

PROJECT DEVELOPMENT PHASE-SPRINT 4

Date	17 th November 2022
Team ID	PNT2022TMID24659
Project Name	Personal assistance for Seniors who are self-reliant
Delivery	Sprint-4

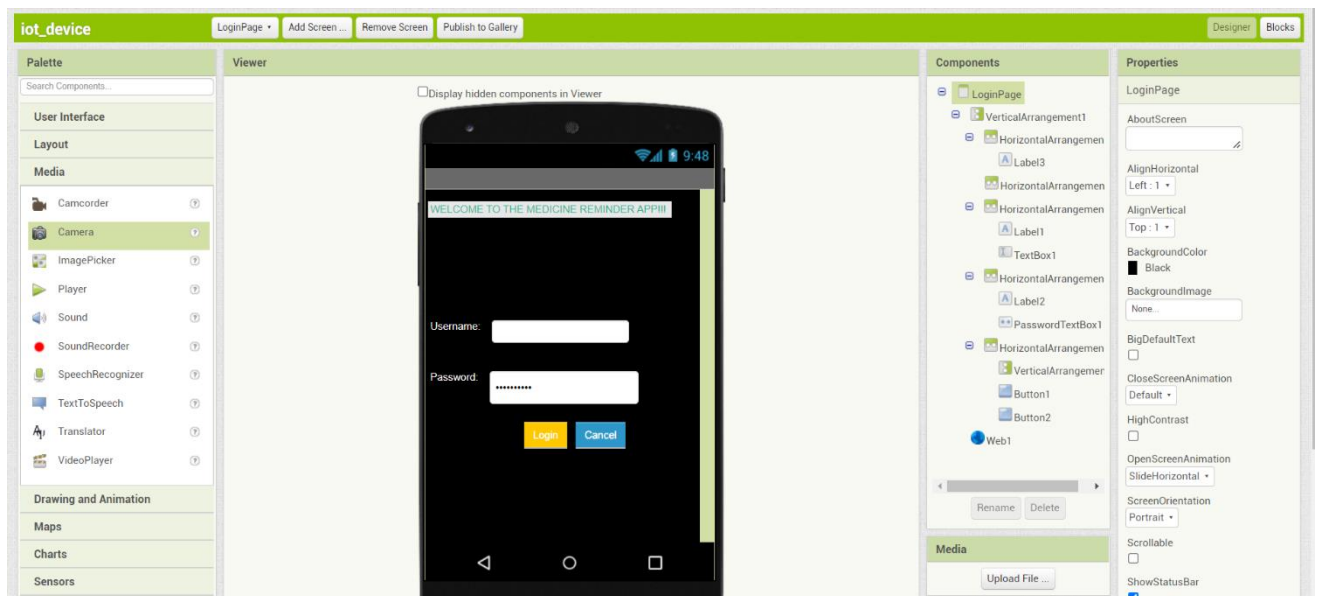
SPRINT 3 -*Creating a Mobile application using MIT App inventor to add medicine and monitor the medicines.*

1.APP SETUP

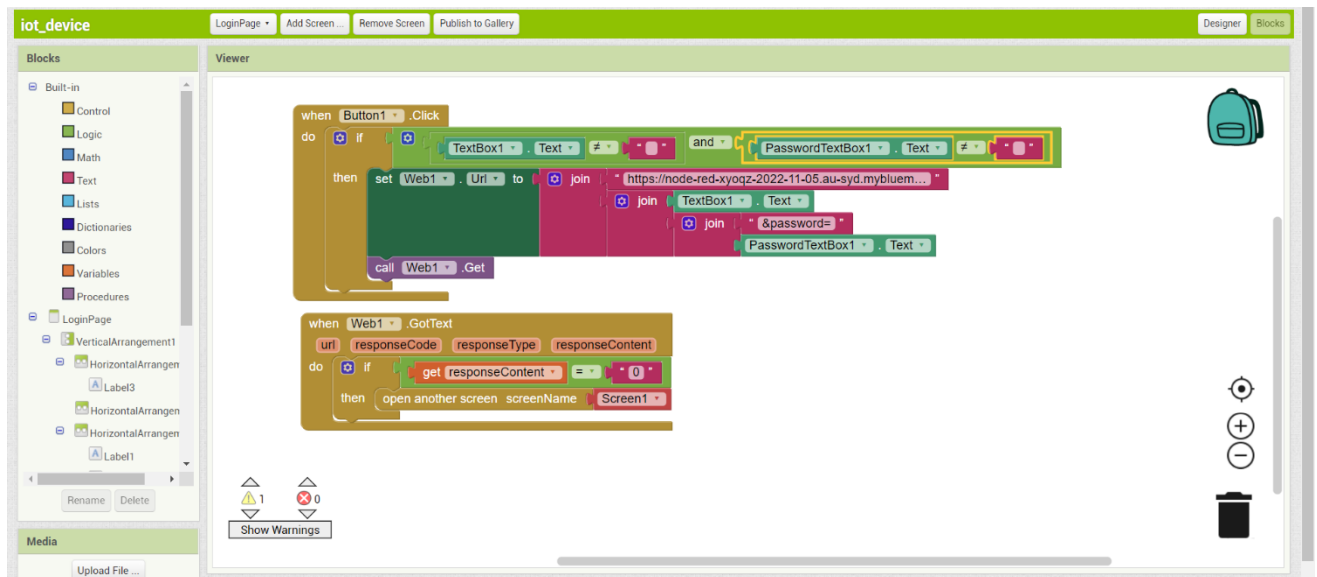
The app consists of two screen. First screen is the login page and the second is the medicine details page.

SCREEN 1:

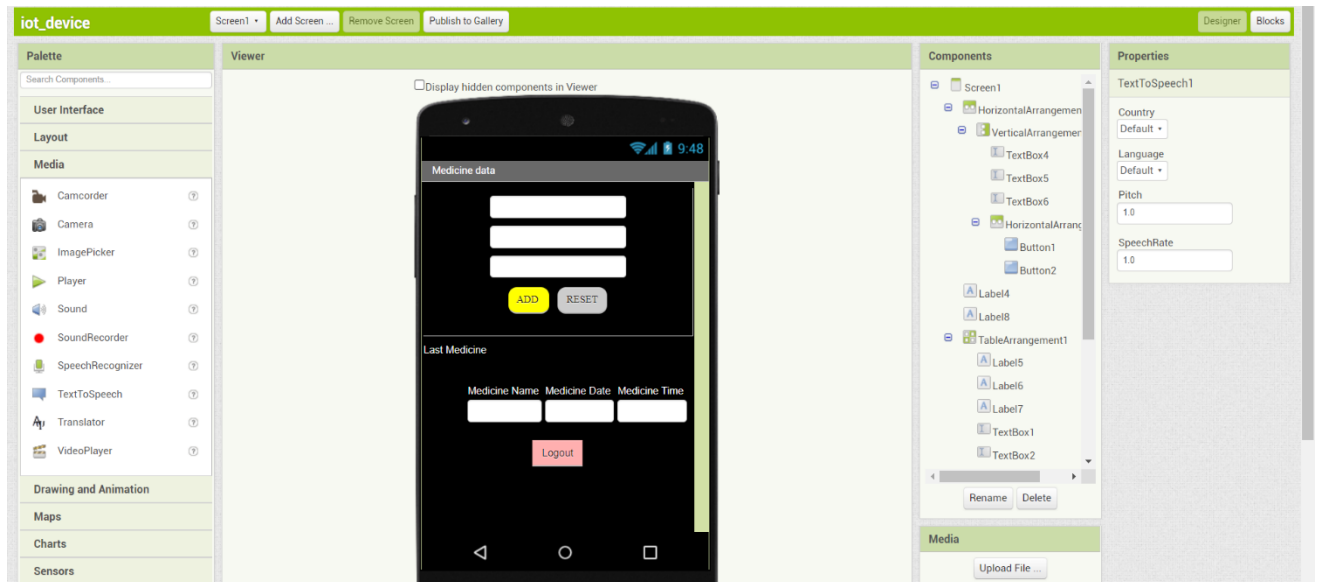
LOGIN SCREEN(DESIGN):



LOGIN SCREEN(BLOCK):



SCREEN 2: MEDICINE SCREEN(DESIGN):

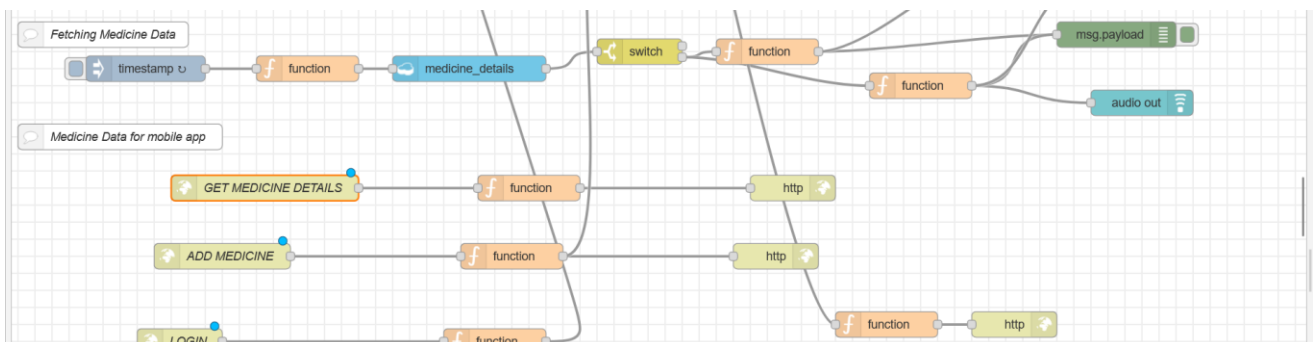


MEDICINE SCREEN(BLOCK):



2. NODE RED FLOW

The flow has http get requests for logging in, adding medicine details and fetching medicine details.



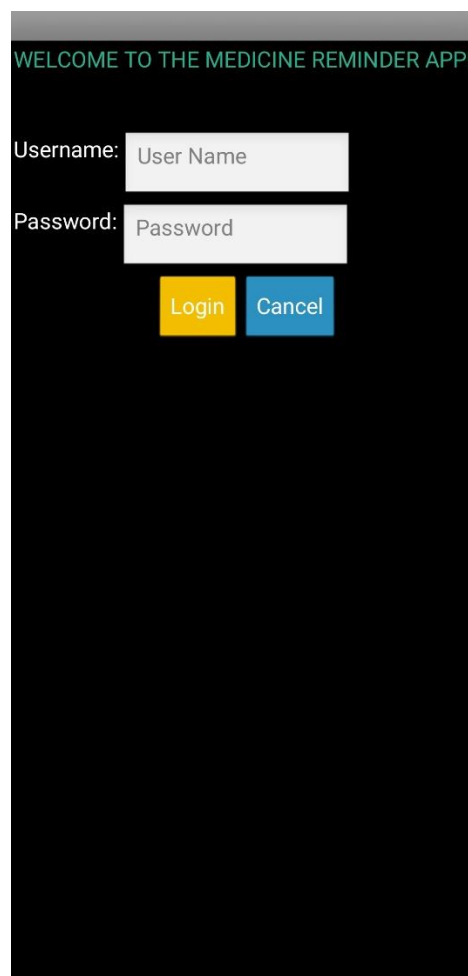
When the user logs in through the mobile application, the username and password is passed from the login url as json parameters which is then verified in the database.

When medicine details are added from the mobile application, the added details is passed using the add_medicine url which contains medicine name, date and time as parameters in json format.

And the latest medicine that was taken is displayed in the mobile application using the med_details url.

3. Mobile application The user can login into the mobile application and add medicine details or check the last medicine that was consumed.

Login Screen:



The image shows a mobile application login screen with a black background. At the top, there is a green header bar with the text "WELCOME TO THE MEDICINE REMINDER APP!". Below the header, there are two input fields: "Username:" with a placeholder "User Name" and "Password:" with a placeholder "Password". Below the input fields, there are two buttons: a yellow "Login" button and a blue "Cancel" button.

Medicine Screen:

Medicine data

Paracetamol

2022-11-17

00:52

ADD

RESET

Last Medicine

Medicine Name Medicine Date Medicine Time

citrizen

2022-11-17

23:45

Logout

Medicine data

Enter Medicine Nam

Date(YYYY-MM-DD)

Time(HH:MM)

ADD

RESET

Last Medicine

Medicine Name Medicine Date Medicine Time

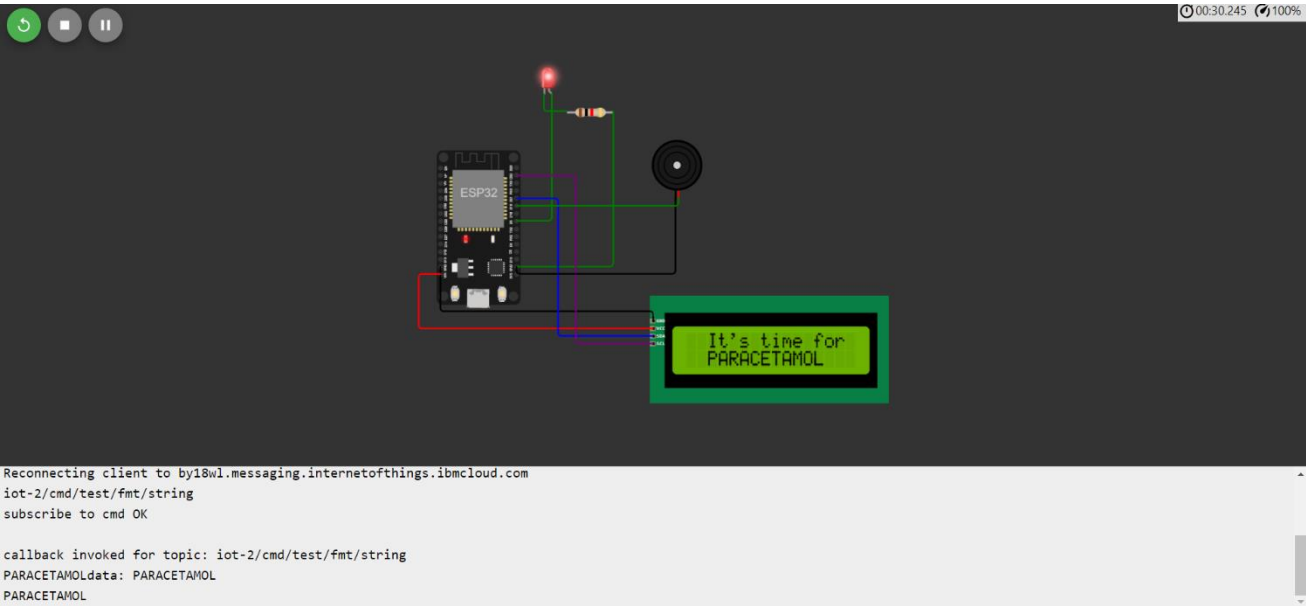
citrizen

2022-11-17

23:45

Logout

When medicine details is added text to speech is used to notify the user that the medicine was added. When the medicine time arrives the iot device also signals -the LED glows, LCD displays the medicine name and buzzer rings.



4. MEDICINE DATABASE

The database is also updated when the user enters the data into from the mobile application.

medicine_details

All Documents

+

Query

Permissions

Changes

Design Documents

+

Document ID

Options

{ } JSON

Create Document

Table

Metadata

{ } JSON

	<div><div>_id</div></div>	<div><div>date</div></div>	<div><div>name</div></div>	<div><div>time</div></div>
<div><div></div><div></div></div>	2022-11-13 17:05	2022-11-13	PARACETAMOL	17:05
<div><div></div><div></div></div>	2022-11-13 17:24	2022-11-13	Amoxylin	17:24
<div><div></div><div></div></div>	2022-11-13 17:30	2022-11-13	Amoxylin	17:30
<div><div></div><div></div></div>	2022-11-13 17:32	2022-11-13	Paracetamol	17:32
<div><div></div><div></div></div>	2022-11-13 17:40	2022-11-13	Dolo 360	17:40
<div><div></div><div></div></div>	2022-11-13 18:55	2022-11-13	Amoxylin	18:55
<div><div></div><div></div></div>	abhi 2022-11-14 18:35	2022-11-14	Amoxylin	18:35
<div><div></div><div></div></div>	abhi 2022-11-14 18:39	2022-11-14	Dolo 365	18:39
<div><div></div><div></div></div>	abhi 2022-11-14 18:41	2022-11-14	Dolo 360	18:41
<div><div></div><div></div></div>	swathi 2022-11-14 18:18	2022-11-14	Amoxylin	18:18
<div><div></div><div></div></div>	swathi 2022-11-14 18:32	2022-11-14	Amoxylin	18:32
<div><div></div><div></div></div>	swathi 2022-11-14 18:34	2022-11-14	Amoxylin	18:34
<div><div></div><div></div></div>	swathi 2022-11-17 14:03	2022-11-17	Paracetaomel	14:03

Thus the Personal Assistance for Seniors Who Are Self-Reliant was successfully developed. It makes use of node-red for web UI and adding details to cloudant and it is also responsible for issuing command to the IBM IOT Watson platform. IBM IOT Watson platform gets the command from the node red flow when medicine has to be taken and sends it to the IOT device which signals when the medicine time arrives. This communication is done using MQTT and HTTP protocol. IBM text to speech service is also used to orally tell the tablet name to the user. Finally, the mobile application developed with the help of MIT App inventor is used for adding and monitoring the medicines which is user friendly and convenient.

Future improvement: IOT DEVICE can consist of sensors to monitor number of medicines and separate racks for each medicine and provide that medicine when the time arrives and also speech to text service to recognize the user voice rather than using push buttons to snooze or turn off the alarm.