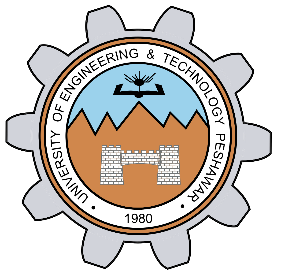
**Threads Synchronization**

**LAB # 8**

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Spring 2022

CSE204L Operating Systems Lab

**Submitted by:Maaz Habib, Alishba Orakzai, Nida Asmat Burki**

**Registration No.: 20PWCSE1952,20pwcse1953, 20pwcse1955**

**Section:**

C

**“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”**

Student Signature:

**Submitted to:**

Engr. Mian Ibad Ali Shah

June 9, 2022

**Department of Computer Systems Engineering University of Engineering and Technology, Peshawar**

**Lab Objective(s):**

* Solve the Critical Section Problem
* Implement different Process Scheduling Algorithms.

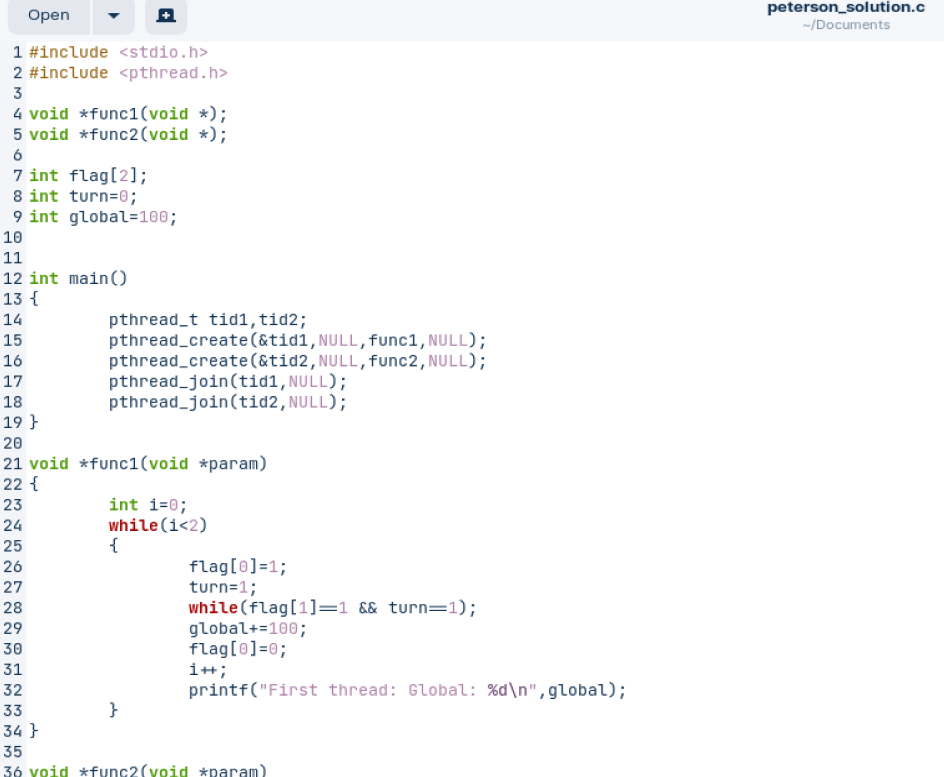
**Task # 01:**

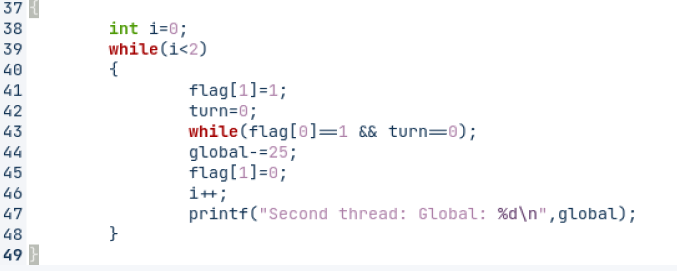
Solve the critical section problem using:

* Peterson solution
* Test and set instruction
* producer/consumer problem

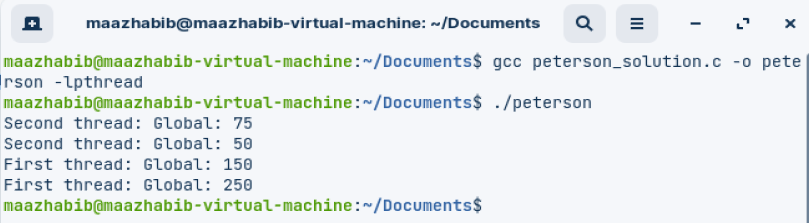
**Peterson Solution:**

**Code:**



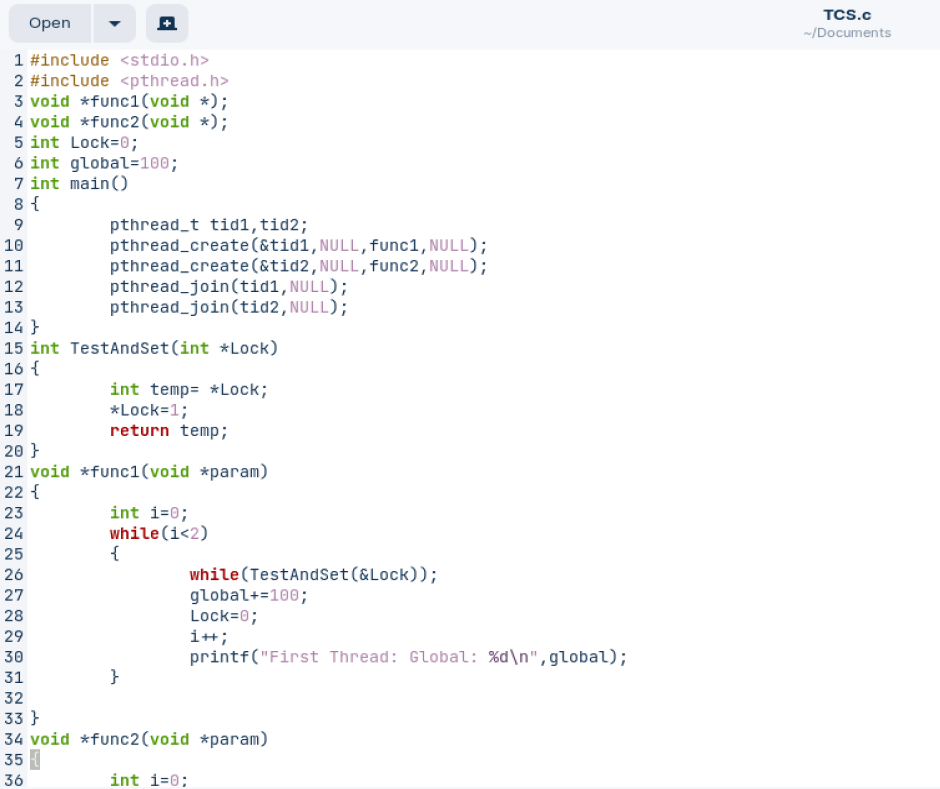


**Output:**



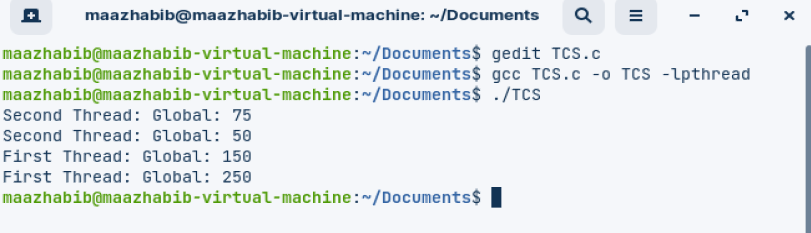
**Test and set instruction:**

**Code:**

****

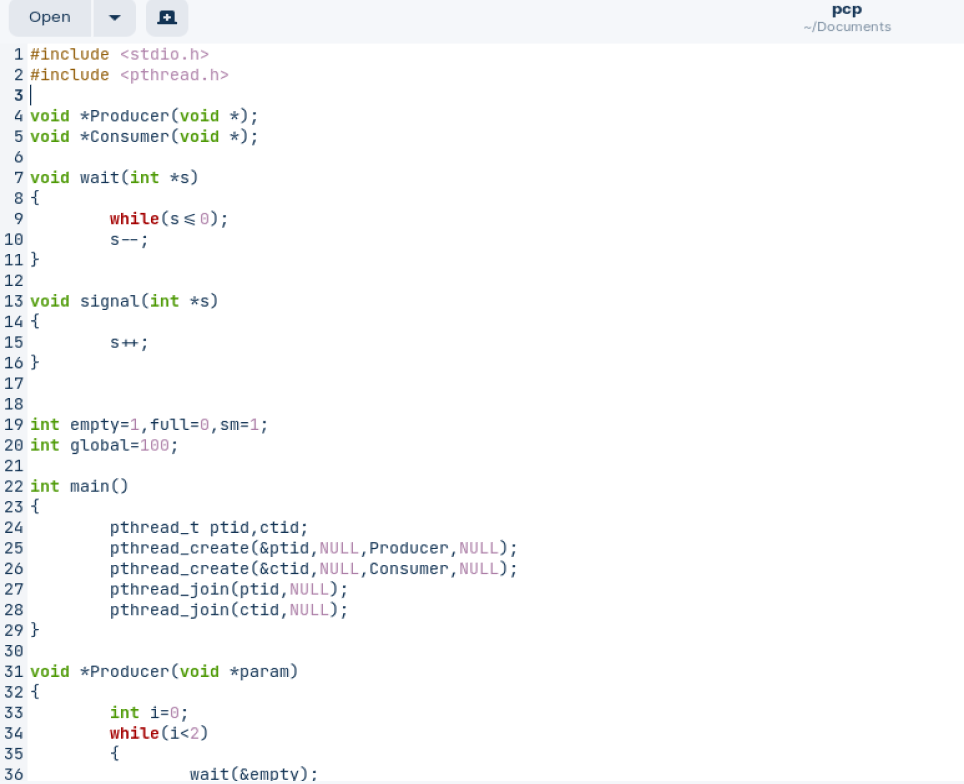
****

**Output:**

****

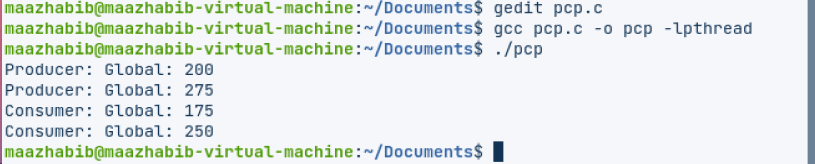
**Producer/Consumer Problem:**

**Code:**

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**Output:**

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**Task # 02:**

Simulate the following Process Scheduling Algorithms:

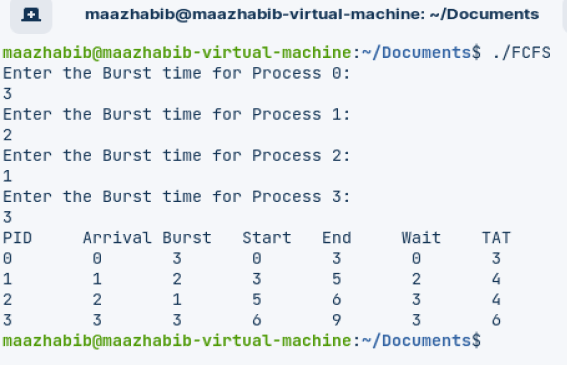
* First Come First Serve
* Shortest Job First
* Priority Scheduling
* Shortest Time Remaining First

**First Come First Serve:**

**Code:**

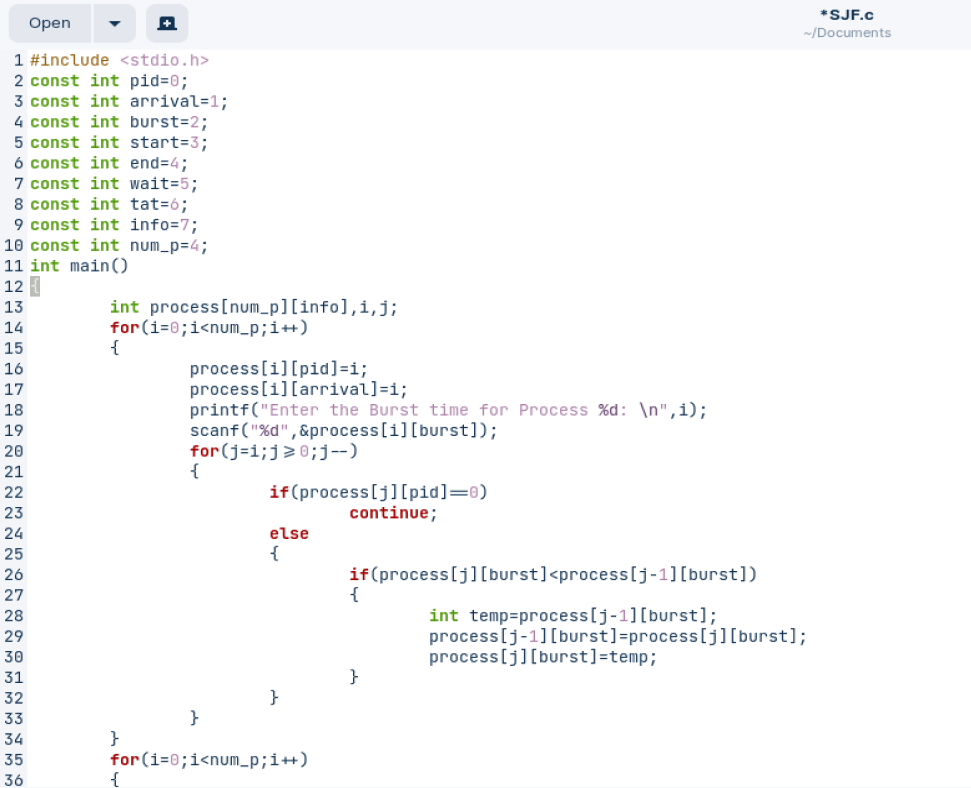
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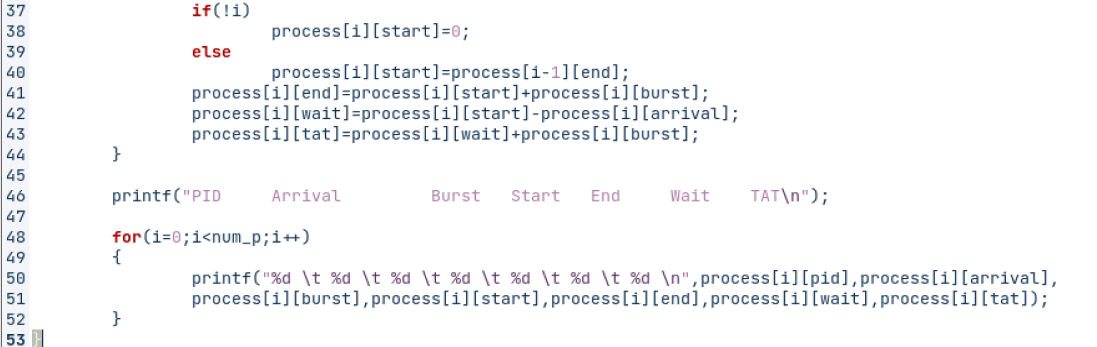
**Output:**

****

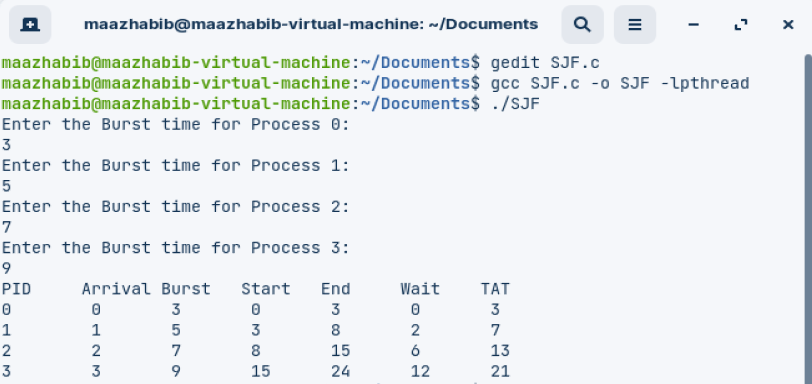
**Shortest Job First:**

**Code:**

****

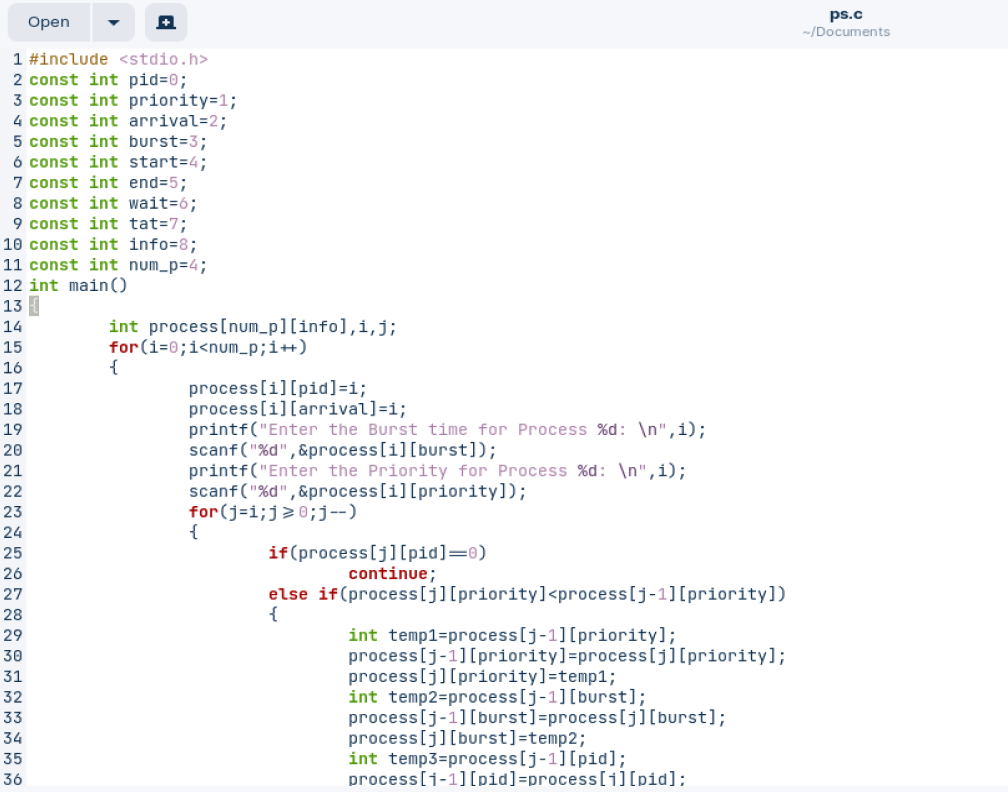
****

**Output:**

****

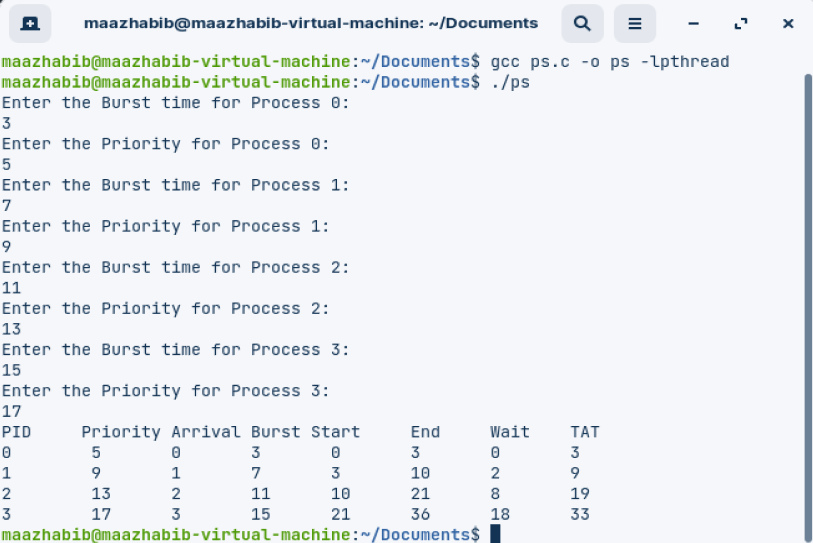
**Priority Scheduling:**

**Code:**

****

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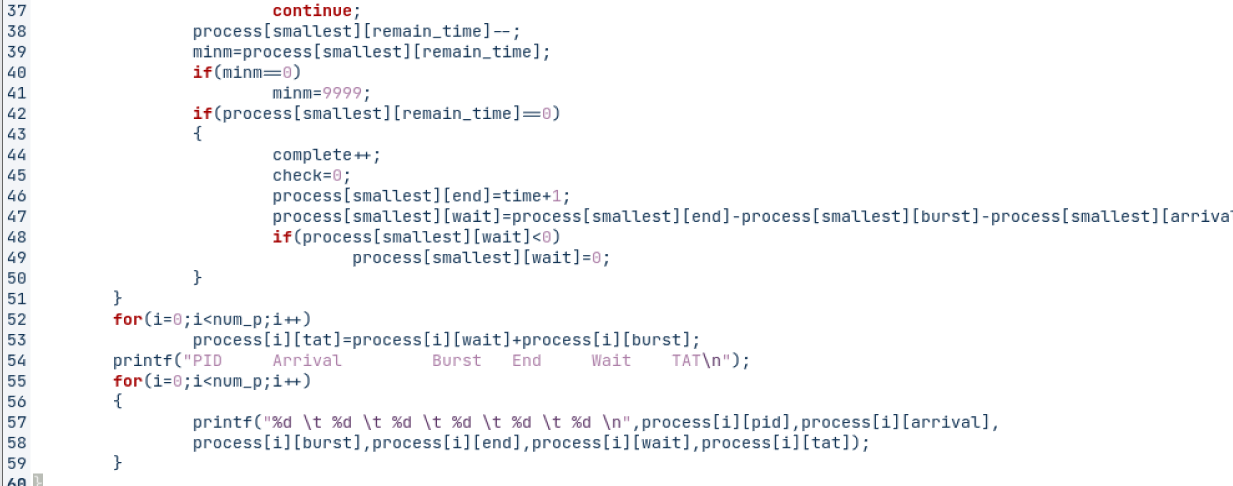
**Output:**

****

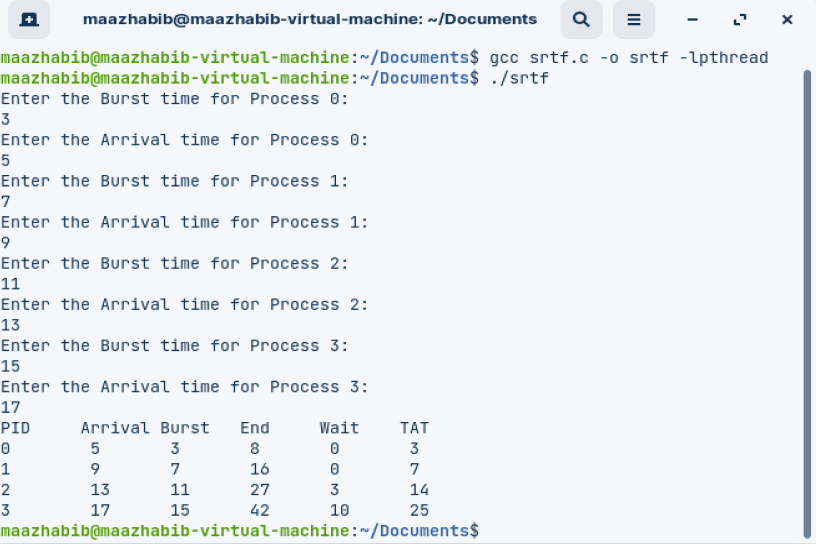
**Shortest Time Remaining First:**

**Code:**

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**Output:**

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