**Task Management in Linux and Windows OS**

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**Introduction**

This document compares achieving process and task management activities in a Linux operating system and Windows operating system.

1. **Running Processes**

**Linux**

**Command**: ps aux

**Description**: This command lists all running processes with detailed information about each.

**Expected Output**: A list of all processes, including user, PID, CPU and memory usage, and the command that started the process.

**Expected Output:** This command displays detailed information about the CPU architecture, including the number of cores, clock speed, architecture type, and cache sizes.

**ScreenshotA screenshot of a computer screen

Description automatically generated**

**Windows**

**Action**: Open Task Manager (Ctrl + Shift + Esc) > Processes tab

**Description**: Displays all running processes with details.

**Expected Output**: A list of all processes with details such as user, PID, CPU, and memory usage.

**Screenshot**

**A screenshot of a computer

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1. **Performance Monitoring**

**Linux**

**Command**: top

**Description**: Provides a real-time view of running processes and system performance.

**Expected Output**: Dynamic display of system processes, CPU, and memory usage.

**ScreenshotA screenshot of a computer screen

Description automatically generated**

**Windows**

**Action**: Open Task Manager > Performance tab

**Description**: Provides real-time system performance metrics.

**Expected Output**: Dynamic display of CPU, memory, disk, and network usage

**Screenshot**

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1. **Kill a task**

**Linux**

**Command**: kill [PID]

**Description**: Terminates a process by its Process ID (PID).

**Expected Output**: The specified process will be terminated.

**Screenshot**

A screen shot of a computer code

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**Windows**

**Action**: Right-click on a process in Task Manager > End Task

**Description**: Terminates the selected process.

**Expected Output:** The specified process will be terminated.

**Screenshot**

**A screenshot of a computer

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1. **Find a Process by Name**

**Linux**

**Command**: pgrep [process\_name]

**Description**: Returns the PIDs of processes matching the given name.

**Expected Output**: List of PIDs for processes matching the process name.

**Screenshot**

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**Windows**

**Action**: Use the search bar within Task Manager’s Processes tab

**Description**: Locates processes by name.

**Expected Output**: Highlighted process that matches the search term.

**Screenshot**

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1. **View Process Tree**

**Linux**

**Command**: pstree

**Description**: Displays processes in a tree structure.

**Expected Output**: Hierarchical tree of running processes.

**Screenshot A computer screen shot of a program

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**Windows**

**Action**: Go to the Details tab in Task Manager

**Description**: Shows detailed information about each process.

**Expected Output:** A list of all processes with detailed information such as PID, CPU usage, and more.

**Screenshot**

**A screen shot of a computer

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