

Django

Course Syllabus

Django

- Introduction
- How the web work
- Setting up the development Environment
- Create Project
- Create App

Views

- Introduction to Django views
- http_response
- URLs
- Templates

Models

- Introduction to Models
- Building an E-commerce Data Model
- Creating Models
- CharField
- TextField
- BooleanField
- Null and default values
- DateField
- ChoiceField
- One-to-One Relationships
- One-to-Many Relationships
- Many-to-Many Relationships

Setting up the Database

- Supported Database Engines
- Creating Migrations
- Running Migrations
- Customizing Database Schema
- Reverting Migrations
- Installing MySQL
- Connecting to MySQL
- Using MySQL in Django
- Running Custom SQL

Templates

- Variables
- Template Tags
- If...Else
- For Loop

- Comment
- Cycle
- Extends
- Include
- Filter
- 404 Template

Django ORM

- Django ORM
- Resetting the Database
- Managers and QuerySets
- Retrieving Objects
- Creating Objects
- Updating Objects
- Deleting Objects
- Filtering Objects
- Complex lookup Using Q Objects
- Referencing Fields using F
- Sorting
- Limiting Results
- Selecting Fields to Query
- Deferring Fields
- Selecting Related Objects
- Aggregating Objects
- Annotating Objects
- Calling Database Functions
- Grouping Data
- Working with Expression Wrappers
- Custom Managers
- Understanding QuerySet Cache
- Executing Raw SQL Queries

Static Files

- Add CSS File
- Add JS File
- Add Image

User model

- Extending User Model
- Custom user Model
- Register user
- User Login
- User Logout
- Securing URLs

Basic Ecommerce Mini Project

Django RestFramework

RESTful APIs

- Introduction
- What are RESTful APIs
- Resources Representations
- HTTP Methods
- Installing Django Rest Framework
- Creating API Views
- Creating Serializers
- Serializing Custom Serializer Field
- Serializing Relationships
- Model Serializers
- Deserializing
- Data Validation
- Saving Objects
- Deleting Objects
- Building APIs (Products, Collections)

Advance API Concepts

- Class-based Views
- Mixins
- Generic Views
- Customizing Generic Views
- ViewSets
- Routers
- Building the Reviews API
- Nested Routers
- Filtering
- Generic Filtering
- Searching
- Sorting
- Pagination

Securing APIs

- Token-based Authentication
- Adding the Authentication Endpoints (djoser)
- Registering Users
- Building the Profile API
- Logging In
- Inspecting a JSON Web Token
- Refreshing Tokens
- Getting the Current User
- Applying Permissions
- Applying Custom Permissions
- Applying Model Permissions
- Applying Model Permissions

Building Full Ecommerce API Includes **Carts and Orders**