Round Robin Algorithm

import java.util.Scanner;

public class RoundRobin

{

public static void main(String args[])

{

int n,i,qt,count=0,temp,sq=0,bt[],wt[],tat[],rem\_bt[];

float awt=0,atat=0;

bt = new int[10];

wt = new int[10];

tat = new int[10];

rem\_bt = new int[10];

Scanner s=new Scanner(System.in);

System.out.print("Enter the number of process (maximum 10) = ");

n = s.nextInt();

System.out.print("Enter the burst time of the process\n");

for (i=0;i<n;i++)

{

System.out.print("P"+i+" = ");

bt[i] = s.nextInt();

rem\_bt[i] = bt[i];

}

System.out.print("Enter the quantum time: ");

qt = s.nextInt();

while(true)

{

for (i=0,count=0;i<n;i++)

{

temp = qt;

if(rem\_bt[i] == 0)

{

count++;

continue;

}

if(rem\_bt[i]>qt)

rem\_bt[i]= rem\_bt[i] - qt;

else

if(rem\_bt[i]>=0)

{

temp = rem\_bt[i];

rem\_bt[i] = 0;

}

sq = sq + temp;

tat[i] = sq;

}

if(n == count)

break;

}

System.out.print("--------------------------------------------------------------------------------");

System.out.print("\nProcess\t      Burst Time\t       Turnaround Time\t          Waiting Time\n");

System.out.print("--------------------------------------------------------------------------------");

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

{

wt[i]=tat[i]-bt[i];

awt=awt+wt[i];

atat=atat+tat[i];

System.out.print("\n "+(i+1)+"\t "+bt[i]+"\t\t "+tat[i]+"\t\t "+wt[i]+"\n");

}

awt=awt/n;

atat=atat/n;

System.out.println("\nAverage waiting Time = "+awt+"\n");

System.out.println("Average turnaround time = "+atat);

}

}

Output:-

Enter the number of process (maximum 10) = 5

Enter the burst time of the process

P0 = 5

P1 = 7

P2 = 4

P3 = 3

P4 = 2

Enter the quantum time: 5

--------------------------------------------------------------------------------

Process Burst Time Turnaround Time Waiting Time

1 5 5 0

2 7 21 14

3 4 14 10

4 3 17 14

5 2 19 17

Average waiting Time = 11.0

Average turnaround time = 15.2