Python ORM

Course Introduction

SoftUni Team

Technical Trainers

Software University

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sli.do

#python-db

SoftUni Diamond Partners

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Course Objective & Program

Course Objectives

- The **Python ORM** course provides

  - The fundamentals of Object-Relational Mapping (ORM)

  - In-depth knowledge of Django models, migrations, and the Django admin site for efficient database management

  - Expertise in performing queries and data operations within Django, including advanced query techniques

  - Knowledge of SQLAlchemy, another renowned ORM framework in the Python ecosystem

Course Topics

- ORM Introduction

- Django Models Basics

- Migrations and Django Admin

- Data Operations in Django with Queries

- Working with Queries in Django

- Django Models Relations

- Models Inheritance and Customization

Course Topics

- Advanced Django Model Techniques

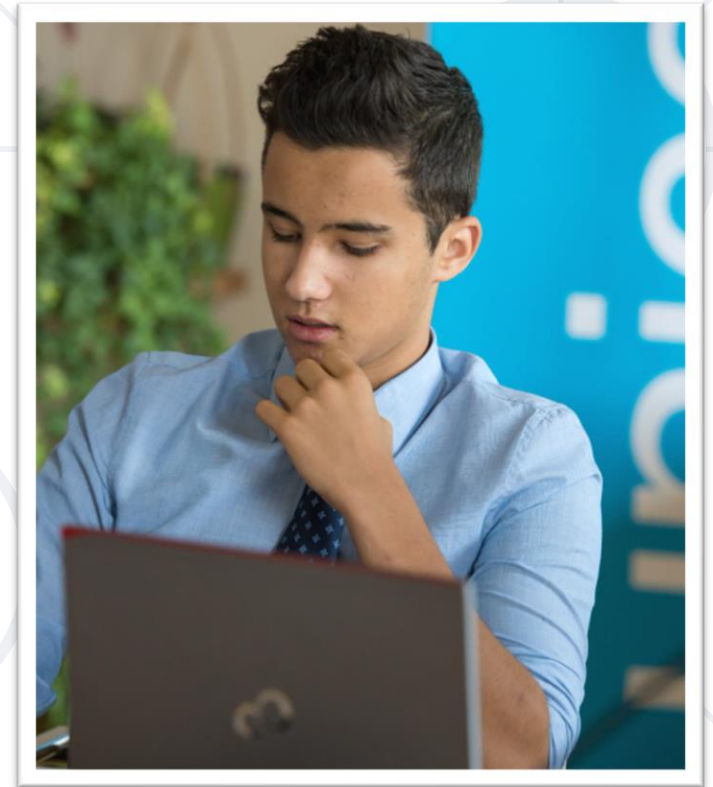- Advanced Queries in Django

- SQLAlchemy

The Trainers

Cvetan Tomov

- **10+ Years** of Experience in **Industrial Automation** and **Machine Vision**
- **SoftUni Alumnus**
- **Python**, **C#**, and others
- Successful Mutual Projects with **Daimler**, **BMW**, **Reichle** & **De-Massari**, **Brose**, **ZF. EOLE** and others

Diyan Kalaydzhiev

- Full-Stack Developer at **Devpunks**

- Fluent in **Python**, **Django**, **JS**, **HTML/CSS**, **React.js**, **Postgres**

- Lecturer at NBU with C++

- **Winner** at HackAUBG 6.0

- Interested in the AI development

Course Organization

Python ORM Course Timeline

17-Jun-2024

03-Aug-2024

09-Aug-2024

Python ORM

6 weeks * 4 times/week
15 credits

Start: 17-Jun-2024
Final exam: 03-Aug-2024
Theoretical Exam: 03-Aug-2024

Re-Take Exams

Final Exam Retake: 09-Aug-2024
Theoretical Exam Retake: 09-Aug-2024

Homework Assignments & Exercises

- Your homework is mainly work in class!
  - Lesson days → slides + live demos + exercises
  - Exercise days → only exercises

- How to submit your homework?
  - Submitted in the **judge system**

- Do your homework when it's due!
  - Assignments pile up quickly

Exam

- Section 0: **Skeleton**
  - You are given a ready-to-use skeleton
- Section 1: **Database**
  - Create models in the models.py file
- Section 2: **Customizing Django Admin Site**
  - Register the models and make the customizations
- Section 3: **Custom Model Manager**
- Section 4: **Django Queries**

SoftUni Certificate

Practical Exam 100%

Evaluation

Homework 5%

CPE Certificate

Practical Exam

Evaluation

Theoretical Exam

Resources

What We Need Additionally?

Course and FB Groups

- Official website:

  https://softuni.bg/trainings/4547/python-orm-june-2024

- Official Facebook group:

  https://www.facebook.com/groups/PythonDBMay2024

- Python Community Facebook group:

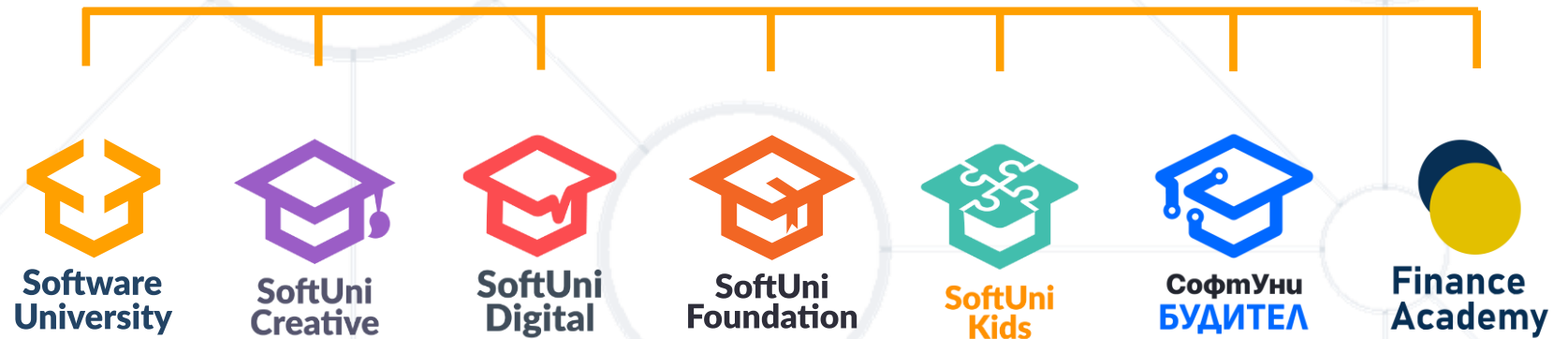 https://www.facebook.com/groups/SoftUniPythonCommunity

Python ORM Recommended Software

- Software needed for this course:

  - PyCharm Professional Edition

- Download the installation guidelines **here**

Learn to Search in Internet

- The course assignments require to search in Internet
    - This is an important part of the learning process
    - Some exercises intentionally have no hints

- Learn to find solutions!
    - Software development includes everyday searching and learning
    - No excuses, just learn to study!
    - Developers learn new technologies, tools, languages every day!

Questions?

Trainings @ Software University (SoftUni)

- Software University – High-Quality Education, Profession and Job for Software Developers

  - softuni.bg, softuni.org

- Software University Foundation

  - softuni.foundation

- Software University @ Facebook

  - facebook.com/SoftwareUniversity

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