

Name : Jagtap Nachiket Nitin  
En.No.: 21221079

## Assignment 3

### Greedy And Dynamic Programming algorithmic Striate

d. Job Scheduling using Greedy Algorithm

Java Code :

```
import java.util.Arrays;
import java.util.Comparator;

class Job {
    char id;
    int deadline;
    int profit;

    public Job(char id, int deadline, int profit) {
        this.id = id;
        this.deadline = deadline;
        this.profit = profit;
    }
}

public class JobScheduling {
    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)
        };

        int n = jobs.length;

        // Sort jobs in decreasing order of profit
        Arrays.sort(jobs, Comparator.comparing((Job job) -> job.profit).reversed());

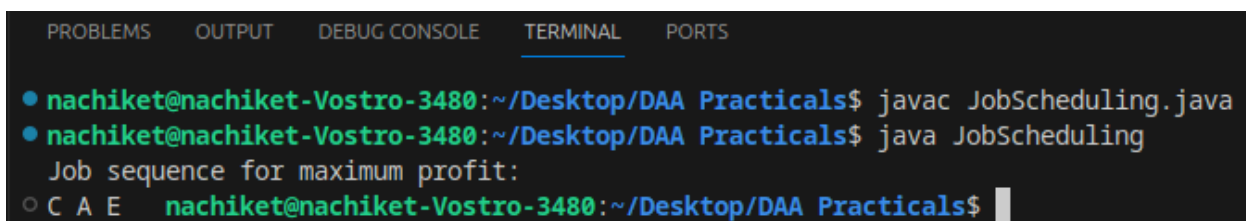
        char[] result = new char[n];
        boolean[] slot = new boolean[n];

        for (int i = 0; i < n; i++) {
            // Find a free slot for this job (from the end of the array to the start)
            for (int j = Math.min(n, jobs[i].deadline) - 1; j >= 0; j--) {
                if (!slot[j]) {
                    result[j] = jobs[i].id;
                    slot[j] = true;
                    break;
                }
            }
        }
    }
}
```

```
}  
}  
}
```

```
System.out.println("Job sequence for maximum profit:");  
for (char jobId : result) {  
    System.out.print(jobId + " ");  
}  
}  
}
```

Output :



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
● nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$ javac JobScheduling.java  
● nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$ java JobScheduling  
  Job sequence for maximum profit:  
○ C A E  nachiket@nachiket-Vostro-3480:~/Desktop/DAA Practicals$
```