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LABs Introduction

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LABs Goal

UNIVERSITY OF TRENTO - Italy
Information Engineering
and Computer Science Department

- Provide experience in the implementation of typical algorithms used in distributed systems.
- Gain experience with standard tools and frameworks for
  - distributed programming
  - modeling & analysis of distributed systems
- Hands-on daily used, popular, really useful libraries
- Have fun! ...that's why Python as main programming language :)

Schedule... WORK IN PROGRESS

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Date	Content	Notes
24th Sep	Labs presentation, Reliable Broadcast	
1st Oct	Intro to MESA	https://mesa.readthedocs.io/en/master
8th	MESA Exercise epidemic protocol	
15th		
22th	Complex networks analysis with NetworkX	https://networkx.org
29th	More tutorials on NetworkX	
5th Nov		
12th	Distributed Programming with RAY	https://ray.io
19th	More tutorials on Ray	
26th		
3rd Dec	Build a blockchain in Python!	
10th		

Good to know

- The final grade will be given 50% by the lab projects and 50% by a final (oral) examination.
- Labs website:

  https://lorebz.github.io/labsdistributedsystems2
- Course website:

  http://cricca.disi.unitn.it/montresor/teaching/ds2
- Meeting me... send me an email :)

  I do not live in Trento but can arrange a meeting somehow if necessary :)

My Python setup and tools

- I work on Ubuntu 20.04
- Python 3.7
  - Anaconda + pip
- PyCharm + SublimeText3
- Sometimes Jupyter Notebooks/Lab

You are free to use any other editor and work on other OSs... this sidenote is just to say that provided code has been tested only under this setup

Maybe useful installation notes

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- Install Anaconda

  https://docs.anaconda.com/anaconda/install/linux

- Anaconda with Python 3.7

  https://www.anaconda.com/blog/python-3-7-package-build-out-miniconda-release

- `sudo snap install pycharm-community --classic`

Questions?