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 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
```