

Beginner Python -- 初级Python

About this course 关于本课

This course is for young people (age 10 to 17) who wants to learn how to program using Python. No prerequisite is required. The course covers basic concepts of a computer system and fundamental concepts of Python programming language. The main goal of this course is to help students gain confidence in programming through reading, writing, running, and debugging simple programs written in Python version 3.

Words from Lecturer:

My name is Max Li (李海飞). I have taught college students for many years (17 to be exact). I also have industrial experiences for 6 years before coming to US for graduate studies. In addition, I have been a researcher at IBM Thomas J. Watson Research Center for 2 years. I got a doctoral degree from the University of Florida (2001), a master's degree from the University of Florida (1998) and a bachelor's degree from Xi'an Jiaotong University (1990). All my degrees are related to computer science and engineering.

VERY important requirement:

A windows 10 laptop is required for the course. Please bring the laptop to the classroom every time because every student needs to use his/her own computer for working with the code.

Course Overview

Week 1 to 4:

Week 1, basic computer concepts.

Practice:

Start Windows 10, open PowerShell, basic commands such as cd, mkdir, etc.

Install Python version 3

Install VS Code and extensions

Write the first python program, "Hello world"

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Week 2, Python Basic I:

1. Print command.
2. Variables.
3. Comments

Week3, Python Basic II:

1. IPO methodology: Input, Process, Output
2. Data types

Week 4, Python Basic III:

1. Boolean expressions
2. if else

Week 5 to 8:**week 5:**

1. For loop
2. While loop

Week 6:

1. Dictionary
2. import library

Week 7:

1. Read files
2. Write files

Week 8:

1. System argument
2. midterm Exam

Week 9 to 12:**Week 9:** Functions**Week 10:**

1. Define a couple of functions
2. Main function: `__main__`

Week 11: Recursive functions**Week 12:** String processing: initials from full name**Week 13 to Week 16:****Week 13:** Class project: how to calculate GPA (1)

Week 14: Class project: how to calculate GPA (2)

Week 15: Class project: how to calculate GPA (3)

Week 16: Class Review and final exam