Network Security

General information about this course

Radboud University, The Netherlands

Spring 2019

About this course

- Lecture (hoorcollege): Monday, 10:30–12:30 in LIN4
- Exercise class (werkcollege): Friday, 13:30–15:30 in HG00.068
- Exam on Friday, June 21, 12:30–14:30 in HAL 2
- Exam grade is your final grade for this course
- 3 EC points
- Website: http://cryptojedi.org/peter/teaching/network-security-2019.shtml
- Language of the lectures: English

Teachers

Lecturers

Peter Schwabe
Office: Mercator I, 3.18
peter@cryptojedi.org

Daan Sprenkels
Office: Mercator I, 3.11b
hello@dsprenkels.com

Student assistants

Jos Craaijo

Alireza Vahdad

Homework

- Homework assignments will be online (at the latest) Friday morning
- Homework assignments are due Friday (one week later) by midnight (sharp!)
- Homework submission through Brightspace
- Homework submission in groups of 2
- Grading of homework in **insufficient**, **sufficient**, **good**, and **FAIL**
- Grading has no effect on final grade, but:

  More than one FAIL and you're not admitted to the exam!

Homework environment

- Programming courses need a computer (with compiler etc.)
- Network security course needs a network

Homework environment

- Programming courses need a computer (with compiler etc.)
- Network security course needs a network. . . that you can break

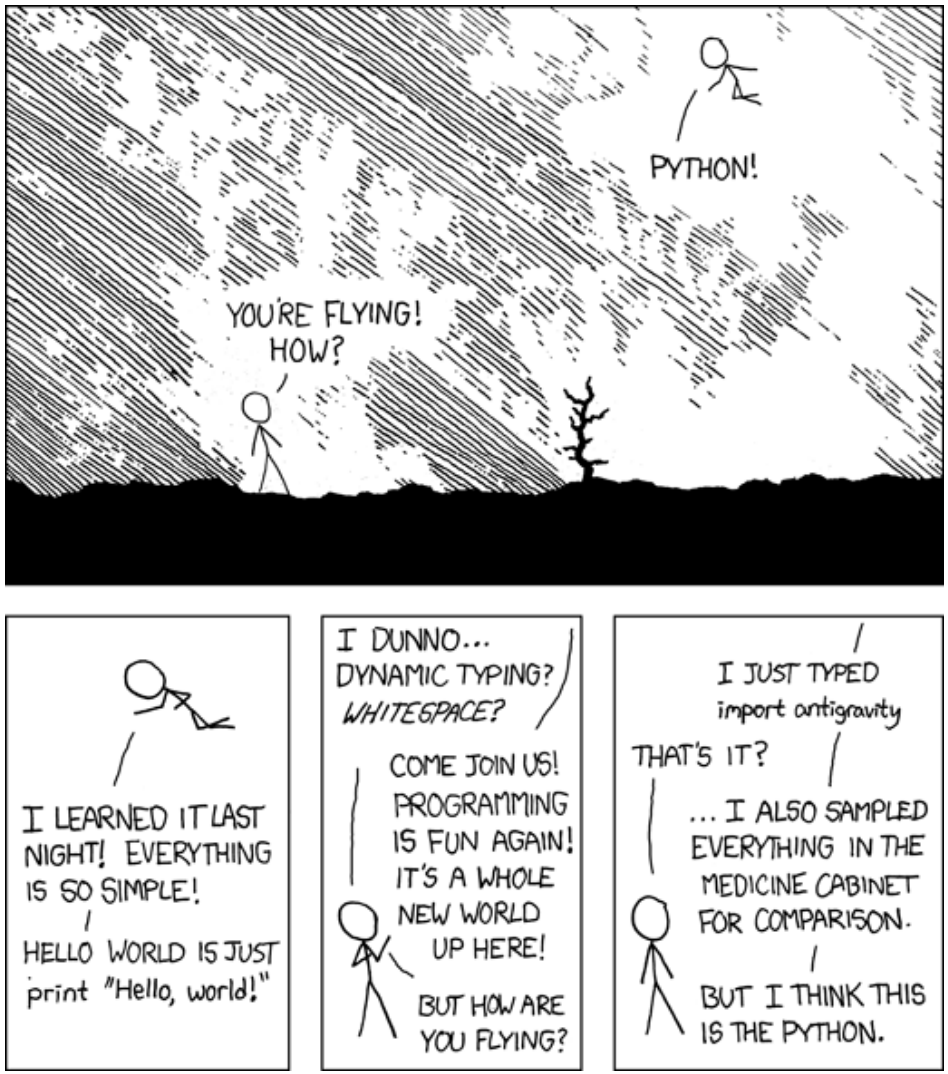
Homework environment

- Programming courses need a computer (with compiler etc.)
- Network security course needs a network. . . that you can break
- Breaking into a network typically needs a computer in this network with root rights
- Tools we use are Linux tools
- Idea: Use your own (Linux) laptop
- Alternative: Use Linux in a virtual machine

Homework environment

- Programming courses need a computer (with compiler etc.)
- Network security course needs a network. . . that you can break
- Breaking into a network typically needs a computer in this network with root rights
- Tools we use are Linux tools
- Idea: Use your own (Linux) laptop
- Alternative: Use Linux in a virtual machine
- Small wireless network set up in Mercator I (ground floor)
- Mercator I has restricted opening times: 8:00–18:00, Mon–Fri

Programming for homework



Source: http://xkcd.com/353

Python

- Network programming in Python
- Primary target is to get stuff done
- Python is a script language (interpreted language, no compiler)
- Python is easy
- Python has many things built-in
- You *can* use other languages (but we don't recommend it)

What is this course about?

Becoming Eve

Examples of what you will learn

- How to break into (badly protected) WiFi networks
- How to read others people's e-mails
- How to set up firewalls (and circumvent them)
- How to get free WiFi in various places
- How to DOS other computers
- How to be anonymous on the Internet

Disclaimer

- Many things taught in this course are illegal when you do it “in the wild”
- You’re grown up, use your skills responsibly
- If you want to try something out, get consent

Disclaimer

- Many things taught in this course are illegal when you do it “in the wild”
- You’re grown up, use your skills responsibly
- If you want to try something out, get consent
- In this course (homework), don’t break more stuff than necessary
- The (vulnerable) toy network is needed for everybody

Course schedule overview

Date	Lecture/Tutorial	Start	Deadline
Apr 8	Lecture		
Apr 12	Exercise class	Homework 1	
Apr 15	Lecture		
Apr 19	— (Good Friday)		
Apr 22	— (Easter Monday)		
Apr 26	Exercise class	Homework 2	Homework 1
Apr 29	— (May Vacation)		
May 3	— (May Vacation)		
May 6	Lecture		
May 10	Exercise class	Homework 3	Homework 2
May 13	Lecture		
May 17	Exercise class	Homework 4	Homework 3
May 20	Lecture		
May 24	Exercise class	Homework 5	Homework 4
May 27	Lecture		
Jun 3	Lecture		
Jun 7	Exercise class		Homework 5
Jun 21	Exam		
Jul 12	Resit		