



Get Certified with Microsoft*
Exam 98-381 : Introduction to
Programming Using Python



Training: Web Development with Python + Django

Introduction to Python Programming

- Why do we need Python?
- Program structure in Python

Execution steps

- Interactive Shell
- Executable or script files.
- User Interface or IDE
- Introduction to Jupyter Editor

Data Types and Operations

- Numbers
- Strings
- List
- Tuple
- Dictionary
- Other Core Types

Statements and Syntax in Python

- Assignments, Expressions and prints
- If tests and Syntax Rules
- While and For Loops
- Iterations and Comprehensions

Functions in Python

- Function definition and call
- Function Scope
- Arguments
- Function Objects
- Anonymous Functions

File Operations

- Opening a file
- Using Files
- Other File tools

Connecting SQL Database

- Introduction of SQL Connectivity

- Using PYMYSQL Library
- Performing Select Query Operation on database
- Performing Data Modification Language Operation on Database

Classes & Objects

- Introduction to Classes & Objects
- Implementing Object Oriented Programming

Django Architecture

- Sites and apps
- Shared configuration
- Minimal Django layout
- Built-in flexibility

Configuring a Project

- Executing manage.py
- Starting the project
- Database setup
- The development server

Adding an Application

- Generate the application files
- Defining models
- Related objects
- SQL Migration
- App configuration
- Accessing models

Login for Nothing and Admin for free

- Setting up the admin user
- Running the admin site
- Changing the admin index page

Basic Views - Controllers

- What is a view
- HttpResponse
- URL route configuration
- Shortcut: `get_object_or_404()`

Basic Views - Templates

- About templates
- Django template syntax
- Static files
- Loading templates
- The url tag
- Shortcut: `template.render()`

Querying the Models

- QuerySets
- Field lookups
- Chaining filters
- Slicing QuerySets
- Related fields
- Q objects

Working with Templates

- Variable lookups
- Inheritance
- Filters
- Escaping HTML
- Custom filters

Forms

- Forms overview
- GET and POST
- The Form class
- Processing the form
- Widgets
- Validation
- Forms in templates
- Beyond the basics

Automated Testing

- Why create tests?
- When to create tests
- Using Django's test framework
- Using the test client
- Running tests
- Checking code coverage

Producing and Consuming Restful API