**package** GreedyAlgorithm;

**import** java.util.ArrayList;

**import** java.util.Collections;

**import static** java.util.Collections.\*;

**class** JobsWithProfitDeadline **implements** Comparable<JobsWithProfitDeadline>

{

**public** String **jobName**;

**public int profit**;

**public int deadLine**;

**public** JobsWithProfitDeadline(String jobName, **int** profit, **int** deadLine) {

**this**.**jobName** = jobName;

**this**.**profit** = profit;

**this**.**deadLine** = deadLine;

}

@Override

**public int** compareTo(JobsWithProfitDeadline o) {

**if** (**this**.**profit**<o.**profit**) **return** 1;

**else return** -1;

}

}

**class** FindJobs

{

ArrayList<JobsWithProfitDeadline> **arrayList**;

**public** String[] **jobNameStore**;

**public int index**;

**public int**[] **profitCalculate**;

**public int length** =0;

**public int total** = 0;

**public** FindJobs(ArrayList<JobsWithProfitDeadline> arrayList, String[] jobNameStore, **int**[] profitCalculate) {

**this**.**arrayList** = arrayList;

**this**.**jobNameStore** = jobNameStore;

**this**.**profitCalculate** = profitCalculate;

**this**.**length** =0;

giveData();

}

**public void** giveData()

{

**for** (JobsWithProfitDeadline give : **arrayList**)

{

**length** = Math.*max*(**length**,give.**deadLine**);

}

**int** length1 = **length**;

**for** (**int** i=1;i<=length1;i++)

{

**jobNameStore**[i] = **null**;

**profitCalculate**[i] = 0;

}

**for** (JobsWithProfitDeadline give : **arrayList**)

{

findProfit(give.**jobName**, give.**profit**, give.**deadLine**);

}

}

**public void** findProfit(String jobName, **int** profit, **int** deadline)

{

**if** (**jobNameStore**[deadline] == **null**)

{

**jobNameStore**[deadline] = jobName;

**profitCalculate**[deadline] = profit;

}**else if**(**jobNameStore**[deadline] !=**null**)

{

**if** (**jobNameStore**[deadline-1] == **null**)

{

**jobNameStore**[deadline-1] = jobName;

**profitCalculate**[deadline-1] = profit;

}**else** {}

}

}

**public void** printjob()

{

**for** (**int** i = 1; i <= **length**; i++) {

**if** (**jobNameStore**[i]==**null** || **profitCalculate**[i]==0){}**else** {

System.***out***.println(**"Job Name: "** + **jobNameStore**[i] + **", profit is = "** + **profitCalculate**[i]);

**total** = **total** + **profitCalculate**[i];

}

}

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

System.***out***.println(**"Total profit = "**+**total**);

}

}

**public class** JobSchedulingWithDeadLine {

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

ArrayList<JobsWithProfitDeadline> arrayList = **new** ArrayList<>();

arrayList.add(**new** JobsWithProfitDeadline(**"a"**,100,2));

arrayList.add(**new** JobsWithProfitDeadline(**"b"**,19,1));

arrayList.add(**new** JobsWithProfitDeadline(**"c"**,27,2));

arrayList.add(**new** JobsWithProfitDeadline(**"d"**,25,1));

arrayList.add(**new** JobsWithProfitDeadline(**"e"**,15,3));

Collections.*sort*(arrayList);

String[] jobName = **new** String [100];

**int**[] profitCalculate = **new int**[100];

FindJobs object = **new** FindJobs(arrayList,jobName,profitCalculate);

object.printjob();

}

}