

Programming with Python

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About me

- ▶ Got first computer in 1995 with Norton Commander (Used every windows version from Win 1995 - Win 11)
- ▶ Breaking that poor computer time to time - due the learning process
- ▶ Finished some programming courses
- ▶ Finished University of Derby, Bsc (Honors) Information Technology, UK
- ▶ 10+ years experience in IT
- ▶ Started from Customer Support -> was Head of QA
- ▶ Currently Software Developer in Test



Content

- ▶ **Course Summary**
- ▶ What is IT?
- ▶ Profession Overview

Course Summary

1. More PRACTICAL course rather than Theoretical
2. Python usage benefits – how to install – what can be done
3. GIT
4. Python Variables and methods
5. String Indexing, Slicing, Print format strings
6. Classes and interaction between them, modules, packages
7. Flow Control
8. Loops and Arrays
9. Lists, Dictionaries, Tuples
10. Decorators
11. Scrapy, BS
12. Python Turtle
13. Fun projects todo

School Programming main idea

► Programming 1 - 10-11 form -

1. Analyses specification
2. Plan what to program
3. Working with provided data and display it
4. How to test your code
5. How to implement code in project
6. And BLA BLA BLA

In short term - read specs and write code (good to have unit tests) - using programming language you have learned (using additional libraries)

School Programming main idea

- ▶ Programming 2 - 12 form - exam
- ▶ In short - implement the solution for the project by using ANY programming language and any libraries that it has to offer
- ▶ Read and write code documentation

Grades

- ▶ Grading minimum 6-7
- ▶ Some tests for iesk/neiesk
- ▶ 3 options of homework:
 - ▶ 1. BIG team project - like telegram bot fully working, game, webpage or fully working microservices, mobile app - it could be anything. Rules every 2 weeks presentation for each team on current project status and what has been done. Each time team presents - another person have to present team results
 - ▶ 2. Personal small projects - about 5 projects - like keyloggers, basic webpage, smaller mobile app, etc. Each month each will present his work
 - ▶ 3. Classy - Tests every month for the grade

Contact and materials

- ▶ Telegram group - ask questions - in the beginning materials
- ▶ Materials - GIT - Class exercises + Lecture pdfs
- ▶ For Private/Group projects we will use - Trello

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What is IT?



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- ▶ What is IT?
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Profession overview

- ▶ IT support - skills - analytical, soft skills
- ▶ DB admin - SQL and knowledge on Databases - banking/finance sector
- ▶ DevOps - Pipeline configuration - deployment.
- ▶ SysAdmin - Configuration of internal and external network
- ▶ QA - testers - test code manually
- ▶ Automation QA - develop and maintain test automatically
- ▶ QA, Dev Leads - lead the team of devs, QA
- ▶ Scrum Master/ Product Owner - manage process of the project
- ▶ UX/UI - design the product GUI
- ▶ IT managers and other managers - manage the whole departments
- ▶ Penetration testers/Security officers - aka Whitehat hackers - test security
- ▶ BA and Technical writers - document the product features and how they should work

Profession overview

- ▶ Software developers - develop and maintain product
 - division for 2 types Front and back
- ▶ Full stack - can work with both front end and back-end
- ▶ Game devs - write game code
- ▶ Animators/designer - manage animation for games



Certification for different professions

- AWS Certified Developer Associate
- AWS Certified Solutions Architect-Associate
- C and C++ Certifications
- Oracle Certified Associate Java Programmer OCAJP
- Certified Associate in Python Programming (PCAP)
- R Programming Certification
- CCA Spark and Hadoop Developer
- Oracle MySQL Database Administration Training and Certification (CMDDBA)
- CompTIA Security+
- MongoDB Certified Developer Associate Exam
- ETC.

Certification for Python

- ▶ Entry (PCEP)
- ▶ Associate (PCAP)
- ▶ Professional (PCPP)
- ▶ Exam 98-381: Introduction to Programming Using Python

Why you need this?

- ▶ To check own knowledge and understanding of language
- ▶ To look fancy on Linkedin and CV
- ▶ To earn for organization more money as your certified professional
- ▶ Gain salary raise

