Algorithm Steps to operate the ESP32 segment:

Step 1: Download Arduino IDE, open the browser and search for Arduino IDE and download the version for your device.

Step 2: Go to the list of programs on your device and search for Arduino and then launch it.

Step 3: After opening the Arduino program we need to define the ESP32 segment, go to the **file** located in the menu bar at the top of the program page and choose the **“Preferences”** option. A window will open, enter the following link (https://dl.espressif.com/dl/package_esp32_index.json) in the input field **"Additional Boards Manager URLs "** and select **OK.**

Step 4: Now choose **Tools** in the menu bar and choose the option **Board: "Arduino Uno"** and then choose the **"Boards Manager…"** option after that, a window will open for you, you will find a search field at the top, enter ESP32**, install** a copy **1.0.6** of esp32, and then **close.**

Step 5: After you have done step number 5, go to the **tools** in the menu bar, and then **Board: "Arduino Uno"** a new option will appear for you, which is **ESP32 Arduino .**

Step 6: Connect the ESP32 piece to the USB wire of your device.

Step 7: Go to **Tools** in the menu bar, then **Board: "Arduino Uno"** , then **ESP32 Arduino** select Controller **"WEMOS D1 MINI ESP32".**

Step 8: After that go to the **tools** in the menu bar and choose **Port**. If you see the option Port is not activated, follow these steps:

- Go to **Device Manager** from your device settings, you will see the name of the ESP32 segment in the other device with a name "CP2104 USB to UART Bridge Controller" , *note that it may appear with another name*.
- Go to the browser and type the name of the ESP32 segment that appeared to you and do a search.
- Choose the SILCON LABS website, go to the downloads tab, and download the Driver based on the operating system of your device.
- Unzip the file to a folder, then go to Downloads on your device, choose the folder that you unzipped and copy the path.
- Go back to the **device manager** in your device settings, click on the name of the ESP32 part, and select **Update driver**, then choose the **Browse my computer for drivers option**, then paste the path you copied into the input field, then choose **Next** and then **Close.**
- Go back to the Arduino program and go to the **tools** in the menu bar and you will see that **Port** is activated.

Step 9: Now we want to turn on the ESP32 light, go to **File**, then **Examples**, then **0.1 Basics** then **Blink**, then click on the **arrow icon** at the top to program the code and run it.

Algorithm to turn on the LED in the ESP32 segment using the web:

Step 1: Connect the ESP32 piece to the USB wire.

Step 2: Open the Arduino software

Step 3: Go to **File** in the menu bar, then choose **Examples**, then choose the **WiFi** option, then choose an option **WiFi Access point**.

Step 4: Then in the code, assign a value to the variable ssid to be the name of the network you want, and then assign a value to the passward variable to be the password for the network

Step 5: Now program the ESP32 piece by clicking on the **arrow icon** at the top

Step 6: Now use any device you have, search for the name of the network that you created and enter its password and connect to it

Step 7: After that, go to the browser on your device and search for **192.168.4.1** , you will now find a page where you can turn the LED on or off the ESP32 segment.