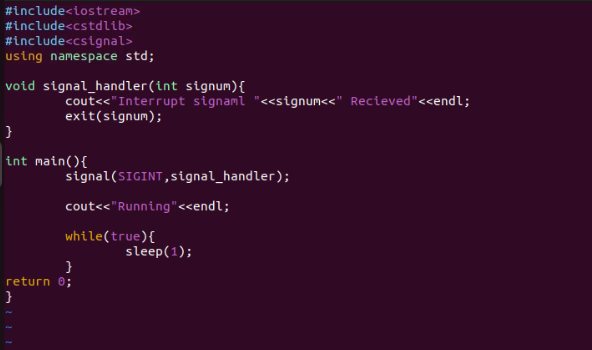
**Linux Command practice 5**

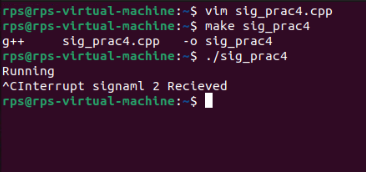
Basic Signal Handling

Simple Signal Handler: Write a C++ program that handles the SIGINT signal (Ctrl+C) gracefully by printing a custom message before exiting.

Code :



Output :

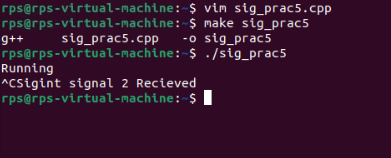


Multiple Signal Handling: Create a program that handles both SIGINT and SIGTERM signals, printing a different message for each

Code :.



Output :

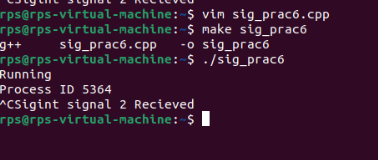


Ignoring Signals: Develop a program that ignores the SIGTERM signal and continues execution even after it's sent.

Code :

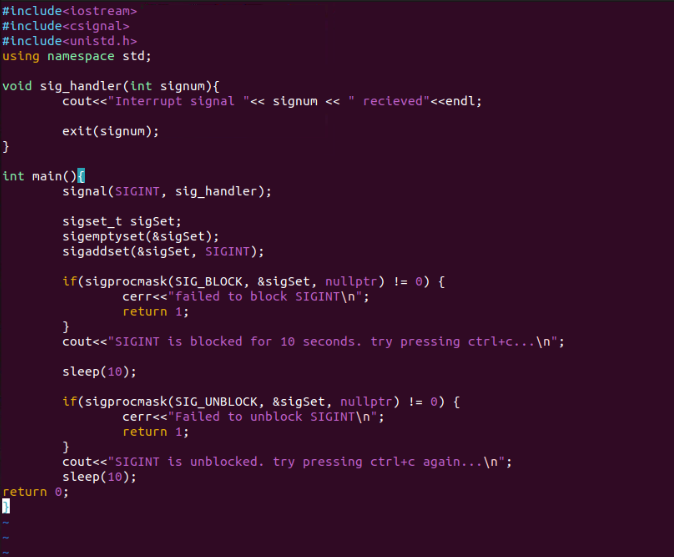


Output :

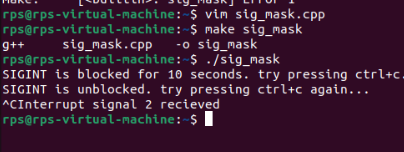


Signal SIGINT block and unblock :

Code :

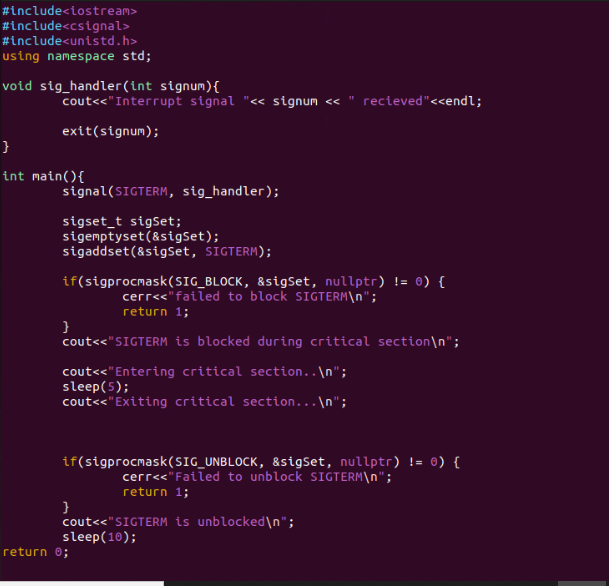


Output :

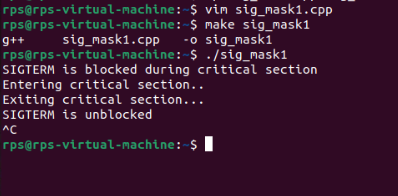


Signal SIGTERM block and unblock :

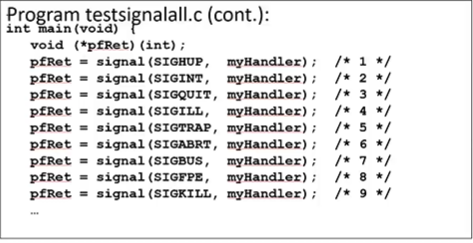
Code :



Output :

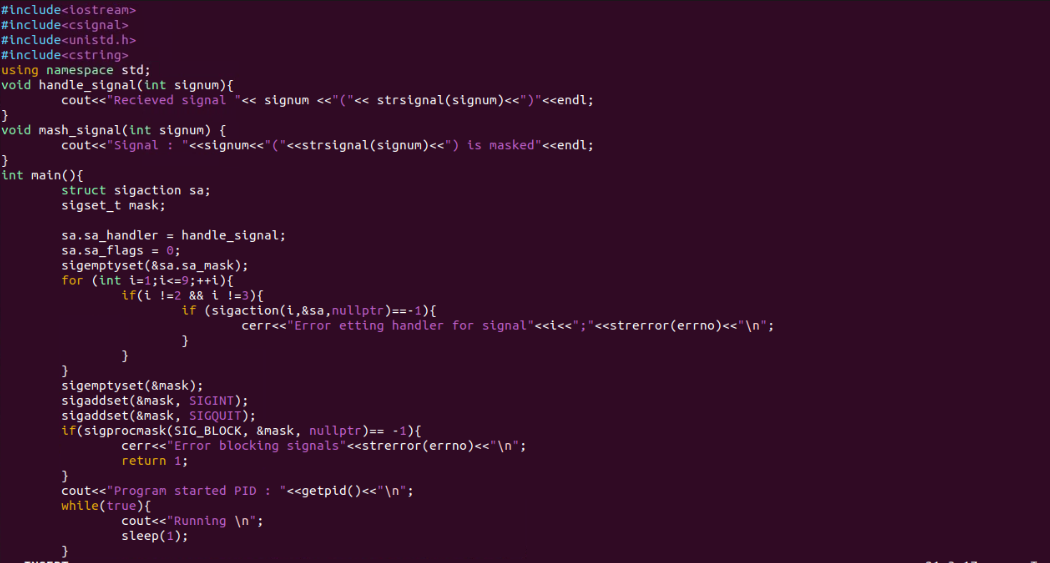


API’s for signal :

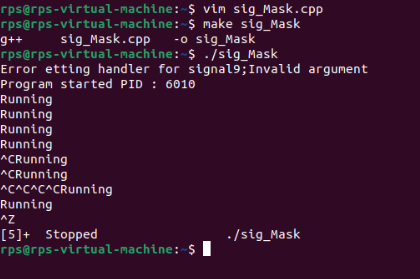


write a code where you handle signals from 1-9 as shown and try to mask few and handle others and test.

Code :



Output:



Signal Masking and Unmasking for Graceful Shutdown

Problem: Develop a C++ application that gracefully handles termination signals (e.g., SIGTERM, SIGINT) by masking specific signals during critical operations and unmasking them afterwards. Implement a clean shutdown procedure that ensures all resources are released before the process exits.

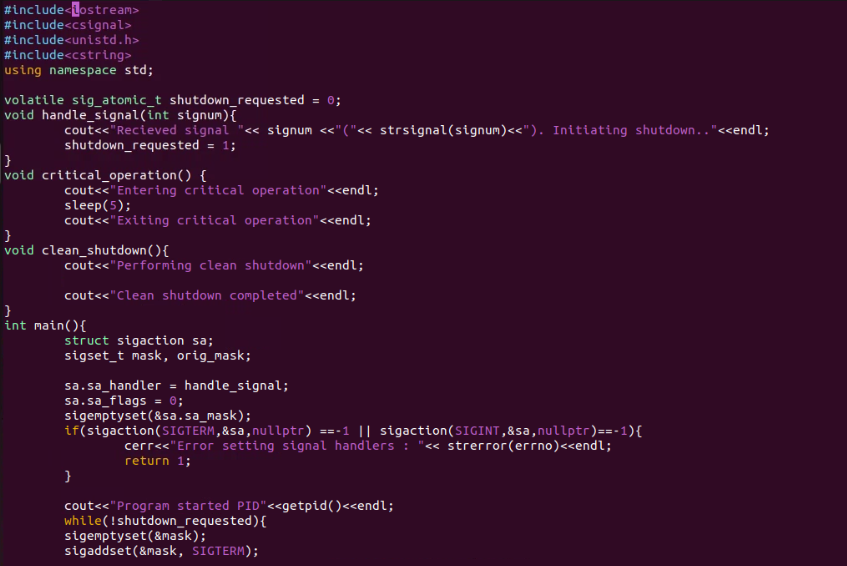
Key Challenges:

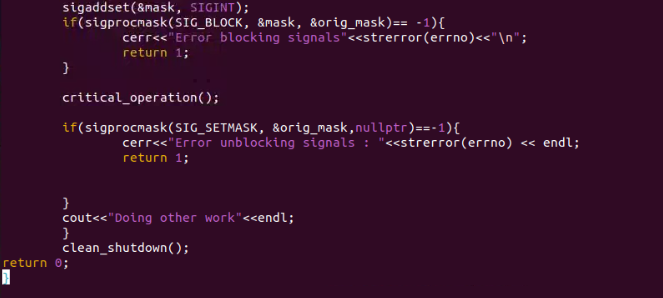
Determining the appropriate signals to mask during critical operations.

Ensuring timely unmasking of signals to avoid process hangs.

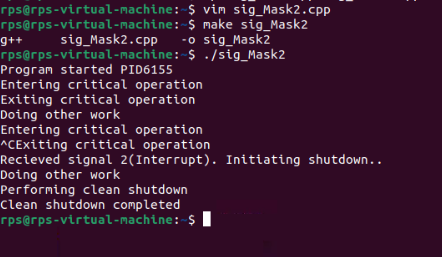
Implementing a robust shutdown mechanism that handles unexpected interruptions.

Code :





Output :



Problem Statement 3: Signal Masking and Unmasking for Error Handling

Problem: Create a C++ application that uses signal masking and unmasking to handle errors gracefully. Mask specific signals during error handling routines to prevent recursive signal delivery. Implement a mechanism to log error details and perform necessary cleanup actions before re-enabling the masked signals.

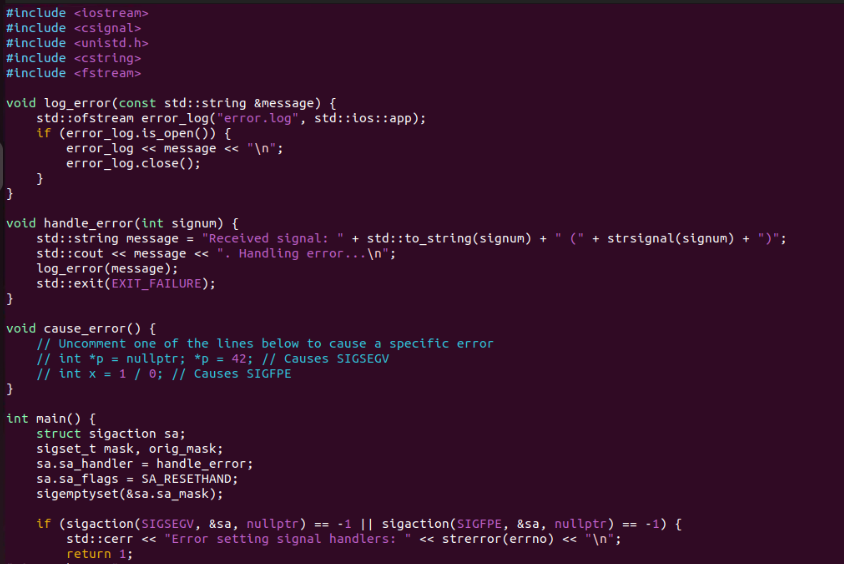
Key Challenges:

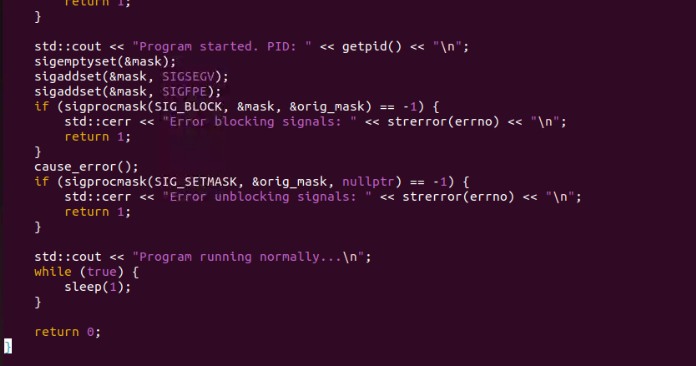
Identifying the appropriate signals to mask during error handling.

Preventing infinite recursion of signal handlers.

Ensuring proper error logging and resource cleanup.

Code:





Output :

