

Homework 3C - Test 1 Part 1

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Abstract

Implementing a greedy criterion of sorting by weight over time in descending order for optimal job completion.

1 10 Jobs

J: 1 2 3 4 5 6 7 8 9 10

W: 6 7 5 7 8 2 11 9 13 11

T: 4 5 2 3 6 1 10 7 8 9

Both methods reach the same results.

Solution value: 2164

Solution sequence: 3 4 6 9 1 2 5 8 10 7

1.1 Exhaustive

Search Time: 80.724s

1.2 Greedy

Search time: 0.018s

2 12 Jobs

J: 1 2 3 4 5 6 7 8 9 10 11 12

W: 6 7 5 7 8 2 11 9 13 11 4 10

T: 4 5 2 3 6 1 10 7 8 9 4 7

Both methods reach the same results.

Solution value: 3000

Solution sequence: 3 4 6 9 1 12 2 5 8 10 7 11

2.1 Exhaustive

Search time: 14911.3s (4+ hours...)

2.2 Greedy

Search Time: 0.015s

3 15 Jobs

J: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

W: 6 7 5 7 8 2 11 9 13 11 4 10 11 12 13

T: 4 5 2 3 6 1 10 7 8 9 4 7 7 8 9

Both methods reach the same results.

Solution value: 5655

Solution sequence: 3 4 6 9 13 1 14 15 12 2 5 8 10 7 11

3.1 Exhaustive

Search time: Unable to complete

3.2 Greedy

Search time: 0.014s