

Greedy Search – job scheduling problem

```
greedyjob.py > ...
1  def printJobScheduling(arr, t):
2
3  Click to add a breakpoint
4      # Sort all jobs according to decreasing order of profit
5      for i in range(n):
6          for j in range(n - 1 - i):
7              if arr[j][2] < arr[j + 1][2]:
8                  arr[j], arr[j + 1] = arr[j + 1], arr[j]
9
10     # To keep track of free time slots
11     result = [False] * t
12
13     # To store result (Sequence of jobs)
14     job = ['-1'] * t
15
16     # Iterate through all given jobs
17     for i in range(len(arr)):
18         # Find a free slot for this job (Note that we start from the last possible slot)
19         for j in range(min(t - 1, arr[i][1] - 1), -1, -1):
20
21             # Free slot found
22             if result[j] is False:
23                 result[j] = True
24                 job[j] = arr[i][0]
25                 break
26
27     print(job)
28
29 # Driver's Code
30 if __name__ == '__main__':
31     arr = [['a', 2, 100], # Job Array
32            ['b', 1, 19],
33            ['c', 2, 27],
34            ['d', 1, 25],
35            ['e', 3, 15]]
36
37     print("Following is maximum profit sequence of jobs")
38
39     # Function Call
40     printJobScheduling(arr, 3)
41
```

Output:

```
PS C:\Users\abhib\Desktop\AI> & C:/Users/abhib/Desktop/ml_project/env/python.exe c:/Users/abhib/Desktop/AI/greedyjob.py
Following is maximum profit sequence of jobs
['c', 'a', 'e']
PS C:\Users\abhib\Desktop\AI>
```