

**Master Programme**

**Heuristic Optimization Methods**

REPORT - Lab1  **Fantasy football draft problem**

**Name and surname**

**Ac. year 2023/2024**

**Contents**

1 Summary of best-found results 3

2 Greedy algorithm 4

2.1 Pseudocode 4

2.2 Description 4

2.3 Analysis 4

3 GRASP 4

3.1 Pseudocode 4

3.2 Description 4

3.3 Analysis 4

# Summary of best-found results

**Instance 1**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Score | First team lineup | Substitutions |
| Greedy algorithm |  |  |  |
| GRASP |  |  |  |

**Instance 2**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Score | First team lineup | Substitutions |
| Greedy algorithm |  |  |  |
| GRASP |  |  |  |

Programming language: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Greedy algorithm

## Pseudocode

## Description

* *Clarify the greedy selection heuristic. How are elements selected when adding them to the solution?*

## Analysis

* *If you tried different greedy criteria, comment and compare results.*
* *How could the greedy algorithm potentially be improved?*

# GRASP

## Pseudocode

## Description

* *Explain both the constructive and local search phases.*
* *How is the RCL obtained?*
* *During local search, how are neighboring solutions generated?*
* *Can you comment on neighborhood size? What is the complexity of your algorithm?*

## Analysis

* *Was there any benefit from using an RCL containing multiple solution elements, as opposed to simply using your original greedy algorithm followed by local search?*
* *Was there any impact of RCL size on solution quality? If yes, quantify or plot these values.*
* *How many iterations of the local search algorithm were needed to reach a local (or potentially global) optimum?*
* *Do you have any ideas for different neighborhoods that you could use?*
* *How do you expect your algorithm would perform for much larger instance sizes?*