

Django with Python Course Content

Python Language Fundamentals

- Variables and Data types
- Strings & Formatting
- Lists, Tuples, Dictionaries & Sets
- Conditional Statements
- Functions
- Loops
- Modules & Packages
- Working with Files, JSON
- Classes & Objects

Setup Environment

- Installation & Setup
- Installing Python, Django on Windows
- Download and setup VSCode
- What is development server? How it runs in Django
- Documentation, Resources and Useful References

Django Core Concepts

- What is Django? Understanding Pre-requisites of learning Django
- What is Model View Template (MVT) in Django
- What are URLs & Views
- URL Patterns in Django
- Implementing URL's in Django
- Implementing Views
- Creating new Project setup in Django
- Understanding Templates & Template Inheritance
- Adding Static Files in Django
- Rendering Data to Templates
- Implementing Models and Fields
- Understanding Migrations in Django
- Create SuperUser
- Managing Data with Django Admin
- Django ORM with Shell
- How to Reset Django Admin Password
- Case Study 1 - Implement a basic django project

Django Intermediate Concepts

- Render HTML template as response
- How to pass data from Django View to template
- Using Django template for loop
- What is CSS, JavaScript and Images in Django? How to use them
- What is the If Else Statement in Django template?
- Header and Footer in Django HTML template (Fix Header and Footer)
- Understanding Tags in Django. How to use Extends and Include Django template tag
- What are URL Template Tags and how to use it
- Learn to highlight Link in Django
- What are HTTP Request Methods in Django (Get and Post)
- Understanding Django REST framework
- Implement Get Method Form
- Implement POST Method Form with CSRF token
- What is Redirect and How to redirect page in Django
- What is HTML Action URL in Django
- Manual Form Validation in Django
- 30. How to Create Model in Django
- Understanding CRUD functionality
- Learn to Get Data from Table in Django

Advanced Concepts

- Order a query in Ascending or Descending
- What are Limiting Query Results in Django
- Understanding Filter Work in Django
- Understanding Auto SlugField
- What is Pagination and how to implement it
- Save Form Data to Database
- Upload File with FileField in Django Model
- How to display uploaded image in template
- Sending Email in Django Project
- Case Study 2

Create API's with Django REST Framework on Heroku

- Preparing environment and creating the Project
- Setup Django REST Framework & creating first API Endpoint

- Consuming the API with Postman
- Creating the endpoint professions
- Creating the endpoint for datasheet & document
- How to override the method get_queryset
- Overriding the behavior of List method
- Override Retrieve Method
- Overriding the behavior of POST Method
- Overriding the behavior of PUT Method
- Overriding the behavior of PATCH Method for partial Update
- Overriding the behavior of DELETE Method
- Creating custom actions
- Querying & Searching on API
- Query Sting
- Filtering by address & query parameters
- Using DjangoFilterBackend
- Enabling Search on the Endpoint
- Ordering the Queryset
- Exploring the serializers classes
- Using properties to add extra information to serializer
- SerializerMethodField, StringRelatedFields
- PrimaryKeyRelatedFields
- Taking advantage of Nested Serializers
- Authentication & Authorization
- Enabling Token based authentication
- Enabling authorizations classes
- Register & Login Templates
- Logout & Navbar Auth Links
- Case Study 3