|  |  |
| --- | --- |
| 2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67  68  69  70  71  72  73 | #include<iostream>    **using** **namespace** std;    **int** main()  {  **int** bt[20],p[20],wt[20],tat[20],pr[20],i,j,n,total=0,pos,temp,avg\_wt,avg\_tat;  **cout**<<"Enter Total Number of Process:";      cin>>n;    **cout**<<"\nEnter Burst Time and Priority\n";  **for**(i=0;i<n;i++)      {  **cout**<<"\nP["<<i+1<<"]\n";  **cout**<<"Burst Time:";          cin>>bt[i];  **cout**<<"Priority:";          cin>>pr[i];          p[i]=i+1;           *//contains process number*      }    *//sorting burst time, priority and process number in ascending order using selection sort*  **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;            *//waiting time for first process is zero*    *//calculate waiting time*  **for**(i=1;i<n;i++)      {          wt[i]=0;  **for**(j=0;j<i;j++)              wt[i]+=bt[j];            total+=wt[i];      }        avg\_wt=total/n;      *//average waiting time*      total=0;    **cout**<<"\nProcess\t    Burst Time    \tWaiting Time\tTurnaround Time";  **for**(i=0;i<n;i++)      {          tat[i]=bt[i]+wt[i];     *//calculate turnaround time*          total+=tat[i];  **cout**<<"\nP["<<p[i]<<"]\t\t  "<<bt[i]<<"\t\t    "<<wt[i]<<"\t\t\t"<<tat[i];      }        avg\_tat=total/n;     *//average turnaround time*  **cout**<<"\n\nAverage Waiting Time="<<avg\_wt;  **cout**<<"\nAverage Turnaround Time="<<avg\_tat;    **return** 0;  } |

