# JAVA INTERVIEW QUESTIONS

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### Core Java

- 1. What are the features of Java?
- 2. What is JVM, JRE and JDK?
- 3. Why Java is called platform independent?
- 4. What are classes and objects?
- 5. What is a constructor?
- 6. Does Java always provide a default constructor for every class?
- 7. What are the uses of this keyword?
- 8. What is a static variable?
- 9. What is a static method?
- 10. Can a class be static?
- 11. Which modifiers can be used with a class?
- 12. What is method overloading?
- 13. Why Method Overloading is not possible by changing the return type of method only?
- 14. What is Composition?
- 15. What is Inheritance?
- 16. Which class is the parent of all classes?
- 17. What are the different types of inheritance?
- 18. What is a super keyword?
- 19. What is method overriding? How is it different from method overloading?
- 20. Explain runtime polymorphism in Java.
- 21. Are static members of a parent inherited by the subclass?
- 22. Can we override static methods?
- 23. Can a reference of child class hold an object of parent class?
- 24. What is constructor chaining?
- 25. Can constructor be inherited?
- 26. What are access modifiers?
- 27. Which access modifiers can be used with a class?

- 28. If we are overriding a method in a subclass, can this child method have different access modifier compared to the parent?
- 29. What is an abstract class? What are its properties?
- 30. Do an abstract class have constructor?
- 31. What is an interface?
- 32. Can interface have concrete methods?
- 33. What are the differences between abstract classes and interfaces?
- 34. What are the three types of variables in Java?
- 35. What are wrapper classes?
- 36. Explain internal caching in wrapper classes.
- 37. What is a final variable?
- 38. What is a final method?
- 39. What is a final class?
- 40. Explain JVM memory management
- 41. What is Garbage Collection?
- 42. What is Metaspace?
- 43. Which class is the parent of all classes?
- 44. What is equals() method?
- 45. In which class is the default equals() method defined?
- 46. What is the difference between == and equals() method?
- 47. What is hashcode() method?
- 48. <u>Default implementation of hashcode depends on memory address.</u> An object's memory address may change after garbage collection. Will hashcode() method return a different value in this scenario?
- 49. What is to String() method?
- 50. What is Cloning? Differentiate deep and shallow cloning.
- 51. What are the disadvantages of using clone() method?
- 52. What is finalize() method?
- 53. What is a marker interface?
- 54. What is Serialization?
- 55. What is Serial Version UID?
- 56. What is a Transient Variable?
- 57. Explain instance and static initializer block?
- 58. What are the different ways of creating an object?

# **Exception Handling**

- 1. What are checked and unchecked exceptions?
- 2. What class is the parent of all exceptions?
- 3. What is the difference between Error and Exception?
- 4. What is finally block?
- 5. What is final, finally and finalize?
- 6. What is the difference between throws and throw?
- 7. Can we use parent exception to catch a child exception?
- 8. If the parent class method throws an exception, can the overridden method in child class throw a different exception?

# **String**

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# **Functional Programming**

- 1. What is a functional interface?
- 2. Can a functional interface contain concrete methods?
- 3. Explain @FunctionalInterface annotation.
- 4. What is a Lambda expression?
- 5. When can we omit braces and return statement in Lambda expression?
- 6. Name some of the built in functional interfaces?
- 7. What is a Function?
- 8. What is a Predicate?
- 9. What is a Supplier?
- 10. What is a Consumer?
- 11. How can we connect two Consumers?
- 12. What is Stream. How is it different from InputStream and OutputStream?
- 13. Explain terminal and non terminal methods of Stream.?
- 14. What is a method reference? Explain different types of method reference?
- 15.Explain filter() method.
- 16. Explain map() method.
- 17. Explain flatMap() method.
- 18.Explain distinct() method.
- 19.Explain limit() method.
- 20. Explain peek() method.
- 21. Explain anyMatch(), allMatch() and noneMatch() methods.
- 22.Explain collect() method.
- 23.Explain count() method.
- 24. Explain findAny() and findFirst() methods.
- 25. Explain for Each() method.
- 26. Explain min() and max() methods.
- 27.Explain reduce() method.
- 28. Explain to Array() method.
- 29. Explain Method reference.

# Multithreading

- 1. What is Multithreading?
- 2. Explain life cycle of a thread.
- 3. What are the two ways of creating a thread?
- 4. What is the difference between start() method and run() method in a thread?
- 5. What is the difference between Thread and Runnable?
- 6. What are the various methods in a thread?
- 7. What is join()?
- 8. What is a daemon thread?
- 9. What is Thread Pool?
- 10. What is Thread Group?

# Synchronization

- 1. Why do we need synchronization?
- 2. What is static synchronization?
- 3. What is synchronized block?
- 4. What is the purpose of wait() and notify()?
- 5. What are the differences between wait() and sleep()?
- 6. What is deadlock?
- 7. What is starvation?
- 8. What are the disadvantages of synchronization?
- 9. What is Lock?
- 10. What problems do Lock solve?
- 11. What is volatile variable?
- 12. Compare volatile and synchronization?

### Collections

- 1. Name implementations of List interface.
- 2. What are the features of ArrayList?
- 3. What are the features of LinkedList?
- 4. What are the similarities and differences between ArrayList and LinkedList?
- 5. What are the features of Vector?
- 6. Is Vector obsolete? Why?
- 7. What is Comparator?
- 8. What is Comparable?
- 9. Differentiate Comparator and Comparable.
- 10. What are the implementations of Map interface?
- 11. What are the features of HashMap?
- 12. Explain internal working of HashMap?
- 13. What is Load Factor of Map?
- 14. What are the features of LinkedHashMap?
- 15. Explain internal working of LinkedHashMap?

- 16. What are the features of TreeMap?
- 17. Compare HashMap, TreeMap and LinkedHashMap
- 18. What are the features of HashTable?
- 19. Why HashTable is obsolete?
- 20. What are the differences between HashMap and HashTable?
- 21. What are the features of ConcurrentHashMap? Explain its internal working.
- 22. What is Set?
- 23. What are the implementations of Set interface?
- 24. Differentiate List and Set.
- 25. What are the features of HashSet?
- 26. Explain internal working of HashSet.
- 27. What are the features of LinkedHashSet? Explain its internal working.
- 28. What are the features of TreeSet?
- 29. Compare HashSet, TreeSet and LinkedHashSet
- 30. Explain Fail Fast Iterators .
- 31. What are the disadvantages of NON Fail Fast Iterators?
- 32. What is modCount of a Collection? What is its use?