

# INTRODUCTION TO DJANGO FRAMEWORK

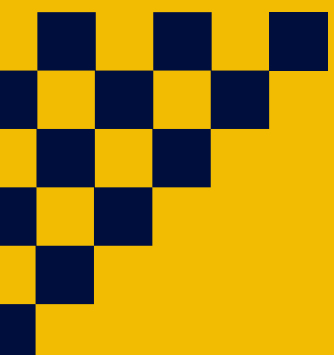


**Python web framework for fast, clean development. Follows DRY principle, minimizing code repetition. Open-source, maintained by Django Software Foundation.**

# Django Framework Overview

# Purpose

Django is a Python web framework for rapid development of secure and maintainable websites and web applications. with clean design and allowing developers to focus on creating unique and innovative web experiences. Django offers for building robust web applications



# Features

**MTV Architecture:** Model-Template-View pattern for organizing code.

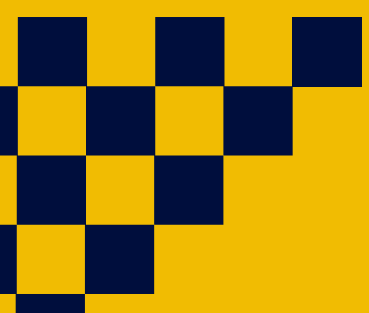
**ORM:** Object-Relational Mapping for interacting with databases using Python.

**Admin Interface:** Auto-generated admin panel for managing app data.

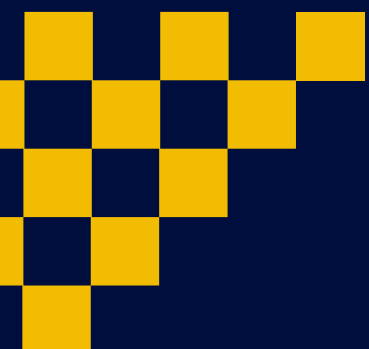
**URL Routing:** Maps URLs to views (Python functions handling requests).

**Template System:** Customizable templates for rendering dynamic content

**CSRF Protection:** Implementing CSRF tokens for defense against Cross-Site Request Forgery attacks.



# Getting Started with Django Installation



# Installation

You can install Django using pip, the Python package manager.

```
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```

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```
pip install django
```

## Create a Project

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```

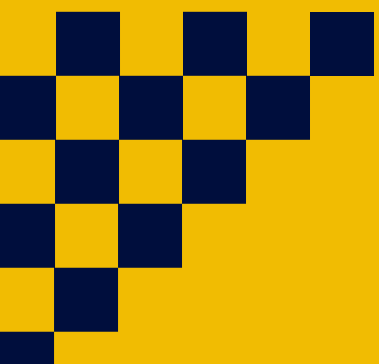
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```
python manage.py makemigrations  
python manage.py migrate
```

This will create a new directory called 'projectname' with the necessary files to start a Django project.



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# Create an App

A Django project is often composed of multiple smaller apps

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```
python manage.py startapp appname
```

This will create a new directory called 'appname' with files for app.

## Define Models

Models in 'models.py' define database structure and create database tables.

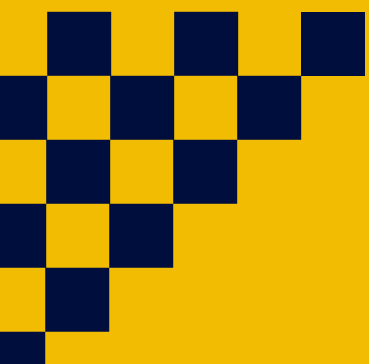
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python manage.py migrate
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# Create Views

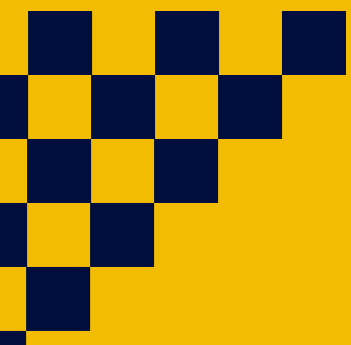
Views in 'views.py' handle requests and return responses.

# URL Routing

Map URLs to views in project's 'urls.py' and/or app's 'urls.py'

# Create Templates

Build HTML templates in app's 'templates' directory.



# Run Server

```
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```
python manage.py runserver
```

This will start a development server, and you can view your Django project in a web browser at <http://localhost:8000/>.

**Django's efficiency and DRY principle make it a popular choice for building robust web applications**



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