#include<stdio.h>

int main()

{

int BurstTime[25], Process[25], WaitingTime[25], TurnaroundTime[25], Priority[25];

int i, j, Limit, Sum = 0, position, Temp;

float AverageWaitingTime, AverageTurnaroundTime;

printf("Please Enter the Total Number of Processes:\t");

scanf("%d", &Limit);

printf("\nEnter Burst Time and Priority For %d Processes\n", Limit);

for(i = 0; i < Limit; i++)

{

printf("\nProcess[%d]\n", i + 1);

printf("Enter Process Burst Time: ");

scanf("%d", &BurstTime[i]);

printf("Enter Process Priority: ");

scanf("%d", &Priority[i]);

Process[i] = i + 1;

}

for(i = 0; i < Limit; i++)

{

position = i;

for(j = i + 1; j < Limit; j++)

{

if(Priority[j] < Priority[position])

{

position = j;

}

}

Temp = Priority[i];

Priority[i] = Priority[position];

Priority[position] = Temp;

Temp = BurstTime[i];

BurstTime[i] = BurstTime[position];

BurstTime[position] = Temp;

Temp = Process[i];

Process[i] = Process[position];

Process[position] = Temp;

}

WaitingTime[0] = 0;

for(i = 1; i < Limit; i++)

{

WaitingTime[i] = 0;

for(j = 0; j < i; j++)

{

WaitingTime[i] = WaitingTime[i] + BurstTime[j];

}

Sum = Sum + WaitingTime[i];

}

AverageWaitingTime = Sum / Limit;

Sum = 0;

printf("\n -------------------------------------------------------------------------\n");

printf("\n| Process ID\t| Burst Time\t| Waiting Time\t| Turnaround Time |\n");

printf("\n -------------------------------------------------------------------------\n");

for(i = 0; i < Limit; i++)

{

TurnaroundTime[i] = BurstTime[i] + WaitingTime[i];

Sum = Sum + TurnaroundTime[i];

printf("\n| Process[%d]\t| %d\t\t| %d\t\t| %d\t\t\t|\n", Process[i], BurstTime[i], WaitingTime[i], TurnaroundTime[i]);

}

printf("\n -------------------------------------------------------------------------\n");

AverageTurnaroundTime = Sum / Limit;

printf("\nAverage Waiting Time:\t%f", AverageWaitingTime);

printf("\nAverage Turnaround Time:\t%f\n", AverageTurnaroundTime);

return 0;

}