**Experiment :- 4**

**(Semaphore)**

4(a)

Aim: Write a program that demonstrates how two processes can share a variable using semaphore.

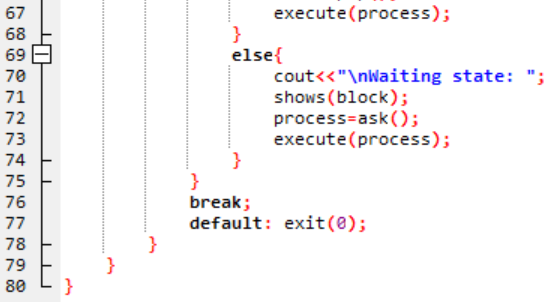
(I have used C++ because program was going long in C. Hope you understand Sir 😊)

**Binary Semaphore**

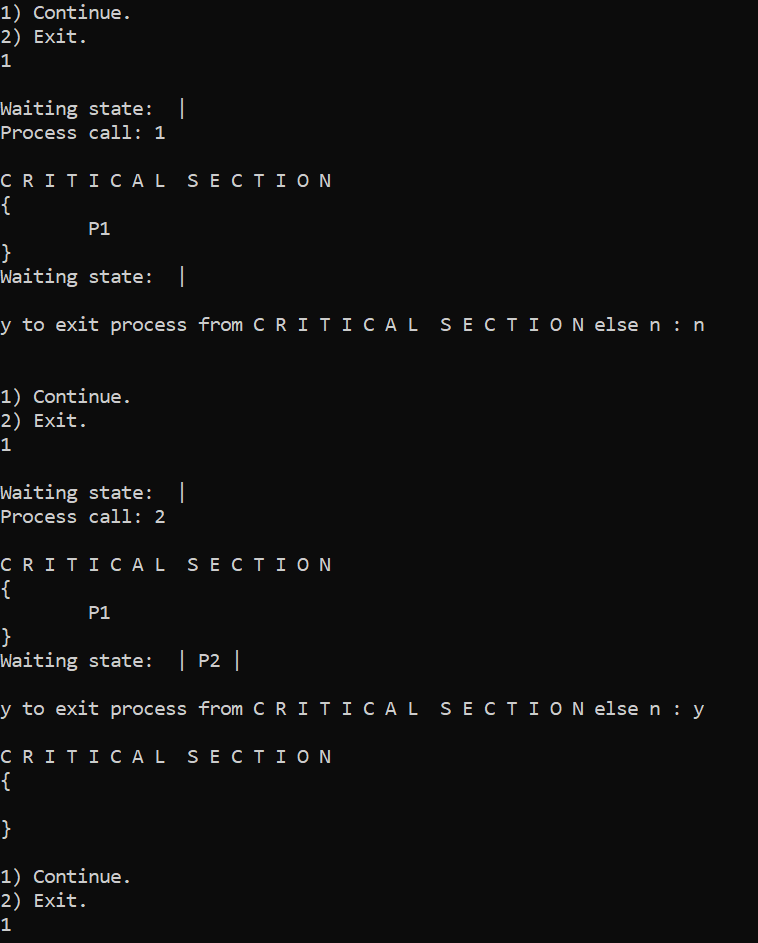
*Code:*

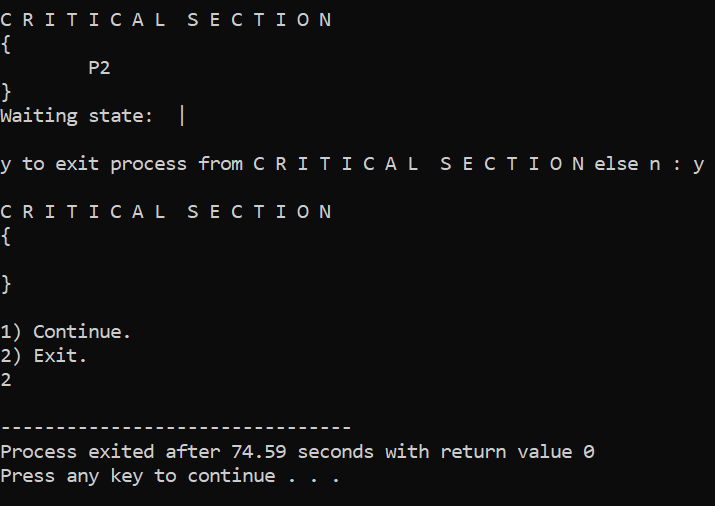
**

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**

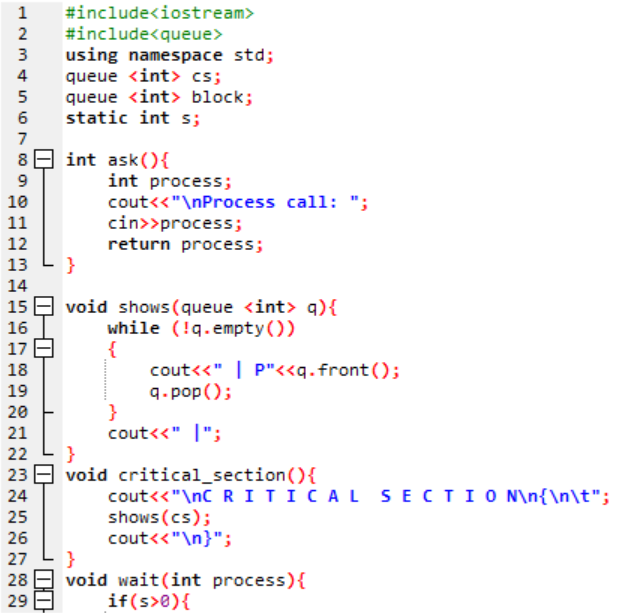
*Output:*

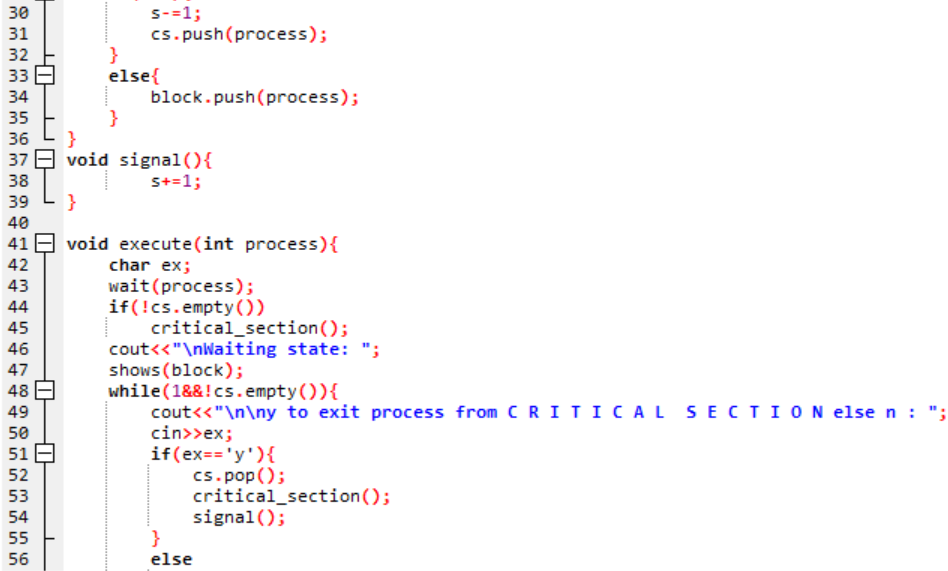
**

**

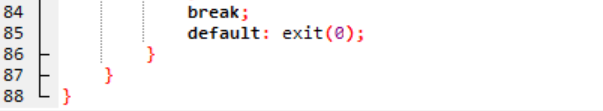
**Counting Semaphore**

*Code:*

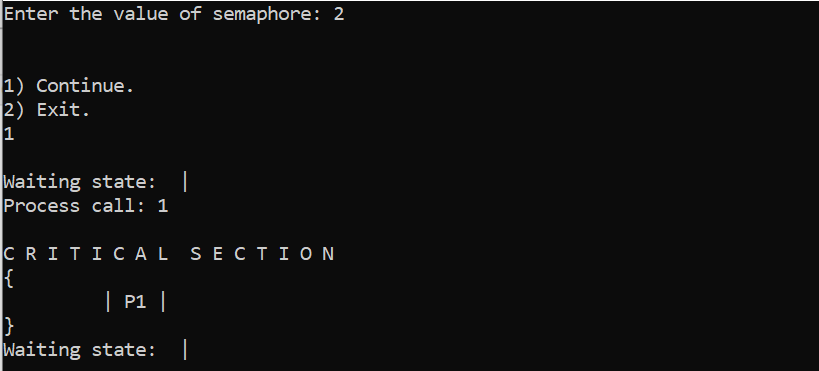
**

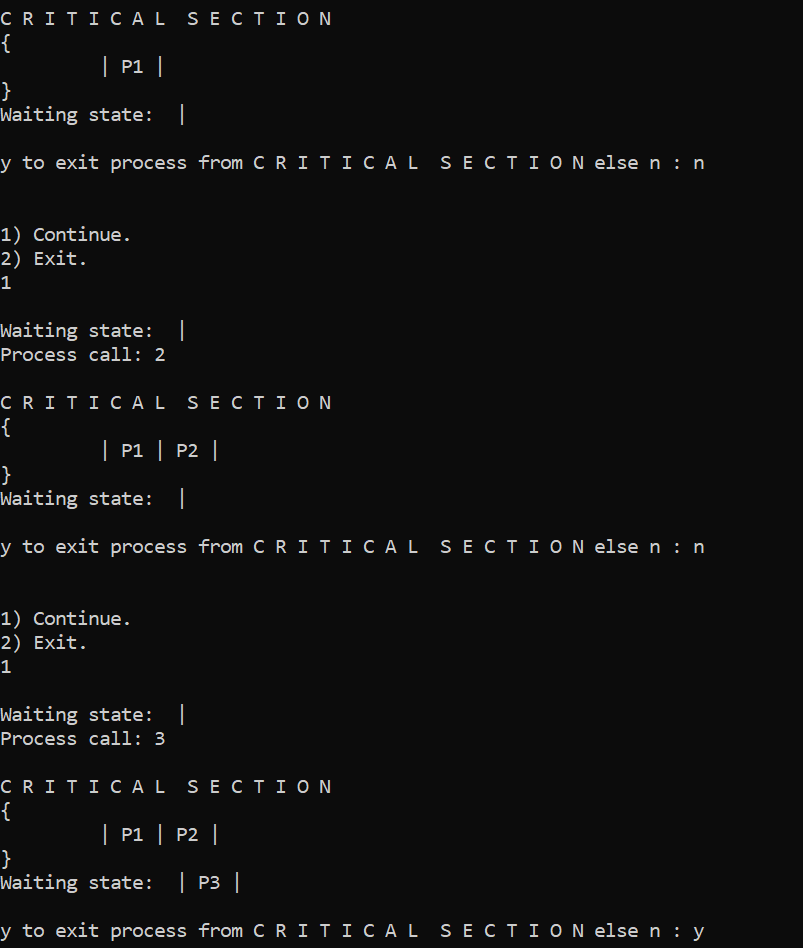
**

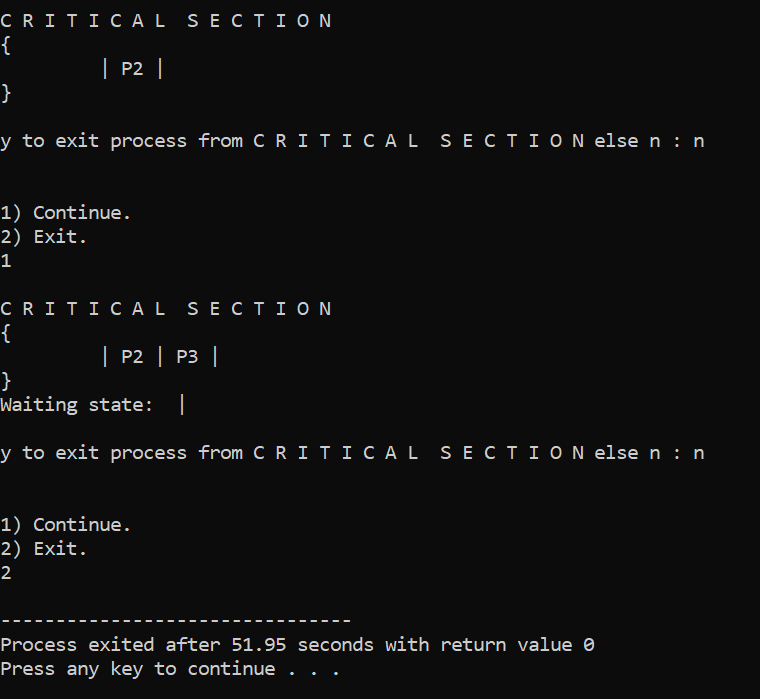
**

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*Output:*

**

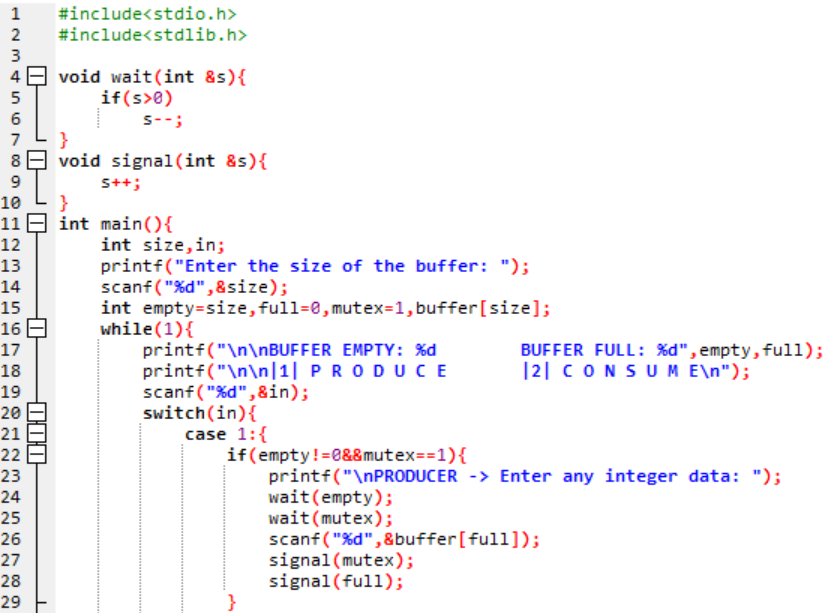


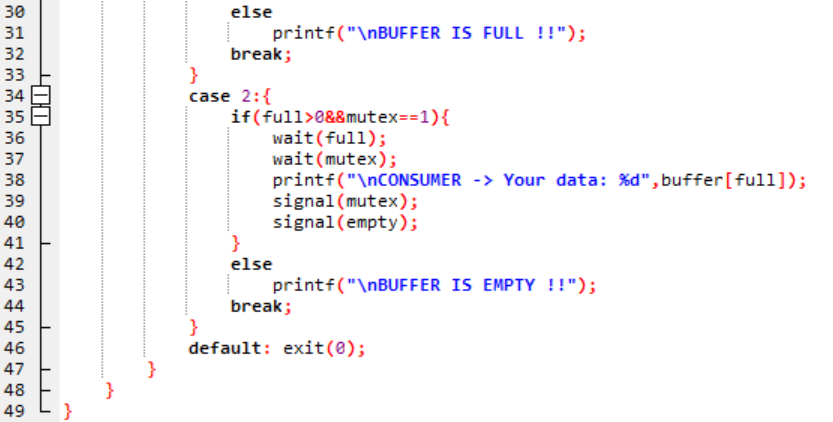


4(b) (Producer & consumer)

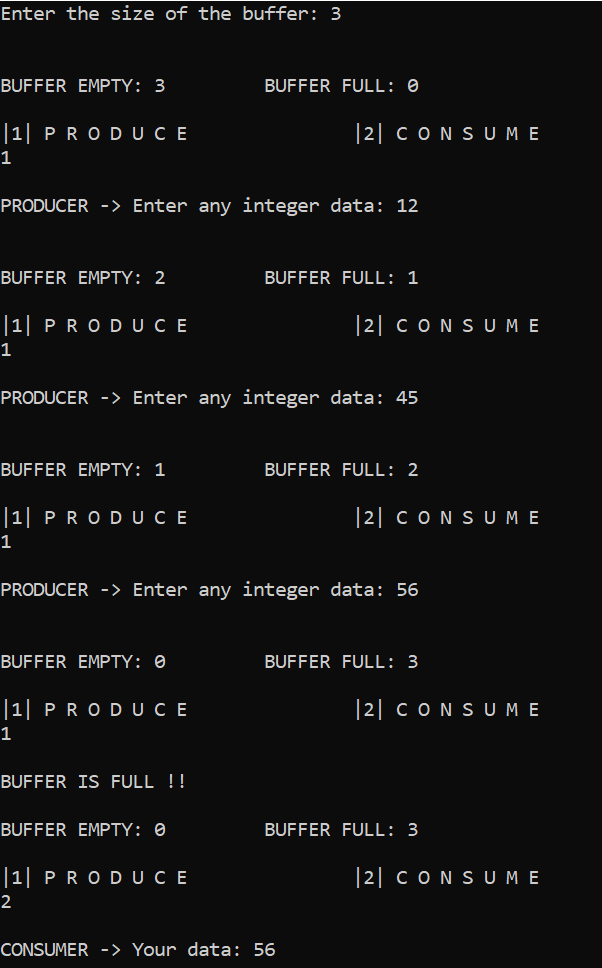
Aim: To write a C program to implement the Producer & consumer Problem (Semaphore)

*Code:*

**

**

*Output:*

**

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