

```

import java.util.*;
import java.util.Scanner;
// A class to store a Job
class Job
{
    String start, finish;
    int profit;

    Job(String start, String finish, int profit)
    {
        this.start = start;
        this.finish = finish;
        this.profit = profit;
    }

    @Override
    public String toString() {
        return "(" + this.start + ", " + this.finish + ", " + this.profit + ") ";
    }
}

class Main
{
    // Function to perform a binary search on the given jobs, which are sorted
    // by finish time. The function returns the index of the last job, which
    // doesn't conflict with the given job, i.e., whose finish time is
    // less than or equal to the given job's start time.
    public static int findLastNonConflictingJob(List<Job> jobs, int n)
    {
        // search space
        int low = 0;

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int high = n;

// iterate till the search space is exhausted
while (low <= high)
{
    int mid = (low + high) / 2;

    int cmp = jobs.get(mid).finish.compareTo(jobs.get(n).start);

    if (cmp <= 0)
    {
        int cmp1 = jobs.get(mid+1).finish.compareTo(jobs.get(n).start);
        if (cmp1 <= 0) {
            low = mid + 1;
        }
        else {
            return mid;
        }
    }
    else {
        high = mid - 1;
    }
}

return -1;
}

// Function to print remaining jobs and calculate remaining earnings
//excluding the non-overlapping max profits tasks picked by lokesh
public static void findRemainingEarningAndJobs(List<Job> jobs)
{
    // sort jobs in increasing order of their finish times

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Collections.sort(jobs, Comparator.comparing(x -> x.finish));

// get the number of jobs
int n = jobs.size();

// base case
if (n == 0) {
    return;
}

int[] remainingEarnings = new int[n];
int totalProfit = 0;
List<List<Integer>> tasks = new ArrayList<>();
for (int i = 0; i < n; i++) {
    tasks.add(new ArrayList<>());
    totalProfit = totalProfit + jobs.get(i).profit;
}

// initialize `remainingEarnings[0]` and `tasks[0]` with the first job
remainingEarnings[0] = jobs.get(0).profit;
tasks.get(0).add(0);

for (int i = 1; i < n; i++)
{
    // find the index of the last non-conflicting job with the current job
    int index = findLastNonConflictingJob(jobs, i);

    // include the current job with its non-conflicting jobs
    int currentProfit = jobs.get(i).profit;

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    if (index != -1) {
        currentProfit += remainingEarnings[index];
    }

    // if including the current job leads to the maximum profit so far
    if (remainingEarnings[i-1] < currentProfit)
    {
        remainingEarnings[i] = currentProfit;

        if (index != -1) {
            tasks.set(i, new ArrayList<>(tasks.get(index)));
        }
        //tasks.set(i, new ArrayList<>(tasks.get(i-1)));
        tasks.get(i).add(i);
    }

    // excluding the current job leads to the maximum profit so far
    else {
        //tasks.get(i).add(i);
        tasks.set(i, new ArrayList<>(tasks.get(i-1)));
        remainingEarnings[i] = remainingEarnings[i-1];
    }
}

var remainingJobs = n - tasks.get(n-1).size();
var remainingProfit = totalProfit - remainingEarnings[n-1];
System.out.println("The number of tasks and earnings available for others");

System.out.println("Task " + remainingJobs);
System.out.println("Earnings " + remainingProfit);

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}
```

```
public static void main(String[] args)
```

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{
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    Scanner sc=new Scanner(System.in);
```

```
    System.out.println("Enter the number of Jobs ");
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    int jobCount = sc.nextInt();
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    if(jobCount>100)
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    {
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```
        System.out.println("The number of jobs in the day should be less than 100");
```

```
        return;
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    }
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```
    List<Job> jobs = new ArrayList<>();
```

```
    System.out.println("Enter job start time, end time, and earnings");
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```
    for (int i = 0; i<jobCount;i++) {
```

```
        List<String> inputs = new ArrayList<>();
```

```
        int a = 0;
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```
        while(a<3)
```

```
        {
```

```
            inputs.add(sc.next());
```

```
            a++;
```

```
        }
```

```
        String start = inputs.get(0);
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String finish = inputs.get(1);
int profit = Integer.parseInt(inputs.get(2));

int compareInputTime = start.compareTo(finish);
if(compareInputTime>=0)
{
    System.out.println("Finish time cannot be earlier or same as Start time");
    return;
}
System.out.println("Enter next job start time, end time and earnings");
jobs.add(new Job( start, finish, profit ));
sc.nextLine();

}
sc.close();
// List<Job> jobs = Arrays.asList(

//     new Job( "0900", "1030", 100 ),
//     new Job( "1000", "1200", 500 ),
//     new Job( "1100", "1200", 300 ));

findRemainingEarningAndJobs(jobs);
}
}

```