Ex. No.: 6b)
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SHORTEST JOB FIRST

Aim:

To implement the Shortest Job First (SJF) scheduling technique

Algorithm:

1. Declare the structure and its elements.
2. Get number of processes as input from the user.
3. Read the process name, arrival time and burst time
4. Initialize waiting time, turnaround time & flag of read processes to zero. 5. Sort based on burst time of all processes in ascending order 6. Calculate the waiting time and turnaround time for each process. 7. Calculate the average waiting time and average turnaround time. 8. Display the results.

Program Code:

```
#include<stdio.h>
int main(){
  ~~intn~~
    int n;
    printf("Enter No. of Processes :");
     scanf("%d,& n);
     int p[n],bt[n],wt[n], tat[n];
     int total_wt =0, total_tat=0;
      printf(" Enter burst time for the
                each processes");
      for(int i=0; i<n; i++){
              scanf("%d", & bt[i]);
      }
      for(int i=0; i<n; i++){
            for(int j=i+1;j<n;j++){
                if(bt[i]>bt[j]){
                int [illegible]
                bt[i] = bt[j];
                bt[j] = temp;
                temp = P[i];
                P[i] = P[j]
                P[j] = temp;
            }
        }
    }
    wt[0] = 0
    for(int i=1; i<n; i++){
        wt[i] = bt[i-1] + wt[i-1]
    }
    for(int i=0; i<n; i++){
        total_wt = total_wt + wt[i]
        total_tat = total_tat + tat[i]
    }
    printf("Process /t Burst time /t Waitin
        time /t TAT \n")
    for(int i=0; i<n; i++){
        printf("%d /t %d /t %d /t %d
            P[i], bt[i], wt[i], tat
    }
    float avg_wt, avg_tat;
    avg_wt = total_wt/n,
    avg_tat = total_tat/n;
    printf("Avg Waiting time : %f", avg
} printf("Avg tat : %.1f", avg_tat)
```

Input

Enter the no. of process: 4
Enter the burst time for all process:
6 8 7 3

Burst time

3
6
7
8

Process	Burst time (ms)	Waiting time (ms)	turn around time (ms)
0	3	0	3
1	6	3	9
2	7	9	16
3	8	16	24

Sample Output:

```
Enter the number of process:
4
Enter the burst time of the processes:
8 4 9 5

Process        Burst Time        Waiting Time   Turn Around Time

  2                4                  0               4
  4                5                  4               9
  1                8                  9               17
  3                9                  17              26

Average waiting time is: 7.5
Average Turn Around Time is: 13.0
```

Result:

Thus the Shortest Job First algorithm is executed