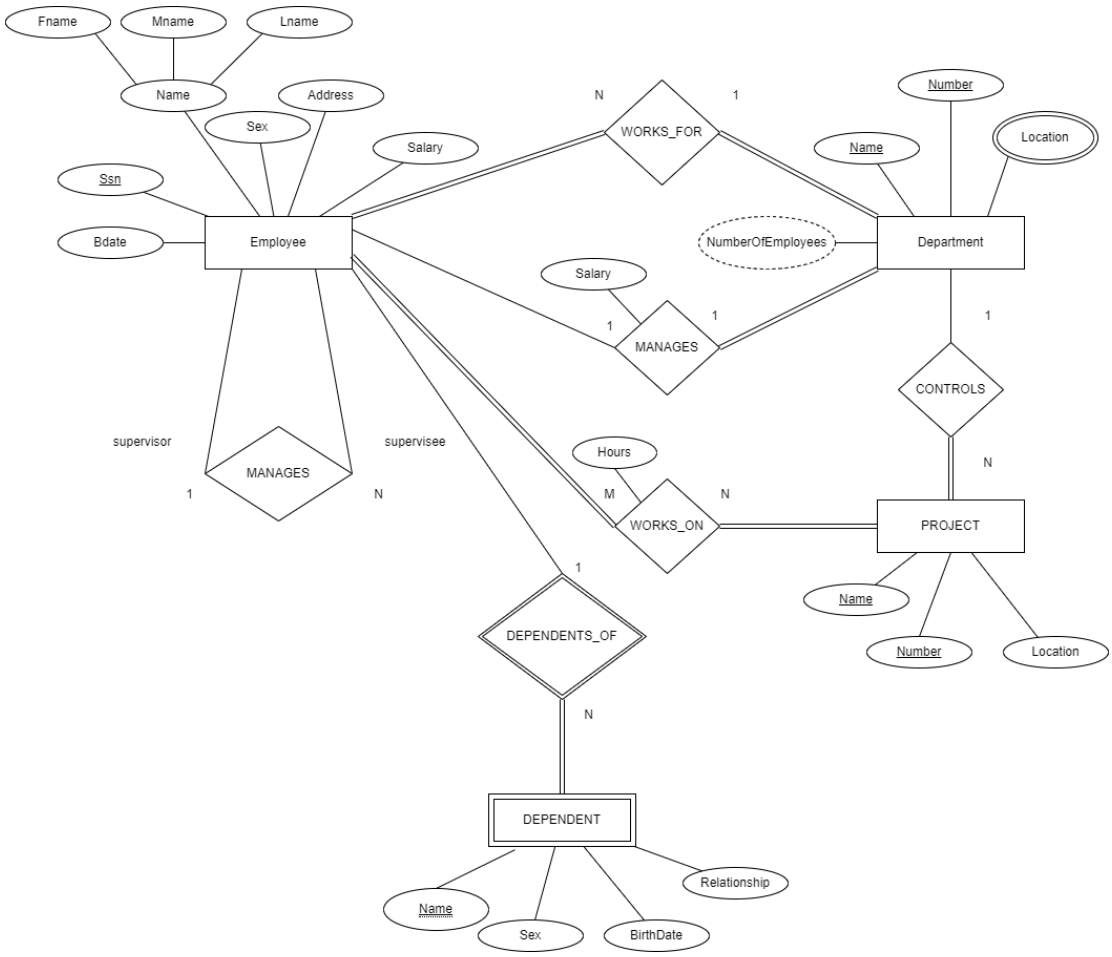
```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Documents/Ra
Users/rayyanbalami/Documents/RayyanCodes/OS/"diningPhilosopher

*** Dining Philosopher Problem ***

Enter the total no. of philosophers: 5
How many are hungry: 4
Enter philosopher 1 position: 1
Enter philosopher 2 position: 2
Enter philosopher 3 position: 3
Enter philosopher 4 position: 4

1. One can eat at a time        2. Two can eat at a time        3. Exit
Enter your choice: 1

Allow one philosopher to eat any time

P2 is granted to eat
P2 is waiting
P3 is waiting
P4 is waiting
P5 is waiting
P3 is granted to eat
P3 is waiting
P4 is waiting
P5 is waiting
P4 is granted to eat
P4 is waiting
P5 is waiting
P5 is granted to eat
P5 is waiting

1. One can eat at a time        2. Two can eat at a time        3. Exit
Enter your choice: 2

Allow two philosophers to eat at the same time

Combination 1
P2 and P3 are granted to eat
P4 is waiting
P5 is waiting

Combination 2
P2 and P4 are granted to eat
P3 is waiting
P5 is waiting

Combination 3
P2 and P5 are granted to eat
P3 is waiting
P4 is waiting

Combination 4
P3 and P4 are granted to eat
P2 is waiting
P5 is waiting

Combination 5
P3 and P5 are granted to eat
P2 is waiting
P4 is waiting

Combination 6
P4 and P5 are granted to eat
P2 is waiting
P3 is waiting

1. One can eat at a time        2. Two can eat at a time        3. Exit
Enter your choice: 3
rayyanbalami@Rayyans-MacBook-Air OS %
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Documents/RayyanCodes
Documents/RayyanCodes/OS/"priority

*** Priority Scheduling ***

Enter the number of processes = 5

Enter Burst Time and Priority
Process 0 :
        Burst Time = 8
        Priority = 4
Process 1 :
        Burst Time = 6
        Priority = 2
Process 2 :
        Burst Time = 2
        Priority = 1
Process 3 :
        Burst Time = 3
        Priority = 3
Process 4 :
        Burst Time = 9
        Priority = 5

PROCESS         PRIORITY        BURST TIME      WAITING TIME    TURNAROUND TIME
P2               1               2               0               2
P1               2               6               2               8
P3               3               3               8               11
P0               4               8               11              19
P4               5               9               19              28

Average Waiting Time = 8.000000
Average Turnaround Time = 13.600000
```



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Docum
alami/Documents/RayyanCodes/OS/"roundRobbin

*** Round Robbin Scheduling ***

Enter the number of processes = 5

Enter Burst Time
Process 0 = 5
Process 1 = 2
Process 2 = 4
Process 3 = 3
Process 4 = 7

Enter the size of time slice = 2

PROCESS  BURST TIME      WAITING TIME    TURNAROUND TIME
0        5               13               18
1        2               2                4
2        4               10               14
3        3               12               15
4        7               14               21

Average Waiting time = 10.200000
Average Turnaround time = 14.400000
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Docu
s/RayyanCodes/OS/"FCFS

*** First Come First Serve Scheduling ***

Enter the number of processes = 5

Enter Burst Time
Process 0 = 5
Process 1 = 8
Process 2 = 6
Process 3 = 2
Process 4 = 10

PROCESS          BURST TIME      WAITING TIME    TURNAROUND TIME
P0               5               0               5
P1               8               5               13
P2               6               13              19
P3               2               19              21
P4               10              21              31

Average Waiting Time = 11.600000
Average Turnaround Time = 17.799999
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Docum
cerConsumer.c -o producerConsumer && "/Users/rayyanbalami/Documents

*** Producer Consumer Problem ***

1. Produce      2. Consume      3. Exit
Enter your choice => 1
Enter the value to produce: 25
Produced: 25

1. Produce      2. Consume      3. Exit
Enter your choice => 2
Consumed: 25

1. Produce      2. Consume      3. Exit
Enter your choice => 2
Buffer is Empty

1. Produce      2. Consume      3. Exit
Enter your choice => 3
Exiting the program
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
rayyanbalami@Rayyans-MacBook-Air OS % cd "/Users/rayyanbalami/Docu
RayyanCodes/OS/"SJF

*** Shortest Job First Scheduling ***

Enter the number of processes = 5

Enter Burst Time
Process 0 = 10
Process 1 = 5
Process 2 = 3
Process 3 = 15
Process 4 = 20

PROCESS          BURST TIME      WAITING TIME    TURNAROUND TIME
P2               3               0               3
P1               5               3               8
P0               10              8               18
P3               15              18              33
P4               20              33              53

Average Waiting Time = 12.400000
Average Turnaround Time = 23.000000
```