

Introduction to Application Development in Python

Lecture 1

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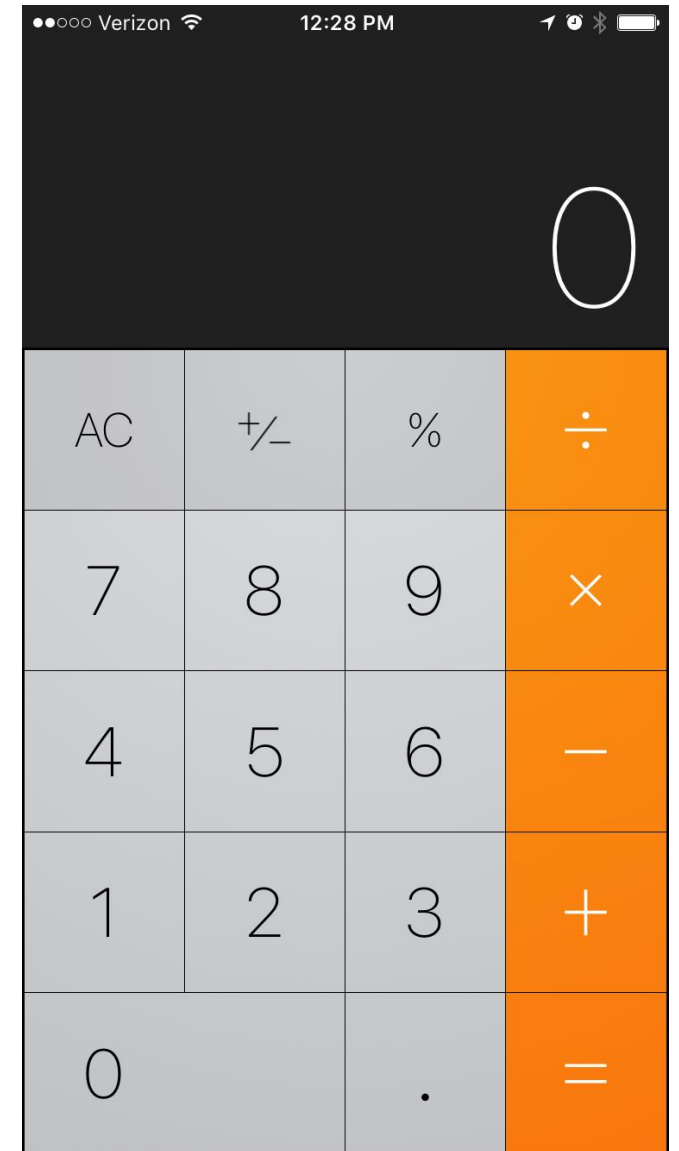
Course information and structure

- Course last for 5 weeks
- Course is 2 ECTS
 - i.e. 56 hours of work → 8 hours per week for 7 weeks
- First part: lecture and theory
- Second part: work on weekly assignment set
- All information can be found on the course website:
<https://github.com/hfcintergalactic/ApplicationDevelopmentInPython>

Content of the course

Develop a command line calculator application

- Programming in Python
- Problem solving
- Algorithmics
- Application development principles
- Testing
- Get familiar with software development toolings:
 - IDE
 - Debugger
 - Automated testing etc



What should you use

- Python 3
- Any IDE you like
 - We prefer PyCharm
 - Eclipse
 - Microsoft Visual Studio Code
 - QT Creator



Grading of the course

- 30% for progress
 - 13 out of 18 requirements (72%) belong to weekly homework
 - If you do your homework, your calculator is almost finished by the end
 - Homework **MUST** be finished **BEFORE** start of lecture
 - Homework schedule is on course webpage
- 70% for implementing all requirements
 - Calculator consists of 18 requirements
 - Each implemented requirement will give you 1/18 (5.56%)

Grading and Assessment

The final results of this course will be determined according to the following criteria.

- Weekly progress (0% - 100%): The programming tasks need to be evaluated by the teacher on a set basis. The final assessment of this criterium is as follows: $\text{Progress} = \text{Number of approved sets} / 5$
- Final assignment (0% - 100%): The final assignment should be submitted through AutoGradr. The assessment of the final assignment is automatic according to the criteria of the assignment. The deadline for the final assignment will be announced during the course. Each successfully implemented requirement accounts for 1/18 point. Thus, The final assessment of this criterium is as follows: $\text{Final assignment} = \text{Number of implemented requirements} / 18$

The final grade will be determined according to the following formula.

$$\text{Grade} = \text{Progress} * 3 + \text{Final assignment} * 7$$

$$\text{Grade} = \text{numberOfWeeks}/5 * 3 + \text{numberOfRequirements}/18 * 7$$

Example grade calculation:

Student has implemented all mandatory requirements and has shown weekly progress each time. So he has 5 out of 5 weeks, and implemented the 13 mandatory requirements out of the total of 19 requirements:

$$(5/5) * 3 + (13/18) * 7 = 8.1$$

Assignments both weekly and final are individual work. In case of plagiarism student(s) will be reported to the exam committee.

How to submit and Rules

- Homework **MUST** be tested with automatic test cases
- Homework **MUST** be **SHOWN IN PERSON**
- Cooperation is allowed, BUT
- Copying code or fraud is single ticket to exam committee!

Deadlines

- Final deadline week 7, Friday 23:59

Weekly schedule

Week number	Slides and contents	Recorded Lectures	Assignment Set	Deadline
Week 1	Lecture 1: Introduction, IDE, Debugger	Lecture 1	Set 1	Before start Lecture Week 2
	Lecture 2: Functions and Conditionals	Lecture 2	Set 2	Before start Lecture Week 2
Week 2	Lecture 3: Lists and String Operations	Lecture 3	Set 3	Before start Lecture Week 3
Week 3	Lecture 4: Loops (For and While)	Lecture 4	Set 4	Before start Lecture Week 4
Week 4	Lecture 5: Combination	Lecture 5	Set 5	Before start Lecture Week 5
Week 5,6,7	Implement all requirements for calculator		Implement all requirements for calculator	Week 7, Friday 23:59