Q1: Why java platform is independent?

A1: Because of its bytecodes which can run on any system.

Q2: Why java is not 100% object oriented?

A2: Because it makes use of 8 primitive data types which are not object.

Q3: Explain public static void main (String [] args) in Java.

A3: This is the entry point for any Java program.

public: it is an access modifier which is used to specify who can access this method.

it means this method will be accessible by any class.

static: it is a keyword in java which identifies it is class based. we use it for main ()

is made static in java so that it can be accessed without creating the instance of a

class.

void: it is the return type of the method.

main (): it is the name of the method which is searched by JVM.

JVM: java virtual machine.

String args: it is the parameter passed to the main method.

Q4: What are the wrapper classes in java?

A4: Wrapper classes convert the java primitives into the reference types or object

of that class.

Q5: What is constructor in Java?

A5: it refers to a block of code which is used to initialize an object. it must have the

same name as the name of the class.

Q6: How many types of the constructers are there in java?

A6: There are two types;

1) Default Constructor: it doesn’t take any input.

2) Parameterized Constructor: it is capable of initializing the instance

variables with the provided values.

Q7: How can we make a class singleton?

A7: By making its constructer private.

Q8: What is the difference between ArrayList and Vector in Java?

A8: ArrayList is not synchronized so that it is fast but vector is synchronized so that

it is slow as it is thread safe

Q9: What is the difference between equals () and == in Java?

A9: equals () operator for using to compare primitives and objects.

==, it uses to compare two objects.

Q10: What are the differences between heap and stack memory in java?

A10: Heap memory is used by all the parts of the application and objects stored in

the heap are globally accessible. Stack memory is used only by one thread of

execution and it cannot be accessed by others.

Q11: What is a package in java?

A11: It is a collection of related classes.

Q12: What are the advantages of the packages?

A12: 1 avoiding name clashes.

2. easier access control on the code

3. it can also contain hidden classes which are not visible to the outer

classes.

Q13: Why pointers are not use in Java?

A13: Because they are unsafe and increases the complexity of the program.

Q14: What is JIT compiler in java?

A14: Just in Time compiler is a program that helps in converting the java bytecodes

into the instructions.

Q15: What are the access modifiers in java?

A15: Default, Private, Public and Protected.

Q16: Explain the access modifiers in java?

A16: Default: accessible same packages and same class

Public: accessible any packages and any class

Private: accessible only same class

Protected: not accessible only different package non-subclass.

Q17: Define a class in Java?

A17: A class is our working area which includes all our data. It contains fields

variables and methods.

Q18: What is an Object in java and how is it created?

A18: Object is an instance of the class having instance variables. An object is

created using by the new keyword in java.

Q19: What is OOP (Object Oriented Programming)?

A19: It is a programming model or approach is ideal for the programs large and

complex codes and needs to be actively updated and maintained. The programs

are organized around objects rather than logic and functions.

Q20: What are the main concepts of OOPs in JAVA?

A20: Inheritance, Encapsulation, Abstraction, Polymorphism.

Q21: Explain them?

A21:

Inheritance: it is a process where once class acquires the properties of another.

Encapsulation: it is a mechanism of wrapping up data.

Abstraction: it is a methodology of hidding implementation details from the user.

Polymorphism: it is the ability of a variable to take multiple forms.

Q22: What is the difference between local variables and instance variables?

A22: A local variables: It is a typically used inside a method, constructor or a block and it

has only local scope. An instance variable: It is a variable which bounded to its object

itself. They are declared within a class but outside of the method

Q23: What are the differences between constructors and methods in java?

A23:

1.

Constructors: it is used to initialized the state of an object.

Methods: it is used to represent the behavior of an object.

2.

Constructors: it does not have any return type.

Methods: it must have a return type.

3.

Constructors: it is invoked implicitly

Methods: It needs to be invoked explicitly

4.

Constructors: it must be same name as the name of class.

Methods: it may be or not.

Q24: What is the final keyword in java?

A24: Final is a special keyword in java that is used as a non-access modifier.

Q25: Explain using final keyword?

A25: When the final keyword is used with a variable then its value cannot be

changed once assigned.

final method: it cannot be overridden.

final class: it cannot be extends.

Q26: What are the differences between break and continue statements?

A26:

1.

Break can be used in switch and loops.

Continue is just used in loops.

2.

Break terminates the moments it is executed.

Continue it does not terminate just jumps to the next step.

Q27: What is an infinite loop in java?

A27: It is an instruction sequence in java that loops endlessly when a functional

exist is not met.

Q28: What is the difference between this() and super() keywords in java?

A28: This () is used to call the default constructors of the same class but super ()

used to call them of the parent/base class.

Note: This () and super () keywords must be the first line of a block.

Q29: What is a Java String Pool?

A29: It refers a collection of Strings which are stored in heap memory. Whenever a

new object is created, it first checks the object is already in the pool or not.

Q30: What are the differences between static and non-static methods?

A30:

1. Static Methods: The static keyword must be used before the method name but

Non-static Methods: no need to use static the keyword.

2. Static Methods: it is called using the class but non-static Methods: it is can be

called like general methods.

3. Static Methods: it cannot be access non static variables but non-static

Methods: it can access them.

Q31: What are the differences between Strings and StringBuilder?

A31: 1. storage area; Strings in StringPool

StringBuilder in Heap area

2. Thread safe;

Strings yes

StringBuilder no

3. form;

Strings immutable

StringBuilder mutable

4. Performance

Strings Fast

StringBuilder more efficient, especially setter and getter

methods.

Q32: Is constructor inherited?

A32: No, it is not inherited.

Q33: What is a ClassLoader in java?

A33: It is a subset of JVM that is responsible for loading the class file.

Q34: How many ClassLoader java provides and what are they?

A34: Java provides 3 ClassLoader.

1. Bootstrap

2. Extension

3. System/ Application.

Q35: Why java Strings are immutable in nature?

A35: Simply means once String object is created its state cannot be modified. It

enhances security caching, synchronization and performance of the application.

Q36: What is the difference between Array and ArrayList?

A:36

1.

Array cannot contain values of different data types.

ArrayList can contain them.

2.

Array's size must be defined.

Size of ArrayList can be dynamically changed.

3.

Array need to specify the index in order to add data.

ArrayList does not need that.

4.

Arrays can contain Primitive data and objects.

ArrayList can contain only objects.

Q37: What is a Map in java?

A37: Map is an interface of Util Package which maps unique keys to values.

Does not contain duplicate keys

Each key can map at maximum one value.

Q38: What is Collection class in Java?

A38: The collection is a framework that acts as an architecture for storing and

manipulating a group of objects.

Q39: Explain about the collection classes what they include?

A39: Includes: interfaces, classes, methods.

List, queue and set important part of collections.

Q40: What is Polymorphism?

A40: A best example of this question is a mobile phone which is used like a camera

or a calculate or a mp3 player or a remote.

Q41: How many types of polymorphism are there in java?

A41: There are two types;

Compile Time polymorphism is method overloading.

Run Time polymorphism is done using inheritance and interface.

Q42: What is the abstraction in java?

A42: It basically deals with hiding the details and showing the essential things to

the user. it can be two ways abstraction classes and interfaces

Q43: What do you mean interface in Java?

A43: It is a collection of abstract methods and static constants. It does not have

any constructions. It is a group of related methods with empty bodies.

Q44: What are the differences between abstract classes and interfaces?

A44: 1.

Abstract Classes: it can provide that have to be overridden.

Interfaces: it cannot provide any code at all just signature.

2.

Abstract Classes: a class may extend only one abstract class

Interfaces: a class may implement several interfaces

3.

Abstract Classes: it can have non-abstract methods

Interfaces: All methods of interface are abstract

4.

Abstract Classes: it can have instance variable

Interfaces: it cannot have instance variables

5.

Abstract Classes: it can have any visibility public protected private

Interfaces: it must be public or none

6.

Abstract Classes: it can contain constructions

Interfaces: it cannot contain

7.

Abstract Classes: fast

Interfaces: slow need to extra time to find corresponding method to the actual

class.

Q45: What is inheritance in java?

A45: it is a concept and helps to reuse the code.

it establishes a relationship among different classes.

their names are parent class and child class

Q46: What is child class in java?

A46: A class which inherits the properties is known child class.

Q47: What are the different types of inheritance?

A47: Single, multilevel, hierarchical and hybrid.

Q48: Explain them?

A48: single: one parent one child

multilevel: more parents one child

hierarchical: one parent more child classes

hybrid: it is a combination of two or more types of inheritances.

Q49: What is method overloading in java?

A49: It is to add or extend more to the method's behavior.

It is a compile time polymorphism.

Methods must have different signature.

Methods of the same class shares the same name but each method must have a different

number of parameters.

Or parameters having different types and order.

It may or may not need inheritance in class.

Q50: What is method overriding in java?

A50: It is to "change" existing behavior of the method.

It is a run time polymorphism.

The methods must have the same signature.

The sub-class has the same method with the same name.

Exactly the same number and type of parameters and same return type as a super class.

Q51: Can you override a private or static method in java?

A51: No, you cannot because it is not accessible there and you need to do

inheritance in class.

Q52: Is multiple inheritance supported by java?

A52: Java doesn’t support multilevel inheritance. Because it is difficult for the compiler to

decide. Which method to execute. If the same name of method in different parent classes.

Q53: What is encapsulation in java?

A53: The data is hidden from the outer world and can be accessed only via current

class methods. Providing public methods to modify and view the values of the

variables.

Q54: What is an association in java?

A54: It is a relationship where all objects have their own lifecycle and there is no

owner. These relationships can be one to one, one to many, many to one and

many to many.

Q55: What do you mean by aggregation in java?

A55: It is a specialized form of association where all objects have their own lifecycle

but there is an ownership and child object cannot belong to another parent object.

Q56: What is a composition in java?

A56: It is again a specialized form of aggregation and we can call this as a death

relationship.

Q57: What is a marker interface?

A57: It can be defined as the interface having no data member and member

functions.

Q58: What is object cloning?

A58: It is the process of creating an exact copy of an object. But object clone is a

protected method, thus you need to override it.

Q59: What is a constructor overloading?

A59: It is a technique of adding any number of constructors to a class each having a

different parameter list.

Q60: How can you handle java exceptions?

A60: There are five keywords. Try, catch, finally, throw and throws using them.

Q61: What is difference between error and exception?

A61: Error: it is an irrecoverable condition occurring at the run time.

Exception: it is condition that occur because of bad input or human error etc.

in most of the cases it is possible to recover it.

Q62: What are the differences between checked and unchecked exceptions?

A62: Checked Exceptions: They are checked at compile time.

Example; IO exception SQL exception.

Unchecked Exceptions: they are not checked at compile time.

Example; arithmetic exception, null pointer exception.

Q63: What purpose do the keywords final, finally and finalize?

A63:

Final: It is used to apply restrictions on class method and variable

Final class cannot be inheritance

Final method cannot be overridden

Final variable cannot be changed

Finally: It is used to place important code; it will be executed.

Whether exception is handled or not.

Finalize: It is used to perform clean up processing just before

The object is garbage collector.

Q64: What are the differences between throw and throws?

A64:

1.

throw is used to explicitly throw an exception,

throws is used to declare an exception.

2.

throw is followed by an instance

throws is followed by class

3.

throw is used within method

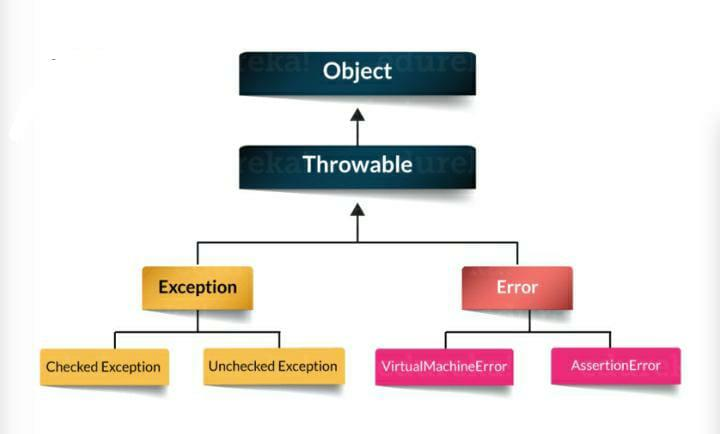
throws is used within the method signature

4.

we cannot throw multiple exceptions

we can throws declare multiple exceptions.

Q65: What is exception hierarchy in java?



Q66: How to create a custom exception?

A66: To create your own exception extend the exception class or any of its

subclasses.

Q67: What are the differences between processes and threads?

A67:

1. Run in

process: separate memory spaces

Threads: shared memory spaces

2. Control

process: by operating system

threads: a programmer in a program

3. Forms

process: independent

threads: dependent

Q68: What is a finally block?

A68: It is a block which always executes a set of statements.

It is always associated with a try block.

Q69: Is there a case when finally, will not execute?

A69: Yes, there is. if the program exits by calling.

System.exit() or causing a fatal error.

Q70: what is synchronization?

A:70:

-A synchronized block of code can be executed by only one thread at a time.

-As Java supports execution of multiple threads, two or more threads may access

the same fields or objects.

-Synchronization is a process which keeps all concurrent threads in execution to be

in sync.

-Synchronization avoids memory consistency errors caused due to inconsistent

view of shared memory.

Q71: Can we have multiple catch blocks under single try block?

A71: Yes, we can have multiple catch blocks under single try block but the

approach should be from specific to general.

Q72: What is “Out of Memory Error”?

A72: “Out of Memory Error” is the subclass of java-lang. Error which generally

occurs when our JVM runs out of memory.

Q73: What are the important methods of Java Exception Class?

A73:

1. String getMessage()

2. public StackTraceElement[] getStackTrace()

3. Synchronized Throwable getCause()

4. String toString()

5. void printStackTrace()

Q74: What is a Thread?

A74: A thread is the smallest piece of programmed instructions which can be

executed independently by a scheduler.

In Java, all the programs will have at least one thread, which is known as the main

thread.

Q75: What are the ways to create a thread?

A75: In Java, threads can be created in the following two ways;

By implementing the Runnable interface.

By extending the Thread.

Q76: What is the garbage collection?

A76: Garbage collection in Java a program which helps in implicit memory

management. Since in Java, using the new keyword you can create objects

dynamically, which once created will consume some memory.

Q77: What are the different types of garbage collectors in Java?

A77: 4 types;

Serial Garbage Collector

Parallel Garbage Collector

CMS Garbage Collector

G1 Garbage Collector

Q78: Is delete next, main exit or null keyword in java?

A78: No, we don’t use them as a keyword in java.

Q79: How many types of memory areas are allocated by JVM?

A79:

1. Class(method) area

2. Heap

3. Stack

4. Program counter register

5. Native Method Stack

Q80: What is the default value of the local variables?

A80: The local variables are not initialized to any default value.