

Django vs Flask – Detailed Comparison with Commands

1. Core Philosophy

Aspect	Django	Flask
Definition	High-level full-stack framework	Lightweight micro-framework
Philosophy	Batteries included	Only core, add what you need
Best For	Large, data-driven applications	APIs & small projects

2. Installation & Project Creation

Task	Django	Flask
Install	<code>pip install django</code>	<code>pip install flask</code>
Create Project	<code>django-admin startproject mysite</code>	Manual file creation
Run Server	<code>python manage.py runserver</code>	<code>flask run</code>

3. Project Structure

Aspect	Django	Flask
Structure Type	Strict & predefined	Flexible
Main Files	<code>settings.py</code> , <code>urls.py</code> , <code>manage.py</code>	<code>app.py</code> / <code>main.py</code>
App Concept	Multiple apps	Single or blueprints

4. URL Routing & Views

Aspect	Django	Flask
Routing Syntax	<code>path('home/', views.home)</code>	<code>@app.route('/home')</code>
View Type	Function / Class-based	Function-based
Request Object	<code>HttpRequest</code>	<code>request</code>

5. Rendering HTML Pages

Task	Django Command	Flask Command
Render Template	<code>return render(request, 'index.html')</code>	<code>return render_template('index.html')</code>
Pass Data	<code>render(request, 'x.html', {'a': 1})</code>	<code>render_template('x.html', a=1)</code>

6. Template Engines

Aspect	Django	Flask
Engine	Django Template Language (DTL)	Jinja2
Syntax Example	<code>{{ variable }}</code> <code>{% for %}</code>	<code>{{ variable }}</code> <code>{% for %}</code>

7. Database & ORM

Aspect	Django	Flask
ORM	Built-in ORM	SQLAlchemy
Default DB	SQLite	None
Model File	models.py	models.py (manual)

8. Database Migrations

Task	Django	Flask
Create Migration	<code>python manage.py makemigrations</code>	<code>flask db migrate</code>
Apply Migration	<code>python manage.py migrate</code>	<code>flask db upgrade</code>

9. Forms & Validation

Aspect	Django	Flask
Form Handling	Django Forms	WTForms
Validation	Automatic	Manual

10. Authentication & Admin Panel

Aspect	Django	Flask
Auth System	Built-in	Extensions
Admin Panel	Automatic	Not available

11. Security Features

Aspect	Django	Flask
CSRF	Enabled by default	Needs Flask-WTF
Sessions	Built-in	Extension based

12. Keywords & Important Functions

Category	Django	Flask
Keywords	models, views, urls	route, request, jsonify
Functions	render(), redirect()	render_template(), url_for()

13. Learning Curve

Aspect	Django	Flask
Difficulty	Moderate	Easy
Time to Build App	More initial setup	Very fast