**Experiment No:** 01

**Experiment Title:** Short Job First (No Arrival Time)

**Theory :** Shortest Job First (SJF) is an algorithm in which the process having the smallest execution time is chosen for the next execution. This scheduling method can be preemptive or non-preemptive. It significantly reduces the average waiting time for other processes awaiting execution.

**Code:**

#include <stdio.h>

int main ()

{

int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp;

float avg\_wt,avg\_tat;

printf("Enter number of process:");

scanf("%d",&n);

for(i=0;i<n;i++)

{

printf("Enter burst time of p%d :",i+1);

scanf("%d",&bt[i]);

p[i]=i+1;

}

//sorting

for(i=0;i<n;i++)

{

pos=i;

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

{

if(bt[j]<bt[pos])

pos=j;

}

temp=bt[i];

bt[i]=bt[pos];

bt[pos]=temp;

temp=p[i];

p[i]=p[pos];

p[pos]=temp;

}

wt[0]=0;

for(i=1;i<n;i++)

{

wt[i]=0;

for(j=0;j<i;j++)

wt[i]+=bt[j];

total+=wt[i];

}

avg\_wt=(float)total/n;

total=0;

printf("\nProcess\tBurst Time\tWaiting Time\tTurnaround Time");

for(i=0;i<n;i++)

{

tat[i]=bt[i]+wt[i];

total+=tat[i];

printf("\np%d \t\t%d \t\t%d \t\t%d",p[i],bt[i],wt[i],tat[i]);

}

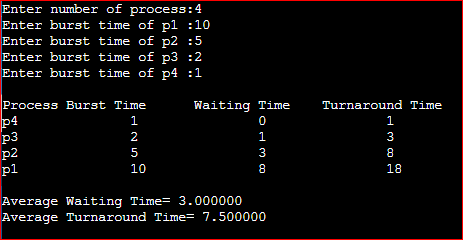
avg\_tat=total/(float)n;

printf("\n\nAverage Waiting Time= %lf",avg\_wt);

printf("\nAverage Turnaround Time= %lf",avg\_tat);

}

**Input and Output: -**

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