EXPERIMENT-10

PETERSON SOLUTION

AIM: To Write a code in python to implement the Peterson Solution.

CODE:

```python
import threading
import time
turn = 0
flag = [False, False]

def process_0():
    global turn, flag
    flag[0] = True
    turn = 1
    while flag[1] and turn == 1:

        pass

    print("Process 0 is in the critical section.")
    time.sleep(2)

    flag[0] = False
    print("Process 0 exited the critical section.\n")

def process_1():
    global turn, flag
    flag[1] = True
    turn = 0
```

```python
    while flag[0] and turn == 0:

        pass

    print("Process 1 is in the critical section.")
    time.sleep(1)

    flag[1] = False
    print("Process 1 exited the critical section.\n")

if __name__ == "__main__":
    thread_0 = threading.Thread(target=process_0)
    thread_1 = threading.Thread(target=process_1)

    thread_0.start()
    thread_1.start()
    thread_0.join()
    thread_1.join()

    print("Both processes have completed.")
```
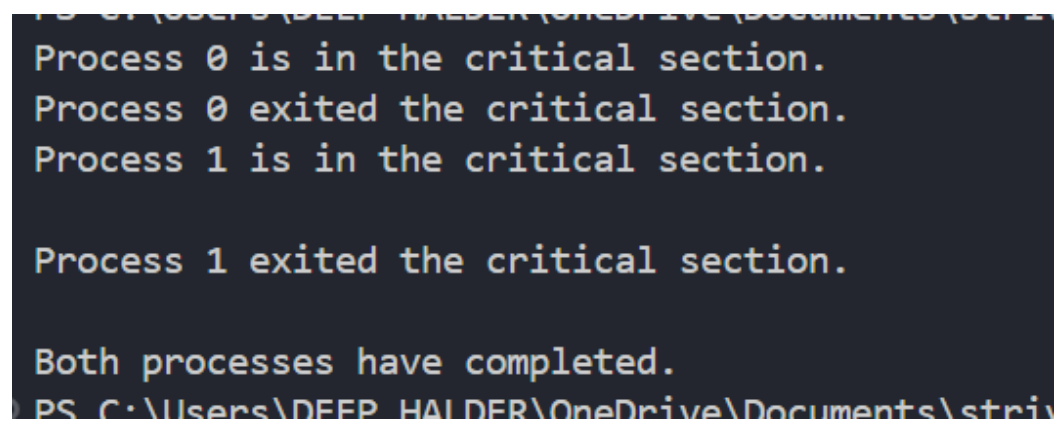
Output:


```
Process 0 is in the critical section.
Process 0 exited the critical section.
Process 1 is in the critical section.

Process 1 exited the critical section.

Both processes have completed.
PS C:\Users\DEEP_HALDER\OneDrive\Documents\stri
```