

3) Explain difference between final(), finally(), and finalize() with example.

Final	Finally	Finalize
<ul style="list-style-type: none">• final is the keyword and access modifier which is used to apply restrictions on a class, method or variable.• Final keyword is used with the classes, methods and variables.• (1) Once declared, final variable becomes constant and cannot be modified. (2) final method cannot be overridden by sub class. (3) final class cannot be inherited.• Final method is executed only when we call it.	<ul style="list-style-type: none">• Finally is the block in Java Exception Handling to execute the important code whether the exception occurs or not.• Finally block is always related to the try and catch block in exception handling.• (1) finally block runs the important code even if exception occurs or not. (2) finally block cleans up all the resources used in try block• Finally block is executed as soon as the try-catch block is executed.	<ul style="list-style-type: none">• finalize is the method in Java which is used to perform clean up processing just before object is garbage collected• Finalize method is used with the objects.• finalize method performs the cleaning activities with respect to the object before its destruction• Finalize method is executed just before the object is destroyed.

4) Explain the working of equals() and hashCode() with example.

- Equals() : the java equals() is a method of lang.Object class, and it is used to compare two objects. To compare two objects that whether they are the same, it compares the values of both the object's attributes. By default, two objects will be the same only if stored in the same memory location.

Syntax: public boolean equals(Object obj)

- Hashcode() : A hashcode() is an integer value associated with every object in java, facilitating the hashing in hash tables. To get this hashcode value for an object, we can use the hashcode method in java. It is the means hashcode() method that returns the integer hashcode value of the given object. Since this method is defined in the object class, hence it is inherited by user-defined classes also. The hashcode() method returns the same hash value when called on two objects, which are equal according to the equals method. And if the objects are unequal, it usually returns different hash values.