

1. Write a C program to define 3 different threads with the following purposes where N is the input. Thread A - To run a loop and return the sum of first N prime numbers. Thread B & C - should run in parallel. One prints "Thread 1 running" every 2 seconds, and the other prints "Thread 2 running" every 3 seconds for 100 seconds.

```
Enter value of N (for sum of first N prime numbers): 5
Thread A: Sum of first 5 prime numbers = 28
Thread 1 running
Thread 2 running
Thread 1 running
Thread 2 running
Thread 1 running
Thread 1 running
Thread 2 running
Thread 1 running
Thread 2 running
Thread 1 running
```

2. In the above program, add signal handling for SIGINT (etc) and prevent termination. Convert the above threads to individual functions and note down the time taken and the flow of execution.

Handles SIGINT (Ctrl+C)

Converts each thread into a regular function

Measures execution time for:

1. Sum of first N primes
2. Prints every 2 seconds (for 5 sec)
3. Prints every 3 seconds (for 5 sec)

Displays flow and total time per function

```
Enter N (for sum of first N primes): 7

--- Running sumOfPrimesFunc ---
Function A: Sum of first 7 primes = 58
Time taken: 0.00 seconds

--- Running runEvery2Seconds (5 sec) ---
Function B: Thread 1 running
Function B: Thread 1 running
Function B: Thread 1 running
Time taken: 0.00 seconds

--- Running runEvery3Seconds (5 sec) ---
Function C: Thread 2 running
Function C: Thread 2 running
Time taken: 0.00 seconds

=== Code Execution Successful ===
```