TECH DRONA
DEBUG YOUR CAREER. DEPLOY YOUR DREAMS.

Coming soon · 2026

FULL-STACK DEVELOPMENT COURSE

Python Full Stack Development

Build and deploy database-backed web applications with Python, Django and REST APIs.



TECHNOLOGIES COVERED

Python · Django · Django REST Framework · MySQL · HTML · CSS · JavaScript · Git

54 hours	9	Labs + capstone
Duration	Modules	Projects

01 ABOUT THE COURSE

Course overview

A 54-hour course that takes learners from their first Python program to a deployed web application. Learners write clean, object-oriented Python, model data in MySQL, build web apps with Django and expose REST APIs with Django REST Framework. The front end uses HTML, CSS and JavaScript, so learners can build both sides of the application themselves.

DURATION
54 hours
Training hours, including guided labs

MODULES
9
Each module ends with hands-on practice

PROJECTS
Labs + capstone
Built, reviewed and demonstrated

LEVEL
Beginner friendly

What you will learn

Python programming
Core Python · OOP · Modules · Exceptions · Regex

Web front end
HTML5 · CSS · Flexbox · Grid · Bootstrap · JavaScript and fetch

Django and REST
Django ORM · Templates · Auth · DRF APIs · JWT

Data and delivery
MySQL · SQL joins · pytest · Git · Cloud deployment

02 WHO IT IS FOR

Goals & outcomes

Who it is for

Final-year students, fresh graduates and career switchers who want to become Python or Django developers.

Prerequisites

- ✓ Basic computer skills and logical thinking
- ✓ No prior programming experience is required

Learning objectives

- ✓ Write clean, tested Python using functions, OOP, modules and exceptions.
- ✓ Design a relational schema in MySQL and query it with SQL and the Django ORM.
- ✓ Build a Django web application with authentication, forms, templates and an admin panel.
- ✓ Create a secure REST API with Django REST Framework and call it from JavaScript.
- ✓ Deploy a working application to the cloud and manage the code with Git.

Key highlights

- ✓ No programming background needed; non-IT learners are welcome.
- ✓ A hands-on lab or mini project closes every module.
- ✓ The capstone is planned, built, deployed and reviewed like real project work.
- ✓ One course covers the back end, the database and the front end.

Expected outcomes

Build full-stack apps
Plan and build a Django application with a REST API and a JavaScript front end.

Work with data
Design MySQL schemas and write efficient queries through SQL and the ORM.

Ship to production
Configure, deploy and maintain an application in the cloud.

Interview ready
Explain your project's design and code from a deployed app and a GitHub repository.

SKILLS YOU BUILD

Python · OOP · Django · REST APIs · MySQL · JavaScript · Git · Deployment

03

NINE MODULES, ONE DEPLOYED CAPSTONE

Course curriculum

01 MODULE 1 — Python foundations

6 hrs

1.1 **Getting started**
Why Python · installing Python and VS Code · virtual environments · pip

1.2 **Core types and statements**
numbers · strings · lists · tuples · dictionaries · sets · if/elif/else · loops

1.3 **Functions**
arguments and return values · *args and **kwargs · scope (LEGB) · lambda · recursion

1.4 **Iteration tools**
comprehensions · map, zip and enumerate · generators and yield

02 MODULE 2 — Python in depth

7 hrs

2.1 **Object-oriented programming**
classes and instances · constructors · inheritance and composition · polymorphism · properties · class and static methods

2.2 **Special methods**
__str__ and __repr__ · operator overloading · __len__ and __getitem__ · dataclasses

2.3 **Modules and packages**
imports · __name__ == "__main__" · relative imports · the standard library

2.4 **Errors, files and patterns**
try/except/else/finally · custom exceptions · context managers · file and JSON handling · regular expressions

03 MODULE 3 — Web front end essentials

7 hrs

3.1 **HTML5**
document structure · semantic tags · forms and input types · accessibility basics

3.2 **CSS and responsive layout**
selectors and specificity · box model · flexbox · grid · media queries · Bootstrap components

3.3 **JavaScript essentials**
variables and types · functions and arrow functions · arrays and objects · ES6 features

3.4 **JavaScript in the browser**
DOM selection and events · form validation · promises and async/await · fetch and JSON · localStorage

04 MODULE 4 — Databases with MySQL

4 hrs

4.1 **Relational design**
tables and keys · constraints · normalisation

4.2 **SQL**
DDL, DML and DQL · joins · aggregate functions · transactions

4.3 **Python and MySQL**
connecting with a driver · CRUD from Python · parameterised queries

05 MODULE 5 — Django core

8 hrs

5.1 **Project setup**
web application architecture · projects and apps · settings · URL patterns with path and include

5.2 **Templates**
Django Template Language · variables, filters and tags · template inheritance · static files

5.3 **Models and the ORM**
fields and options · migrations · CRUD and bulk operations · one-to-one, one-to-many and many-to-many

05 MODULE 5 · CONTINUED
Django core

5.4 **Admin and views**
admin panel and superuser · function-based views · class-based generic views

06 MODULE 6
Django in practice
5 hrs

6.1 **Forms**
Django forms and model forms · validation and validators · CSRF protection

6.2 **Users and access**
authentication · login and logout · permissions · sessions

6.3 **Common features**
file and image uploads · sending email · pagination · search

07 MODULE 7
REST APIs with Django REST Framework
6 hrs

7.1 **REST and DRF basics**
REST principles · JSON · serializers · status codes

7.2 **Building APIs**
APIView and generics · mixins · viewsets and routers · filtering and pagination

7.3 **Securing APIs**
token and JWT authentication · permissions · throttling · OpenAPI docs

7.4 **Consuming the API**
calling the API from JavaScript · CORS · handling errors in the UI

08 MODULE 8 — Testing, Git and deployment

4 hrs

8.1	**Testing** pytest and Django tests · testing views and APIs	
8.2	**Git and GitHub** branches · pull requests · resolving merge conflicts	
8.3	**Going live** environment settings and secrets · Gunicorn · deploying to a cloud host · storing files on AWS S3	

09 MODULE 9 — Capstone project

7 hrs

9.1	**Plan the application** requirements · data model · API design	
9.2	**Build, test and deploy** Django app · REST API · JavaScript front end · deployment	
9.3	**Demo and code review** live demonstration · review feedback	PROJECT

Total duration · 54 hours

Training hours across nine modules, including guided labs and the capstone project.

04 LEARN BY BUILDING

Practical learning

Hands-on learning

- Python labs: a data-analysis script over CSV files and an object-oriented shopping cart with an invoice and GST calculation.
- A responsive landing page built with HTML, CSS and Bootstrap, then made interactive with JavaScript.
- A MySQL schema for an online store, queried directly and from Python.
- A Django content-management app: create, edit, search and publish articles.
- A REST API for that app with JWT authentication, consumed by a JavaScript front end.

Tools & technologies

Languages

Python · JavaScript · SQL · HTML · CSS

Frameworks

Django · Django REST Framework · Bootstrap

Data

MySQL · Django ORM

Workflow

VS Code · Git and GitHub · pytest · Postman · Gunicorn

Projects

Mini project · Online shopping system

Browse products, manage a cart and generate an itemised invoice with tax, first in Python, then backed by MySQL.

Mini project · Job portal

A Django app where employers post openings and job seekers build profiles, search and apply.

Capstone · choose one

A banking application, an e-commerce store or a course-registration portal, built with Django, DRF and MySQL and deployed online.

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One technology partner. From learning to building to scaling.

Software engineering, AI and cloud, practical training and internships, recruitment and technology procurement, from one accountable team in Vijayawada.

NEXT STEP

Coming soon: join the waitlist

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Vijayawada, Andhra Pradesh, India

MSME registered

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Course details, schedules and fees are confirmed on enquiry and may change.