S.No: 5	Exp. Name: ***FCFS scheduling algorithm***	Date:2025-04-09

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Aim:

Aim: Simulation of FCFS scheduling algorithm.

Description:

First Come First Serve (FCFS)

- Jobs are executed on first come, first serve basis.
- It is a non-preemptive, pre-emptive scheduling algorithm.
- Easy to understand and implement.
- Its implementation is based on FIFO queue.
- Poor in performance as average wait time is high.

Source Code:

FCFS.c

```
#include<stdio.h>
int main()
{
   int n,bt[20],wt[20],tat[20],avwt=0,avtat=0,i,j;
   printf("Enter total number of processes(maximum 20):");
   scanf("%d",&n);
   printf("Enter Process Burst Time\n");
   for(i=0;i<n;i++)
      {
         printf("P[%d]:",i+1);
         scanf("%d",&bt[i]);
      }
   wt[0]=0;
   for(i=0;i<n;i++)
      {
         wt[i]=0;
         for(j=0;j<i;j++)
            wt[i]+=bt[j];
      }
   printf("Process\t\tBurst Time\tWaiting Time\tTurnaround Time");
   for(i=0;i<n;i++)
      {
         tat[i]=bt[i]+wt[i];
         avwt+=wt[i];
         avtat+=tat[i];
         printf("\nP[%d]\t\t%d\t\t%d\t\t%d",i+1,bt[i],wt[i],tat[i]);
      }
   avwt/=i;
   avtat/=i;
   printf("\nAverage Waiting Time:%d",avwt);
   printf("\nAverage Turnaround Time:%d",avtat);
   return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1			
User Output			
Enter total number of processes(maximum 20): 3			
Enter Process Burst Time 4			
P[1]: 4			
P[2]: 9			
P[3]: 6			
Process	Burst Time	Waiting Time	Turnaround Time
P[1]	4	0	4
P[2]	9	4	13
P[3]	6	13	19
Average Waiting Time:5			
Average Turnaround Time:12			

Test Case - 2			
User Output			
Enter total number of processes(maximum 20): 3			
Enter Process Burst Time 24			
P[1]: 24			
P[2]: 3			
P[3]: 3			
Process	Burst Time	Waiting Time	Turnaround Time
P[1]	24	0	24
P[2]	3	24	27
P[3]	3	27	30
Average Waiting Time:17			
Average Turnaround Time:27			

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