COURSE SYLLABUS

Python Web Development with Django

Build Python web applications with Django and Django REST framework. Work with URL routing, models, APIs, authentication, and images.

> Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://training-nyc.com/courses/python-web-development-with-django



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Course Outline

Intro to Python

Introduction to Python

- Variables
- Numeric Data Types: Int & Float
- Sequential Types: Str & List
- If-Elif-Else Statements
- Creating Python Scripts/Files
- Definite loops: For loops
- Indexing
- Slicing

Advanced Data Types in Python

- Data Types: tuples
- Dictionaries
- Reading and Writing txt and csv files

Writing Iterative Code and Algorithms

- Indefinite loops: while loops
- Runtime complexity
- Searching and sorting algorithms
- Custom functions in Python
- Args and Kwargs
- Importing files

Object Oriented Programming with Python

Introduction to Object Oriented Programming

- Classes
- Methods
- Inheritance
- Abstract Classes

Working with APIs

- RESTful architecture
- Working with APIs
- Request library

Introduction to Developer Tools and SQL

- Assert statements
- Testing
- Git
- Intro to SQL
- CRUD

Introduction to Django

Introduction to Back-End Web Development using Django

- HTTP protocol
- MVC model
- Virtual environment
- Django structure
- Generic Views
- HTML templates
- URL dispatcher

Advanced Django for Web and Automation

- Custom Views
- GET and POST methods
- URL shortener
- User model
- Logic in templates
- Querying models
- Serving Staticfiles
- Deployment of Django
- Automating tasks with Django

Django REST

Building Web APIs using Django REST

- Generic Views in Django Rest
- Serializers
- JSON
- Building RESTful APIs

- Filtering Models
- Working with Images
- Authentication with tokens
- Postman
- Related models
- Contenttypes app

Deploying Web APIs

- Using API endpoints
- Deployment of Django REST project

Capstone Project and Career Support

Final Project and Presentation

- Concept presentation
- Approval by committee
- Working on the project
- Intermediate report to committee
- Finishing the project

Preparing to enter the job market

- Resume review and mock interviews
- Understanding the job market
- How to identify the right company for you
- Final presentation of working project