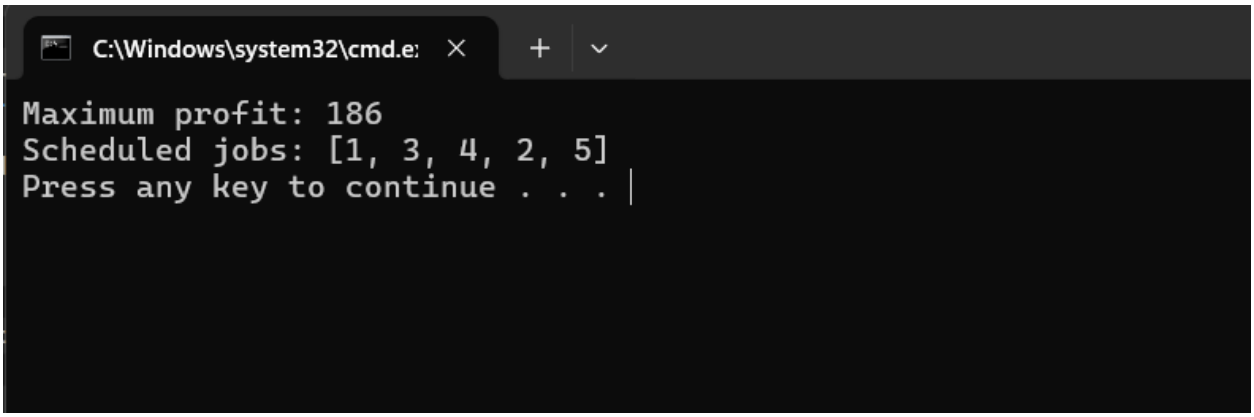
90) Job Sequencing with Deadlines

CODE:

```
def job_sequencing_with_deadlines(jobs):
    jobs.sort(key=lambda x: x[2], reverse=True)
    max_deadline = max(jobs, key=lambda x: x[1])[1]

    time_slots = [-1] * (max_deadline + 1)

    total_profit = 0
    scheduled_jobs = []

    for job_index, deadline, profit in jobs:
        while deadline > 0 and time_slots[deadline] != -1:
            deadline -= 1
        if deadline >= 0:
            time_slots[deadline] = job_index
            total_profit += profit
            scheduled_jobs.append(job_index)

    return total_profit, scheduled_jobs

if __name__ == "__main__":
    jobs = [
        (1, 2, 100),
        (2, 1, 19),
        (3, 2, 27),
        (4, 1, 25),
        (5, 3, 15)
    ]

    max_profit, scheduled_jobs = job_sequencing_with_deadlines(jobs)
    print(f"Maximum profit: {max_profit}")
    print(f"Scheduled jobs: {scheduled_jobs}")
```

OUTPUT:



TIME COMPLEXITY : O(nlogn)