Name: -Shraddha ganesh Bagav

Roll No: -2181849

PRN: -10304020181824570033

**Aim -**  Implementation of Round Robin scheduling Algorithm.

**Program :-**

public class RoundRobin

{

static void WaitingTime(int processes[], int n,

int bt[], int wt[], int quantum)

{

int rem\_bt[] = new int[n];

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

rem\_bt[i] = bt[i];

int t = 0;

while(true)

{

boolean done = true;

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

{

if (rem\_bt[i] > 0)

{

done = false;

if (rem\_bt[i] > quantum)

{

t += quantum;

rem\_bt[i] -= quantum;

}

else

{

t = t + rem\_bt[i];

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

rem\_bt[i] = 0;

}

}

}

if (done == true)

break;

}

}

static void TurnAroundTime(int processes[], int n,

int bt[], int wt[], int tat[])

{

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

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

}

static void avgTime(int processes[], int n, int bt[],

int quantum)

{

int wt[] = new int[n], tat[] = new int[n];

int total\_wt = 0, total\_tat = 0;

WaitingTime(processes, n, bt, wt, quantum);

TurnAroundTime(processes, n, bt, wt, tat);

System.out.println("Processes " + " Burst time " +

" Waiting time " + " Turn around time");

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

{

total\_wt = total\_wt + wt[i];

total\_tat = total\_tat + tat[i];

System.out.println(" " + (i+1) + "\t\t" + bt[i] +"\t " +

wt[i] +"\t\t " + tat[i]);

}

System.out.println("Average waiting time = " +

(float)total\_wt / (float)n);

System.out.println("Average turn around time = " +

(float)total\_tat / (float)n);

}

public static void main(String[] args)

{

int processes[] = { 1, 2, 3};

int n = processes.length;

int burst\_time[] = {10, 5, 8};

int quantum = 2;

avgTime(processes, n, burst\_time, quantum);

}

}

**Output:-**

Processes Burst time Waiting time Turn around time

1 10 13 23

2 5 10 15

3 8 13 21

Average waiting time = 12.0

Average turn around time = 19.666666