Technical Documentation

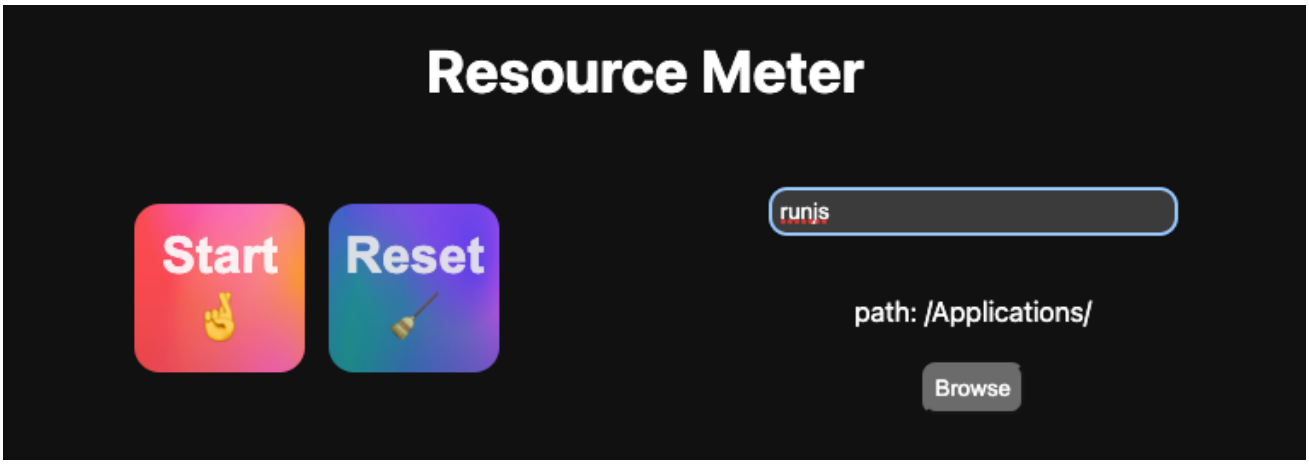
System Requirements
Have Node.js installed
OS: macOS, Windows, or Linux. For resource reasons I was only able to test the app on macOS

installation and configuration
Open cmd, bash, etc console in the root folder of the project.
Execute command npm install, (Linux or macOS) sudo npm install (this will install all the necessary dependencies for the operation of the application)
npm start (start the application))

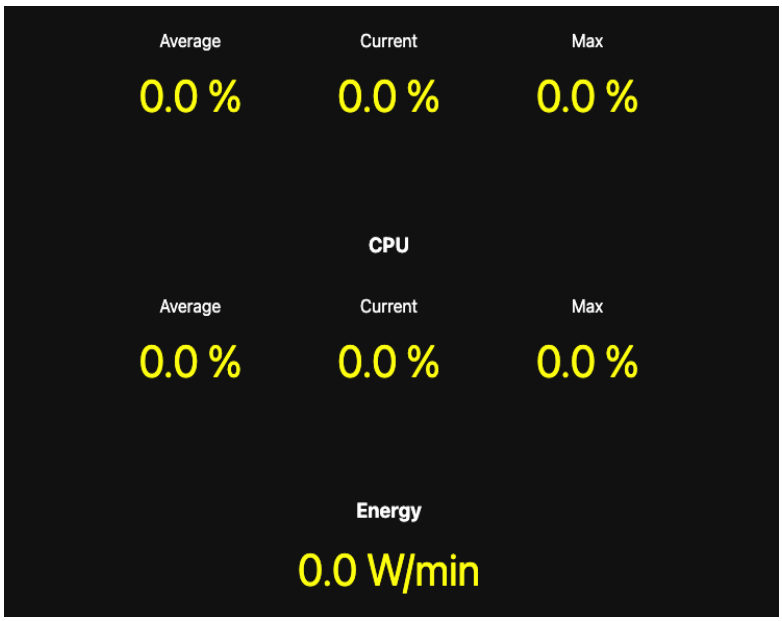
Libraries and Frameworks
-Electron
-systemInformation
-ps-list

Base Code
The application consists of a main file where the primary configuration of the Electron application takes place. It also defines event handlers for communication between the main process and the window's rendering process, creating the window.
Then, there are several other files with the .js extension that contain functions primarily responsible for obtaining system resources or performing operations to estimate the application's resource consumption.
preload.js: This file acts as a bridge that connects the rendering area with the window (main.js).
rendered.js: This file accesses HTML elements and applies event listeners. It is responsible for rendering the information and implementing specific logic to store values, calculate averages of the stored resources, and provide interactivity to the application.
style.css: This file applies the styles to the application.
index.html: This file contains the HTML elements and serves as the base structure of the project.

How to use the application



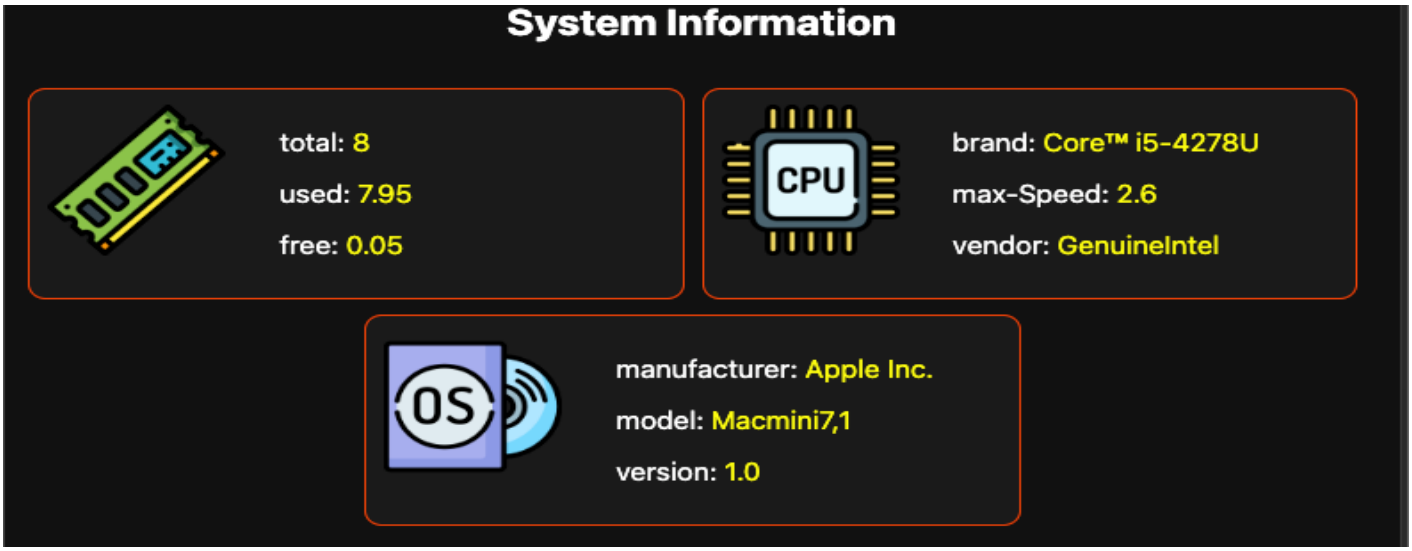
Once the application is initialized, it contains a "Browser" button that allows you to navigate between directories. To obtain all the processes, the application needs to access the root folder of the application you want to measure. It also includes an input field for cases where accessing that location is not possible. For example, on macOS, you may need to access the contents of a package.
After selecting the appropriate location, you can begin the measurement by clicking the "Start" button.
If needed, you can reset the values to their initial parameters by clicking the "Reset" button, which will enable you to start a new measurement.



The measurements of RAM and CPU are obtained by summing up all the processes and recording the maximum, current, and average values within an approximate 1-minute interval, updating every second.

The fourth section measures the approximate power consumption of the application, considering the average of all the processes. It calculates the consumption of RAM as a percentage of the total capacity and the processor consumption based on the Total CPU Power (TCP) and the percentage utilized by the processes within the approximate 1-minute interval.

The last section renders the properties of the hardware and the operating system, providing precise information about the available resources.



Thank you, I hope the application meets the expectations to some extent. It was challenging for me, but I really enjoyed having the opportunity to expand my knowledge and continue growing.