Interview Questions

1. **Why do we use OOPs?**
    - ❖ It gives clarity in programming and allows simplicity in solving complex problems.
    - ❖ Data and code are bound together by encapsulation.
    - ❖ Code can be reused, and it reduces redundancy.
    - ❖ It also helps to hide unnecessary details with the help of Data Abstraction.
    - ❖ Problems can be divided into subparts.
    - ❖ It increases the readability, understandability, and maintainability of the code.
2. **What are the differences between the constructor and the method?**

Constructor	Method
It is a block of code that initializes a newly created object.	It is a group of statements that can be called at any point in the program using its name to perform a specific task.
It has the same name as the class name.	It should have a different name than the class name.
It has no return type.	It needs a valid return type if it returns a value; otherwise void.
It is called implicitly at the time of object creation	It is called explicitly by the programmer by making a method call
If a constructor is not present, a default constructor is provided by Java	In the case of a method, no default method is provided.

3. **What are the main features of OOPs?**
    - ❖ Inheritance
    - ❖ Encapsulation
    - ❖ Polymorphism
    - ❖ Data Abstraction
4. **The disadvantage of OOPs?**
    - ❖ Requires pre-work and proper planning.
    - ❖ In certain scenarios, programs can consume a large amount of memory.
    - ❖ Not suitable for a small problem.
    - ❖ Proper documentation is required for later use.
5. **What is the difference between class and structure?**

    Class: User-defined blueprint from which objects are created. It consists of methods or sets of instructions that are to be performed on the objects.
    Structure: A structure is basically a user-defined collection of variables of different data types.

6. **What is the difference between a class and an object?**

Class	Object
Class is the blueprint of an object. It is used to create objects.	An object is an instance of the class.
No memory is allocated when a class is declared.	Memory is allocated as soon as an object is created.
A class is a group of similar objects.	An object is a real-world entity such as a book, car, etc.
Class is a logical entity.	An object is a physical entity.
A class can only be declared once.	Objects can be created many times as per requirement.
An example of class can be a car.	Objects of the class car can be BMW, Mercedes, Ferrari, etc.