

Final project - Travelling Salesman Problem

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

CIR3 - Graph Theory - Leandro MONTERO

30 April 2020

Contents

1	Introduction	3
2	Real-life situations	4
3	Exact algorithm	5
	3.1 Pseudo-code	5
	3.2 Time complexity	5
	3.3 Optimal Solution	
	3.4 Execution time and performance	
4	Constructive 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	Local search heuristic	7
	5.1 Pseudo-code	7
	5.2 Time complexity	7
	5.3 Optimal Solution	7
	5.4 Execution time and performance	7
6	GRASP meta-heuristic	8
	6.1 Pseudo-code	8
	6.2 Time complexity	8
	6.3 Optimal Solution	
	6.4 Execution time and performance	
7	Conclusion	9

Introduction

Real-life situations

Exact algorithm

3.1 Pseudo-code

```
Data: this text

Result: how to write algorithm with LATEX2e

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
```

- 3.2 Time complexity
- 3.3 Optimal Solution
- 3.4 Execution time and performance

Constructive heuristic

- 4.1 Pseudo-code
- 4.2 Time complexity
- 4.3 Optimal Solution
- 4.4 Execution time and performance

Local search heuristic

- 5.1 Pseudo-code
- 5.2 Time complexity
- 5.3 Optimal Solution
- 5.4 Execution time and performance

GRASP meta-heuristic

- 6.1 Pseudo-code
- 6.2 Time complexity
- 6.3 Optimal Solution
- 6.4 Execution time and performance

Conclusion

Bibliography