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Course - BSc IT
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Subject - Operating system.

Q2 Problem Statement & Solution

```
#include <stdio.h>
int main ()
{
    int a[10], bt[10], at[10], endTime, i, smallest;
    int remain = 0, n, time, sum_wait = 0, sum_turnaround = 0;
    printf("Enter number of processes: ");
    scanf("%d", &n);
    for (i = 0; i < n; i++)
    {
        printf("Enter arrival time for process P%d: ", i+1);
        scanf("%d", &at[i]);
        printf("Enter burst time for process P%d: ", i+1);
        scanf("%d", &bt[i]);
        at[i] = bt[i];
    }
    printf("\n\n Process Id | Turnaround Time | waiting Time |");
    at[9] = 9999;
    for (time = 0; remain != n; time++)
    {
        smallest = 9;
```

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

```
{ if (at[i] <= time && rt[i] < rt[smallest] && rt[i] > 0)
```

```
{
```

```
    smallest = i;
```

```
}
```

```
}
```

```
rt[smallest] --;
```

```
if (rt[smallest] == 0)
```

```
{
```

```
    remain ++;
```

```
    endTime = time + 1;
```

```
printf("In P[%d] |t| |t %d |t| |t %d", smallest + 1, endTime -  
    at[smallest], endTime - bt[smallest] - at[smallest]);
```

```
sum_wait += endTime - bt[smallest] - at[smallest];
```

```
sum_turnaround += endTime - at[smallest];
```

```
}
```

```
}
```

```
printf("In\n\n Average waiting time = %f\n", sum_wait *  
    1.0 / n);
```

```
printf("In\n\n Average Turnaround time = %f", sum_turnaround  
    * 1.0 / n);
```

```
return 0;
```

```
}
```





```
1 /*****  
2  
3  
4  
5  
6
```

Onl

Code, Compile,

Write your code in this editor



input

```
Enter no of Processes : 5  
Enter arrival time for Process P1 : 2  
Enter burst time for Process P1 : 10  
Enter arrival time for Process P2 : 1  
Enter burst time for Process P2 : 5  
Enter arrival time for Process P3 : 4  
Enter burst time for Process P3 : 1  
Enter arrival time for Process P4 : 0  
Enter burst time for Process P4 : 6  
Enter arrival time for Process P5 : 2  
Enter burst time for Process P5 : 3
```

```
Process |Turnaround Time| Waiting Tim  
e
```

P[3]		1		0
P[5]		4		1
P[2]		9		4
P[4]		15		9
P[1]		23		13

```
Average waiting time = 5.400000
```

```
Average Turnaround time = 10.400000
```

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