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SUBJECT → Operating System.
CODE → PBI-202

DATE → 22/6/21
SIGN → Saurabh

Question 2:-   SOURCE CODE:-

```c
#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);
    printf("\n Enter Burst Time:\n");
    for (i=0; i<n; i++)
    {
        printf("p%d: ", i+1);
        scanf("%d", &bt[i]);
        P[i] = i+1;
    }
        for (i=0; i<n; i++)
        {
            pos= i;
            for (j= i+1; j<n; j++)
            {
                if (bt[j] < bt[pos])
                    pos = j;
            }
```

```c
        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 ("\n Pocess \t   Burst Time    \t waiting Time
                                        \t turnaround time");
    for (i=0; j<n; i++)

    {
        tat [i] = bt [i] + wt [i];
        total += = tat [i];
        Printf (" \np%d \t \t   %d \t \t   %d \t \t",
                        p [i], bt [i], wt [i], tat [i];
    }
```

```c
avg_tat = (float)total/n;
Printf ("\n\n Avgerage  Waiting Time = "%.f", avg_wt);
Printf ("\n Avgerage  Turnaround Time = "%.f", avg_tat);
}
```

DATE → 20/6/21
SIGN → saurabh

```c
#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);
    printf("\nEnter Burst Time:\n");
    for(i=0;i<n;i++)
    {
        printf("p%d:",i+1);
        scanf("%d",&bt[i]);
        p[i]=i+1;
    }
        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];
    }
}
```

```c
23   }
24       for(i=0;i<n;i++)
25   {
26       pos=i;
27       for(j=i+1;j<n;j++)
28       {
29           if(bt[j]<bt[pos])
30           pos=j;
31       }
32       temp=bt[i];
33       bt[i]=bt[pos];
34       bt[pos]=temp;
35       temp=p[i];
36       p[i]=p[pos];
37       p[pos]=temp;
38   }
39   wt[0]=0;
40   for(i=1;i<n;i++)
41   {
42       wt[i]=0;
43       for(j=0;j<i;j++)
44       wt[i]+=bt[j];
45       total+=wt[i];
46   }
47   avg_wt=(float)total/n;
48   total=0;
49   printf("\nProcess\t    Burst Time    \tWaiting Time\tTurnaround Time");
50   for(i=0;i<n;i++)
51   {
52       tat[i]=bt[i]+wt[i];
53       total+=tat[i];
54       printf("\np%d\t\t  %d\t\t    %d\t\t\t%d",p[i],bt[i],wt[i],tat[i]);
55   }
56       avg_tat=(float)total/n;
57   printf("\n\nAverage Waiting Time=%f",avg_wt);
58   printf("\nAverage Turnaround Time=%f\n",avg_tat);
59   }
60
```

```
Enter number of process:4

Enter Burst Time:
p1:10
p2:2
p3:1
p4:4

Process        Burst Time        Waiting Time    Turnaround Time
p3                1                  0                 1
p2                2                  1                 3
p4                4                  3                 7
p1               10                  7                17

Average Waiting Time=2.750000
Average Turnaround Time=7.000000


...Program finished with exit code 0
Press ENTER to exit console.
```