Core Java:

1. What are the differences between or features in Java 6/7 and 8?
2. What is Object?
3. What is Class?
4. Explain concepts of OOPS
5. What is runtime and compile time polymorphism?
6. Difference between extend and implement?
7. What is package?
8. What are different types of variables in java? (Instance/Class/Local/parameters)?

Arrays:

1. What is an Array and how to initialize array?
2. What happens when you declare an Array final? Final int[] array = new inst[10]. Will you be able to add new elements?
3. How to sort an array?
4. How do you copy array?
5. How do you search an array?

Comparison Operators and methods:

1. Difference between instanceof and instance?
2. Difference between = ,== and equals method?
3. Difference between Comparable and CompareTo?

Switch Block:

1. A switch works with the byte, short, char, and int primitive data types. It also works with *enumerated types* (discussed in [Enum Types](https://docs.oracle.com/javase/tutorial/java/javaOO/enum.html)), the [String](https://docs.oracle.com/javase/8/docs/api/java/lang/String.html) class, and a few special classes that wrap certain primitive types: [Character](https://docs.oracle.com/javase/8/docs/api/java/lang/Character.html), [Byte](https://docs.oracle.com/javase/8/docs/api/java/lang/Byte.html), [Short](https://docs.oracle.com/javase/8/docs/api/java/lang/Short.html), and [Integer](https://docs.oracle.com/javase/8/docs/api/java/lang/Integer.html) (discussed in [Numbers and Strings](https://docs.oracle.com/javase/tutorial/java/data/index.html)).
2. Is break in Switch statement optional?
3. Can we use Strings as conditions with Switch block?
4. Can there be more than one default label in switch block?
5. From which Java version we can use String Object in the Switch Statement Expression?
6. When we use String in Switch Expression .. How are the case label compared ? it will use String.equals method

Loops:

1. Difference between while and do-while loop?
2. Difference between for loop and enhanced for loop? Write a statement. When was enhanced for loop introduced in java.

Classes and Objects:

1. What is “extend” keyword?
2. What are access modifiers and list them out?
3. What are access specifiers and difference between them?
4. What is method overloading and overriding. Give Example?
5. What are constructors? Can we overload and override constructors? Can you overload main method?
6. What is covariant return type?
7. How to call one constructor from another constructor method?
8. How do you call parent class constructor method from subclass constructor?
9. What is package-private at top level and member level?
10. What is static keyword? Explain when this is declared at class, method and variable level?
11. What is final keyword? Explain when this is declared at class, method and variable level?
12. What is static block and when do we use it?
13. How do you initialize instance and class members?

Nested or Inner Classes:

1. What is nested class? Give an example?
2. Nested classes are divided into two categories. Explain them
3. What is inner class?
4. Why use nested Classes?
5. Describe access modifiers and specifiers applied to nested classes?
6. What are static nested classes?
7. What is shadowing?
8. What are local, anonymous and nested classes?
9. Difference between local, anonymous, nested and lambda expression?
10. What is serialization? How do you serialize local and anonymous classes? Is it recommended?
11. What is Lambda Expression? Which version of java supports lambda expression? Where did you use it?
12. What is the syntax of Lambda Expression?
13. How to serialize a lambda expression?
14. What is enum? How do you declare enum?
15. Are enums singleton?
16. How do you get all enum types declared in a class? Code it.

Annotation:

1. What are annotations and list there uses? Which version of Java contains annotations?
2. What are repeating annotations and when were these introduced?8
3. Explain some features added to annotations in Java8

Interfaces and Inheritance:

1. What is interface?
2. What is abstract class?
3. Difference between interface and abstract keyword?
4. Different types of access modifiers used for interface class, method and variable?
5. Can interface be private? Can methods be static final? Can variables be static final and private?
6. What is inheritance?
7. How to inherit only one method from super class?
8. What are default methods?
9. When do you use interface and abstract?
10. Can you declare constructor in interface?
11. What can we do in a subclass?
12. Does a subclass inherit private members in a superclass?
13. What is casting, down casting and up casting?
14. What are instance methods and static methods? Overriding vs hiding methods. Give an example?

|  |  |  |
| --- | --- | --- |
|  | **Superclass Instance Method** | **Superclass Static Method** |
| **Subclass Instance Method** | Overrides | Generates a compile-time error |
| **Subclass Static Method** | Generates a compile-time error | Hides |

1. How do you hide superclass fields?
2. What will subclass static variable which is declared same name as superclass do?
3. What is Super Keyword?
4. How to invoke superclass constructor from subclass?
5. What are the different methods in Object Class in java.lang.package?

Number and Strings:

1. What is autoboxing?
2. What is unboxing?
3. How to convert int to String?
4. How to convert int to Integer?
5. Write a code to do decimal Format?
6. How to get random number in java?
7. How to generate unique id in java?
8. What is NaN?
9. Different methods in character class?
10. Why is string immutable?
11. Write a code to reverse a string?
12. Fibonacci series
13. Concatenation in string?
14. Difference between string, string buffer and string builder?
15. Convert string to number?
16. Get character at nth position in string
17. Split,trim,lower and upper,replace, replaceall,replaceFirst
18. Converting string to array

Generics and packages:

1. What are generics and why use them?
2. What are packages? Different approaches to import static package.
3. What is default package?