**MonitoringActivity**

This project is a Flask-based application designed to monitor user inactivity and log it to a file. It provides a web interface for starting and stopping the monitoring process, processing log files, and viewing inactivity reports.

**Features**

* **Start and Stop Monitoring**: Allows users to start and stop monitoring inactivity.
* **Dynamic Log File Creation**: Automatically generates log files with timestamps or uses a user-specified file path.
* **Inactivity Logging**: Logs periods of inactivity longer than 5 minutes.
* **Log Processing**: Processes log files to calculate total inactivity duration and displays start and stop times.
* **View Logs**: Allows users to view the contents of specific log files.
* **Quick Links Section**: Provides a section for commonly used links.

**File Overview**

**1.**[app.py](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

This is the main Flask application file. It contains the following routes and logic:

* **/ (Index Route)**:
  + Displays the main page with options to start or stop monitoring.
  + Initializes the [monitoring](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) session variable to False when the application starts.
* **/start**:
  + Starts the monitoring process.
  + Accepts a file path and an optional end time from the user.
  + Dynamically generates a log file name if a directory is provided.
  + Sets [session['monitoring']](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) to True.
* **/stop**:
  + Stops the monitoring process.
  + Sets [session['monitoring']](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) to False.
* **/process\_logs**:
  + Displays a page for processing log files.
* **/load\_logs**:
  + Loads log files from a specified directory and displays them in the interface.
* **/process\_log**:
  + Processes a specific log file to calculate total inactivity duration and displays start and stop times.
* **/view\_file**:
  + Displays the contents of a specific log file.

**2.**[index.html](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

This is the main HTML template for the application. It includes:

* A form to start monitoring with fields for file path and end time.
* A button to stop monitoring.
* A section to display the "Monitoring is currently running..." message when monitoring is active.
* A quick links section for commonly used URLs.

**3.**[process\_logs.html](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

This template displays the log files in a specified directory and allows users to select and process a specific log file.

**4.**[show\_log.html](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

This template displays the results of processing a log file, including:

* Start time.
* Stop time.
* Total inactivity duration.

**5.**[view\_file.html](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

This template displays the contents of a specific log file.

**6.**[start\_app.bat](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html)

A batch file to start the Flask application. It runs the [app.py](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) file on port 5001.

**How It Works**

**1. Starting the Application**

* Run the [start\_app.bat](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) file to start the Flask application.
* Open a browser and navigate to http://127.0.0.1:5001.

**2. Starting Monitoring**

* Enter a file path in the "File Path" field. If a directory is provided, a log file with a timestamped name will be created in that directory.
* Optionally, enter an end time in the format mm/dd/yyyy hh:mm:ss. If no end time is provided, monitoring will stop at 11:59:59 PM of the current day.
* Click the "Start Monitoring" button to begin monitoring.

**3. Stopping Monitoring**

* Click the "Stop Monitoring" button to stop the monitoring process.

**4. Processing Logs**

* Navigate to the "Log Processing Page" by clicking the corresponding button.
* Enter the directory containing the log files and load the logs.
* Select a log file to process and view the total inactivity duration, start time, and stop time.

**5. Viewing Logs**

* Select a log file from the list and view its contents.

**Requirements**

* Python 3.10 or higher
* Flask
* Pynput

**Installation**

1. Clone the repository:

git clone https://github.com/your-username/MonitoringActivity.git

cd MonitoringActivity

1. Create a virtual environment:

python -m venv venv

1. Activate the virtual environment:
   * On Windows:

venv\Scripts\activate

* + On macOS/Linux:

source venv/bin/activate

1. Install the required dependencies:

pip install -r requirements.txt

**Usage**

1. Start the application:

python app.py

1. Open a browser and navigate to http://127.0.0.1:5001.
2. Use the interface to start/stop monitoring, process logs, and view log files.

**Example Log File**

A sample log file might look like this:

Script started at: 03/31/2025 10:00:00

Inactivity Start: 03/31/2025 10:15:00 | Inactivity End: 03/31/2025 10:20:00 | Total Inactivity Duration: 0:05:00

Script stopped at: 03/31/2025 11:00:00

**Troubleshooting**

* **"Monitoring is currently running..." message appears incorrectly**:
  + Ensure the [session['monitoring']](vscode-file://vscode-app/c:/Program%20Files/Microsoft%20VS%20Code/resources/app/out/vs/code/electron-sandbox/workbench/workbench.html) variable is properly initialized in the / route.
* **PermissionError when creating log files**:
  + Verify that the application has write permissions for the specified directory.
* **Invalid date format error**:
  + Ensure the end time is entered in the format mm/dd/yyyy hh:mm:ss.