Mawlana Bhashani Science and Technology University
Lab-Report

Lab Report No: 09
Lab Report Name: Implementation of Priority Scheduling Algorithm
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Objective: Priority Scheduling algorithm Definition & executable code in c are followed.

1. What is priority Scheduling algorithm?
Answer: Priority scheduling is a non-preemptive algorithm and one of the most common scheduling algorithms in batch systems. Each process is assigned a priority. Process with highest priority is to be executed first and so on. Processes with same priority are executed on first come first served basis. Priority can be decided based on memory requirements, time requirements or any other resource requirement.

2. How to implemented in C?

Answer:

Source Code:

```c
#include <stdio.h>

int main()
{

        int BuT[20],WaT[20],p[20],TaT[20],priority[20];

        float avwt=0,avtat=0;

        int i,j,n,temp,key;

        printf("\nEnter the number of the processes: ");

        scanf("%d",&n);

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

        {
```

```c
        printf("\nEnter the burst time and priority of the process P[%d]: ",i);

        scanf("%d",&BuT[i]);
        scanf("%d",&priority[i]);
        p[i]=i;

}

for(i=0;i<n;i++)
{
    key=i;
    for(j=i+1;j<n;j++)
    {
        if(priority[j]<priority[key])
        {
            key=j;
        }
    }
    temp=BuT[i];
    BuT[i]=BuT[key];
    BuT[key]=temp;

    temp=priority[i];
    priority[i]=priority[key];
    priority[key]=temp;

    temp=p[i];
    p[i]=p[key];
```

```c
        p[key]=temp;
    }



WaT[0]=0;
TaT[0]=BuT[0];
avtat=TaT[0];


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


        WaT[i]=WaT[i-1]+BuT[i-1];


        TaT[i]=TaT[i-1]+BuT[i];


        avwt+=WaT[i];


        avtat+=TaT[i];


}

avwt=avwt/n;
avtat=avtat/n;

printf("\n\nPROCESS\t\twaiting time\tburst time\tTurnaround time\n");


printf("\n");


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

```c
{

        printf("P[%d]\t\t%d\t\t%d\t\t%d\n",p[i],WaT[i],BuT[i],TaT[i]);


}


printf("\n\nAverage  waiting  time:  %.2f",avwt);

printf("\n\nAverage  Turn  around  time  is:  %.2f",avtat);

printf("\n");


return  0;


}
```

Output: