#### 

**Operating System**

**Lab 12 Tasks**

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**Task 1:**

Which command would you use to find the process ID (PID) of a process named OSLab without running it. After obtaining the PID, which command would you use to kill the process?

**Solution:**

Finding the Process ID (PID) of a Process Named "OSLab":

**1. pgrep OSLab:**

pgrep command is used to search for processes based on their names. When you run pgrep OSLab, it checks for any running processes that match the name "OSLab" and returns their Process ID (PID).

**Killing the Process after Finding the PID:**

**2. kill <PID>:**

After getting the PID (e.g., from the pgrep output), you can use the kill command to send a stop signal to that process. The kill command doesn’t instantly end the process; it sends a signal. By default, this signal is SIGTERM, which allows the process to stop smoothly.

**Syntax:** kill <PID>

**Task 2:**

How would you write a script that uses a signal trap to handle specific signals, and what is the purpose of a signal trap in such a script?

**Solution:**

**Signal Trap in a Script**

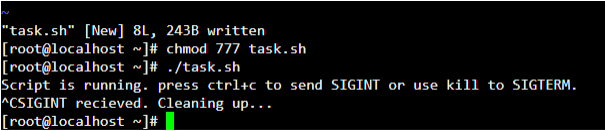
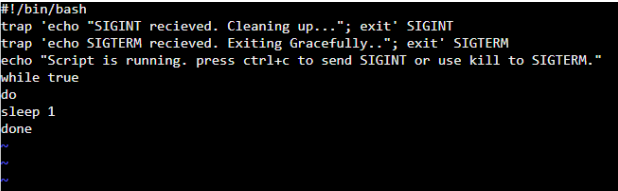
A signal trap in a script is used to catch and handle certain signals sent to a process, like instructions to stop or end. With a signal trap, you can control how the process responds, rather than letting it stop or act in a way you didn't plan.

**Purpose of a Signal Trap:**

**Custom Signal Handling:** Lets you define actions when a signal is received, such as cleaning up files or saving data, rather than letting the process handle it by default.

**Prevent Unintended Termination:** Helps stop the process from automatically quitting when it receives signals like SIGINT, allowing you to control the response.

**Graceful Shutdown:** Enables the script to handle signals like SIGTERM, so it can clean up resources or save progress before it ends.



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