

Assignment Name: Layered Architecture Model of an online judge system.

Creating a layered Architecture model for an online judge system involves understanding its structure and components.

Steps to create Handwritten Diagram:

1. choose layers;

- presentation layer

- web or mobile interface

- Displays problem, user submissions and results.

- Application layer:

- Handles problem submission, solution evolution and user requests.

- Business logic layer:

- Core functionalities like compiling code, running test cases, and scoring.

- Data Analysis layer:

- Interacts with databases for user data, problem

sets and submission history.

2. Identity Components:

- Authentication and Authorization
- code submission and Execution queue
- compiler, test case management, scoring Algorithm.
- user profile Data, submission log.
- cloud platforms, sandboxes, Databases.

3. Draw the Diagram:

- use rectangular box or layers to represent each layer.
- Add arrows to indicate data flow between layers.
- label components with each layer.

4. Test case flow example:

- User submits code → Application queues the code → Business logic compiles and tests it → Result stored in the database → presentation display the results.