

OPERATING SYSTEM - CS23431

EXP 6(C)

PRIORITY SCHEDULING

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ROLL NO:

PROGRAM:

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

```
int main() {
```

```
int n; printf("Enter Number of Processes: "); scanf("%d", &n);
```

```
int pid[n], b[n], p[n];
```

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

```
    printf("Enter processid Burst Time and Priority Value for Process %d: ", i + 1);
```

```
    scanf("%d %d %d", &pid[i], &b[i], &p[i]);
```

```
}
```

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

```
int max_priority = p[i];
```

```
int max_index = i;
```

```
int swapped = 0;
```

```
for (int j = i + 1; j < n; j++) {
```

```
    if (p[j] < max_priority) {
```

```
        max_priority = p[j];
```

```
        max_index = j;
```

```
        swapped = 1;
```

```
    }
```

```
}
```

```
if (swapped) {
```

```
    int temp = p[i];
```

```
    p[i] = p[max_index];
```

```
    p[max_index] = temp;
```

```
    temp = b[i];
```

```
    b[i] = b[max_index];
```

```

        b[max_index] = temp;

        temp = pid[i];
        pid[i] = pid[max_index];
        pid[max_index] = temp;
    }
}

int wait_time = 0, totalwt = 0, totalturn = 0;
printf("P_ID\tBT\tWT\tTAT\n");
for (int i = 0; i < n; i++) {
    int tat = wait_time + b[i];
    printf("%d\t%d\t%d\t%d\n", pid[i], b[i], wait_time, tat);
    totalwt += wait_time;
    totalturn += tat;
    wait_time += b[i];
}

printf("Average waiting time is %d\n", totalwt / n);
printf("Average turn around time is %d\n", totalturn / n);
return 0;

}

```

OUTPUT:

```
[csel64@fedora ~]$ vi priority.c
[csel64@fedora ~]$ gcc priority.c
[csel64@fedora ~]$ ./a.out
Enter Number of Processes: 4
Enter processid Burst Time and Priority Value for Process 1: 1 6 3
Enter processid Burst Time and Priority Value for Process 2: 2 2 2
Enter processid Burst Time and Priority Value for Process 3: 3 14 1
Enter processid Burst Time and Priority Value for Process 4: 4 6 4
P_ID    BT      WT      TAT
3        14      0       14
2         2      14      16
1         6      16      22
4         6      22      28
Average waiting time is 13
Average turn around time is 20
```