**Socket Programming Project 2 - TCP/IP Programming**

To run the application, first start the monitoring service by opening a terminal, navigating to the directory containing `monitoring\_service.py`, and typing `**sudo python3 monitoring\_service.py**`. Then, open another terminal, navigate to the directory containing management\_service.py, and run the script with `**python3 management\_service.py**`.

**Management Service Software Requirements Specification (SRS) (Abbreviated):**

1. The Management Service is performing the existing tasks related to configuring and managing monitoring tasks. It manages connections to monitoring services and distributes tasks for checking the status of various servers (HTTP, HTTPS, ICMP, DNS, NTP, TCP, UDP). It maintains real-time status updates of these monitoring services and provides a command interface for users to control the application.

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1. It is also establishing and maintaining persistent TCP connections to multiple monitoring services, each identified by IP and port numbers. It has a saved configuration that contains the list of Monitoring Services.

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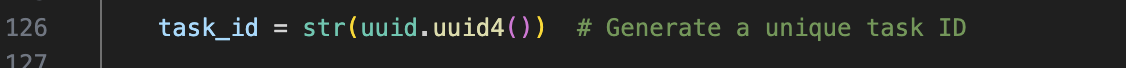
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1. It also holds all configuration information for monitoring tasks, including service types to monitor, parameters for checks, and check frequencies.

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It also assigns and manages unique IDs for each monitoring service, linking them to specific monitoring tasks.



1. Status Display: It provides real-time status updates of all connected monitoring services.

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1. Task Distribution and Validation:

The unique ID is retrieved from the Monitoring Service and displayed on the terminal.A screen shot of a computer

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**Monitoring Service Software Requirements Specification (SRS) (Abbreviated):**

1. The Monitoring Service is performing the existing tasks related to running service checks (HTTP, HTTPS, ICMP, DNS, NTP, TCP, UDP).

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1. It is using a unique identifier for interacting with the Management Service.

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1. It performs assigned monitoring tasks according to the received configurations and frequencies.

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1. Result Reporting:

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1. The Monitoring Service must be able to allow for the Management Service to reconnect without needing to restart the Monitoring Service.

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