3. Write a program to compute the average waiting time and average turnaround time based on Non Preemptive Shortest-Job-First Scheduling for the following process with the given CPU burst times, ( and the assumption that all jobs arrive at the same time.)

Process Burst Time

P1 6

P2 8

P3 7

P4 3

Program:

#include<iostream>

int main(){

int n=4;

int bt[]={6,8,7,3};

int p[]={1,2,3,4};

int wt[n],tat[n],total\_wt=0,total\_tat=0;

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

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

if(bt[i]>bt[j]){

int temp\_bt=bt[i];

bt[i]=bt[j];

bt[j]=temp\_bt;

int temp\_p=p[i];

p[i]=p[j];

p[j]=temp\_p;

}

}

}

wt[0]=0;

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

wt[i]=wt[i-1]+bt[i-1];

}

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

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

}

printf("process burst time waiting time turnaround time\n");

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

total\_wt+=wt[i];

total\_tat+=tat[i];

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

}

printf("n average waiting time=%2f\n",(float)total\_wt/n);

printf("average turnaround time=%2f\n",(float)total\_tat/n);

return 0;

}

Output:

