
Jupman

Release 0.1.0

Luca Bianco

Dec 16, 2019

Contents

1	General Info	1
1.1	Timetable and lecture rooms	1
1.2	Midterm	1
1.3	Slides	1
1.4	Teaching assistants	2
1.5	Course material	2
1.6	Acknowledgements	2
2		3
2.1	Index	3

CHAPTER 1

General Info

The contacts to reach me can be found [at this page](#)¹.

1.1 Timetable and lecture rooms

Lectures will take place on Mondays from 14:30 to 16:30 (in lecture room A107) and on Wednesdays from 11:30 to 13:30 (in lecture room A107). This second part of the Scientific Programming course will tentatively run from 06/11/2019 to 20/12/2019.

1.2 Midterm

The midterm of this part of the course will take place on Friday, December 20th, in A202 at 11:45. Please register for the midterm on [esse3](#).

1.3 Slides

The slides shown during the lectures will gradually appear below:

- Lecture 1-2: [Introduction to algorithms](#)
- Lecture 2-3: [Algorithms and complexity](#)
- Lecture 3-4: [Algorithms and complexity](#)
- Lecture 5-6: [Data Structures 1](#)
- Lecture 6-7: [Data Structures 2](#)
- Lecture 7-8: [Trees](#)

¹ <http://www.fmach.it/CRI/info-general/organizzazione/Biologia-computazionale/BIANCO-LUCA>

- Lecture 9-10: [Graphs](#)
- Lecture 11: [Dynamic Programming](#)
- Lecture 12: [Other paradigms](#)

1.4 Teaching assistants

[David Leoni](#)² (for Data Science)

[Massimiliano Luca](#)³ (for QCB)

1.5 Course material

Brad Miller and David Ranum. *Problem Solving with Algorithms and Data Structures using Python*. An interactive version is freely available at [this link](#)⁴.

Other material includes the following books:

- Lutz. *Learning Python* (5th edition). O'REILLY (2013)
- Hetland. *Python Algorithms: Mastering Basic Algorithms in the Python Language*. Apress, 2nd ed. (2014)

and (thanks to Prof. Alberto Montresor)

- Introduction to algorithms | [Link](#)
- Big-Oh Notation | [Link](#)
- Sorting | [Link](#)
- Dynamic Programming | [Link](#)
- Greedy Algorithms | [Link](#)
- String Algorithms | [Link](#)

1.5.1 Link to lab material

Material for QCB students can be found [here](#)⁵.

Material for Data Science students can be found [here](#)⁶.

1.6 Acknowledgements

I would like to thank Prof. Alberto Montresor for kindly allowing me to use his slides and Dr. David Leoni for all his help and for sharing Jupman with me. I would also like to thank Dr. Stefano Teso for allowing us to use some of his material of a previous course.

² <https://www5.unitn.it/People/it/Web/Persona/PER0014767#INFO>

³ <https://webapps.unitn.it/du/it/Persona/PER0178755/OrarioRicevimento>

⁴ <http://interactivepython.org/runestone/static/pythonds/index.html>

⁵ <https://massimilianoluca.github.io/algoritmi/index.html>

⁶ <https://datasciprolab.readthedocs.io/en/latest/>

CHAPTER 2

2.1 Index