Assignment

OOPS

1. How to create in object in Java?

⇒ There are several ways we can create objects of a class in Java as we all known a class provides the blueprint for objects, you create in objec from a class. This concept is under rated and sometimes proves to be beneficial at this concept is bypassed by many programmers and sometimes even do ask from interview perpectiv

Methods

There are many diffrent ways to create objects in Java. the help of programs to illustrate internal working by which we can create in object in Java

1. using new keyword
2. using new instance
3. using clone() method.
4. using deserialization
5. using newinstance() method of constructor class.

Let us disscuss them one by one and implement the same appending a clean java program of sam

Method 1: using new Keyword.

Using the new keyword in Java is the most basic way to create an object this is the most common way to create and object in Java. Almost 99% of objects are created in this way: By using this methods we can call any constructor we want to call (no argument or parameterised constructor).

2. what is the use of a new keyword in Java?

⇒ The "new" keyword in Java is used to create an instance of an object It allocates memory to an object and returns a refrence to the object created. It is used with a constructor to create an object.

3. what are the different types of variable in Java?

⇒

- Static variables
- Instance variables
- Local variables.

4. what is the difference between instance variables and Local variables?

⇒

Instance variable	Local variable
They are defined in class but outside the body of methods	They are defined as a type of variable declared within programming blocks or subroutines
These variable are created when an object is instantiated and are accesible to all constructors methods, and blocks in the class	These variable are created when a block method. or constructor is started, and the variable will be destroyed once it exits the block, method or constructor
These variable are destroyed when the object is distroyed	These variable are destroyed when the constructor method is exited
It can be accessed throughout the class	its access is limited to the method by which its declared
They are used to reserving memory for data that class needs and lifetime of object	They are used to decrease dependencies between components i.e. complexity of the code is decreased.
It includes access modifiers such as Private, Public, Protected etc	It does not include any access modifiers such as Private, Public Protected etc.

5. In which area memory is allocated for instance variable and local variable?

⇒ instance variable are allocated in the heap and local variable are allocated in stack.

6. what is method overloading?

⇒ Method overloading in Java is a feature that allows a class to have multiple methods with the same name but diffrent Parameters. overloading is used to Provide multiple ways to call a method for diffrent use cases, making code more readable and reusable.