

Name - Parikshit Negi  
Father's Name - Mr. Manoj Negi  
Student I.D - 20051041  
University Roll.no - 2023075  
Course - BSC I.T  
Semester - 2nd  
Paper Name - Operating System  
Paper Code - PBI-202  
Type of paper -  
Campus - Dehradun

Ans 2 → C Program to implement SJF CPU  
scheduling Algorithm

Code -

```
// C program to implement SJF CPU scheduling algorithm
#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  
}
```

```
// sorting of burst time  
for(i = 0; i < n; ++)
```

```
{  
    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("\n Process Burst Time + Waiting Time +  
Turnaround Time");
```

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

```
{
```

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

```
    total += tat[i];
```

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

```
}
```



```
avg - tat = (float) total/n;  
printf ("nn Average Waiting Time = %f", avg - wt);  
printf ("n Average Turnaround Time = %f", avg -  
tat);
```

~~tat~~

```
return 0;
```

```
}
```

Inup

FileEditSelectionViewGoRunTerminalHelp01\_c - Untitled (Workspace) - Visual Studio Code

EXPLORER

OPEN EDITORS 1 UNSAVED

02\_practice.c ch...

03\_if\_logical\_op...

if\_else.c chapter 3

01,2\_practice.c c...

04\_practice.c ch...

01\_c os assignm...

if\_else\_if.c chapt...

03\_practice.c ch...

01\_practice.c ch...

UNTITLED (WORKSPACE)

03\_practice.c

04,5\_practice.c

chapter 3

01\_practice.c

02\_practice.c

02\_practice.exe

03\_practice.c

04\_practice.c

if\_basic.c

if\_else\_c

if\_else\_if.c

if\_else.c

os assignment

01\_c

01\_exe

OUTLINE

02\_practice.c

03\_if\_logical\_operators.c

if\_else.c

01,2\_practice.c

04\_practice.c

01\_c

if\_else\_if.c

os assignment > 01\_c > main()

44wt[i]+=bt[j];

45

46total+=wt[i];

47}

48

49avg\_wt=(float)total/n;

50total=0;

51

52printf("nProcesstBurst TimetWaiting TimetTurnaround Time");

53for(i=0;i<n;i++)

54{

55tat[i]=bt[i]+wt[i];

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

2: Code

? ) { .\01\_ }

Enter number of process:4

nEnter Burst Time:n1:20

p2:25

p3:10

p4:15

nProcesstBurst TimetWaiting TimetTurnaround Timenp3tt10tt0ttt10np4tt15tt10ttt25np1tt20tt25ttt45np2tt25tt45

ttt70nnAverage Waiting Time=20.000000nAverage Turnaround Time=37.500000n

PS C:\Users\HP\OneDrive\Documents\os assignment>

Scanned by TapScanner