

JOB SCHEDULING ALGORITHM

```
import java.util.*;

public class JobScheduling {

    static class Job {

        char id;

        int deadline, profit;

        Job(char id, int deadline, int profit) {

            this.id = id;

            this.deadline = deadline;

            this.profit = profit;

        }

    }

    static void jobScheduling(Job[] jobs) {

        Arrays.sort(jobs, Comparator.comparingInt(j -> -j.profit));

        int maxDeadline = 0;

        for (Job : jobs) {

            if (job.deadline > maxDeadline)

                maxDeadline = job.deadline;

        }

        char[] result = new char[maxDeadline];

        boolean[] slot = new boolean[maxDeadline];

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

            slot[i] = false;

        }

        for (int i = 0; i < jobs.length; i++) {

            for (int j = Math.min(maxDeadline - 1, jobs[i].deadline - 1); j >= 0; j--) {

                if (!slot[j]) {
```

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        result[j] = jobs[i].id;

        slot[j] = true;

        break;
    }
}

}

System.out.println("Job Schedule:");

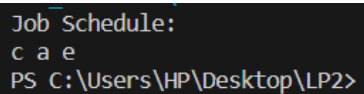
for (char job : result) {
    if (job != '\0')
        System.out.print(job + " ");
}
}

public static void main(String[] args) {
    Job[] jobs = {
        new Job('a', 2, 100),
        new Job('b', 1, 19),
        new Job('c', 2, 27),
        new Job('d', 1, 25),
        new Job('e', 3, 15)
    };

    jobScheduling(jobs);
}
}

```

OUTPUT:



```

Job Schedule:
c a e
PS C:\Users\HP\Desktop\LP2>

```