

OPERATING SYSTEM - CS23431

EXP 6(C)

PRIORITY SCHEDULING

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PROGRAM:

```
#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 Process ID, Burst Time and Priority for Process %d: ", i + 1);
```

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

```
    }
```

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

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

```
        int min_index = i;
```

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

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

```

        min_priority = p[j];
        min_index = j;
    }
}

if (min_index != i) {
    int temp;

    temp = p[i];    p[i] = p[min_index];    p[min_index] = temp;
    temp = b[i];    b[i] = b[min_index];    b[min_index] = temp;
    temp = pid[i];  pid[i] = pid[min_index]; pid[min_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: %d\n", totalwt / n);
printf("Average Turn Around Time: %d\n", totalturn / n);

```

```
    return 0;
}
```

OUTPUT:

```
[cse164@fedora ~]$ vi priority.c
[cse164@fedora ~]$ gcc priority.c
[cse164@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
[cse164@fedora ~]$
```