/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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Batch:TA3

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importt java.util.\*;

public class Main{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.println ("enter no of process:");

int n = sc.nextInt();

int pid[] = new int[n];

int at[] = new int[n]; // at means arrival time

int bt[] = new int[n]; // bt means burst time

int ct[] = new int[n]; // ct means complete time

int ta[] = new int[n]; // ta means turn around time

int wt[] = new int[n]; //wt means waiting time

int f[] = new int[n]; // f means it is flag it checks process is completed or not

int st=0, tot=0;

float avgwt=0, avgta=0;

for(int i=0;i<n;i++)

{

System.out.println ("enter process " + (i+1) + " arrival time:");

at[i] = sc.nextInt();

System.out.println ("enter process " + (i+1) + " brust time:");

bt[i] = sc.nextInt();

pid[i] = i+1;

f[i] = 0;

}

boolean a = true;

while(true)

{

int c=n, min=999;

if (tot == n) // total no of process = completed process loop will be terminated

break;

for (int i=0; i<n; i++)

{

/\*

\* If i'th process arrival time <= system time and its flag=0 and burst<min

\* That process will be executed first\*/

if ((at[i] <= st) && (f[i] == 0) && (bt[i]<min))

{

min=bt[i];

c=i;

}

}

/\* If c==n means c value can not updated because no process arrival time< system time so we increase the system time \*/

if (c==n)

st++;

else

{

ct[c]=st+bt[c];

st+=bt[c];

ta[c]=ct[c]-at[c];

wt[c]=ta[c]-bt[c];

f[c]=1;

tot++;

}

}

System.out.println("\npid arrival brust complete turn waiting");

for(int i=0;i<n;i++)

{

avgwt+= wt[i];

avgta+= ta[i];

System.out.println(pid[i]+"\t"+at[i]+"\t"+bt[i]+"\t"+ct[i]+"\t"+ta[i]+"\t"+wt[i]);

}

System.out.println ("\naverage tat is "+ (float)(avgta/n));

System.out.println ("average wt is "+ (float)(avgwt/n));

sc.close();

}

}

**OUTPUT**

enter no of process:

3

enter process 1 arrival time:

23

enter process 1 brust time:

12

enter process 2 arrival time:

12

enter process 2 brust time:

21

enter process 3 arrival time:

2

enter process 3 brust time:

3

pid arrival brust complete turn waiting

1 23 12 45 22 10

2 12 21 33 21 0

3 2 3 5 3 0

average tat is 15.333333

average wt is 3.3333333