Wexdi SoftSkills

Django Models and Database

Introduction to Django ORM

- Django ORM stands for *Object-Relational Mapping*.
- It is an abstraction layer that allows developers to interact with the database using Python code rather than raw SQL queries.
- With the ORM, you define models (Python classes), and Django automatically translates them into database tables.

Introduction to Django ORM

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Django ORM simplifies database queries with intuitive Python code. You can create, read, update, and delete records with simple commands.

- Create a new record:
  - blog = Blog.objects.create(title="Django ORM", content="Learning about Django ORM!")
- Retrieve a record:
  - blog = Blog.objects.get(id=1)
  - print(blog.title) # Output: Django ORM
- Update a record:
  - blog.title = "Updated Title"
  - blog.save()
- Delete a record:
  - blog.delete()

Defining models

- Models in Django are Python classes that represent database tables. Each attribute of the class corresponds to a column in the table. Django's ORM automatically translates these models into SQL queries.
- Here's an example of a Django model:

```
from django.db import models
class Blog(models.Model):
    title = models.CharField(max_length=100)
    content = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
```

- In this example, we define a Blog model that has three fields: title, content, and created_at.
- Django ORM will automatically generate the necessary SQL statements to create the corresponding table in the database.

Connecting Django to a database

- In setting.py

```
DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.mysql',
        'NAME': 'mydb',
        'USER': 'root',
        'PASSWORD': 'admin',
        'HOST':'localhost',
        'PORT':'3306',
    }
}
```

Performing migrations

Once your models are defined, you need to create a migration. Migrations are how Django tracks changes to your models and applies them to the database.

python manage.py makemigrations
python manage.py migrate

Django Admin panel

