

What is Framework? What is the advantage of Using a Framework for Web Development.

A **framework** is a pre-written, reusable set of tools, libraries, and best practices designed to simplify the development process for specific types of applications, such as web development. It provides a structured environment for building software by handling common tasks like routing, database interactions, and UI rendering.

Advantages of Using a Framework for Web Development

1. **Faster Development:** Pre-built components and functionalities save time in coding repetitive tasks.
2. **Consistency:** Provides a standardized way of organizing and writing code, improving maintainability.
3. **Security:** Includes built-in features to prevent vulnerabilities like SQL injection or CSRF attacks.
4. **Scalability:** Designed to handle growing applications efficiently.
5. **Community Support:** Popular frameworks have large communities for support and resources.
6. **Ease of Maintenance:** Structured architecture makes it easier to update and debug code.
7. **Integration:** Often supports seamless integration with other tools, libraries, and APIs.

Explain the features of Django framework.

MVT Architecture: Separates business logic, user interface, and database management for cleaner code.

Built-in Admin Interface: Auto-generated dashboard to manage application data easily.

ORM (Object-Relational Mapping): Simplifies database operations without raw SQL.

Security: Protects against common threats like SQL injection, XSS, and CSRF.

Scalability: Handles both small and large-scale projects efficiently.

Rapid Development: Pre-built components speed up development.

URL Routing: Provides clean and human-readable URL mapping.

Template Engine: Allows dynamic content rendering with HTML.