c) Priority

```
#include <stdio.h>

int main() {
   int n, i, j, pos, temp;
   int bt[20], p[20], pr[20], wt[20], tat[20];
   int total_wt = 0, total_tat = 0;

   printf("Enter the number of processes: ");
   scanf("%d", &n);

   for(i = 0; i < n; i++) {
      printf("Enter burst time and priority for P[%d]: ", i+1);
      scanf("%d%d", &bt[i], &pr[i]);
      p[i] = i + 1;
   }

   for(i = 0; i < n; i++) {
      pos = i;
      for(j = i+1; j < n; j++) {
         if(pr[j] < pr[pos])
            pos = j;
      }

      temp = pr[i];
      pr[i] = pr[pos];
      pr[pos] = temp;

      temp = bt[i];
      bt[i] = bt[pos];
      bt[pos] = temp;

      temp = p[i];
      p[i] = p[pos];
      p[pos] = temp;
   }

   wt[0] = 0;

   for(i = 1; i < n; i++) {
      wt[i] = 0;
      for(j = 0; j < i; j++)
         wt[i] += bt[j];
   }

   for(i = 0; i < n; i++) {
      tat[i] = bt[i] + wt[i];
```

```
        total_wt += wt[i];
        total_tat += tat[i];
    }

    printf("\nProcess\tBurst Time\tPriority\tWaiting Time\tTurnaround Time\n");
    for(i = 0; i < n; i++) {
        printf("P[%d]\t\t%d\t\t%d\t\t%d\t\t%d\n", p[i], bt[i], pr[i], wt[i], tat[i]);
    }

    printf("\nAverage Waiting Time = %.2f", (float)total_wt / n);
    printf("\nAverage Turnaround Time = %.2f\n", (float)total_tat / n);

    return 0;
}
```

Output

```
Enter the number of processes: 2
Enter burst time and priority for P[1]: 9
89
Enter burst time and priority for P[2]: 6
88

Process Burst Time  Priority    Waiting Time    Turnaround Time
P[2]        6       88      0       6
P[1]        9       89      6       15

Average Waiting Time = 3.00
Average Turnaround Time = 10.50


=== Code Execution Successful ===
```