```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
P  BT  WT  TAT
1  10  0   10
2  5  10   15
3  8  15   23
Average waiting time = 8.333333
Average turn around time = 16.000000
PS C:\college programs>
```

```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
Enter number of process: 5
Enter Burst Time:
P1: 01
P2: 02
P3: 03
P4: 04
P5: 05
P       BT      WT      TAT
P1      1       0       1
P2      2       1       3
P3      3       3       6
P4      4       6       10
P5      5       10      15
Average Waiting Time= 4.000000
Average Turnaround Time= 7.000000
PS C:\college programs>
```

```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
Enter Number of Processes: 5
Enter Burst Time and Priority Value for Process 1: 1 3
Enter Burst Time and Priority Value for Process 2: 2 2
Enter Burst Time and Priority Value for Process 3: 3 1
Enter Burst Time and Priority Value for Process 4: 4 5
Enter Burst Time and Priority Value for Process 5: 5 4
Order of process Execution is
P4 is executed from 0 to 4
P5 is executed from 4 to 9
P1 is executed from 9 to 10
P2 is executed from 10 to 12
P3 is executed from 12 to 15

Process Id     Burst Time   Wait Time    TurnAround Time
P4          4          0          4
P5          5          4          9
P1          1          9          10
P2          2          10          12
P3          3          12          15
PS C:\college programs>
```

```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
 Total number of process in the system: 2

 Enter the Arrival and Burst time of the Process[1]
 Arrival time is:       1

Burst time is:  8

 Enter the Arrival and Burst time of the Process[2]
 Arrival time is:       2

Burst time is:  4
Enter the Time Quantum for the process:         3

 Process No              Burst Time              TAT             Waiting Time
Process No[2]           4                               8                       4
Process No[1]           8                               11                      3
 Average Turn Around Time:      9.500000
 Average Waiting Time:  3.500000
```

```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
Enter no of pages:10
Enter the reference string:7 8 9 3 2 4 7 4 6 1
Enter no of frames:3

        7
        7       8
        7       8       9
        3       8       9
        3       2       9
        3       2       4
        7       2       4
        7       6       4
        1       6       4

The no of page faults is 9
PS C:\college programs>
```

```
 Incoming  t Frame 1  t Frame 2  t Frame 3
4                       4                       -                       -
1                       4                       1                       -
2                       4                       1                       2
4                       4                       1                       2
5                       5                       1                       2
Total Page Faults:      4
PS C:\college programs>
```

```
 PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc p1.c -o p1 } ; if ($?) { .\p1 }
 Enter number of frames: 3
 Enter number of pages: 10
 Enter page reference string: 7 8 9 3 2 1 6 5 4 9

 7       -1      -1
 7       8       -1
 7       8       9
 3       8       9
 2       8       9
 1       8       9
 6       8       9
 5       8       9
 4       8       9
 4       8       9

 Total Page Faults = 9
 PS C:\college programs>
```

```
        Memory Management Scheme - Worst Fit
Enter the number of blocks:3
Enter the number of files:3

Enter the size of the blocks:-
Block 1:5
Block 2:2
Block 3:7
Enter the size of the files :-
File 1:1
File 2:4
File 3:5

File_no:        File_size :     Block_no:       Block_size:     Fragement
1               1               3               7               6
2               4               1               5               1
3               5               0               8               0
```

```
        Memory Management Scheme - First Fit
Enter the number of blocks:3
Enter the number of files:2

Enter the size of the blocks:-
Block 1:5
Block 2:2
Block 3:7
Enter the size of the files :-
File 1:1
File 2:4

File_no:        File_size :     Block_no:       Block_size:     Fragement
1               1               1               5               4
2               4               3               7               3
PS C:\college programs>
```

```
Enter the number of blocks:3
Enter the number of files:2

Enter the size of the blocks:-
Block 1:5
Block 2:7
Block 3:2
Enter the size of the files :-
File 1:4
File 2:3

File No File Size       Block No        Block Size      Fragment
1               4               1               5               1
2               3               2               7               4
PS C:\college programs>
```

```
1 reader is inside
1 Reader is leaving
Writer is trying to enter
Writer has entered
Writer is leaving
1 reader is inside
1 Reader is leaving
Writer is trying to enter
Writer has entered
Writer is leaving
1 reader is inside
1 Reader is leaving
Writer is trying to enter
Writer has entered
Writer is leaving
1 reader is inside
1 Reader is leaving
Writer is trying to enter
Writer has entered
Writer is leaving

...Program finished with exit code 0
Press ENTER to exit console.
```

```
Enter the number of Producers:2
Enter the number of Consumers:2
Enter buffer capacity:2
Successfully created producer 1
Producer 1 produced 29
Successfully created producer 2
Producer 2 produced 11
Successfully created consumer 1
Buffer:29 11
Consumer 3 consumed 11
Current buffer len: 1
Buffer:29
Consumer 2 consumed 29
Current buffer len: 0
Successfully created consumer 2
Producer 1 produced 3
Buffer:3
Consumer 2 consumed 3
Current buffer len: 0
Producer 2 produced 31
Producer 1 produced 27
Producer 1 produced 7
Buffer:31 27
```

```
Enter the number of process and resources
5 3
enter allocation of resource of all process 5x3 matrix
1 2 3
4 5 6
0 6 7
0 8 9
9 5 4
enter the max resource process required 5x3 matrix
0 1 0
1 2 3
2 3 4
3 4 5
4 5 6
enter the  available resource 3 4 2

 need resources matrix are
-1      -1      -3
-3      -3      -3
2       -3      -3
3       -4      -4
-5      0       2

 available resource after completion
17      30      31
 safe sequence are
p0      p1      p2      p3      p4
```

```
Enter the directory name:siddhika
Enter the number of files:3
Enter file name to be created:sid
Do you want to enter another file(yes - 1 or no - 0):1
Enter file name to be created:shukla
Do you want to enter another file(yes - 1 or no - 0):1
Enter file name to be created:ss
Do you want to enter another file(yes - 1 or no - 0):1
Enter file name to be created:sk
Do you want to enter another file(yes - 1 or no - 0):0
Directory name is:siddhika
Files names are:
sid
shukla
ss
sk
PS C:\college programs>
```

```
1. Create Directory     2. Create File  3. Delete File
4. Search File          5. Display      6. Exit
Enter your choice -- 1

Enter name of directory -- siddhika
Directory created

1. Create Directory     2. Create File  3. Delete File
4. Search File          5. Display      6. Exit
Enter your choice -- 2

Enter name of the directory -- siddhika
Enter name of the file -- sid
File created

1. Create Directory     2. Create File  3. Delete File
4. Search File          5. Display      6. Exit
Enter your choice -- 5

Directory       Files
siddhika        sid

1. Create Directory     2. Create File  3. Delete File
4. Search File          5. Display      6. Exit
Enter your choice -- 6
PS C:\college programs>
```

```
PS C:\college programs> cd "c:\college programs\" ; if ($?) { gcc hierarchical.c -o hierarchical } ; if ($?) { .\hierarchical }
Enter number of users: 1
Enter name: siddhika
Enter dir(1) or file(0): sid

Hierarchical
```