

project development phase

sprint 1

Date	14 NOV 2022
Team ID	PNT2022TMID25229
Project Name	IOT Based Smart Crop Protection System For Agriculture

To develop a web application using node red using node red

The screenshot displays the MIT App Inventor web application editor. The browser address bar shows the URL `ai2.appinventor.mit.edu/#5531244482658304`. The application title is "IOT_Based_smart_crop_protection_system_for_agriculture_APP". The interface is divided into several panels:

- Palette:** A sidebar on the left containing various UI components categorized under "User Interface" (Button, CheckBox, DatePicker, Image, Label, ListPicker, ListView, Notifier, PasswordTextBox, Slider, Spinner, Switch, TextBox, TimePicker, WebViewer), "Layout", "Media", "Drawing and Animation", "Maps", and "Charts".
- Viewer:** The central workspace showing a mobile phone mockup. The screen displays a green plant growing in a field, with a hand holding a smartphone in front of it. The phone's status bar shows "Screen1" and the time "9:48".
- Components:** A panel on the right showing the components currently on the screen, including "Screen1" and "Image1".
- Properties:** A panel on the right showing the properties for the selected component, "Image1". Properties include "AlternateText", "Clickable", "Height", "Width", "Picture" (set to "IOTagriculturepic.jpg"), "RotationAngle", "ScalePictureToFit", and "Visible" (checked).

The bottom of the screen shows a Windows taskbar with the search bar "Type here to search" and various application icons. The system clock indicates the time is 23:07 on 25-11-2022.

Video from . - Google Drive x web application.pdf x +

File | C:/Users/hari6/Downloads/ibm%20pro/IBM-Project-30185-1660141533-main/IBM-Project-30185-1660141533-main/develop%20a%20web%20application%20using%... 2 of 8

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Not secure | ai2.appinventor.mit.edu/#5796383014387712

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iot_based_smart_crop Screen2 Add Screen Remove Screen Publish to Gallery Designer Blocks

Palette Search Components... User Interface Button CheckBox DatePicker Image Label ListPicker ListView Notifier PasswordTextBox Slider Spinner Switch TextBox TimePicker WebViewer

Viewer ☐ Display hidden components in Viewer Phone size (505,320) Screen2 Iot based smart crop protection Register now Username Text for Label1 Email Id Text for Label2 Password Text for Label3 Address Text for Label4 Phone no Text for Label5 Submit

Components Screen2 TextBox1 TextBox2 HorizontalArrangement1 VerticalArrangement1 TextBox3 TextBox4 TextBox5 TextBox6 TextBox7 Button1 VerticalArrangement2 Label1 Label2 Label3 Label4 Label5 Media Rename Delete

Properties Screen2 AboutScreen CloseScreenAnimation Default HighContrast OpenScreenAnimation Default ScreenOrientation Unspecified Scrollable

Type here to search 29°C 11:20 AM 19-11-2022

Type here to search 27°C Mostly clear 22:57 25-11-2022

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Search Components...

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- Switch
- TextBox
- TimePicker
- WebView

Layout

Media

Drawing and Animation

Maps

Display hidden components in Viewer

Phone size (505,320)

Screen3

Sign in

User Id

.....

Login

Screen3

- TextBox1
- Label1
- PasswordTextBox1
- Button1

Rename Delete

Media

iot.jpeg

Upload File ...

Screen3

AboutScreen

AlignHorizontal

Left : 1

AlignVertical

Top : 1

BackgroundColor

Default

BackgroundImage

None...

BigDefaultText

CloseScreenAnimation

Default

HighContrast

OpenScreenAnimation

Default

ScreenOrientation

Unspecified

Scrollable

ShowStatusBar

True

Title

Screen3

TitleVisible

Type here to search

29°C

11:20 AM

19-11-2022

IBM

Explore GitHub

IBM EPBL/IBM Project

mit app inventor

MIT App Inventor

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IOT_Based_smart_crop_protection_system_for_agriculture_APP

Screen4

Add Screen ...

Remove Screen

Publish to Gallery

Designer

Blocks

Search Components

User Interface

Button

CheckBox

DatePicker

Image

Label

ListPicker

ListView

Notifier

PasswordTextBox

Slider

Spinner

Switch

TextBox

TimePicker

WebViewer

Layout

Media

Drawing and Animation

Display hidden components in Viewer

Phone size (505,320)

Screen4

FIELDS

Temperature

Sensor Detection

Humidity

Soil Moisture

Check

Components

Screen4

TextBox1

Label1

HorizontalArrangement1

Label2

HorizontalArrangement2

Label3

HorizontalArrangement3

Label4

HorizontalArrangement4

Button1

Media

IOTagric...epic.jfif

Upload File

Properties

Button1

BackgroundColor

Default

Enabled

FontBold

FontItalic

FontSize

14.0

FontTypeface

default

Height

Automatic...

Width

Automatic

Image

None...

Shape

default

ShowFeedback

Text

Check

TextAlignment

center : 1

IOT agriculture pic.jfif

Show all

Type here to search

Market Brief

23:41

25-11-2022

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iot_based_smart_crop

Screen1 Add Screen Remove Screen Publish to Gallery Designer Blocks

Blocks

Built-in

- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures
- Screen1
- Image1
- Any component

Viewer

when Screen1 Backpressed

do open another screen screenName Screen2

Show Warnings

Media

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iot_based_smart_crop

Screen2 Add Screen Remove Screen Publish to Gallery Designer Blocks

Blocks

Screen2

- TextBox1
- TextBox2
- HorizontalArrangement1
- VerticalArrangement1
- TextBox3
- TextBox4
- TextBox5
- TextBox6
- TextBox7
- Button1
- VerticalArrangement2
- Label1
- Label2
- Label3
- Label4
- Label5

Viewer

when Button1 TouchUp

do

- if length Label1 Text < 1
- then set Label1 Text to User name must not be empty
- else if length Label1 Text < 15
- then set Label1 Text to Password maximum 15 characters
- else if not contains text piece Email ID
- then set Label2 Text to Email ID
- else

Show Warnings

Media

Type here to search

29°C 11:46 AM 19-11-2022

IBM-30185-1662617556 Node-RED x Service Deta x Cloudant Da x Node-RED x IBM Watson x IBM Watson x +

node-red-uaobi-2022-10-03.eu-de.mybluemix.net/red/#flow/bf7338572bf24ec8

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Node-RED

Flow 1

debug

all nodes all

23:46 25-11-2022

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Page view | Read aloud | Add text | Draw | Highlight | Erase

Node-RED

Flow 1

dashboard

gauge

msg.payload

function

switch

humidity

temperature

moisture status in soil

http request

click on button to get image

http

msg.payload

template

debug

```
{
  "randomNumber": 26,
  "temp": 25,
  "hum": 82
}
```

11/19/2022, 10:05:21 AM node:12f2649a:0d0d98
iot-2/type/abcd/id/1234/evl/event_1/fmrljson:
msg.payload: Object

```
{
  "randomNumber": 72,
  "temp": 36,
  "hum": 98
}
```

11/19/2022, 10:06:25 AM node:12f2649a:0d0d98
iot-2/type/abcd/id/1234/evl/event_1/fmrljson:
msg.payload: Object

```
{
  "randomNumber": 76,
  "temp": 20,
  "hum": 94
}
```

11/19/2022, 10:06:53 AM node:12f2649a:0d0d98
iot-2/type/abcd/id/1234/evl/event_1/fmrljson:
msg.payload: Object

```
{
  "randomNumber": 73,
  "temp": 64,
  "hum": 97
}
```

11/19/2022, 10:07:24 AM node:12f2649a:0d0d98
iot-2/type/abcd/id/1234/evl/event_1/fmrljson:
msg.payload: Object

```
{
  "randomNumber": 15,
  "temp": 80,
  "hum": 85
}
```

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26°C Mostly clear

23:53 25-11-2022

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Node-RED Deploy

ga x Flow 1 debug

dashboard

gauge

function temperature

function function msg payload

function humidity

IBM IoT connected

randomNumber: 11, temp: 69, hum: 86 }

11/19/2022, 10:32:29 AM node: f2f2649a.0d0d98
iot-2/type/abcd/id/1234/ev/1/fmtljson :
msg.payload : Object

randomNumber: 4, temp: 74, hum: 92 }

11/19/2022, 10:32:59 AM node: f2f2649a.0d0d98
iot-2/type/abcd/id/1234/ev/1/fmtljson :
msg.payload : Object

randomNumber: 16, temp: 12, hum: 87 }

11/19/2022, 10:33:29 AM node: f2f2649a.0d0d98
iot-2/type/abcd/id/1234/ev/1/fmtljson :
msg.payload : Object

randomNumber: 41, temp: 58, hum: 99 }

11/19/2022, 10:33:59 AM node: f2f2649a.0d0d98
iot-2/type/abcd/id/1234/ev/1/fmtljson :
msg.payload : Object

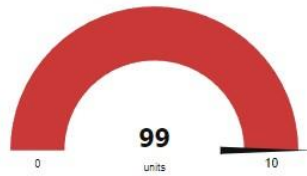
randomNumber: 59, temp: 23, hum: 89 }

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crop protection

Humidity



MOTOR ON

MOTOR OFF

sensor data



Type here to search



30°C Cloudy



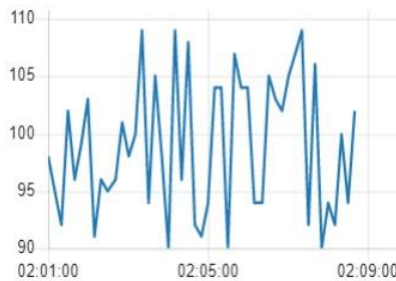
02:08
16-11-2022



MOTOR ON

MOTOR OFF

sensor data



Type here to search



30°C Cloudy



02:08
16-11-2022



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ii5woz2.internetofthings.ibmcloud.com/dashboard/boards/c1e81473-2b16-43e6-b0e9-088ec0351ac8

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IBM Watson IoT Platform

test01

+ Add New Card

Settings

Line chart

Time	temp
10:32	40
10:32:30	70
10:33	75
10:33:30	15
10:34	60
10:34:30	25
10:35	30
10:35:30	35
10:36	45

5 minutes now

1 Simulation running

Type here to search

10:36 AM 11/19/2022

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26°C Mostly clear 23:54 25-11-2022