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ASSIGNMENT NO – CPU SCHEDULING (FCFS)

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PROGRAM :-

**import** java.io.\*;

**public** **class** FCFS {

**public** **static** **void** main(String args[]) **throws** Exception {

**int** i, j, n, new1, newFT = 0;

**int** new2[]=**new** **int**[20];

**int** matrx[][] = **new** **int**[10][3], temp, temp1, temp2;

**int** FT[] = **new** **int**[10];

**int** WT[] = **new** **int**[10];

**int** TT[] = **new** **int**[10];

**int** ft1[]=**new** **int**[20];

System.*out*.println("\*\*\*\*\*\*\*FCFS Scheduling\*\*\*\*\*");

System.*out*.println("--------------------------");

System.*out*.println("Enter no. of processes : ");

BufferedReader br = **new** BufferedReader(**new** InputStreamReader(System.*in*));

n = Integer.*parseInt*(br.readLine());

System.*out*.println("No. of processes are : " + n);

System.*out*.println("Enter process matix : ");

System.*out*.println("--------------------------");

System.*out*.println("\nENTER PROCESS ID ,ARRIVAL TIME AND BURST TIME");

System.*out*.println("--------------------------");

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

**for** (j = 0; j < 3; j++) {

String n1 = br.readLine();

new1 = Integer.*parseInt*(n1);

matrx[i][j] = new1;

}

}

System.*out*.println("---------------------");

System.*out*.println("\n\tP\_id\tAT\tBT");

System.*out*.println("---------------------");

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

**for** (j = 0; j < 3; j++) {

System.*out*.print("\t " + matrx[i][j]);

}

System.*out*.println();

}

System.*out*.println("Sorted Matrix is ");

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

**for** (j = i + 1; j < n; j++) {

**if** (matrx[i][1] > matrx[j][1]) {

temp = matrx[i][1];

matrx[i][1] = matrx[j][1];

matrx[j][1] = temp;

temp = matrx[i][2];

matrx[i][2] = matrx[j][2];

matrx[j][2] = temp;

temp = matrx[i][0];

matrx[i][0] = matrx[j][0];

matrx[j][0] = temp;

}

}

}

System.*out*.println("---------------------");

System.*out*.println("\n\tP\_id\tAT\tBT");

System.*out*.println("---------------------");

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

**for** (j = 0; j < 3; j++) {

System.*out*.print("\t " + matrx[i][j]);

}

System.*out*.println();///

}

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

FT[i] = newFT + matrx[i][2];

newFT = FT[i];

TT[i] = FT[i] - matrx[i][1];

WT[i] = TT[i] - matrx[i][2];

}

System.*out*.println("Final Table : ");

System.*out*.println("----------------------------");

System.*out*.println("\n\tP\_id\tAT\tBT\tFT\tTT\tWT");

System.*out*.println("----------------------------");

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

**for** (j = 0; j < 3; j++) {

System.*out*.print("\t " + matrx[i][j]);

}

System.*out*.print("\t" + FT[i] + "\t" + TT[i] + "\t" + WT[i]);

ft1[i]=FT[i];

System.*out*.println();

}

System.*out*.println("\n GANT CHART ");

System.*out*.println("\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

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

**for** (j = 0; j < 1; j++) {

System.*out*.print("\t P\_ID |" + matrx[i][j]+"|");

}

System.*out*.print("\t FT|"+ FT[i]+"|");

}

System.*out*.println("\n\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

System.*out*.println("\n");

}

}

OUTPUT :-

\*\*\*\*\*\*\*FCFS Scheduling\*\*\*\*\*

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

Enter no. of processes :

4

No. of processes are : 4

Enter process matix :

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

ENTER PROCESS ID ,ARRIVAL TIME AND BURST TIME

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

1

3

5

2

1

1

3

0

7

4

2

2

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

P\_id AT BT

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

1 3 5

2 1 1

3 0 7

4 2 2

Sorted Matrix is

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

P\_id AT BT

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

3 0 7

2 1 1

4 2 2

1 3 5

Final Table :

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

P\_id AT BT FT TT WT

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

3 0 7 7 7 0

2 1 1 8 7 6

4 2 2 10 8 6

1 3 5 15 12 7

GANT CHART \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

P\_ID |3| FT|7| P\_ID |2| FT|8| P\_ID |4| FT|10| P\_ID |1| FT|15|

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_