

RAM Usage Monitoring and API Interface

This project provides a system for monitoring RAM usage and an API interface to access the collected data. It uses Python, FastAPI, psutil, SQLAlchemy, and bcrypt for password hashing.

Prerequisites

- Python 3.6 or higher
- Virtual environment (optional but recommended)

Installation

1- Clone the repository:

```
git clone https://github.com/sinmajidi/ram-usage-monitoring.git  
cd ram-usage-monitoring
```

2- Install dependencies:

```
pip install -r requirements.txt
```

Usage

1- Running the RAM Usage Monitor:

Start monitoring RAM usage by running the main.py script:

```
python main.py
```

The script will continuously monitor RAM usage and store the data in the SQLite database.

2-API Interface:

Run the FastAPI application using Uvicorn:

```
uvicorn api_interface:app --reload
```

Access the API documentation at <http://localhost:8000/docs> to explore available endpoints and interact with the API.

3-Creating Users:

Run the user_creator.py script to add new users to the database:

```
python user_creator.py
```

Follow the prompts to enter the user's email and password.

API Endpoints

- **GET /login**

Endpoint for user authentication. Provides a token upon successful authentication.

- **GET /get_ram_data/**

Endpoint to retrieve RAM usage data. Requires authentication. Supports query parameter limit to specify the number of records to retrieve.