

23UAI313

```
#include <iostream>
```

```
using namespace std;
```

```
struct job
```

```
{
```

```
    char id;
```

```
    int profit;
```

```
    int deadline;
```

```
};
```

```
void sort(job arr[], int n)
```

```
{
```

```
    for (int i = 0; i < n - 1; i++)
```

```
    {
```

```
        for (int j = 0; j < n - 1 - i; j++)
```

```
        {
```

```
            if (arr[j].profit < arr[j + 1].profit)
```

```
            {
```

```
                swap(arr[j], arr[j + 1]);
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

```
int jobseq(job arr[], int n, int maxdeadline)
```

```
{
```

```
    sort(arr, n);
```

```
    bool timeslot[maxdeadline] = {0};
```

```
    int max_profit = 0;
```

```

for (int i = 0; i < n; i++)
{
    int d = min(maxdeadline, arr[i].deadline);
    for (int j = d - 1; j >= 0; j--)
    {
        if (timeslot[j] == 0)
        {
            timeslot[j] = 1;
            cout << arr[i].id << " ";
            max_profit = max_profit + arr[i].profit;
            break;
        }
    }
}
return max_profit;
}

int main()
{
    int n;
    cout << "enter the no of job" << endl;
    cin >> n;
    int maxdeadline;
    cout << "enter the max deadline" << endl;
    cin >> maxdeadline;
    job arr[n];
    for (int i = 0; i < n; i++)
    {
        cout << "enter the id, profit and deadline " << i + 1 << ":" << endl;
        cin >> arr[i].id >> arr[i].profit >> arr[i].deadline;
    }
    int maxprofit = jobseq(arr, n, maxdeadline);

```

```
cout << "The maximum profit that can be obtained is: " << maxprofit << endl;  
}
```