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WEEK 4 DAY 4: 16/10/25 [THURSDAY]

TASK : Learn/use Flask-Migrate or write simple script to seed DB; migrations when schema changes

QUESTIONS/REFLECTIONS:

1. What is a migration? How it works: generating migration file → applying it →
    version control.
    Migration is wa to change and control the database, where
      You add new tables
      Rename columns
      Change data types
      Add constraints or indexes

    How it works:
    1. Generate Migration File:
    Ex, flask db migrate -m "Add email column to users"
    This command:
        •   Scans for schema changes
        •   Generates a migration file with SQL commands
    2. Apply migration:
        flask db upgrade
    3. Version control

2. How to seed data: why and how.
    Seeding means inserting initial or reference data.

    Why:
        To create **default records** (e.g., admin user, categories, roles)
        To have **test data** during development
        To **bootstrap configuration** for production
    How to run:
    Use the command, python seed.py to run the data.

3. If you need to add a new column to tasks table after app is in use, how do you do
    that safely?

        •   Update the task model.
        •   Generate migration: flask db migrate -m "Add priority column to tasks"
        •   Apply the changes: flask db upgrade
        •   Push and commit the changes
        •   Run the flask dp upgrade
        •   Restart the app
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