

```
#include<stdio.h>
#include<unistd.h>

int main(){
    printf("Hello World! \n");
    fork();
    printf("I am after forking");
    printf("\t I am process %d. \n" ,getpid());
    return 0;
}
```

```
[X]-[bichitra@parrot]-[~/Documents/oslab]
└─ $nano lab1.c
[bichitra@parrot]-[~/Documents/oslab]
└─ $gcc -o lab1.out lab1.c
[bichitra@parrot]-[~/Documents/oslab]
└─ $./lab1.out
Hello World!
I am after forking      I am process 333350.
I am after forking      I am process 333351.
[bichitra@parrot]-[~/Documents/oslab]
└─ $
```

```
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<pthread.h>

void*ThreadFun(void*tid){
long*ThreadID=(long*)tid;
printf("Hello World! \n This is a Thread %ld \n",*ThreadID);
}

int main(){
pthread_t tid0;
pthread_t tid1;
pthread_t tid2;
pthread_t *pthread[]={&tid0,&tid1,&tid2};

for(int i=0;i<3;i++){
pthread_create(pthread[i],NULL,ThreadFun,(void*)pthread[i]);
}

pthread_exit(NULL);
return 0;
}
```

```
[bichitra@parrot]~/Documents/oslab
└─ $nano lab2.c
[bichitra@parrot]~/Documents/oslab
└─ $gcc -o lab2.out lab2.c
[bichitra@parrot]~/Documents/oslab
└─ $./lab2.out
Hello World!
  This is a Thread 140642993796800
Hello World!
  This is a Thread 140642985404096
Hello World!
  This is a Thread 140642977011392
```

```
[bichitra@parrot]~/Documents/oslab
└─ $gcc -o lab3.out lab3.c
[bichitra@parrot]~/Documents/oslab
└─ $./lab3.out
Enter total number of processes(maximum 20):6

Enter Process Burst Time
P[1]:2
P[2]:4
P[3]:1
P[4]:6
P[5]:3
P[6]:5

Process          Burst Time      Turnaround Time  Waiting Time
P[1]              2                0                 2
P[2]              4                2                 6
P[3]              1                6                 7
P[4]              6                7                13
P[5]              3               13                16
P[6]              5               16                21

Average Waiting Time:7
Average Turnaround Time:10Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab
└─ $
[bichitra@parrot]~/Documents/oslab
└─ $
```

[bichitra@parrot]~/Documents/oslab

└─\$./lab4.out

Enter number of process:6

Enter Burst Time:

p1:4

p2:6

p3:5

p4:3

p5:2

p6:2

Process	Burst Time	Waiting Time	Turnaround Time
p5	2	0	2
p6	2	2	4
p4	3	4	7
p1	4	7	11
p3	5	11	16
p2	6	16	22

Average Waiting Time=6.666667

Average Turnaround Time=10.333333

Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab

└─\$

```
[bichitra@parrot]~/Documents/oslab
```

```
└─$ ./lab5.out
```

```
Enter Total Process: 8
```

```
Enter Arrival Time and Burst Time for Process Process Number 1 :1 5
```

```
Enter Arrival Time and Burst Time for Process Process Number 2 :2 7
```

```
Enter Arrival Time and Burst Time for Process Process Number 3 :3 8
```

```
Enter Arrival Time and Burst Time for Process Process Number 4 :5 6
```

```
Enter Arrival Time and Burst Time for Process Process Number 5 :4 3
```

```
Enter Arrival Time and Burst Time for Process Process Number 6 :6 8
```

```
Enter Arrival Time and Burst Time for Process Process Number 7 :7 9
```

```
Enter Arrival Time and Burst Time for Process Process Number 8 :9 7
```

```
Enter Time Quantum: 2
```

```
Process |Turnaround Time|Waiting Time
```

```
P[5] | 21 | 18
```

```
P[1] | 31 | 26
```

```
P[4] | 33 | 27
```

```
P[2] | 43 | 36
```

```
P[3] | 44 | 36
```

```
P[6] | 43 | 35
```

```
P[8] | 43 | 36
```

```
P[7] | 46 | 37
```

```
Average Waiting Time= 31.375000
```

```
Avg Turnaround Time = 38.000000Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab
```

```
└─$
```

```
[bichitra@parrot]~/Documents/oslab
```

```
└─$ ./lab7.out
```

```
Enter number of frames: 3
```

```
Enter number of pages: 10
```

```
Enter page reference string: 2 3 4 2 1 3 7 5 4 3
```

```
2      -1      -1
```

```
2       3      -1
```

```
2       3       4
```

```
2       3       4
```

```
1       3       4
```

```
1       3       4
```

```
7       3       4
```

```
5       3       4
```

```
5       3       4
```

```
5       3       4
```

```
Total Page Faults = 6Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab
```

```
└─$
```

```
[bichitra@parrot]~/Documents/oslab
```

```
└─$ ./lab8.out
```

```
enter number of location      9
```

```
enter position of head 143
```

```
enter elements of disk queue
```

```
86
```

```
1470
```

```
913
```

```
1774
```

```
948
```

```
1509
```

```
1022
```

```
1750
```

```
130
```

```
movement of total cylinders 1745Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab
```

```
└─$
```

```
[bichitra@parrot]~/Documents/oslab
```

```
└─$ ./lab9.out
```

Enter the max range of disk

200

Enter the initial head position

22

Enter the size of queue request

3

Enter the queue of disk positions to be read

55

66

21

Disk head moves from 22 to 55 with seek 33

Disk head moves from 55 to 66 with seek 11

Disk head moves from 66 to 200 with seek 134

Disk head moves from 200 to 0 with seek 200

Disk head moves from 0 to 21 with seek 21

Total seek time is 399

Average seek time is 133.000000

Name:Bichitra Gautam Roll:29008 4th sem└─[bichitra@parrot]~/Documents/oslab

```
└─$
```



```
[bichitra@parrot]~/Documents/oslab
```

```
└─$ ./lab10.out
```

Enter the number of Requests

4

Enter the Requests sequence

44

67

12

34

Enter initial head position

22

Enter total disk size

450

Enter the head movement direction for high 1 and for low 0

0

Total head movement is 98

Name:Bichitra Gautam Roll:29008 4th sem [bichitra@parrot]~/Documents/oslab

```
└─$ █
```