

# Lab Exercise Part 1 e 2??

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## 1 Introduction

...

## 2 Technical Approach

### 2.1 Instancing

... Class 1 - Random

Class 2 - Domain specific random How...

### 2.2 part2

Used tabu search or genetic or various.... Used from moodle?? Added: clever initial solution, intensification, diversification, 3 opt instead of 2 opt, alternating ...

## 3 Results

Tested 3,4,5 instance for each n and ...

| <i>n</i> | <b>class1</b> | <b>class2</b> |
|----------|---------------|---------------|
| 5        | 0.15          |               |
| 10       | 0.25          |               |
| 20       |               |               |
| 30       |               |               |
| 50       |               |               |
| 70       |               |               |
| 100      |               |               |
| 150      |               |               |
| 200      |               |               |

Table 1: Average Time

Assuming a max time as 20 seconds.... we can solve for up to ?? nodes.

Class 1 vs Class 2 ...

Tested 3,4,5 instance for each n and ...

| $n$ | <b>class1</b> | <b>class2</b> |
|-----|---------------|---------------|
| 5   | 0.15          |               |
| 10  | 0.25          |               |
| 20  |               |               |
| 30  |               |               |
| 50  |               |               |
| 70  |               |               |
| 100 |               |               |
| 150 |               |               |
| 200 |               |               |

Table 2: Average Time

| $n$ | <b>sol</b> | <b>optimal</b> | <b>cplex heuristic</b> |
|-----|------------|----------------|------------------------|
| 5   | 40         | 30             | N/A                    |
| 10  | 100        | 90             | N/A                    |
| 20  |            |                | N/A                    |
| 30  |            |                | N/A                    |
| 50  |            |                |                        |
| 70  |            |                |                        |
| 100 |            |                |                        |
| 150 |            |                |                        |
| 200 |            |                |                        |

Table 3: Solution

Assuming a max time as 20 seconds.... we can solve for up to ?? nodes.  
Class 1 vs Class 2 ...  
std. deviation of ...

## 4 Conclusions