



Final project - Travelling Salesman Problem

Fanoarii BOYER - Jérémy BEAUGEARD - Arthur GUERINEAU - Adrien LE SAUX

CIR3 - Graph Theory - Leandro MONTERO

30 April 2020

Contents

1	Real-life situations	3
2	Exact algorithm	4
2.1	Pseudo-code	4
2.2	Time complexity	4
2.3	Optimal Solution	4
2.4	Execution time and performance	4
3	Constructive heuristic	5
3.1	Pseudo-code	5
3.2	Time complexity	5
3.3	Optimal Solution	5
3.4	Execution time and performance	5
4	Local search heuristic	6
4.1	Pseudo-code	6
4.2	Time complexity	6
4.3	Optimal Solution	6
4.4	Execution time and performance	6
5	GRASP meta-heuristic	7
5.1	Pseudo-code	7
5.2	Time complexity	7
5.3	Optimal Solution	7
5.4	Execution time and performance	7

Chapter 1

Real-life situations

Chapter 2

Exact algorithm

2.1 Pseudo-code

```
Data: this text
Result: how to write algorithm with LATEX2ε
while not at end of this document do
    read current;
    if understand then
        go to next section;
        current section becomes this one;
    else
        go back to the beginning of current section;
    end
end
```

2.2 Time complexity

2.3 Optimal Solution

2.4 Execution time and performance

Chapter 3

Constructive heuristic

3.1 Pseudo-code

3.2 Time complexity

3.3 Optimal Solution

3.4 Execution time and performance

Chapter 4

Local search heuristic

4.1 Pseudo-code

4.2 Time complexity

4.3 Optimal Solution

4.4 Execution time and performance

Chapter 5

GRASP meta-heuristic

5.1 Pseudo-code

5.2 Time complexity

5.3 Optimal Solution

5.4 Execution time and performance

Bibliography