

Learning Journal Task 2.3

Reflection Questions

- 1. Do some research on Django models. In your own words, write down how Django models work and what their benefits are.**

Django models are a fundamental part of Django's object-relational mapping (ORM) system, allowing developers to define the structure of their database schema entirely in Python. This approach provides a high-level, database-agnostic way to interact with the database.

How Django Models Work:

- Models are defined as Python classes in `models.py` within a Django app.
- Each model class represents a table in the database, and each attribute of the class represents a field in the table.
- Django provides various field types (e.g., `CharField`, `IntegerField`, `DateTimeField`) to define the type of data each attribute will store.

Migrations:

- After defining or updating models, you run `makemigrations` to create migration files that describe the changes.
- Then, run `migrate` to apply these changes to the database, ensuring the schema is updated accordingly.

Querying:

- Django models provide a rich query API that allows you to perform complex queries without writing raw SQL.
- You can create, retrieve, update, and delete objects using methods like `create()`, `filter()`, `get()`, `update()`, and `delete()`.

- 2. In your own words, explain why it is crucial to write test cases from the beginning of a project. You can take an example project to explain your answer.**

By writing test cases from the beginning, we ensure that each feature works correctly in isolation and integrates smoothly with other features. This approach minimizes the risk of major issues arising later in the development cycle, reducing the cost and effort required to fix them.

Writing test cases from the start of a project ensures code quality, facilitates refactoring, promotes better design, increases development speed, provides documentation, and builds confidence in the codebase.