

OPERATING SYSTEM - CS23431

EX 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 = totaltime - a[i] - 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
```