

Steps involved in making this Project:

Step 1:

Install Unity Hub

Step 2:

Sign in or create your new account in Unity Hub

Step 3:

Go to Browser and Search Vuforia Developer portal
the link is <https://developer.vuforia.com/>

Step 4:

Create an Vuforia account By Sign in or signup

Step 5:

Navigate and go to the develop menu and click get basic

Step 6:

Then activate your Vuforia license

Step 7:

Now go to download menu and then download the latest Vuforia engine

Step 8:

Then install the Vuforia engine on the unity hub

Step 9:

Then in the unity hub click create new project

Step 10:

Then remove the main camera and right click and add the Vuforia camera

Step 11:

Click the installed packages and go to Vuforia and under the license enter the license key which you have created from the previous step and activate it.

Step 12:

Then select the HD image and download it, this will be further used as target image, after downloading save it in the computer.

Step 13:

Again, go to Vuforia Developer Portal and in the Develop menu go to the Target Manager and click add database then give the database name and select the device type and import the image which has been downloaded.

Step 14:

Now click create Database, the image will be converted into target image format then download the database which you have created.

Step 15:

Now go to unity hub and on the AR camera Right click and select Add Target Image and the import the Downloaded Database in it.

Step 16:

Adjust the image and set the angle 90 degree to the base, then click on the target image and add plane.

Step 17:

Then make the plane to be perpendicular to the target image

Step 18:

Then add buttons and Background image to the added plane

Step 19:

Now adjust the buttons on the plane with the background image of the plane and check that it doesn't interfere with other elements and then save the project.

Step 20:

Now add text to the buttons as ON and OFF

Step 21:

Then go the Blynk app or website and create an account create a project in the project we must click on that on or off that means the signal pass "0" or "1" in that process we connect in unity hub app by authentication signal via it passing a connection the connection signal to be passed in the unity hub we must create a target image to be created via assets (will be clearly explained in the IOT part).

Step 22:

Then copy the v0 and v1 as an url (note: the url must also include the auth token hence it will be easier, the auth token will be generated while creating an account in blynk) and then save it for further use.

Step 23:

Then add c sharp code to the Buttons and add the url with v0 for off and with v1 for ON, that's it the buttons are now in working condition. Note: add the url to the respective Buttons on the onclick function to work properly.

Step 24:

Then extract the Project as an apk file with desired apk name and select the platform as android, then copy the apk file to your mobile via USB cable.

Step 25:

Now the IOT part, on your pc install Arduino IDE.

Step 26:

For this the hardware's required are Wi-Fi controller esp8266, relay module, jumper wires, power bank for powering of WIFI controller, plug and appliance which you are going to control.

Step 27:

Browse blynk cloud in your browser, now signup or sign in to the blynk cloud platform.

Step 28:

Navigate to the template menu then click on the new template button in the template menu and name it as "AR Button".

Step 29:

Choose the hardware as esp8266

Step 30:

Make connection type as Wi-Fi and click done, then navigate to the data stream section.

Step 31:

Create new data stream then create a virtual pin by leaving the configurations as default and create virtual pin 0 (V0).

STEP 32:

Do the same step and create virtual pin 1(V1).

Step 33:

Navigate to the web dashboard and select the switch in widget box and save it.

Step 34:

Then click search icon and click on new devices and select choose from template option.

Step 35:

Choose the created template name and device name and copy the documentation code and paste the code into your Arduino IDE.

Step 36:

Then type to code required to connect the Wi-Fi controller device and give your Wi-Fi network's Ssid and password to your code

```
"char ssid[]="your Wi-Fi name""
```

```
"char pass[]="your password"".
```

Step 37:

Then compile the code and after successful compilation connect your wi-fi controller in your pc via USB cable.

Step 38:

Then choose the connected board in your Arduino IDE and upload the code into your Wi-Fi controller.

Step 39:

Now power the Wi-Fi controller through power supply then turn on your Wi-Fi then the Wi-Fi controller is connected to your Wi-Fi or Hotspot.

Step 40:

Then connect the Wi-Fi controller esp8266 to relay module through jumper wire by the pins D1-IN, 3V-VOL, Gnd-Gnd.

Step 41:

Then connect the relay module and the appliance which you are wishing to control with normal wire and connect it with the plug also.

Step 42:

Then open the apk file which we have generated and show it on the target image then the control panel will be visible on your phone screen and then what's now you can control the appliance by clicking the button on or off.

