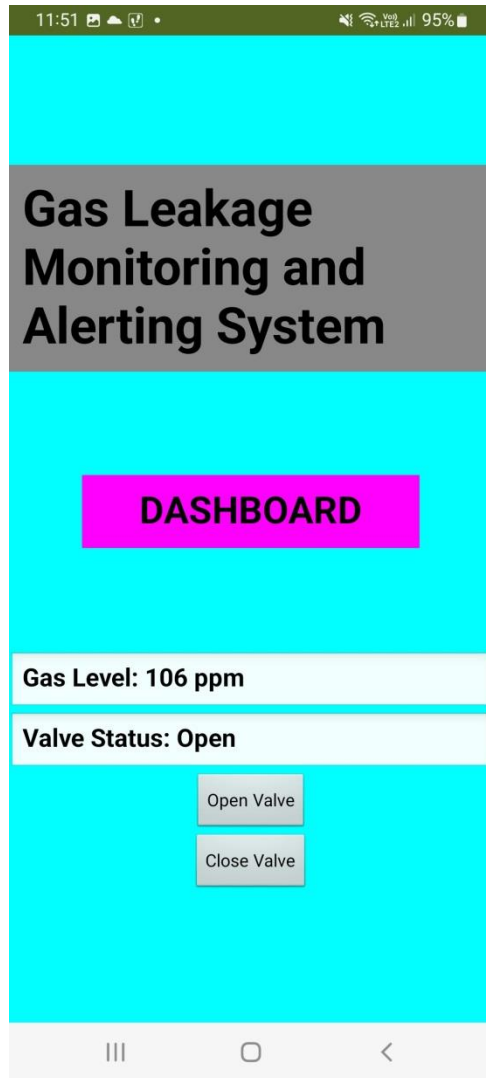
+

-

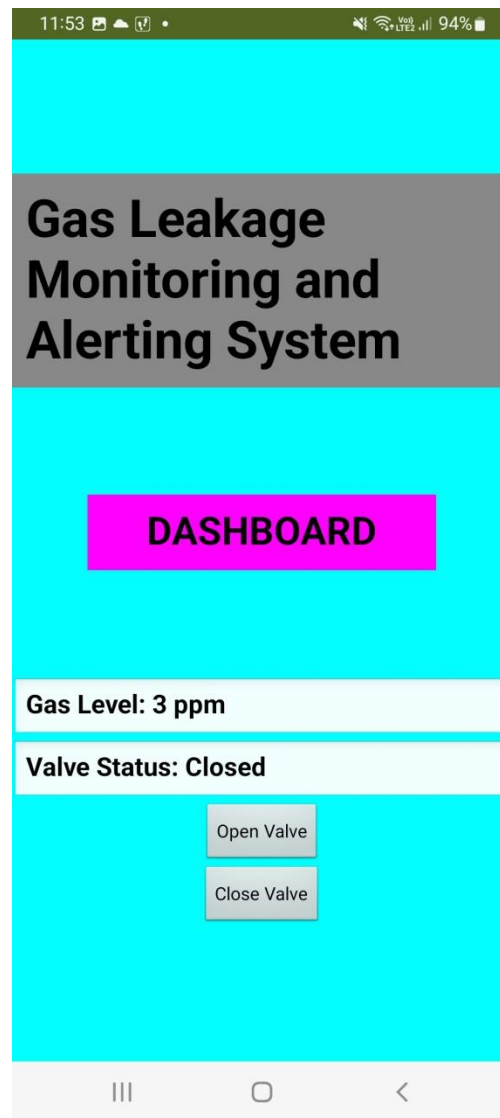
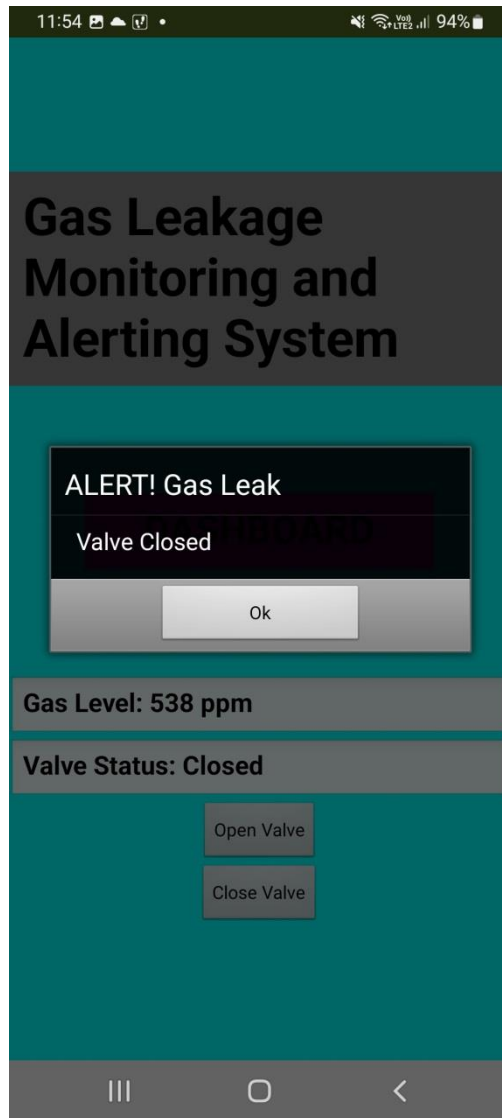
🗑️

Demo:

The gas levels change as the sensor reading changes:



When the concentration increases 500pm, the valve is closed and the concentration decreases.



In the last sprint, we will allow the user to manually the control the valves (using the buttons).