Ques 1. How to create an object in java?
Ans:- The object is a basic building block of an OOPs language. In Java, we cannot execute any program without creating an object. There is various way to create an object in Java.

1. Java provides five ways to create an object.
2. Using new Keyword
3. Using clone() method
4. Using newInstance() method of the Class class
5. Using newInstance() method of the Constructor class
6. Using Deserialization

Using Keyword Method:-
Using the new keyword is the most popular way to create an object or instance of the class. When we create an instance of the class by using the new keyword, it allocates memory (heap) for the newly created object and also returns the reference of that object to that memory. The new keyword is also used to create an array. The syntax for creating an object is:

ClassName object = new ClassName();

Ques 2. What is the New Keyword in Java?
Ans:- In Java, the new keyword is used to create an instance or object of a class. When you use the new keyword, it allocates memory for the object and initializes its properties.
Ques 3. What are the Different types of variables in java?
Ans:- In Java, variables can be classified into several types based on their scope and usage. The different types of variables in Java include:

1. Local Variables: These variables are declared within a method, constructor, or block of code.
2. Instance Variables (Non-Static Variables): These variables are declared within a class but outside any method, constructor, or block of code.
3. Static Variables (Class Variables): These variables are declared with the static keyword within a class but outside any method, constructor, or block of code.

Ques 4. What is the difference between Instance variable and Local variable?
Ans:- There are many difference between Instance variable and Local variable.

	Instance Variables	Local Variables
Scope	Associated with an object (instance of a class)	Limited to the block or method in which they are declared
Declaration	Declared within a class, outside any method or block	Declared within a method, constructor, or block of code
Memory Allocation	Memory is allocated when an object is created	Memory is allocated when the method or block is executed
Default Value	Initialized with default values (0, null, false)	No default value; must be explicitly assigned a value before use
Accessibility	Accessible throughout the entire class	Accessible only within the block or method where they are declared
Lifetime	Exist as long as the object exists	Exist only as long as the block or method is executing
Initialization	Initialized with default values or custom initializers	Must be explicitly assigned a value before use
Thread Safety	Shared among all instances of the class	Not shared; each method invocation has its own set of variables
Usage	Store state and characteristics of an object	Temporary storage for intermediate calculations or method parameters

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

Ans:- In Java, memory allocation for instance variables and local variables happens in different areas:-

Instance Variables: Memory for instance variables is allocated on the heap.

Local Variables: Memory for local variables is allocated on the stack.

Ques 6. What is the Method overloading?

Ans:- If a class has multiple methods having same name but different in parameters, it is known as **Method Overloading**.

When you overload a method, you provide different versions of the method that can handle different types or numbers of parameters. The compiler determines which version of the method to invoke based on the arguments passed during the method call.