

PYTHON FUNDAMENTALS

Joris Hoendervangers

Bootcamp

June 2024



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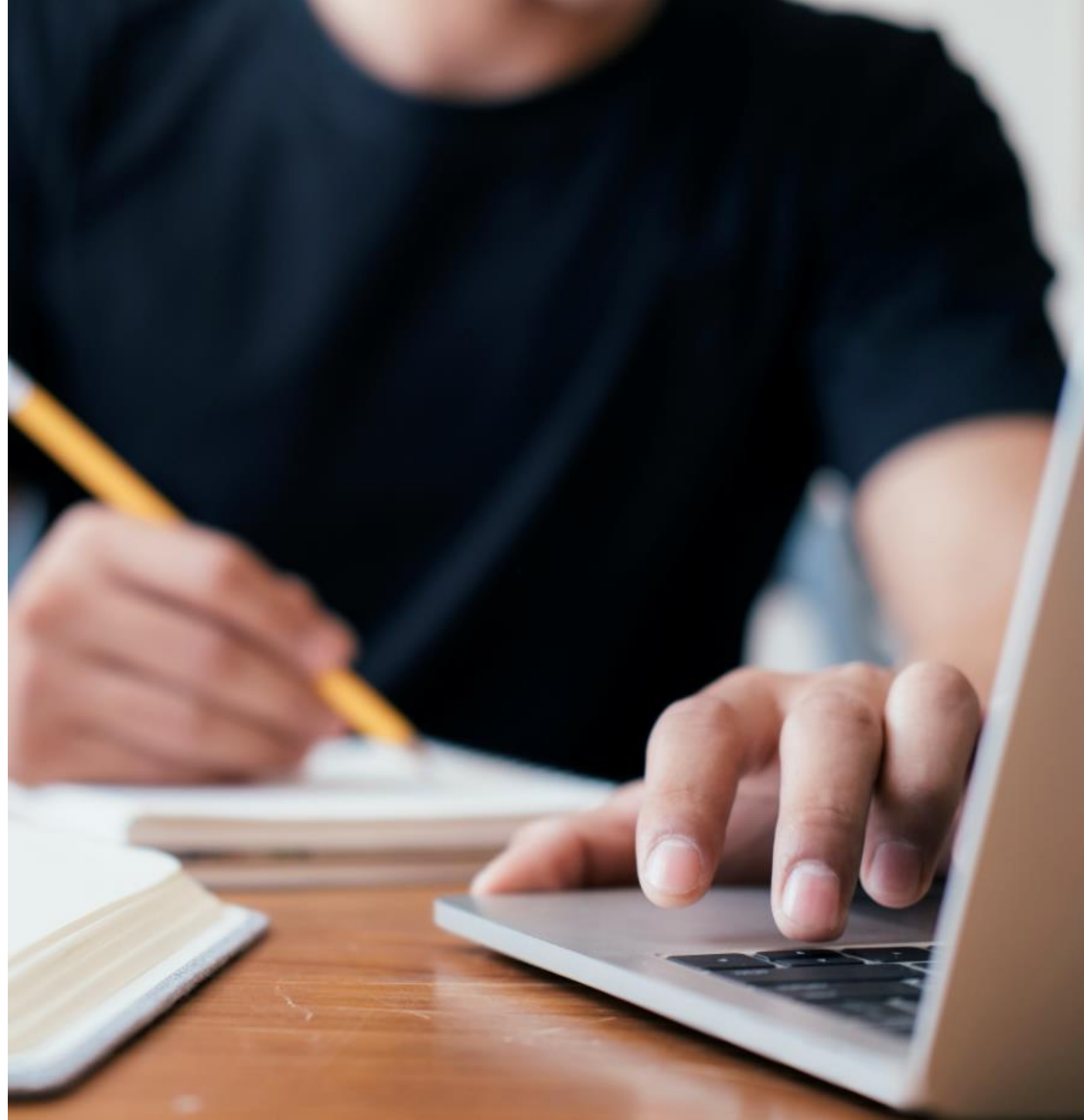
- 2018 - now: Python trainer / developer
- 2018 - 2019: Consultant at ING Bank
- 2015 - 2018: Thomson Reuters
- 2010 - 2014: Fixed Income Trading
- Degree: MSc Financial Management

ABOUT THE INSTRUCTOR

LEARNING OBJECTIVES

During this Bootcamp, you will learn:

- The fundamentals of the Python programming language
- About the software tools Anaconda and Jupyter Notebooks
- Basic programming skills:
 - Day 1: Variables & Datatypes
 - Day 2: Data Structures
 - Day 3: Flow control
 - Day 4: Functions













INTRODUCTION TO PYTHON

Background information:

- Started in 1991
- Created by Guido van Rossum
- Used for data science, web development, and automation
- Open Source
- Welcoming community



TIOBE INDEX

May 2024	May 2023	Change	Programming Language		Ratings	Change
1	1			Python	16.33%	+2.88%
2	2			C	9.98%	-3.37%
3	4	⬆️		C++	9.53%	-2.43%
4	3	⬇️		Java	8.69%	-3.53%
5	5			C#	6.49%	-0.94%
6	7	⬆️		JavaScript	3.01%	+0.57%
7	6	⬇️		Visual Basic	2.01%	-1.83%
8	12	⬆️		Go	1.60%	+0.61%
9	9			SQL	1.44%	-0.03%
10	19	⬆️		Fortran	1.24%	+0.46%



```
public class Main {  
    public static void main(String[] args) {  
        System.out.println("Goodbye, World!");  
    }  
}
```



```
print("Hello world!")
```

ANACONDA

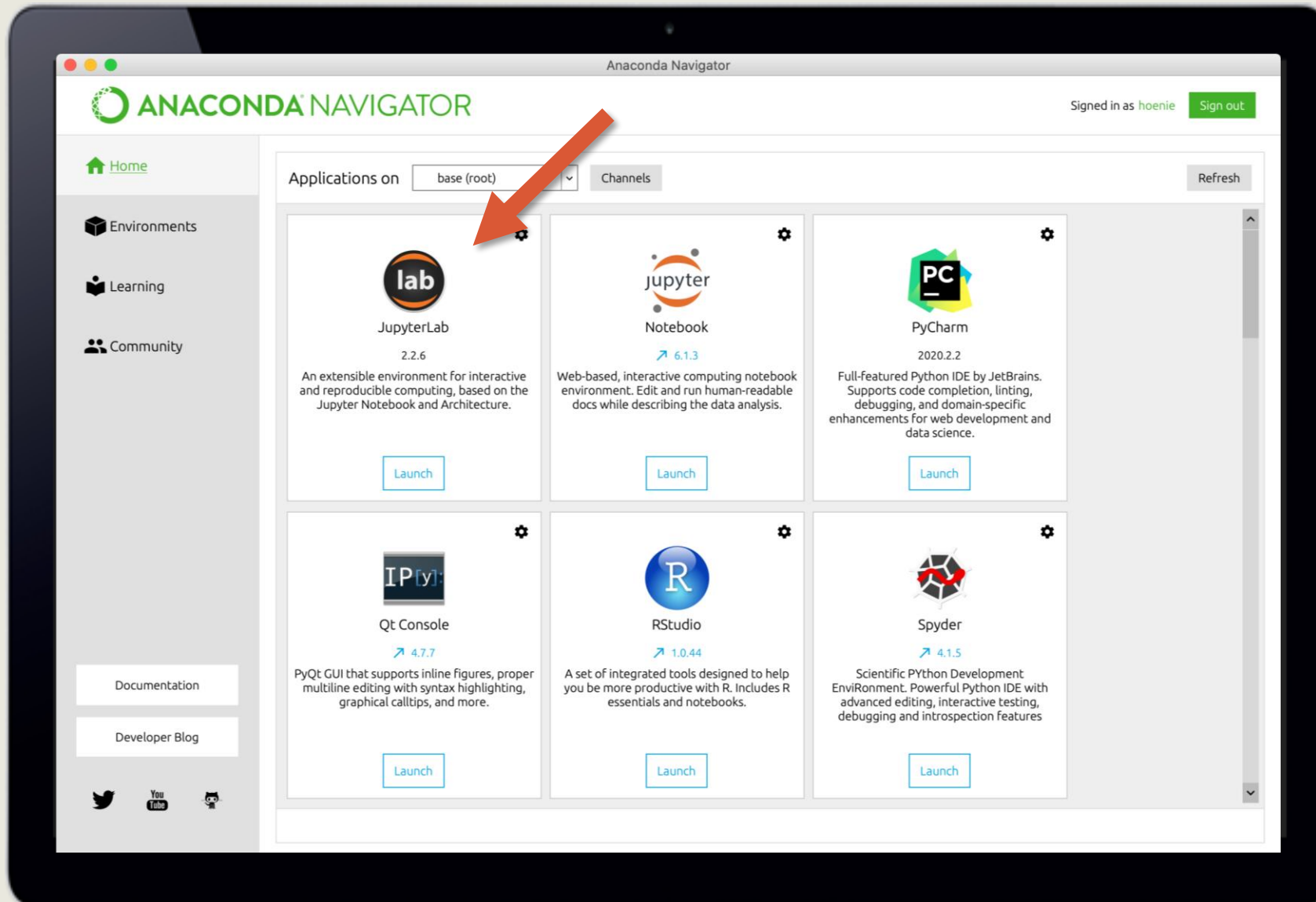
Python installation

“Anaconda is a free and open-source distribution of the Python and R programming languages for scientific computing, that aims to simplify package management and deployment. ”

Download at: <https://www.anaconda.com/download>



ANACONDA NAVIGATOR



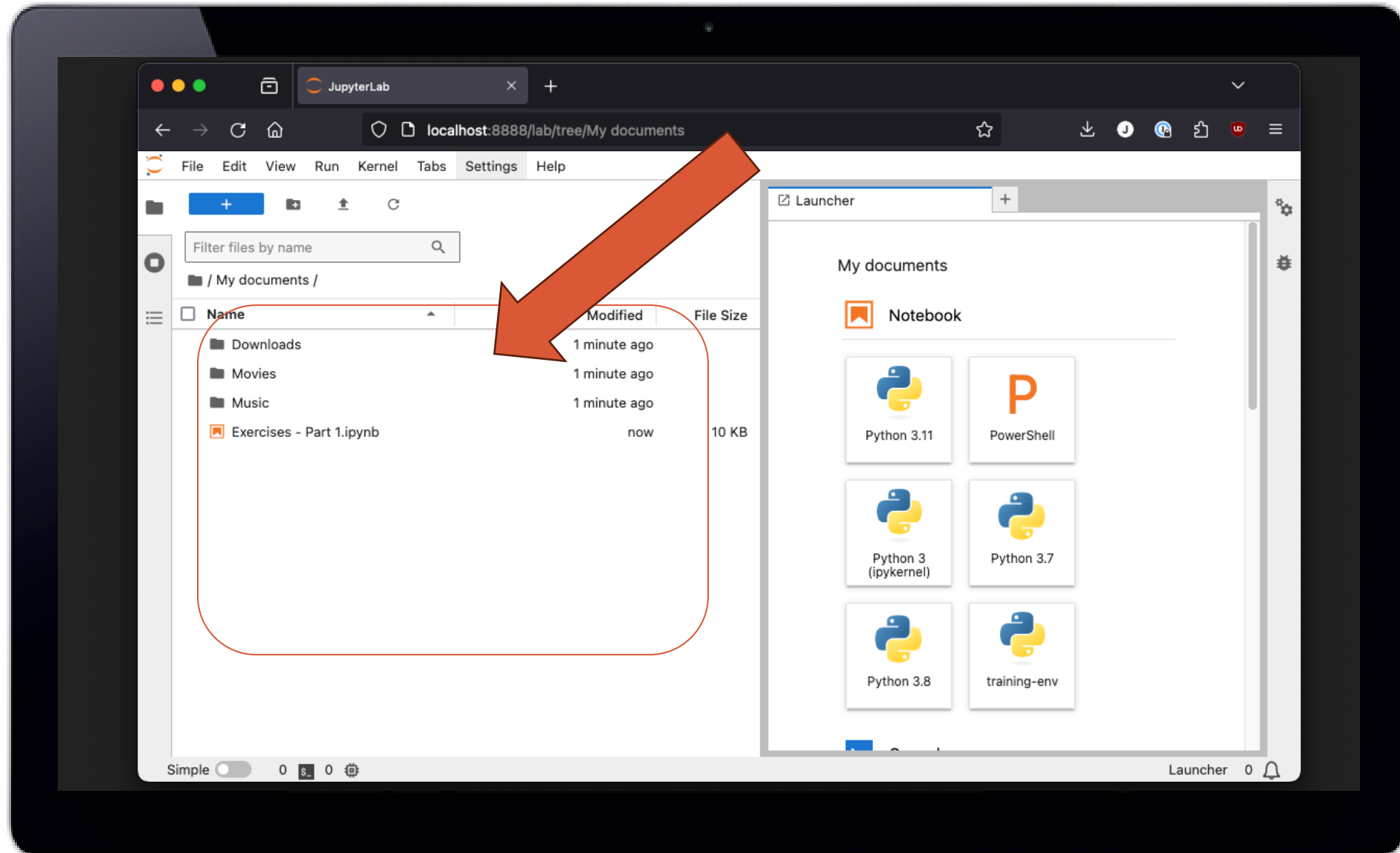
JUPYTER

Editor

“The Jupyter Lab is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text.”



ADDING FILES IN JUPYTER





LAB SESSION 1

Topics:

- Simple arithmetic operations
- Variables
- Keywords
- Comments
- Datatypes
- Print statements

LEARNING OBJECTIVES

During this Bootcamp, you will learn:

Day 1:

- ✓ Variables
- ✓ Datatypes (string, int, float, bool)

Day 2:

- Data structures (lists, tuple, dict, set)

Day 3:

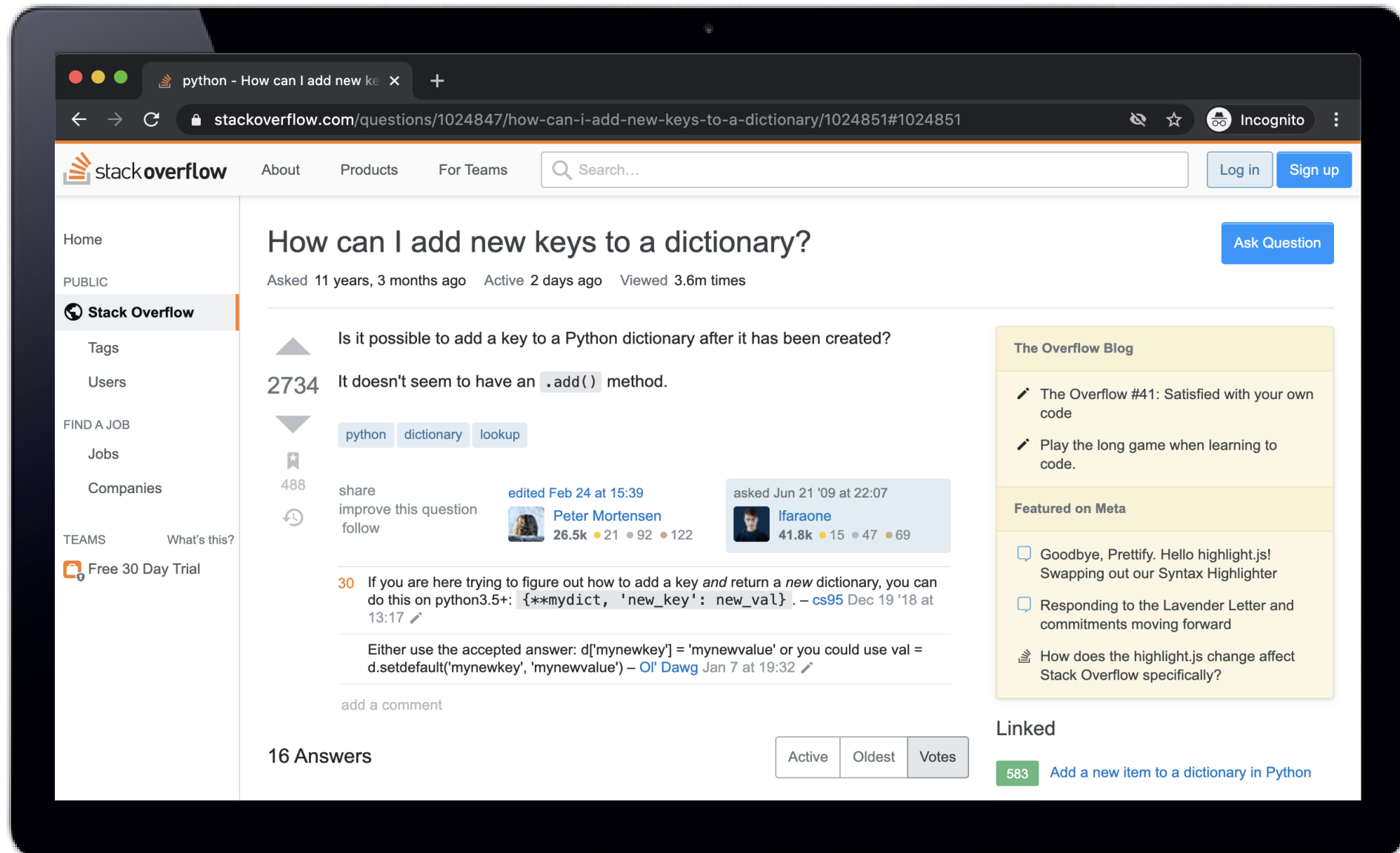
- Flow control
 - If / else statements
 - For loops

Day 4:

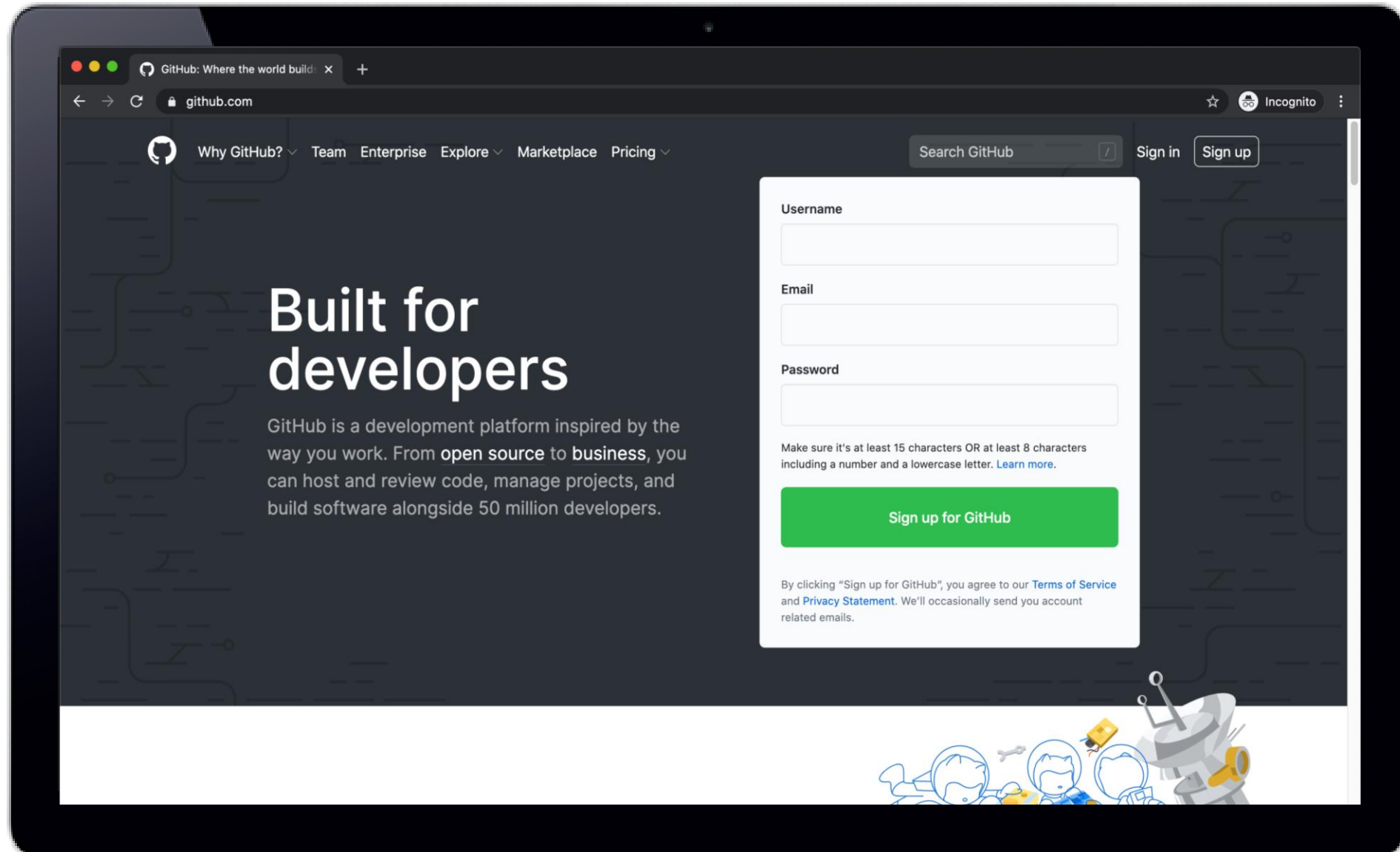
- Functions
 - User defined functions
 - Modules
 - Packages



STACKOVERFLOW



GITHUB



EXERCISES

Instructor video will appear here during live session. Delete this placeholder before presenting

- HackerRank <https://www.hackerrank.com/>
- LeetCode <https://leetcode.com>
- Codingame <https://www.codingame.com/>
- Exercism <https://exercism.io>

THE END

See you tomorrow!

