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Roll - 2023029

Q) C program to implement SJF CPU Scheduling

```
#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:");
    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])
```

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```

{
    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];
}

```

$avg-wt = (\text{float}) \text{total}/n;$

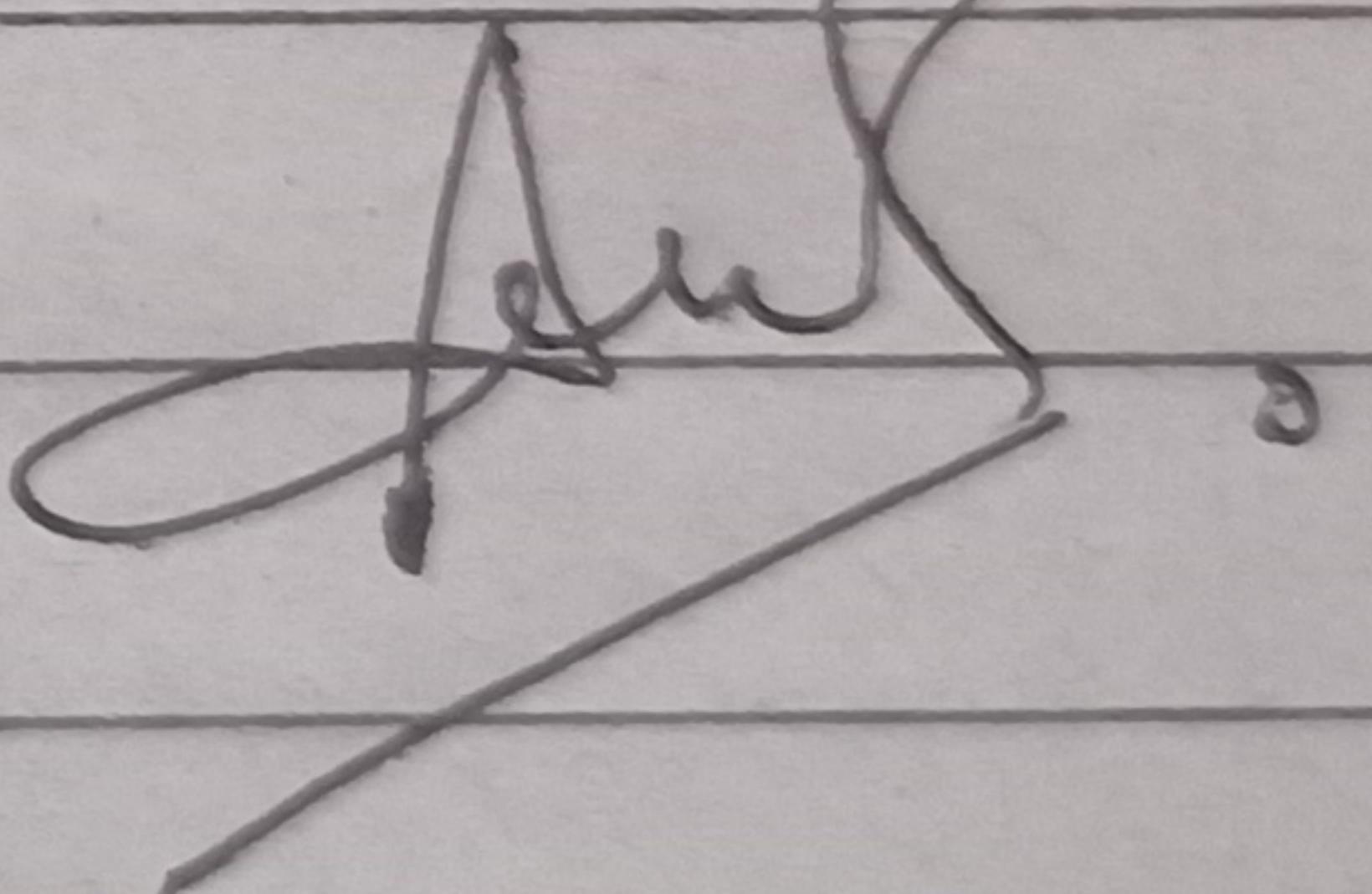
$total = 0$

`printf("nProcess\t Burst Time\t\t waiting Time T
 Turnaround Time");`

```
for (i = 0; i < n; i++)  
{  
    tat[i] = bt[i] + wt[i];  
    total+ = tat[i]  
    printf ("np%ctt%dtc %d", p[i], bt[i],  
    wt[i], tat[i]);  
}  
  
avg-tat=(float)total/n;  
printf ("nAverage waiting Time = %f", avg-wt);  
printf ("nAverage Turnaround Time= %f" avg-tat);  
  
return 0;  
}
```

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EXPLORER ... C 02_practice.c C 03_if_logical_operators.c C if_else.c C 01,2_practice.c C 04_practice.c C 01_c X C if_else_if.c D I ...

OPEN EDITORS 1 UNSAVED os assignment > C 01_c > main()

C 02_practice.c ch... 44 wt[i]+=bt[j];
C 03_if_logical_op... 45
C if_else.c chapter 3 46 total+=wt[i];
C 01,2_practice.c c... 47 }
C 04_practice.c ch... 48
X C 01_c os assignm... 49 avg_wt=(float)total/n;
C if_else_if.c chap... 50 total=0;
● C 03_practice.c ch... 51
C 01_practice.c ch... 52 printf("nProcesss Burst Time tWaiting TimetTurnaround Time");
53 for(i=0;i<n;i++)
54 {
55 tat[i]=bt[i]+wt[i];

UNTITLED (WORKSPACE)

C 03_practice.c
C 04,5_practice.c
chapter 3
C 01_practice.c
C 02_practice.c
E 02_practice.exe
C 03_practice.c
C 04_practice.c
C if_basic.c
C if_else.c
C if_else_if.c
C if_else.c
os assignment
C 01_c
E 01_exe

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

2: Code + - X

```
?) { .\01_ }
Enter number of process:4
nEnter Burst Time:np1:20
p2:25
p3:10
p4:15
nProcesss Burst Time tWaiting TimetTurnaround Timenp3tt 10tt 0ttt10np4tt 15tt 10ttt25np1tt 20tt 25ttt45np2tt 25tt 45
ttt70nnAverage Waiting Time=20.000000nAverage Turnaround Time=37.500000
PS C:\Users\HP\OneDrive\Documents\os assignment>
```