

# **OPERATING SYSTEM - CS23431**

## **EXP 6(D)**

### **ROUND ROBIN SCHEDULING**

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#### **PROGRAM:**

```
#include <stdio.h>
```

```
int main() {
```

```
    int n;
```

```
    printf("Enter number of processes: ");
```

```
    scanf("%d", &n);
```

```
    int p[n], a[n], bt[n], temptbt[n], slot;
```

```
    printf("Enter process ID, arrival time, burst  
time for each process:\n");
```

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

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

```
        temptbt[i] = bt[i];
```

```
    }
```

```
    printf("Enter quantum time slot: ");
```

```
    scanf("%d", &slot);
```

```
    int totalwt = 0, totalturn = 0, totaltime = 0;
```

```

int i = 0, count = 0, completed = 0;

printf("P_ID\tBT\tTAT\tWT\n");
while (completed != n) {
    if (temptbt[i] <= slot && temptbt[i] > 0) {
        totaltime += temptbt[i];
        temptbt[i] = 0;
        count = 1;
    } else if (temptbt[i] > 0) {
        totaltime += slot;
        temptbt[i] -= slot;
    }

    if (temptbt[i] == 0 && count == 1) {
        completed++;
        int tat = totaltime - a[i];
        int wt = tat - bt[i];
        printf("%d\t%d\t%d\t%d\n", p[i], bt[i],
tat, wt);
        totalwt += wt;
        totalturn += tat;
        count = 0;
    }

    if (i == n - 1)

```

```

        i = 0;

    else

        i++;

    }

    printf("Average waiting time is %d\n",
totalwt / n);

    printf("Average turn around time is %d\n",
totalturn / n);

    return 0;

}}

```

## OUTPUT:

```

Enter number of processes: 4
Enter process ID, arrival time, burst time for each process:
1 0 4
2 1 7
3 2 5
4 3 6
Enter quantum time slot: 3
P_ID    BT    TAT    WT
1        4    13     9
3        5    16    11
4        6    18    12
2        7    21    14
Average waiting time is 11
Average turn around time is 17
[cse164@fedora ~]$

```