**Job Scheduling Problem:**

def job\_scheduling(jobs, deadlines):  
    jobs.sort(key=lambda x: x[1], reverse=True)  
    scheduled\_jobs = [None] \* max(deadlines)  
    max\_profit = 0  
  
    for job in jobs:  
        for i in range(job[2] - 1, -1, -1):  
            if scheduled\_jobs[i] is None:  
                scheduled\_jobs[i] = job[0]  
                max\_profit += job[1]  
                break  
  
    return scheduled\_jobs, max\_profit  
  
def main():  
    num\_jobs = int(input("Enter the number of jobs: "))  
    jobs = []  
  
    for i in range(num\_jobs):  
        job\_id = int(input(f"Enter job ID {i+1}: "))  
        profit = int(input(f"Enter profit for job {job\_id}: "))  
        deadline = int(input(f"Enter deadline for job {job\_id}: "))  
        jobs.append((job\_id, profit, deadline))  
  
    scheduled\_jobs, max\_profit = job\_scheduling(jobs, [job[2] for job in jobs])  
  
    print("Scheduled Jobs:")  
    for i in range(len(scheduled\_jobs)):  
        if scheduled\_jobs[i] is not None:  
            print(f"Job {scheduled\_jobs[i]} is scheduled at time {i+1}")  
    print(f"Maximum Profit: {max\_profit}")  
  
if \_\_name\_\_ == "\_\_main\_\_":  
    main()

OUTPUT:

Enter the number of jobs: 5  
Enter job ID 1: 1  
Enter profit for job 1: 100  
Enter deadline for job 1: 2  
Enter job ID 2: 2  
Enter profit for job 2: 19  
Enter deadline for job 2: 1  
Enter job ID 3: 3  
Enter profit for job 3: 27  
Enter deadline for job 3: 2  
Enter job ID 4: 4  
Enter profit for job 4: 25  
Enter deadline for job 4: 1  
Enter job ID 5: 5  
Enter profit for job 5: 15  
Enter deadline for job 5: 3

Scheduled Jobs:  
Job 1 is scheduled at time 2  
Job 3 is scheduled at time 1  
Job 5 is scheduled at time 3  
Maximum Profit: 142