**Java basics**

**If we don't override hashCode and override only equals then what happen? -** https://www.geeksforgeeks.org/equals-hashcode-methods-java/

**What is the difference between reference types and value types?**

\* What are the annotations in java.lang package? - https://www.geeksforgeeks.org/annotations-in-java/

\* Can we override/overload static method? - https://www.geeksforgeeks.org/can-we-overload-or-override-static-methods-in-java/

\* Can we override private method? - https://www.geeksforgeeks.org/can-override-private-methods-java/#:~:text=2)%20In%20Java%2C%20methods%20declared,fact%20bounded%20during%20compile%20time.

\* [What is the difference between == and equals() in Java?](https://stackoverflow.com/questions/7520432/what-is-the-difference-between-and-equals-in-java) - https://www.geeksforgeeks.org/difference-between-and-equals-method-in-java/

\* Can we reference instance variable from static method? if not why? - https://www.geeksforgeeks.org/java-program-to-check-the-accessibility-of-an-instance-variable-by-a-static-method/

\* Will a finally block execute after a return statement in a method in Java? - https://www.tutorialspoint.com/will-a-finally-block-execute-after-a-return-statement-in-a-method-in-java#:~:text=Yes%2C%20the%20finally%20block%20will,it%20will%20not%20be%20executed.

\* What is the meaning of public, static, void? - 12https://www.geeksforgeeks.org/replacing-public-with-private-in-main-in-java/?ref=lbp

\* What will be the output of below code?

\* a)

public class Test { public static void main(String[] args) {

System.out.println(Math.min(Double.MIN\_VALUE, 0.0d)); } }

\* b)

public class Test{

public static void main(String[] arr){

System.out.println(0.1\*3 == 0.3);

System.out.println(0.1\*2 == 0.2);

}

}

\*c)

public class Test

{

public static void main(String[] args)

{

System.out.println(1.0 / 0.0);

System.out.println(1 / 0);

}

}

### Arrays

Variable Args in Java

Variable Array In java

### Strings

\* Why String in immutable?

\* What is the minimum iteration needed to reverse the String - String Swap.

\* Write a program to split a string and find out word count.

\* String permutations and combinations example "abcde" create possible P & C

\* How many objects will be created?

public class Test{

public static void main(String[] args){

String s = new String("Hello World"); //

}

}

### OOPS concepts

\* Can we have private constructors? What are the uses of private constructors?

\* Like any method we can provide access specifier to the constructor. If it’s made private, then it can only be accessed inside the class. There are

various scenarios where we can use private constructors. The major ones are

\* Internal Constructor chaining

\* Singleton class design pattern

### Generics

generic vs Inheritance

Why Generics

### Collections

\* Number addition and subtraction in parallel streams

\* Methods in streams

\* 2 level sorting in java

\* How to create a Ordered HashSet - LinkedHashSet

\* Linked List vs Array

\* How to create your own concurrentHashMap

\* Implement hashtable/HashMap in java

\* bracket Problem in java - Stack

\* what will happen if we add another element with same key in hashmap? - https://stackoverflow.com/questions/1669885/what-happens-when-a-duplicate-key-is-put-into-a-hashmap

\* What is hashing? How do we override hashcode? What are the things to be taken care while implementing hashcode method?

\* Which linked list is used for HashMap implementation in Java? Is it singly or doubly linked list? - https://www.geeksforgeeks.org/hashtables-chaining-with-doubly-linked-lists/

\* If we have 2 employee objects with same id, name and DOB, how will you store in HashSet? - https://www.codexpedia.com/java/java-set-and-hashset-with-custom-class/

\* Will it store both or 1 object in HashSet? Do we have to do anything in Employee object for this?

\* Given an array, write code to return new array with numbers less than k? Use streams api - filter

\* How HashMap works internally? If you've any custom object like Employee and you want to use that as key in hashmap, which two methods you will override?

\* How do you order data stored in hashmap?

\* How do you copy unique values from hashmap into arraylist

\* How do you desig custom collection and it should be iterable? Iterable vs Interator.

\* What is the difference between HashMap and TreeMap?

### Concurrency

\* Reentrantlock - Java 8

\* BlockingQueue and Semaphores

\* 2 thread of same object accessing same non static method (synchronized).

### Lambda and functional & reactive programming

\* Reactive programming

\* What is functional interface? What is the difference between normal interface and functional interface?

\* Argument of Predicate

\* Name some of the functional interface

\* Predicate functional interface method and argument

\* What do you mean by captured variable? - https://www.geeksforgeeks.org/java-lambda-expression-variable-capturing-with-examples/

\* What are method references in Java? - https://www.geeksforgeeks.org/method-references-in-java-with-examples/ , https://www.javatpoint.com/java-8-method-reference

\* What are Intermediate operations(methods) in Java?

\* [What is the difference between intermediate and terminal operations?](https://stackoverflow.com/questions/47688418/what-is-the-difference-between-intermediate-and-terminal-operations)

\* Lamda expression, map, flatmap

\* What is the use of @FunctionalInterface, custom functional interface?

\* Name some of the built in functional interface.

### Garbage collections

\* Garbage collector type and details

\* How Mark and Sweep works

\* Parts of Heap Memory (JVM Architecture)

\* What are memory leaks and garbage collection?