Ex. No.: 6a)
Date: 21/2/25

FIRST COME FIRST SERVE

Aim:

To implement First-come First- serve (FCFS) scheduling technique

Algorithm:

1. Get the number of processes from the user.
2. Read the process name and burst time.
3. Calculate the total process time.
4. Calculate the total waiting time and total turnaround time for each process 5. Display the process name & burst time for each process. 6. Display the total waiting time, average waiting time, turnaround time

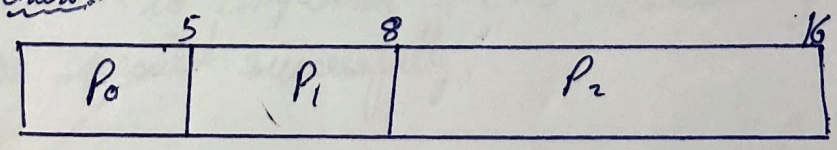
Program Code:

```
int main(){
    int n;
    printf("Enter no. of process ");
    scanf("%d", &n);
    int burst[n];
    printf("Enter the .. burst time");
    for(int i=0; i<n; i++)
        scanf("%d", &burst[i]);
    printf("Process  BT  WT  TAT \n");
    int wt=0, tat = burst[0];
    float avg_wt=0, avg_tat=0;
    for(int i=0; i<n; i++)
    {
        printf("%d %d %d\n", i, burst[i],
                wt, tat);
        avg_wt += wt;
        avg_tat += tat;
        wt = wt + burst[i];
        tat = burst[i+1] + wt;
    }
    avg_wt = avg_wt / n;
    avg_tat = avg_tat / n;
    printf("Average WT  %f\n", avg_wt)
    printf("Average TAT  %f\n", avg_tat)
}
```

Python code:-

```
n = int(input("Enter number of processes: "))
bt = []
print("Enter burst time :-")
for i in range(n):
    el = int(input(f"For P{i+1}: "))
    bt.append(el)
ct = [0]*n
ct[0] = bt[0]
for i in range(1, n):
    ct[i] = ct[i-1] + bt[i]

tat = ct[:]

wt = [tat[i] - bt[i] for i in range(n)]

atat = sum(tat)/n
awt = sum(wt)/n

print("\nProcess\tBT\tCT\tTAT\tWT")
for i in range(n):
    print(f"P{i+1}\t{bt[i]}\t{ct[i]}\t{tat[i]}\t{wt[i]}")

print("\nAverage Turnaround Time : %.2f" % atat)
print("Average Waiting Time : %.2f" % awt)
```

Grantt Chart:-



Sample Output:

Enter the number of process:
3
Enter the burst time of the processes:
24 3 3

Process	Burst Time	Waiting Time	Turn Around Time
0	24	0	24
1	3	24	27
2	3	27	30

Average waiting time is: 17.0
Average Turn around Time is: 19.0

Enter number of process : 3
Enter the burst time : 5 3 8

Process	BT	WT	TAT
0	5	0	5
1	3	5	8
2	8	8	16

Average WT : 4.3
Average TAT : 9.7

Result:

Program to implement FCFS scheduling technique was executed successfully.