Java Interview

# **Oops Concepts:**

## **Encapsulation:**

1. What is Encapsulation in Java? Why is it called Data hiding and Features?
   * Process of binding data and methods together in a single unit.
   * Encapsulations is used to hide the features and functionalities defined in a class.
   * Encapsulation is the one of the concepts of OOPS
   * Private access modifier helps to keep the variables and method accessible only inside the class helps to hide the data is called data hiding
2. What are the advantages of Encapsulation?
   * Hide data and functionality from outside world
   * Provide secured access to class variables.
   * Has more flexibility in adding new features
   * It improves maintainability of application.
   * A class can have total control over what is stored in its fields.
3. How to achieve encapsulation in Java? Give an example.
   * Assigning variables in a class
   * Give access to variables by getters and setter method.
4. How to achieve Data hiding programmatically?
   * By declaring variables as private and hide from the members outside the class.
5. What is Tightly encapsulated class in Java?
   * Each variable declared as private.
6. What is the difference between Abstraction and Encapsulation?

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| * + **Abstraction** | * + **Encapsulation** |
| * + Solves problem at design level | * + Solves problem at implementation level |
| * + Implemented using Interface or Abstract class | * + Implemented using private and protected access modifiers |
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1. What are the getter and setter methods in Java?
   * They are mutators, used to get access and modify private class variables
2. Explain design pattern based on encapsulation in java? (Revisit)
   * Singleton

## **Inheritance**