ROUND ROBIN

import java.util.\*;

public class Main {

public static void main(String args[]) {

Scanner s = new Scanner(System.in);

int wtime[], btime[], rtime[], num, quantum;

wtime = new int[10];

btime = new int[10];

rtime = new int[10];

System.out.print("Enter number of processes (MAX 10): ");

num = s.nextInt();

System.out.print("Enter burst time");

for (int i = 0; i < num; i++) {

System.out.print("\nP[" + (i + 1) + "]: ");

btime[i] = s.nextInt();

rtime[i] = btime[i];

wtime[i] = 0;

}

System.out.print("\n\nEnter quantum: ");

quantum = s.nextInt();

int rp = num;

int i = 0;

int time = 0;

while (rp != 0) {

if (rtime[i] > 0) {

if (rtime[i] > quantum) {

rtime[i] -= quantum;

time += quantum;

} else {

time += rtime[i];

wtime[i] = time - btime[i];

rtime[i] = 0;

rp--;

}

}

i = (i + 1) % num;

}

// Subtract the arrival time from waiting time

for (int j = 1; j < num; j++) {

int arrivalTime = j; // Adjust the arrival time as needed

wtime[j] -= arrivalTime;

}

// Calculate turn around time and display the table

int turnAroundTime[] = new int[num];

double avgTurnAroundTime = 0;

double avgWaitingTime = 0;

System.out.println("\n\nProcess\tBurst Time\tWaiting Time\tTurnaround Time");

for (int j = 0; j < num; j++) {

turnAroundTime[j] = btime[j] + wtime[j];

avgTurnAroundTime += turnAroundTime[j];

avgWaitingTime += wtime[j];

System.out.println("P[" + (j + 1) + "]\t" + btime[j] + "\t\t" + wtime[j] + "\t\t" + turnAroundTime[j]);

}

avgTurnAroundTime /= num;

avgWaitingTime /= num;

System.out.println("\nAverage Turnaround Time: " + avgTurnAroundTime);

System.out.println("Average Waiting Time: " + avgWaitingTime);

}

}