



# Web Development Using Django

## Introduction:

Django is a web application framework written in Python programming language. Django is an open-source python web framework used for rapid development, pragmatic, maintainable, clean design, and secures websites. A web application framework is a toolkit of all components need for application development. The main goal of the Django framework is to allow developers to focus on components of the application that are new instead of spending time on already developed components. It is fully featured than many other frameworks on the market. It takes care of a lot of hassle. involved in web development, enables users to focus on developing components needed for their application.

By using Django, we can build web applications in very less time. Django is designed in such a manner that it handles much of configure things automatically.

## Duration:

- 6 Days (or) 36 Hours.

## Content:

| <u>S.No</u> | Topics  | Duration |
|-------------|---|----------|
| 1           | Object-Oriented Programming(Classes,Objects)        | 1Hrs     |
| 2           | Constructors, inheritance                           | 1Hrs     |
| 3           | Python Packages and modules using oop's.            | 1Hrs     |
| 4           | Django Introduction                                 | 30M      |
| 5           | MVC, MVT,Architecture of Django                     | 30M      |
| 6           | Django Installation                                 | 15M      |
| 7           | Project Creation, APP creation and use of admin app | 45M      |
| 8           | URL mapping(creation),Dynamic URL mapping,views     | 3Hrs     |
| 9           | Interface between controller(urls.py &              | 1Hr      |



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|----|--|------|
|    | views.py) files  |      |
| 10 | Http Request and Responses.  | 1Hr  |
| 11 | Django Templates   | 1Hr  |
| 12 | Providing an interface between controller and templates                | 2Hrs |
| 13 | Static file handling   | 1Hrs |
| 14 | Data rendering from HTML to views and then views to HTML with example. | 2Hrs |
| 15 | Model creation   | 1Hr  |
| 16 | Migrations, ORM  | 1Hr  |
| 17 | Model Queries(Django shell)  | 2Hrs |
| 18 | Superuser Creation(admin part)   | 1Hr  |
| 19 | Roles of the superuser.  | 1Hr  |
| 20 | Curd operations, Messages generation                                   | 5Hrs |
| 21 | Form Validations   | 1Hr  |
| 22 | Database Connectivity and Database Migrations with MYSQL               | 1Hr  |
| 23 | Mail Sending   | 1Hr  |
| 24 | File Uploading.  | 1Hr  |
| 25 | User Registration and  | 1Hr  |
| 26 | User Authentication  | 1Hr  |
| 27 | Templates Blocks   | 1Hr  |
| 28 | User Profile Creation.   | 2Hrs |

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### Course Objectives:

The objective of this course is

- To impart knowledge on Web development using Frameworks(Django) to the students & Faculty of engineering colleges across the state of Andhra Pradesh.
- This course is for a candidate who wants to learn Django from scratch and work through a fully functional Project. This course is apt for those who have been working on Python and intend to move the expertise to the



web. Through the ORM framework candidate can achieve relatively complex functionality quite rapidly.

### **Entry Requirements (Pre-requisites):**

- Faculty&Students must have a basic Knowlege on Python Programming.

### **Eligibility :**

- All Faculty & Students who have Python Knowledge are eligible.

### **Hardware Requirements:**

- i3 or above Processor is required
- 4 GB or above RAM is recommended
- Good Internet Connectivity
- OS-Windows 10 is Preferable