***Categorization of Methods***

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| --- | --- | --- |
| Method | Belongs To | Explanation(Hinglish) |
| Authenticate | Business Logic | Ye check karta hai ki user ka username/password sahi hai ya nahi – yeh ek rule hai, toh business logic mein aata hai. |
| Search | Data Access + Business Logic | Agar simple database se data nikalna hai, toh Data Access Logic. Agar koi filter, sorting, ya custom rule lage toh Business Logic bhi involved ho sakti hai. |
| Change Password | Business + Integration Logic | Password validate karna Business Logic; external service (like OTP API or email API) ko call karna Integration Logic. |
| Forgot Password | Business + Integration Logic | Token generate karna Business Logic; reset link email bhejna ya SMS API call karna Integration Logic. |
| Add (Create) | Data Access + Business Logic | Validate karna (jaise email unique hai ya nahi) business logic hai. Lekin record database mein insert karna Data Access Logic. |
| Update | Data Access + Business Logic | Same – validate/update rules business logic, actual DB update = Data Access Logic. |
| Delete | Data Access + Business Logic | Agar directly delete kar rahe ho, toh Data Access. Lekin agar soft delete ya kuch check lagana ho before delete (jaise "order already shipped, delete not allowed") – toh business logic bhi. |
| User Registration | Integration Logic | External API (like email verification service ya CRM system) ke saath integrate karna Registration ke dauraan hota hai.  S |

***Summary in Simple Hinglish***

* Rules check karna, validation lagana, decision lena = Business Logic
* Database se data lena, save karna, update/delete karna = Data Access Logic
* Often, real-world apps mein dono logic saath mein kaam karte hain, but their responsibilities clearly alag hoti hain.
* Agar chaho, main ek simple code structure bhi bana sakta hoon to show how they’re separated.

**Q.1:- kya leker aaye ho?**

**Ans:-** ORS Project

**Q2:- kaun sa version?**

**Ans:-** 4

**Q3:- kaun sa Architecture Use Kara Hai?**

**Ans:-**

MVC is Framework it is used to separate the code in three component like MODEL, VIEW, CONTROLLER

MVC > Model:=Model contain Business Logic, Data Access Logic, and Integration Logic.

>View:=View Contain Presentation Logic

>Controller:=Controller contain Control(Navigation) Logic.

**Q4:-what is Logics?**

**Ans:-**

**Presentation Logic:-** it is used to define the look of User Interface(JSP).

**Control Logic:-** it is used to decide the navigation of User Interface.

**Business Logic:-** it is used to perform the Business Operations like (Change passwords and forget password).

**Data Access Logic:-** it is used to Make Changes in DataBase like(CRUD).

**Integration Logic:-** it is used to integrate application with another application or server(Send E-Mail).

**Q5:-what is MVC Guidelines?**

**Ans:-**

* One Screen One View.
* One View One Controller.
* View is always access by Controller.
* View always submit request to its own Controller.
* Controller will perform Business Operations by Calling Model Business Method.

**Q6:-What is Design Pattern?**

**Ans:-**

Standard Problem Has Standard Solution.

There are 4 types of Design Patter.

* **Singleton Design Pattern:-**the class that has only one instance in their lifetime.
* **Builder Design Pattern:**-create complex object using simple object using step by step approach.
* **Factory Design Pattern**:- the class that has ability to create object of other class is called Factory class.
* **FrontController Design Pattern**:-it perform session checking and login operation before calling any application controller. It prevent any user to access an application without login.

**Q7:-which class we make Singleton class and how we make?**

**Ans:-**

JDBC DATASOURCE Class

There Are 4 steps to make Singleton Class

1. Make a class Final
2. Make a constructor Private
3. Declare Static variable of self type.
4. Make a get Instance() Static method.

**Q8:-How many Dependencies used in project?**

**Ans:-**

1. log4j :- 1.2.17
2. My SQL :- 8.0.29
3. JavaX Mail :- 1.4.7
4. Javax Servlet :- 3.0.1
5. C3P0 :- 0.9.1.2
6. Junit :- 3.8.1

**Q9:- What is Input Validation?**

**Ans:-** Input Validation checks input data Enter by User.

**Q10:- What is Business Validation?**

**Ans:-** Checks the Business Condition that may need Database Communication.

**Q11:- How you are Performing Business Validation?**

**Ans:-** First we have propagate exception on Model and we have catch and set on CTL and get on View.

**Q12:-Types of Validation?**

**Ans:-**

1. Input Validation
2. Business Validation

**Q13:- What is Maven?**

**Ans:-** Maven is a powerful build Automation tools.

**Q14:- What is the build\war?**

**Ans:-** it is a whole compile code of entire application.

**Q15:- What is Utility Classes?**

**Ans:-** Utility classes are used to reusability and reuseable service.

**Q16:- what are the Utility Classes you have in your project?**

**Ans:-**

1. Data Validator
2. Data Utility
3. Email Utility
4. Email Builder
5. Email Message
6. HTML Utility
7. JDBCDataSource
8. Property Reader
9. Servlet Utility

**Q17:- What is Link? How we can find that it is Link?**

**Ans:-**

* Link is a clickable Text.
* it is used to Navigate the page in the application.
* And once we visit any link it will change the colour.
* when we move cursor in the clickable text it will show the path where it can take to us.
* And it has Underline In it.

**Q18:- What is Servlet Cycle?**

**Ans:-**

* init();
* service();
* destroy();

**Q19:- What is BaseCtl?**

**Ans:-** BaseCtl is a Parent of All CTL. And it contains

* GENERIC WORK FLOW
* GENERIC CONSTANT
* GENERIC OPERATIONS
* **GENERIC WORK FLOW:-** It provides By SERVICE METHOD
* **GENERIC CONSTANT:-** It is provides by ALL BUTTONS
* **GENERIC OPERATIONS:-** It is provides by BASE CTL METHODS like “PRELOAD() , VALIDATE() , POPULATE BEAN() , GET VIEW().s

**Q20:- What is Filter?**

**Ans:-** Filter perform pre-processing and post-processing operations on request and response of client.

**Q21:- What is Session?**

**Ans:-** Session is conversation between browser web client and web server.

**Q22:- How to Destroy Session?**

**Ans:-**

* Session.invalidate(); (Minutes).
* <Session config> (Minutes)

<Session timeout>20</ Session timeout>

</Session config>

* Session.setMaxInactiveInterval(); (Seconds)