

# Django

## 1. Introduction to Front End

- HTML
- CSS
- Javascript
- Bootstrap

## 2. Django Introduction

- What is Python?
- What is Web Framework?
- What is MVC?

## 3. Installation / Setup

- Installing Python
- Install Django
- Database Setup
- Creating new Project
- Overview of generated files and folders
- Development Server

## 4. URLs & Views

- Creating first view & URL
- Dynamic Path Segments
- Captured Values
- Path Converters
- Redirects
- Reverse Function & Named URLs
- Dynamic View Logic

## 5. Templates & Static Files

- Adding & Registering Templates
- Rendering Templates
- Variable Interpolation
- URL Tag for Dynamic URLs
- Template Inheritance
- Partial Template Snippets
- 404 Templates
- Static Files
- Global Static Files

## 6. Data & Models

- Different kinds of Data
- Understanding SQL
- Django Models
- Django Model with fields
- Migrations
- Inserting Data
- Updating Models & Migrations
- Blank vs Null
- Deleting Data
- Create instead of Save
- Querying & Filtering Data
- Rendering Queried Data in the Template
- Model URLs
- Adding a Slugfield & Overwriting Save
- Using the Slug & Updating Field Options
- Aggregation & Ordering

## 7. Admin Interface

- Logging Data Into the Admin Panel
- Adding Models to the Admin Area
- Configuring Model Fields
- Configuring the Admin Settings

## 8. Relationships

- Understanding Relationship Types
- Adding a one-to-many Relation & Migrations
- Cross Model Queries
- Managing Relations in Admin
- One-to-one Python Code
- One-to-one & Admin Config
- Using many-to-many in Python
- Many-to-many in Admin
- Circular Relations & Lazy Relations

### 9. Forms

- Get & Post Requests
- CSRF Protection
- Handling Form Submission & Extracting Data
- Manual Form Validation & the Problems with "that"
- Using the Django Form Class
- Validation with Django Forms
- Customizing the Form Controls
- Storing Form Data in a Database
- Introducing & Configuring ModelForms
- Saving Data with a ModelForm

### 10. Class Views

- TemplateView
- Using the TemplateView
- The ListView
- DetailView
- FormView
- CreateView

### 11. File Uploads

- Making the File Upload Work
- Storing Uploaded Files Naive Approach
- Adding a Form with a Filefield
- Using Models for File Storage
- Using an Imagefield
- Serving Uploaded Files

### 12. Sessions, Users & Registration

- What are Sessions?
- Enabling & Configuring Sessions
- Storing Data in Sessions
- Which Kind of Data Should be Stored
- Using Session Data
- Safely Accessing Session Data
- Users and Authentication
- Using Users Logging In and Out
- Limiting Access to Logged-in Users
- Managing Users, Permissions and Groups
- Using Authentication Data in Templates

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