# ITK 279 Algorithms and Data Structures

# **Bonus 1**

Matheus Sampaio

**Sprint 2016** 

## **Important Information**

**ULID:** msanto2

**Student Name:** Matheus Sampaio

**Secret Directory:** matheussampaioBonus1

#### **Summary**

This assignment revises some important things about the dynamic programming. Where we should compute temporary solution to find the best result solution.

### **Output of the program**

```
$ ./a.out 10
Sequence length:10
9, 10, 10, 0, 4, 3, 2, 4, 1, 2
Longest increasing subsequence, length:3
0, 3, 4
$ ./a.out 30
Sequence length:30
12, 5, 20, 27, 9, 7, 17, 6, 1, 22, 4, 20, 22, 10, 5, 10, 13, 21, 9, 16, 1, 8, 25, 25, 14, ....
Longest increasing subsequence, length:8
1, 4, 5, 10, 13, 21, 25, 30
```