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| **Ex.No:5.d** | **CPU SCHEDULING ALGORITHMS** |
| **SJF SCHEDULING** |

# AIM:

To write a C program for implementation of SJF scheduling algorithms.

# ALGORITHM:

Step 1: Inside the structure declare the variables.

Step 2: Declare the variable i,j as integer,totwtime and totttime is equal to zero. Step 3: Get the value of „n‟ assign pid as I and get the value of p[i].btime.

Step 4: Assign p[0] wtime as zero and tot time as btime and inside the loop calculate wait time and turnaround time.

Step 5: Calculate total wait time and total turnaround time by dividing by total number of process.

Step 6: Print total wait time and total turnaround time. Step 7: Stop the program.

# PROGRAM:

#include<stdio.h> #include<stdlib.h> typedef struct

{

int pid; int btime; int wtime;

}

sp;

int main()

{

int i,j,n,tbm=0,towtwtime=0,totttime sp\*p,t;

printf("\n sjf schaduling ..\n"); printf("enter the no of processor"); scanf("%d",&n); p=(sp\*)malloc(sizeof(sp)); printf("\n enter the burst time"); for(i=0;i<n;i++)

{

printf("\n process %d\t",i+1); scanf("%d",&p[i].btime); p[i].pid=i+1;

 p[i].wtime=0;

}

for(i=0;i<n;i++) for(j=j+1,j<n;j++)

{

if(p[i].btime>p[j].btime)

{

t=p[i]; p[i]=p[j]; p[j]=t;

}}

printf("\n process scheduling\n"); printf("\n process \tburst time \t w for(i=0;i<n;i++)

{

towtwtime+=p[i].wtime=tbm; tbm+=p[i].btime; printf("\n%d\t\t%d",p[i].pid,p[i].bt printf("\t\t%d\t\t%d",p[i].wtime,p[i

}

totttime=tbm+towtwtime;

printf("\n total waiting time :%d", totwtime ); printf("\n average waiting time :%f",(float)totwtime/n); printf("\n total turn around time :%d",totttime);

printf("\n average turn around time: :%f",(float)totttime/n);

}