

CS23431 - OPERATING SYSTEM

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 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:

```
[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
```