System Requirements

Specification Index

For

Dynamic Student List Rendering in Django

(Topic:- Django Templates)

Version 1.0

Problem Statement

Scenario:

You have joined an educational platform startup as a Django developer. The company wants to display a list of student names dynamically from the database.

The requirement is to fetch student names from the database and display them using a Django template.

The company wants:

- A Django model for storing student details.
- A view function that fetches student names from the database.
- A Django template to render student names dynamically.
- Proper unit tests to validate the implementation.

Your Task

1️⃣Define a Django model Student with:

- name → A unique student name (CharField, max length: 100).
- roll_number → Student roll number (IntegerField, unique=True).
- created_at → Auto-generated timestamp (DateTimeField).

2️⃣Implement a Function-Based View (FBV):

- Fetch student names from the database.
- Pass data to the template dynamically.

3️⃣Create a Django template to render student names.

Execution Steps to Follow:

1. All actions like build, compile, running application, running test cases will be through Command Terminal.
2. To open the command terminal the test takers, need to go to

   Application menu(Three horizontal lines at left top)->Terminal->NewTerminal.

3. The editor Auto Saves the code.
4. If you want to exit (logout) and to continue the coding later anytime(using Save & Exit option on Assessment LandingPage) then you need to use CTRL+Shift+B command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.
5. These are time bound assessments the timer would stop if you logout and while

   logging in back using the same credentials the timer would resume from the same time it was stopped
from the previous logout.

6. To test any Restful application, the last option on the left panel of IDE, you can find

   ThunderClient, which is the lightweight equivalent of POSTMAN.

7. To test any UI based application the second last option on the left panel of IDE, you can

   find Browser Preview, where you can launch the application.

8. Install ‘djangorestframework’ module before running the code. For this use the following command.

   ```
   pip install djangorestframework
   ```

9. Use the following command to run the server

   ```
   python3 manage.py runserver
   ```

10. Mandatory: Before final submission run the following commands to execute testcases

    ```
    python3 manage.py test library.test.test_functional
    python3 manage.py test library.test.test_exceptional
    python3 manage.py test library.test.test_boundary
    ```

11. To test rest end points

    Click on ‘Thunder Client’ or use Ctrl+Shift+R->Click on ‘New Request’ (at left side of IDE)

12. Once you are done with development and ready with submission, you may navigate to the previous tab and submit the workspace. It is mandatory to click on “Submit Assessment” after you are done with code.

13. You need to use CTRL+Shift+B - command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.