Lab 2

```
D:\OS labs\lab2.exe            ×    +   ∨

Thread 6487688: Joining the Critical section
Thread 6487688: Going to leave Critical section
Thread 6487692: Joining the Critical section
Thread 6487692: Going to leave Critical section
Thread 6487688: Joining the Critical section
Thread 6487688: Going to leave Critical section
Thread 6487692: Joining the Critical section
Thread 6487692: Going to leave Critical section
Thread 6487688: Joining the Critical section
Thread 6487688: Going to leave Critical section
Thread 6487692: Joining the Critical section
Thread 6487692: Going to leave Critical section
Thread 6487688: Joining the Critical section
Thread 6487688: Going to leave Critical section
Thread 6487692: Joining the Critical section
Thread 6487692: Going to leave Critical section


------------------------------------
Process exited after 4.117 seconds with return value 0
Press any key to continue . . .
```

Lab 3

```
D:\OS labs\lab3.exe            ×    +   ∨

Enter no. of processes:3
Enter the burst time of processes:5 8 12

bt          wt          tt
5           0           5
8           5           13
12          13          25


aw=6.000000
 at=14.000000


------------------------------------
Process exited after 6.221 seconds with return value 0
Press any key to continue . . .
```

Lab 4

```
D:\OS labs\lab4.exe                    ×    +    ∨

Enter no. of processes:3
Enter the burst time of processes:12 8 5
5812

bt          wt          tt
5           0           5
8           5           13
12          13          25

aw=6.000000
,at=14.000000

----------------------------------
Process exited after 6.095 seconds with return value 0
Press any key to continue . . .
```

Lab 5

```
D:\OS labs\lab5.exe        ×    +    ∨

Enter number of processes:4
Enter burst time for sequences:6 8 7 3
Enter time quantum:3
Process_no        Burst time      Waiting time    Turn around time
1                 6               9               15
2                 8               15              23
3                 7               17              24
4                 3               9               12

Average waiting time is 12.500000
 Average turn around time is 18.500000
--------------------------------
Process exited after 25.09 seconds with return value 0
Press any key to continue . . .
```

lab 6

```
D:\OS labs\lab6.exe          ×    +    ∨

 Enter the no of processes:2

 Enter the no of resources:2
process 1
maximum value for resource 1:7
maximum value for resource 2:5
allocated from resource 1:0
allocated from resource 2:1
process 2
maximum value for resource 1:3
maximum value for resource 2:2
allocated from resource 1:2
allocated from resource 2:0
Enter total value of resource 1:5
Enter total value of resource 2:7

        max allocated needed total avail
   P1       75       01      74      57 36
   P2       32       20      12


        Avail Before              Avail After
   p2            24              56
 deadlock occured
-------------------------------------
Process exited after 88.96 seconds with return value 0
Press any key to continue . . . |
```

Lab 7

```
D:\OS labs\lab7.exe          ×    +    ∨

1.Producer
2.Consumer
3.Exit
Enter your choice:1

Producer produces the item 1
Enter your choice:1

Producer produces the item 2
Enter your choice:1

Producer produces the item 3
Enter your choice:2

Consumer consumes item 3
Enter your choice:1

Producer produces the item 3
Enter your choice:1
Buffer is full!!
Enter your choice:3

-----------------------------------
Process exited after 79.99 seconds with return value 0
Press any key to continue . . . |
```

Lab 8

```
D:\OS labs\lab8.exe          ✕    +    ⌄

Enter number of pages: 12
Enter reference string: 1 3 0 3 5 6 3 1 2 1 3 6
Enter number of frames: 3

Reference String          Frames
1                         1 - -
3                         1 3 -
0                         1 3 0
3                         1 3 0
5                         5 3 0
6                         5 6 0
3                         5 6 3
1                         1 6 3
2                         1 2 3
1                         1 2 3
3                         1 2 3
6                         1 2 6

Total Page Faults: 9

------------------------------------
Process exited after 13.79 seconds with return value 0
Press any key to continue . . .
```

Lab 9

```
D:\OS labs\lab9.exe          ✕    +    ⌄

Enter number of pages: 12
Enter reference string: 7 0 1 2 0 3 0 4 2 3 0 3
Enter number of frames: 3

Reference String          Frames
7                         7 - -
0                         0 - -
1                         0 1 -
2                         0 2 -
0                         0 2 -
3                         0 2 3
0                         0 2 3
4                         4 2 3
2                         4 2 3
3                         4 2 3
0                         0 2 3
3                         0 2 3

Total Page Faults: 7

------------------------------------
Process exited after 5.191 seconds with return value 0
Press any key to continue . . .
```

Lab 10

```
D:\OS labs\lab10.exe          ×    +    ∨

Enter number of pages: 12
Enter reference string (pages): 7 0 1 2 0 3 0 4 2 3 0 3
Enter number of frames: 3

Reference String          Frames
7                         7 - -
0                         7 0 -
1                         7 0 1
2                         7 2 1
0                         7 2 0
3                         7 2 3
0                         7 0 3
4                         7 4 3
2                         7 4 2
3                         7 4 3
0                         7 4 0
3                         7 4 3

Total Page Faults: 12

_____
Process exited after 5.588 seconds with return value 0
Press any key to continue . . . |
```

Lab 11

```
D:\OS labs\lab11.exe          ×    +    ∨

Enter the initial head position: 50

Enter the number of disk requests: 5

Enter the disk requests:
82

170

43

140

24

Disk Scheduling Order:
50 -> 82 -> 170 -> 43 -> 140 -> 24

Total Seek Time: 460

_____
Process exited after 61.15 seconds with return value 0
Press any key to continue . . . |
```