PY020 - *Web Development with Python and Django*

DURATION: 3 Days; Instructor-led

WHAT YOU WILL LEARN
Django is one of many web frameworks available; however, over the last decade, Django has distinguished itself as a leading framework for developing scalable, secure and maintainable web applications.

Django has its rough edges, but its pragmatic approach to getting stuff done is where it really stands out from the crowd. Django has plenty of supporters, and a few detractors.

This is the first course to guide you to develop a website using this framework.

AUDIENCE
This course is mostly for Python programmers with no experience with Django or web programming. It is also valuable for experienced programmers who want to learn Django while building a website.

PREREQUISITES
A basic understanding of Python language.

A basic understanding of HTML is also an advantage but unnecessary.

METHODOLOGY
This program will be conducted with interactive lectures, PowerPoint presentation, discussions and practical exercise

COURSE OUTLINES

Module 1 - Introduction
- The history of Web
- 3 Tier-Architecture
- Python and Django

Module 2 – Why use Django for Web Development?
- Leverage on the power of Python
- Built-in Admin
- Scalable
- Battle Tested
- Many supporting Packages
- Actively Developed
- Stable Releases
- First class Documentation

Module 3 – Django Overview
- The Big Picture—How Django is Structured
- Django Models
- Django Templates
- Django Views
- URLconf

Module 4 – Installing Python and Django
- Installing Python
- Installing a Python Virtual Environment
- Installing Django
- Starting a Project
- Creating a Database
- The Development Server

Module 5 – Your First Django Application
- Django Project Structure
- Django Applications
- Creating the Pages App
- Django App Structure
- Your First View
- Configuring the URLs

Module 6 – Creating the Page Model
- The Page Model
- Using the Admin Site

Module 7 – Django Templates
- Template Settings
- Site Template and Static Files
- Updating Your View
- Error Pages
- The Pages Template

Module 8 – Improving Your View and Adding Navigation
- Modify Page URLs
- Rewriting the View
- Improving the Templates
- Error 404

Module 9 – Creating the Contact Form
- Add URL to Pages App
- Add Navigation to Site Template
- Create the Contact Form Template
- Create the Contact Form View
- Emailing the Form Data

Module 10 – Building a More Complex Form
- Create the Quotes App
- Create the Quote Model
- Add Quote Model to the Django Admin
- Create the Quote Form
- Add the Quote View
- Create the Quote Form Template
- Link the Quote Form

Module 11 – Django's Generic Views
- Viewing Records with ListView
- Viewing a Single Record with DetailView
- Create the Detail View
- Add the URLconf

- Create the Detail View Template
- Add CSS to Format Detail View
- Modify Quote List Template

Module 12 – User Management
- Users in the Admin
- Users in the Front End
- Testing the Authentication System
- Restricting Users in the Front End

Module 13 – Deploying a Django Website
- Choosing a Host
- Preparing the Site for Deployment
- Deploy to PythonAnywhere

Module 14 – Next Steps
- Testing
- Documenting Your Code
- Connecting to Other Databases
- Django's "App Store"
- Online Django Resources
- Django Books