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Layered Architecture Model of an online

Judge System:

Creating a Layered Architecture model for an online Judge system involves understanding its structure and components. Here's how you can create and organise my handwritten drawing:

Step to create Handwritten Diagram:

1) Choose layer:

• Presentation layer:

→ web or mobile interface

↔ Displays problem, user submissions and results,

• Application layer:

→ Handles problem submission, solution evaluation and user requests.

- Business Logic Layer:

- Core functionalities like compiling code, running test cases, 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

3) Draw the Diagram:

- Use rectangular box or layers to represent each layer.

- 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 result.

