MoodLamp Mobile Application

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December 16, 2022

Contents

1   Introduction

MoodLamp App is a mobile application that enables the user to control the color of the Mood lamp using their mobile phone.
This mobile application was developed using flutter in *CEDT Lab*.

2   How to Install the Application

Installation of this application is easy and can be completed by following the steps given below.

Step 1: Click on the .apk file. After clicking, a pop-up will be displayed as shown in figure 1.
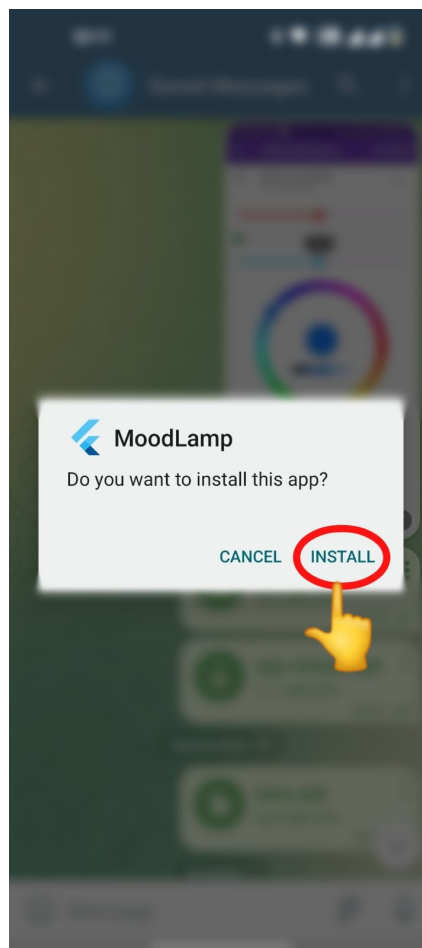

Figure 1: Click Install.

Step 2: Click on the INSTALL. The app will start installing as shown in figure 2.

Step 3: After the successful installation click on OPEN as shown in figure 3.
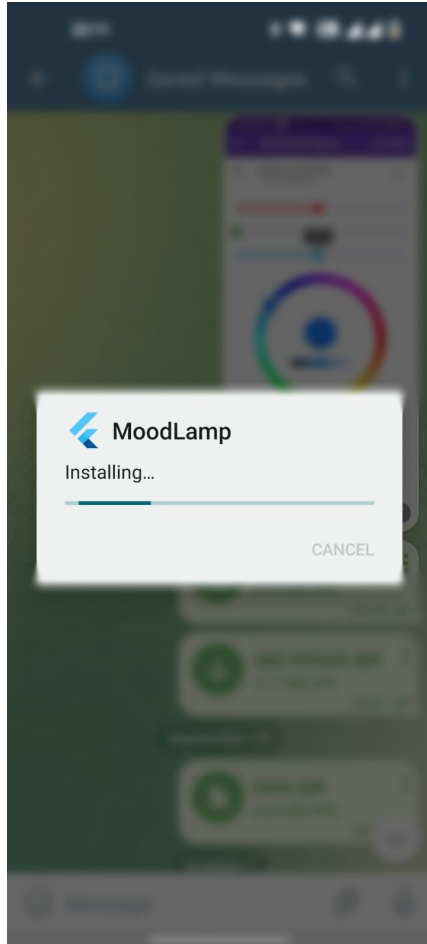

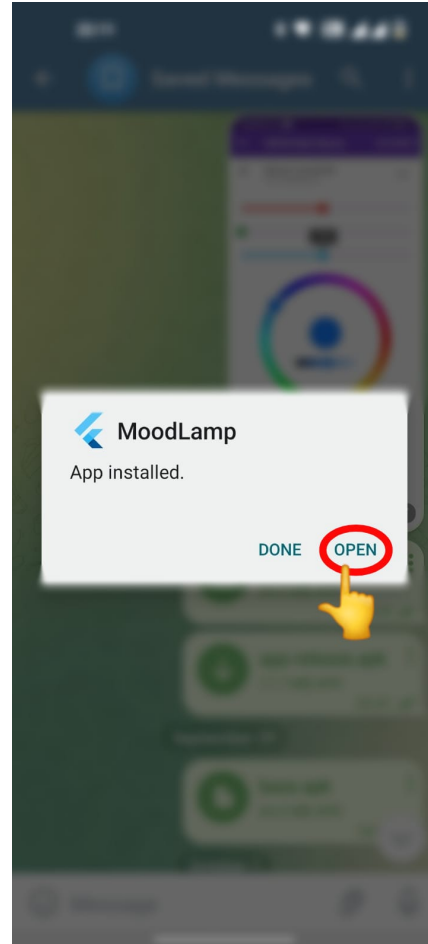
Figure 2: App is Installing.

Figure 3: Click Open.

3   How to connect with Mood lamp

When the App Opens its quite probable that you might get an error "Bluetooth Adapter is off." as shown in figure 4. It indicates that your mobile device's Bluetooth is off. As our app communicates with the mood lamp using Bluetooth only, So it is necessary to switch on the Bluetooth of your mobile device.

After turning Bluetooth on, you will see the same screen as shown in figure 5. Now to proceed kindly click on the button with 🔍 icon.
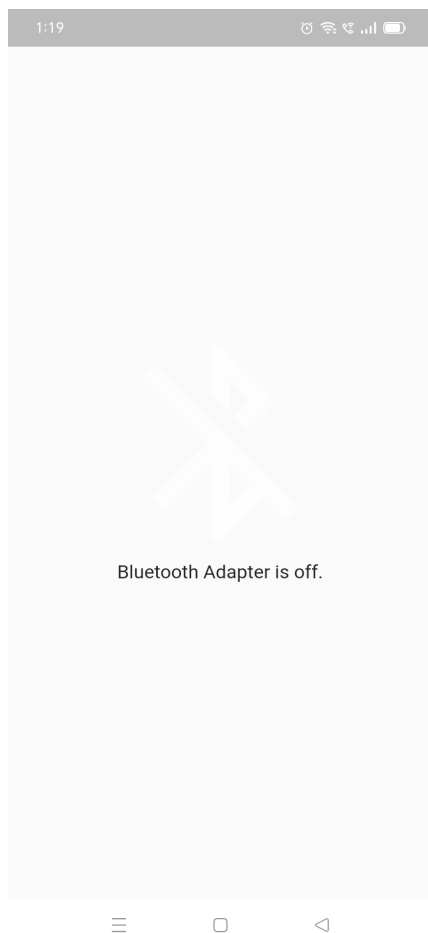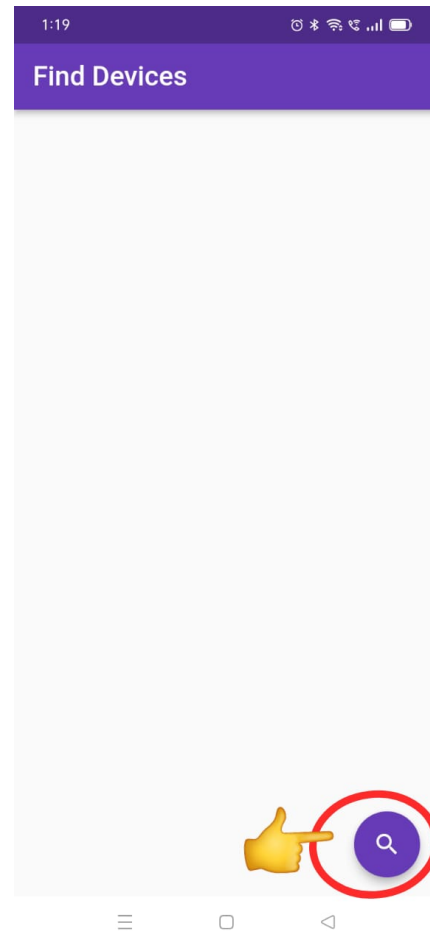
Figure 4: Need to turn on Bluetooth.

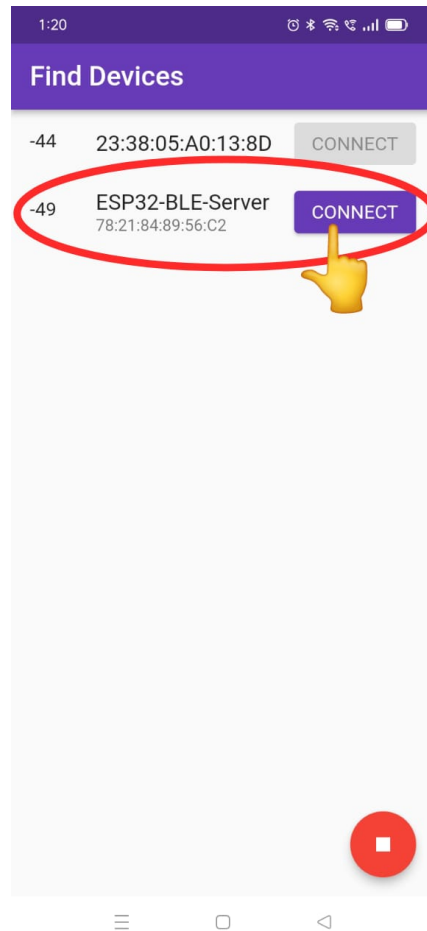Figure 5: Click on the find device button.

Figure 6: Click on connect button.

Now the list of all the nearby available Bluetooth devices will show up as shown in figure 6. Find the name of our Mood lamp (in this case ESP32-BLE-Server) and click on the connect button given against it.

Now the screen will be the same as shown in figure 6 which means our Mood lamp is now connected to our app and we just need to click the refresh button. After refreshing screen will be the same as shown in figure 8.
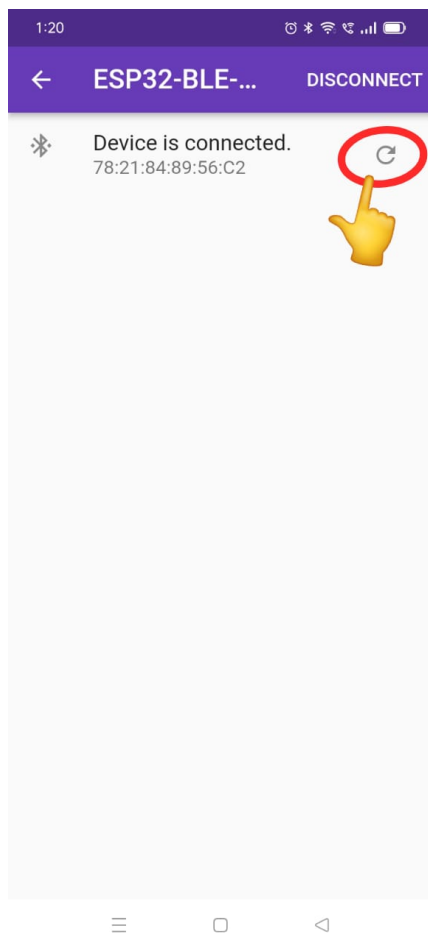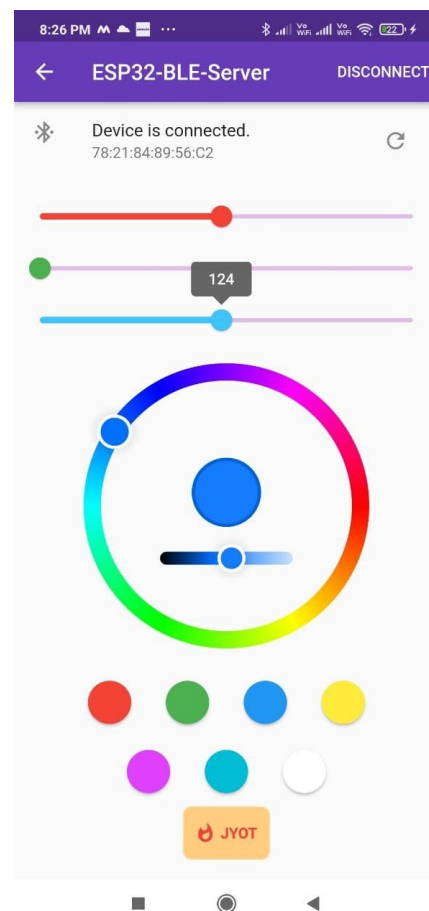
Figure 7: Click on refresh button.

Figure 8: App's Interface.

4 Features of Application

· Sliders for changing RGB values.

· Color Wheel.

· Dedicated Color Buttons.

· JYOT Button.

· Mood lamp off when Mobile is Shaked.

4.1 Sliders for changing RGB values

This application provides you with sliders to change the RGB value just by moving the slider of that color (i.e. Red, Green, or Blue) over a range of 0 to 255.
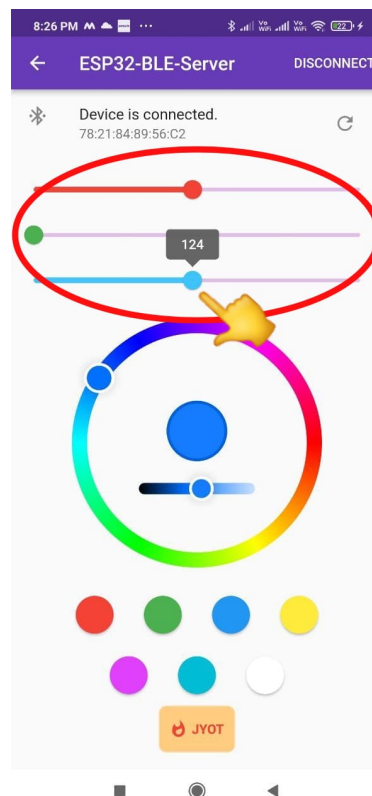By moving the sliders we can set our Mood lamp at different colors as shown below in figure 9.

Figure 9: Sliders for changing RGB values.

4.2   Color Wheel

The Color Wheel provides us a better user experience of changing the RGB values by just moving a selector over a color wheel as shown in the figure 10.
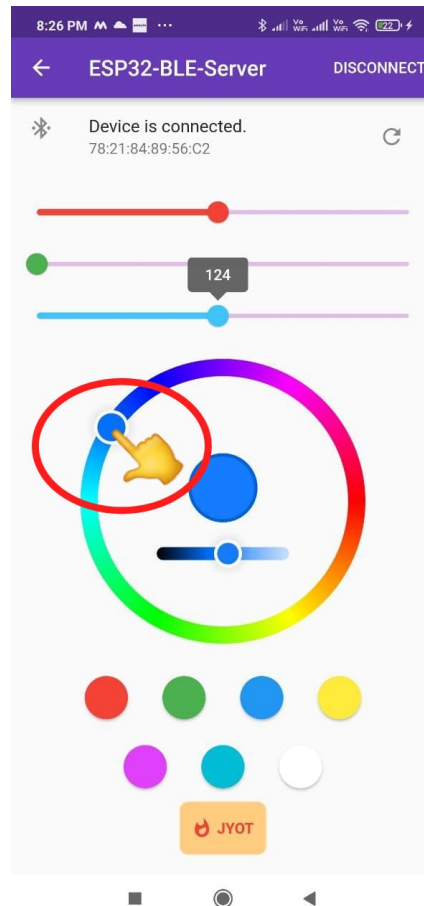

Figure 10: Color Wheel.

4.3   Dedicated Color Buttons

A secondary color is a color made by mixing of two primary colors in a given color space.
When we mix red and green colors we get yellow represented as:
red + green = yellow
When we mix green and blue colors we get cyan represented as:
green + blue = cyan
When we mix blue and red colors we get magenta represented as:

blue + red = magenta
When all three primaries are combined in equal amounts, the result is white.
red + green + blue = white

So we provided dedicated buttons for these 7 colors for Mood lamp: red, yellow, green, cyan, blue, magenta, and white as shown in figure 11.
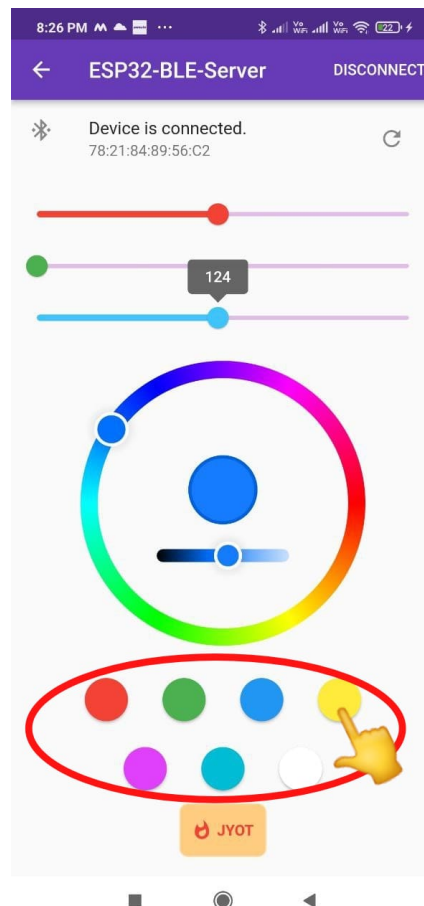

Figure 11: Dedicated Color Buttons.

4.4   JYOT Button

This application also provides the user with a fascinating feature which is termed here as "JYOT". As its name suggests whenever the user clicks on the JYOT button Mood lamp will get into Jyot mode i.e. Mood lamp will start appearing like a flicking flame.

This mode can be activated by just clicking on the JYOT button as shown in figure 12.
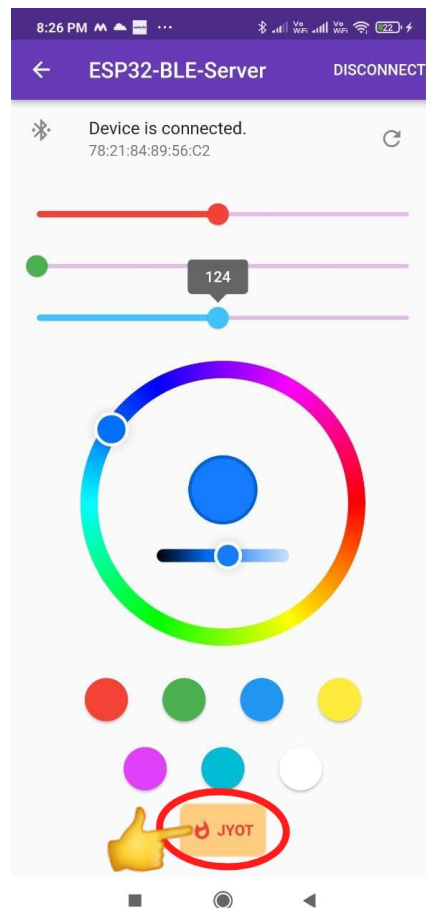

Figure 12: JYOT Button

4.5 Mood lamp off when Mobile is Shaked.

When the user wants to turn the Mood lamp off (i.e. want to set RGB values to 000) user just needs to shake the mobile and the Mood lamp will turn off.