PORTABLE RPI-BASED PROGRAMMER DOCUMENTATION

It has three LED's for indication and two switches for operation,

- Orange LED indicates the Wi-Fi connectivity of RPI.
  - Blinking – Wi-Fi not connected.
  - Constant ON – Wi-Fi Connected
  - Connected on RPI GPIO 4
- Green LED indicates the successful operation.
  - Connected on RPI GPIO 2
- RED LED indicates the unsuccessful operation.
  - Connected on RPI GPIO 3
- Code Upload Switch.
  - Press the button for 2-3 seconds and wait to glow the LED
    - RED LED Glow – failed to upload the code.
    - GREEN LED Glow – successfully code upload.
- Shutdown Switch.
  - Press the button for 5 seconds to shut down the RPI.
    - RPI is a power fluctuation-sensitive device, so whenever you want to turn it off first shut it down.
    - The successful Shutdown indication is –
      - LEDs will blink in the following sequence in 0.5 seconds interval
        - GREEN
        - RED
        - GREEN
        - RED

WIFI CREDENTIALS

If you want to update the new code in the device you need to update it in RPI first wirelessly and its too simple.

- Turn ON your mobile hotspot with the following credentials
  - SSID – evoluzn_ota
  - PASSWORD – 123456789
    - Wait for 5 to 10 seconds to connect RPI on your network
- Flask Service Setup
  - You need to set up flask service which will return the file on RPI

```python
from flask import Flask, send_file
import os

app = Flask(__name__)

@app.route("/sp16")
def return_pdf():
    # Get the list of files in the current directory
    files = os.listdir(".")

    # Filter for the file with the .hex extension (or use other criteria)
    filename = next((file for file in files if file.endswith(".hex")), None)
    print (filename)
    # If the file is found, return it
    if filename:
        return send_file(filename)
    else:
        return "File not found", 404


if __name__ == "__main__":
    app.run(host='0.0.0.0', port=1000)
```

  - Run this file in your system where you are generating the .bin file of your code.
  - MQTT commands to upload the code,
    - Send 100 on evoluzn_ota/control to update the code in RPI
      - Once the file is received and saved in RPI it will blink the GREEN LED
      - In case of failure to download the file in RPI it will blink the RED LED