

OS Lab Week 12 and 13

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PES2201800475
Sem 5 Section F

Make file

```
fcfs:
    gcc FCFS.c -o FCFS.out
    ./FCFS.out

phil:
    gcc dining_phil.c -o dining_phil.out
    ./dining_phil.out

clean:
    rm -f *.out
```

Program 2: Write a C program to implement FCFS disk scheduling and calculate Total Seek time and Average seek time as shown in the output below.

```
sivasurya ~/Documents/VSC/OS-Lab/Week_12&13/PES2201800475_SivaSuryaBabu_Week12-13 master make fcfs
gcc FCFS.c -o FCFS.out
./FCFS.out
Enter the max range of disk
200
Enter the size of queue request
8
Enter the queue of disk positions to be read
90 120 35 122 38 128 65 68
Enter the initial head position
50
Disk head moves from 50 to 90 with seek 40
Disk head moves from 90 to 120 with seek 30
Disk head moves from 120 to 35 with seek 85
Disk head moves from 35 to 122 with seek 87
Disk head moves from 122 to 38 with seek 84
Disk head moves from 38 to 128 with seek 90
Disk head moves from 128 to 65 with seek 63
Disk head moves from 65 to 68 with seek 3
Total seek time is 482
Average seek time is 60.250000
sivasurya ~/Documents/VSC/OS-Lab/Week_12&13/PES2201800475_SivaSuryaBabu_Week12-13 master
```

Program 1: Write a C program that simulates the Dining-Philosophers problem

```
sivasurya@office-linux:~/Documents/VSC/OS-Lab/Week_12&13/PES2201800475_SivaSuryaBabu_Week12-13
sivasurya ~/Documents/VSC/OS-Lab/Week_12&13/PES2201800475_SivaSuryaBabu_Week12-13 » master » make phil
gcc dining_phil.c -o dining_phil.out
./dining_phil.out
Fork 1 taken by Philosopher 1
Fork 2 taken by Philosopher 2
Fork 3 taken by Philosopher 3
Fork 4 taken by Philosopher 4
Philosopher 5 is waiting for fork 4

Till now num of philosophers completed dinner are 0

Fork 5 taken by Philosopher 1
Philosopher 2 is waiting for Fork 1
Philosopher 3 is waiting for Fork 2
Philosopher 4 is waiting for Fork 3
Philosopher 5 is waiting for fork 4

Till now num of philosophers completed dinner are 0

Philosopher 1 completed his dinner
Philosopher 1 released fork 1 and fork 5
Fork 1 taken by Philosopher 2
Philosopher 3 is waiting for Fork 2
Philosopher 4 is waiting for Fork 3
Philosopher 5 is waiting for fork 4

Till now num of philosophers completed dinner are 1

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 2 released fork 2 and fork 1
Fork 2 taken by Philosopher 3
Philosopher 4 is waiting for Fork 3
Philosopher 5 is waiting for fork 4

Till now num of philosophers completed dinner are 2

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 3 completed his dinner
Philosopher 3 released fork 3 and fork 2
Fork 3 taken by Philosopher 4
Philosopher 5 is waiting for fork 4
```

Till now num of philosophers completed dinner are 2

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 3 completed his dinner
Philosopher 3 released fork 3 and fork 2
Fork 3 taken by Philosopher 4
Philosopher 5 is waiting for fork 4

Till now num of philosophers completed dinner are 3

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 3 completed his dinner
Philosopher 4 completed his dinner
Philosopher 4 released fork 4 and fork 3
Fork 4 taken by philosopher 5

Till now num of philosophers completed dinner are 4

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 3 completed his dinner
Philosopher 4 completed his dinner
Fork 5 taken by philosopher 5

Till now num of philosophers completed dinner are 4

Philosopher 1 completed his dinner
Philosopher 2 completed his dinner
Philosopher 3 completed his dinner
Philosopher 4 completed his dinner
Philosopher 5 completed his dinner
Philosopher 5 released fork 5 and fork 4

Till now num of philosophers completed dinner are 5

sivasurya ~/Documents/VSC/OS-Lab/Week_12&13/PES2201800475_SivaSuryaBabu_Week12-13 master