

Name - Parikshit Negi

Father's Name - Mr. Manoj Negi

Student ID - 20051041

University Roll no - 2023075

Course - BSC I.T

Semester - 2nd

Paper Name - Operating System

Paper Code - PBI - 202

Type of paper - Regular

Campus - Dehradun

Ans 2 → #include <stdio.h>

main ()

{

int at[10], bt[10], rt[10], end Time, i, smallest, proce-
-ssGrant[100];

int remain = 0, n, time, sum_wait = 0, sum -
turnaround = 0;

printf("Enter no of Processes :");

scanf("%d", &n);

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

{ printf("Enter arrival time for process %d :
", i+1)

scanf("%d", &at[i]);

printf("Enter burst time for Process %d : ", i+1);

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```
scanf ("%d", &bt[i]);
```

```
rt[i] = bt[i];
```

```
}
```

```
printf ("\n\n Process | t | Turnaround Time | Waiting Time\n\n");
```

```
rt[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)
```

```
        {
```

```
            Process Grantt[time] = i;
```

```
            smallest = i;
```

```
        }
```

```
    }
```

```
    rt[smallest] = 0;
```

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

```
    {
```

```
        remain++;
```

```
        end Time = time + 1;
```

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```

Print f ("\nP [%d] \t \t %d \t \t %d", smallest + 1, end
Time - at [smallest], end Time - bt [smallest] - at [smallest]);
sum - wait += end Time - bt [smallest] - at [smallest];
sum - turnaround += end Time - at [smallest];
}
}
Print f ("\n\n Average waiting time = %f \n", sum
- wait * 1.0 / n);
Print f ("Average Turnaround time = %f \n\n", sum
- turnaround * 1.0 / 5);
for (i = 0; i <= time; i++)
{
Print f ("%d -> P%d", i, processGrant[i] + 1);
}
}
}

```

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```

main()
~~~~
Enter no of Processes : 4
Enter arrival time for Process P1 : 7
Enter burst time for Process P1 : 8
Enter arrival time for Process P2 : 6
Enter burst time for Process P2 : 5
Enter arrival time for Process P3 : 5
Enter burst time for Process P3 : 5
Enter arrival time for Process P4 : 8
Enter burst time for Process P4 : 5

Process |Turnaround Time| Waiting Time

P[3]    |      5      |      0
P[2]    |      9      |      4
P[4]    |     12      |      7
P[1]    |     21      |     13

Average waiting time = 6.000000
Average Turnaround time = 9.400000

0->P2094813689 1->P32734 2->P64550201 3->P1 4->P-1070156335 5->P3 6->P3 7->P3 8->P3 9->P3 10->P2 11->P2 12->P2 13->P2
14->P2 15->P4 16->P4 17->P4 18->P4 19->P4 20->P1 21->P1 22->P1 23->P1 24->P1 25->P1 26->P1 27->P1 28->P-1070156175

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

```