**Real-Time System Usage Monitoring Application**

This application monitors and visualizes real-time system usage data including CPU, memory, and disk usage.

It consists of two components -

1. Python script for fetching and plotting the data.
2. C# server for providing the system usage data.

**Python Script (fetch\_plot.py):**

The script uses the requests library for making HTTP requests and matplotlib for plotting.

The functions used are:

* fetch\_data(): Sends a GET request to the server endpoint /system-info to fetch system usage data.
* update\_plot(frame): Updates the plot with the received data.

For the plotting we have initializes lists to store x-axis values and usage percentages for CPU, memory, and disk.

It continuously fetches data from the server and updates the plot every second using Matplotlib's FuncAnimation.

**C# Server (server.cs):**

The server is built using ASP.NET Core and utilizes SignalR for real-time communication.

**The endpoints are:**

* /system-info: Provides random CPU, memory, and disk usage data when requested.
* /system-info-hub: SignalR hub for broadcasting system info to connected clients.

SystemInfoCollector is used Generates random system usage data and broadcasts it to connected clients via SignalR hub.The startup configuration are Configures SignalR, controllers, and services.

Working of the Module:

Start the C# server using the dotnet run command.

Run the Python script to initiate real-time monitoring and visualization.

The Python script fetches data from the server every second and updates the plot accordingly.

The C# server continuously generates random system usage data and broadcasts it to connected clients.Users can visualize CPU, memory, and disk usage in real-time through the Matplotlib plot.