

# Linux System Monitor Tool - Project Report

This project is a real-time system monitoring tool built in C++ that displays live information about system processes, CPU usage, and memory utilization. It functions similarly to the Linux 'top' command and utilizes the /proc filesystem with an ncurses-based terminal interface.

## Key Features:

- Real-time CPU usage (overall percentage)
- Memory usage (total, used, percentage)
- Live process list (PID, user, CPU%, MEM%, RSS, command)
- Sorted by CPU usage (highest first)
- Auto-refresh every second
- Simple keyboard control (q to quit)
- Lightweight C++17 code using ncurses

## Technologies Used:

- C++17
- Linux /proc filesystem
- ncurses
- System calls and process management

## How to Build and Run:

1. Install dependencies: `sudo apt install g++ libncurses5-dev libncursesw5-dev`
2. Compile: `g++ -std=c++17 -O2 sysmon.cpp -lncurses -o sysmon`
3. Run: `./sysmon`
4. Controls: Press 'q' to quit

## Sample Output:

PID	USER	CPU%	MEM%	RSS(KB)	COMMAND
1354	anuj	22.5	3.1	98000	firefox
978	root	5.2	0.4	12500	Xorg
2461	anuj	1.3	0.1	3400	sysmon

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