Steps

Make sure that python is installed on your mac

If Not then install it from: https://www.python.org/

Open Terminal

```
Sh
python3 --version
```

Create the Python Script:
we will use Visual Studio Code to write the Python script. Save the script with a .py extension, for example, battery_monitor.py.

Save your code to your desktop. Then Import it in terminal using this command

Stands For Sell Command

```
Sh
cd Desktop
```

Then Run you code

The Title You saved your code under

```
Sh
python3 battery_monitor.py
```

Before running your code make sure you have installed the *psutil* library installed.
You can install it using pip:

```
Sh
pip3 install psutil
```

psutil allows us to accsess the battery.

Create a formula that allows you to track the battery usage and time left

Silly Aspect:

Battery Countdown

Tell you how much longer until your battery dies.

we will use the mac's battery sensors to extract the current percentage

Copilot assist for debugging and scripting

Software: Terminal for Mac

Language: Python, Index.html

Sticking with Visual studio

Wont Work on terminal, only Bash Script

Python WILL work with some extra code ✅

New Error Found, Python is incompatible. Continuing using index.html

Using:
index: *html*
script: *js*
style: *css*

Submission Vid.

Video Link

First Terminal Attempt

Using Terminal For Mac

```
Desktop — Python battery_monitor.py — 80×24
Last login: Wed Dec  4 15:01:20 on ttys003
[redacted]-MacBook-Air ~ % pip3 install psutil

Requirement already satisfied: psutil in /Library/Frameworks/Python.framework/Versions/3.13/lib/python3.13/site-packages (6.1.0)

[notice] A new release of pip is available: 24.2 -> 24.3.1
[notice] To update, run: pip3 install --upgrade pip
mohamedelbotaty@Mohameds-MacBook-Air ~ % cd Desktop

[redacted]-MacBook-Air Desktop % python3 power_up_protector.py

/Library/Frameworks/Python.framework/Versions/3.13/Resources/Python.app/Contents/MacOS/Python: can't open file '/[redacted]_protector.py': [Errno 2] No such file or directory
[redacted]Desktop % python3 battery_monitor.py
```

First attempt: Fail, Continuing using index.html

Backend using js

```
// Function to update the battery status
function updateBatteryStatus(battery) {
    let batteryPercentage = Math.round(battery.level * 100); // Get battery level as a percentage
    let timerElement = document.getElementById('timer');
    let batteryPercentageElement = document.querySelector('.battery-percentage');
    let batteryFillElement = document.querySelector('.battery-fill');
    let batteryStatusText = document.querySelector('.battery-status-text');

    // Update the battery percentage display
    batteryPercentageElement.textContent = `${batteryPercentage}%`;
    batteryFillElement.style.width = `${batteryPercentage}%`;

    // Update the charging status text
    if (battery.charging) {
        batteryStatusText.textContent = "Plugged In";
    } else {
        batteryStatusText.textContent = "Not Charging";
    }

    // Define battery capacity and average usage
    const batteryCapacity = 5; // Total battery capacity in hours
    const averageUsage = 0.2; // Average usage in hours per percentage (1 hour for every 20%)

    // Calculate remaining battery life using the provided formula
    let remainingBatteryLife = (batteryPercentage / 100) * batteryCapacity / averageUsage; // Remaining battery life in hours

    // Convert remaining battery life to minutes
    let timeLeftInMinutes = remainingBatteryLife * 60; // Convert hours to
```

Success!!