Seat No.: T191094350 Name : Aryan Sirdesai Problem Statement : Implement Greedy search algorithm for : III. Job Scheduling Problem

In [1]:
```
profit = []
jobs = []
deadline = []

n = int(input("Enter the Number of Jobs: "))

for i in range(n):
    p = int(input("Enter the profit of job {}: ".format(i+1)))
    profit.append(p)
    j = input("Enter the name of job {}: ".format(i+1))
    jobs.append(j)
    d = int(input("Enter the deadline of job {}: ".format(i+1)))
    deadline.append(d)

profitNJobs = list(zip(profit, jobs, deadline))
profitNJobs = sorted(profitNJobs, key=lambda x: x[0], reverse=True)

slot = [0] * (n+1)
profit = 0
ans = ['null'] * (n+1)

for i in range(n):
    job = profitNJobs[i]

    for j in range(job[2], 0, -1):
        if slot[j] == 0:
            ans[j] = job[1]
            profit += job[0]
            slot[j] = 1
            break

print("Jobs scheduled:", ans[1:])
print("Total profit:", profit)
```

```
Enter the number of jobs: 5
Enter the profit of job 1: 200
Enter the name of job 1: j1
Enter the deadline of job 1: 3
Enter the profit of job 2: 10
Enter the name of job 2: j2
Enter the deadline of job 2: 1
Enter the profit of job 3: 15
Enter the name of job 3: j3
Enter the deadline of job 3: 2
Enter the profit of job 4: 5
Enter the name of job 4: j4
Enter the deadline of job 4: 1
Enter the profit of job 5: 30
Enter the name of job 5: j5
Enter the deadline of job 5: 3
Jobs scheduled: ['j3', 'j5', 'j1', 'null', 'null']
Total profit: 245
```

In [ ]: