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**Lab Report Name:** **Implementation of Priority Scheduling algorithm .**

**Lab Report No:09**

**Lab Report 9: Implementation of Priority Scheduling algorithm .**

**Theory :** In priority scheduling algorithm each process has a priority associated with it and as each process hits the queue, it is stored in based on its priority so that process with higher priority are dealt with first. It should be noted that equal priority processes are scheduled in FCFS order.

Turnaround Time = Completion Time - Arrival Time

Waiting Time = Turn Around Time - Burst Time

**Corresponding code:**

#include<stdio.h>

int main()

{

int bt[20], p[20], wt[20], tat[20], pr[20],i,j,n,total=0,pos,temp,avg\_wt,avg\_tat;

printf("Enter Total Number of Process:");

scanf("%d",&n);

printf("\nEnter Burst Time and Priority\n");

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

{

printf("\nP[%d]\n",i+1);

printf("Burst Time:");

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

printf("Priority:");

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

p[i]=i+1; //contains process number

}

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

{

pos=i;

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

{

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

pos=j;

}

temp=pr[i];

pr[i]=pr[pos];

pr[pos]=temp;

temp=bt[i];

bt[i]=bt[pos];

bt[pos]=temp;

temp=p[i];

p[i]=p[pos];

p[pos]=temp;

}

wt[0]=0; //waiting time for first process is zero

//calculate waiting time

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

{

wt[i]=0;

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

wt[i]+=bt[j];

total+=wt[i];

}

avg\_wt=total/n; //average waiting time

total=0;

printf("\nProcess\t Burst Time \tWaiting Time\tTurnaround Time");

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

{

tat[i]=bt[i]+wt[i]; //calculate turnaround time

total+=tat[i];

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

}

avg\_tat=total/n; //average turnaround time

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

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

printf("\n");

return 0;

}

**Output:**

