Question 1. What Is Annotation In Java?

Answer :

An annotation, in the java programming language is a special form of syntactic metadata that can be added to Java Source Code. Classes, methods, variables parameters and packages may be annotated. Unlike Java doc tags, Java annotation are reflective, in that they are embedded in class files generated by the compiler and may be retained by the java VM to make retrievable at run-time.

Annotation is basically to attach metadata to method, class or package. Metadata is used by the compiler to perform some basic compile-time checking

Question 2. What Is The Most Important Feature Of Java?

Answer :

Java is a platform independent language.

Question 3. What Are The Differences Between The Methods Sleep() And Wait()?

Answer :

The code sleep(1000); puts thread aside for exactly one second. The code wait(1000), causes a wait of up to one second. A thread could stop waiting earlier if it receives the notify() or notifyAll() call. The method wait() is defined in the class Object and the method sleep() is defined in the class Thread.

Question 4. How Many Types Of Memory Areas Are Allocated By Jvm?

Answer :

Many types:

Class(Method) Area
Heap
Stack
Program Counter Register
Native Method Stack
Question 5. What Is The Difference Between Prepared Statement And Statement In Java?

Answer :

A statement is parsed and executed each time its call sent to database. A prepared statement may be parsed once and executed repeatedly with different parameters.
Solaris,etc).

Question 7. What Is The Difference Between Constructors And Other Methods In Core Java?

Answer :

Constructor will be automatically invoked when an object is created whereas method has to be called explicitly.
Constructor needs to have the same name as that of the class whereas functions need not be the same.
There is no return type given in a constructor signature (header). The value is this object itself so there is no need to indicate a return value.
There is no return statement in the body of the constructor.
The first line of a constructor must either be a call on another constructor in the same class (using this), or a call on the superclass constructor (using super). If the first line is neither of these, the compiler automatically inserts a call to the parameterless super class constructor.
Question 8. What Is Jit Compiler?

Answer :

Just-In-Time(JIT) compiler:It is used to improve the performance. JIT compiles parts of the byte code that have similar functionality at the same time, and hence reduces the amount of time needed for compilation.Here the term “compiler” refers to a translator from the instruction set of a Java virtual machine (JVM) to the instruction set of a specific CPU.

Question 9. What Are Four Steps For The Execution Of Query:

Answer :

Query is parsed
Query is compiled.
Query is optimized.
Query is executed.
In case of statement, the above four steps are performed every time. And in case of prepared statement the above three steps are performed once.

Question 10. What Is A Jvm?

Answer :

JVM is Java Virtual Machine which is a run time environment for the compiled java class files.

Question 11. What's The Difference Between J2sdk 1.5 And J2sdk 5.0?

Answer :

There's no difference, Sun Microsystems just re-branded this version.

Question 12. What Is Platform?

Answer :

A platform is basically the hardware or software environment in which a program runs. There are two types of platforms software-based and hardware-based. Java provides software-based platform.

Question 13. Explain Java Thread Life Cycle.

Answer :

The life cycle of threads in Java is very similar to the life cycle of processes running in an operating system. During its life cycle the thread moves from one state to another depending on the operation performed by it or performed on it. A Java thread can be in one of the following states:

NEW: A thread that is just instantiated is in new state. When a start () method is invoked, the thread moves to the ready state from which it is automatically moved to runnable state by the thread scheduler.
RUNNABLE (ready_running) A thread executing in the JVM is in running state.
BLOCKED A thread that is blocked waiting for a monitor lock is in this state. This can also occur when a thread performs an I/O operation and moves to next (runnable) state.
WAITING A thread that is waiting indefinitely for another thread to perform a particular action is in this state.
TIMED_WAITING (sleeping) A thread that is waiting for another thread to perform an action up to a specified waiting time is in this state.
TERMINATED (dead) A thread that has exited is in this state.

Question 14. What Is The Difference Between A Jdk And A Jvm?

Answer :

JDK is Java Development Kit which is for development purpose and it includes execution environment also. But JVM is purely a run time environment and hence you will not be able to compile your source files using a JVM.

Question 15. What Would You Use To Compare Two String Variables - The Operator == Or The Method Equals()?

Answer :

I would use the method equals() to compare the values of the Strings and the == to check if two variables point at the same instance of a String object.

Question 16. What Is The Main Difference Between Java Platform And Other Platforms?

Answer :

The Java platform differs from most other platforms in the sense that it's a software-based platform that runs on top of other hardware-based platforms.It has two components:

Runtime Environment
API(Application Programming Interface)

Question 17. Which Way A Developer Should Use For Creating Thread, I.e. Sub Classing Thread Or Implementing Runnable.

Answer :

There are two ways of creating Thread in java (i.e. sub classing or implementing Runnable). It is very important to understand the implication of using these two approaches. There are two different points about using these two approaches.

By extending the thread class, the derived class itself is a thread object and it gains full control over the thread life cycle. Implementing the Runnable interface does not give developers any control over the thread itself, as it simply defines the unit of work that will be executed in a thread.

Another important point is that when extending the Thread class, the derived class cannot extend any other base classes because Java only allows single inheritance. By implementing the Runnable interface, the class can still extend other base classes if necessary.

To summarize, if developer needs a full control over the Thread life cycle, sub classing Thread class is a good choice, and if programs need more flexibility by extending other class developer, should go with implementing Runnable interface.

Question 18. What Is A Pointer And Does Java Support Pointers?

Answer :

Pointer is a reference handle to a memory location. Improper handling of pointers leads to memory leaks and reliability issues hence Java doesn't support the usage of pointers.

Question 19. How Can A Subclass Call A Method Or A Constructor Defined In A Superclass?

Answer :

Use the following syntax: super.myMethod(); To call a constructor of the superclass, just write super(); in the first line of the subclass‘s constructor.

Question 20. What Gives Java Its 'write Once And Run Anywhere' Nature?

Answer :

The bytecode. Java is compiled to be a byte code which is the intermediate language between source code and machine code. This byte code is not platform specific and hence can be fed to any platform.

Question 21. What Is The Difference Between Synchronized And Synchronized Block?

Answer :

In case of a Synchronized method a thread may need to have the lock for a longer time as compared to the synchronized block.

Another difference between synchronized method and block is that we don’t specify the particular object whose monitor is required to be obtained by thread for entering a synchronized method, whereas we can specify the particular object in case of synchronized block.

Question 22. Does Java Support Multiple Inheritance?

Answer :

Java doesn't support multiple inheritance.

Question 23. How Would You Make A Copy Of An Entire Java Object With Its State?

Answer :

Have this class implement Cloneable interface and call its method clone().

Question 24. What Is Classloader?

Answer :

The classloader is a subsystem of JVM that is used to load classes and interfaces. There are many types of classloaders e.g. Bootstrap classloader, Extension classloader, System classloader, Plugin classloader etc.

Question 25. Static Synchronization Vs Instance Synchronization?

Answer :

When a static synchronized method is called, the program obtains the class lock before calling the method. This mechanism is identical to the case in which method is non-static, it is just a different lock, and this lock is solely for static method. Apart from the functional relationship between the two locks, they are not operationally related at all.

Question 26. Is Java A Pure Object Oriented Language?

Answer :

Java uses primitive data types and hence is not a pure object oriented language.

Question 27. What Is The Role Of Ioc Container In Spring?

Answer :

IOC container is responsible to:

create the instance.
configure the instance, and
assemble the dependencies.

Question 28. What Are The Types Of Ioc Container In Spring?

Answer :

There are two types of IOC containers in spring framework.

BeanFactory
ApplicationContext

Question 29. What Is The Difference Between Beanfactory And Applicationcontext?

Answer :

BeanFactory is the basic container whereas ApplicationContext is the advanced container. ApplicationContext extends the BeanFactory interface. ApplicationContext provides more facilities than BeanFactory such as integration with spring AOP, message resource handling for i18n etc.

Question 30. What Are The Transaction Management Supports Provided By Spring?

Answer :

Spring framework provides two type of transaction management supports:

Programmatic Transaction Management: should be used for few transaction operations.
Declarative Transaction Management: should be used for many transaction operations.
Question 31. What Are Classes For Spring Jdbc Api?

Answer :

JdbcTemplate
SimpleJdbcTemplate
NamedParameterJdbcTemplate
SimpleJdbcInsert
SimpleJdbcCall
Question 32. How Can You Fetch Records By Spring Jdbctemplate?

Answer :

You can fetch records from the database by the query method of JdbcTemplate. There are two interfaces to do this:

ResultSetExtractor
RowMapper
Question 33. What Is Aop?

Answer :

AOP is an acronym for Aspect Oriented Programming. It is a methodology that divides the program logic into pieces or parts or concerns. It increases the modularity and the key unit is Aspect.

Question 34. What Are The Aop Terminology?

Answer :

AOP terminologies or concepts are as follows:

JoinPoint
Advice
Pointcut
Aspect
Introduction
Target Object
Interceptor
AOP Proxy
Weaving
Question 35. What Are The Types Of Advice In Aop?

Answer :

There are 5 types of advices in spring AOP.

Before Advice
After Advice
After Returning Advice
Throws Advice
Around Advice
Question 36. What Does @controller Annotation?

Answer :

The @Controller annotation marks the class as controller class. It is applied on the class.

Question 37. What Does @requestmapping Annotation?

Answer :

The @RequestMapping annotation maps the request with the method. It is applied on the method.

Question 38. What Does The Viewresolver Class?

Answer :

The View Resolver class resolves the view component to be invoked for the request. It defines prefix and suffix properties to resolve the view component.

Question 39. Which Viewresolver Class Is Widely Used?

Answer :

The org.springframework.web.servlet.view.InternalResourceViewResolver class is widely used.

Question 40. How To Detect The Operating System On The Client Machine?

Answer :

In order to detect the operating system on the client machine, the navigator.appVersion string (property) should be used.

Question 41. How Many Types Of Association Mapping Are Possible In Hibernate?

Answer :

There can be 4 types of association mapping in hibernate.

One to One
One to Many
Many to One
Many to Many
Question 42. Is It Possible To Perform Collection Mapping With One-to-one And Many-to-one?

Answer :

No, collection mapping can only be performed with One-to-Many and Many-to-Many.

Question 43. What Is Lazy Loading In Hibernate?

Answer :

Lazy loading in hibernate improves the performance. It loads the child objects on demand. Since Hibernate 3, lazy loading is enabled by default, you don't need to do lazy="true". It means not to load the child objects when parent is loaded.

Question 44. What Is Hql (hibernate Query Language)?

Answer :

Hibernate Query Language is known as an object oriented query language. It is like structured query language (SQL). The main advantage of HQL over SQL is:

You don't need to learn SQL
Database independent
Simple to write query
Question 45. What Is Sessionfactory?

Answer :

SessionFactory provides the instance of Session. It is a factory of Session. It holds the data of second level cache that is not enabled by default.

Question 46. What Is Session?

Answer :

It maintains a connection between hibernate application and database.
It provides methods to store, update, delete or fetch data from the database such as persist(), update(), delete(), load(), get() etc.
It is a factory of Query, Criteria and Transaction i.e. it provides factory methods to return these instances.
Question 47. Explain Criteria Api?

Answer :

Criteria is a simplified API for retrieving entities by composing Criterion objects. This is a very convenient approach for functionality like "search" screens where there is a variable number of conditions to be placed upon the result set.

Example : List employees = session.createCriteria(Employee.class) .add(Restrictions.like("name", "a%")) .add(Restrictions.like("address", "Boston")) .addOrder(Order.asc("name")) .list();

Question 48. What Are The Most Common Methods Of Hibernate Configuration?

Answer :

The most common methods of Hibernate configuration are:

Programmatic configuration
XML configuration (hibernate.cfg.xml)
Question 49. How Would You Reattach Detached Objects To A Session When The Same Object Has Already Been Loaded Into The Session?

Answer :

You can use the session.merge() method call.

Question 50. What Are The States Of Object In Hibernate?

Answer :

There are 3 states of object (instance) in hibernate.

Transient: The object is in transient state if it is just created but has no primary key (identifier) and not associated with session.
Persistent: The object is in persistent state if session is open, and you just saved the instance in the database or retrieved the instance from the database.
Detached: The object is in detached state if session is closed. After detached state, object comes to persistent state if you call lock() or update() method

Question 1. Why Do You Want To Work In This Industry / Company?

Answer :

First you should try to convince that this company gives huge opportunity in many aspect i.e. new technologies implementation, the policy of company suits you like professionalism. Also you can mention that you are big fan of this company and its your dream company. Basically show your all positive attitude towards company.

Question 2. Which Location Do You Want To Work In And Why?

Answer :

Give your own choice. Also mention a valid reason for why you are interested for that location. The reason should be always positive and clear. Example :- you can support your family from this location,

Question 3. Describe A Problem You Faced And How You Deal With It ?

Answer :

You can describe any issue you faced during your project work in the organization. And what the solution you have implemented for that issue.

Question 4. What Are The Types Of Class Loaders In Java?

Answer :

As per my knowledge there are basically 3 types of class loader like bootstarp classloader,extension class loader and system class loader.

Bootstrap Class Loader
Bootstrap class loader loads java’s core classes like java.lang, java.util etc. These are classes that are part of java runtime environment. Bootstrap class loader is native implementation and so they may differ across different JVMs.
Extensions Class Loader
JAVA_HOME/jre/lib/ext contains jar packages that are extensions of standard core java classes. Extensions class loader loads classes from this ext folder. Using the system environment propery java.ext.dirs you can add ‘ext’ folders and jar files to be loaded using extensions class loader
System Class Loader
Java classes that are available in the java classpath are loaded using System class loader
Question 5. How To Read And Write Image From A File ?

Answer :

You can use ImageIo.read() and ImageIO.write() method of javax.imageio package.

Question 6. How Concurrenthashmap Works?

Answer :

The basic design of ConcurrentHashMap is to handling threading. Basically it locks each of the box (by default 16) which can be locked independently and thread safe for operation. And it does not expose the internal lock process.

Question 7. Can A Static Block Throw Exception?

Answer :

Yes. We can throw checked exception.

Question 8. What Is Difference Between Iterator Access And Index Access?

Answer :

Basically iterator access process the traverse operation through each element, where index access process access direct the element by using the index.

Question 9. Why Character Array Is Better Than String For Storing Password In Java?

Answer :

Because, character array stores data in encrypted format which is not readable by human. But,the string stores the data in human readable format which is not secure.

Question 10. What Is Daemon Thread In Java ?

Answer :

A daemon thread is normally runs on background. And it does not prevent the JVM from exiting when the program finishes but the thread is still running.

Question 11. What Is Java Reflection Api?

Answer :

Reflection is one of the most powerful api which help to work with classes, methods and variables dynamically. Basically it inspect the class attributes at runtime. Also we can say it provides a metadata about the class.

Question 12. What Is The Difference Between Serializable And Externalizable Interfaces?

Answer :

Both interfaces are used for implement serialization. But, the basic difference is Serializable interface does not have any method (it’s a marker interface) and Externalizable interface having 2 methods such as readExternal() and writeExternal(). Serializable interface is the super interface for Externalizable interface.

Question 13. What Is An Abstract Method?

Answer :

An abstract method is a method whose implementation is deferred to a subclass.

Question 14. What Value Does Read() Return When It Has Reached The End Of A File?

Answer :

The read() method returns -1 when it has reached the end of a file.

Question 15. Can A Byte Object Be Cast To A Double Value?

Answer :

No, an object cannot be cast to a primitive value.

Question 16. What Is The Difference Between A Static And A Non-static Inner Class?

Answer :

A non-static inner class may have object instances that are associated with instances of the class’s outer class. A static inner class does not have any object instances.

Question 17. What Is An Object’s Lock And Which Object’s Have Locks?

Answer :

An object’s lock is a mechanism that is used by multiple threads to obtain synchronized access to the object. A thread may execute a synchronized method of an object only after it has acquired the object’s lock. All objects and classes have locks. A class’s lock is acquired on the class’s Class object.

Question 18. What Is The % Operator?

Answer :

It is referred to as the modulo or remainder operator. It returns the remainder of dividing the first operand by the second operand.

Question 19. When Can An Object Reference Be Cast To An Interface Reference?

Answer :

An object reference be cast to an interface reference when the object implements the referenced interface.

Question 20. Which Class Is Extended By All Other Classes?

Answer :

The Object class is extended by all other classes.

Question 21. Which Non-unicode Letter Characters May Be Used As The First Character Of An Identifier?

Answer :

The non-Unicode letter characters $ and _ may appear as the first character of an identifier.

Question 22. What Restrictions Are Placed On Method Overloading?

Answer :

Two methods may not have the same name and argument list but different return types.

Question 23. What Is Transient Variable?

Answer :

Transient variable can’t be serialize. For example if a variable is declared as transient in a Serializable class and the class is written to an ObjectStream, the value of the variable can’t be written to the stream instead when the class is retrieved from the ObjectStream the value of the variable becomes null.

Question 24. What Is Collection Api?

Answer :

The Collection API is a set of classes and interfaces that support operation on collections of objects. These classes and interfaces are more flexible, more powerful, and more regular than the vectors, arrays, and hashtables if effectively replaces.

Example of classes: HashSet, HashMap, ArrayList, LinkedList, TreeSet and TreeMap.

Example of interfaces: Collection, Set, List and Map.

Question 25. What Is Casting?

Answer :

There are two types of casting, casting between primitive numeric types and casting between object references. Casting between numeric types is used to convert larger values, such as double values, to smaller values, such as byte values. Casting between object references is used to refer to an object by a compatible class, interface, or array type reference.

Question 26. What Is The Return Type Of A Program’s Main() Method?

Answer :

void.

Question 27. If A Variable Is Declared As Private, Where May The Variable Be Accessed?

Answer :

A private variable may only be accessed within the class in which it is declared.

Question 28. What Do You Understand By Private, Protected And Public?

Answer :

These are accessibility modifiers. Private is the most restrictive, while public is the least restrictive. There is no real difference between protected and the default type (also known as package protected) within the context of the same package, however the protected keyword allows visibility to a derived class in a different package.

Question 29. What Is Downcasting ?

Answer :

Downcasting is the casting from a general to a more specific type, i.e. casting down the hierarchy.

Question 30. What Modifiers May Be Used With An Inner Class That Is A Member Of An Outer Class?

Answer :

A (non-local) inner class may be declared as public, protected, private, static, final, or abstract.

Question 31. How Many Bits Are Used To Represent Unicode, Ascii, Utf-16, And Utf-8 Characters?

Answer :

Unicode requires 16 bits and ASCII require 7 bits. Although the ASCII character set uses only 7 bits, it is usually represented as 8 bits. UTF-8 represents characters using 8, 16, and 18 bit patterns. UTF-16 uses 16-bit and larger bit patterns.

Question 32. What Restrictions Are Placed On The Location Of A Package Statement Within A Source Code File?

Answer :

A package statement must appear as the first line in a source code file (excluding blank lines and comments). [8/1, 1:22 PM] pratik Kumar: Question 1. What Is The Purpose Of Assert Keyword Used In Jdk1.4.x?

Answer :

In order to validate certain expressions. It effectively replaces the if block and automatically throws the AssertionError on failure. This keyword should be used for the critical arguments. Meaning, without that the method does nothing.

Question 2. How Will You Get The Platform Dependent Values Like Line Separator, Path Separator, Etc., ?

Answer :

Using Sytem.getProperty(…) (line.separator, path.separator, …)

Question 3. What Is Skeleton And Stub? What Is The Purpose Of Those?

Answer :

Stub is a client side representation of the server, which takes care of communicating with the remote server. Skeleton is the server side representation. But that is no more in use… it is deprecated long before in JDK.

Question 4. What Is The Final Keyword Denotes?

Answer :

final keyword denotes that it is the final implementation for that method or variable or class. You can't override that method/variable/class any more.

Question 5. What Is The Significance Of Listiterator?

Answer :

You can iterator back and forth.

Question 6. What Is The Major Difference Between Linkedlist And Arraylist?

Answer :

LinkedList are meant for sequential accessing. ArrayList are meant for random accessing.

Question 7. What Is Nested Class?

Answer :

If all the methods of a inner class is static then it is a nested class.

Question 8. What Is Inner Class?

Answer :

If the methods of the inner class can only be accessed via the instance of the inner class, then it is called inner class.>

Question 9. What Is Composition?

Answer :

Holding the reference of the other class within some other class is known as composition.

Question 10. What Is Aggregation?

Answer :

It is a special type of composition. If you expose all the methods of a composite class and route the method call to the composite method through its reference, then it is called aggregation.

Question 11. What Are The Methods In Object?

Answer :

clone, equals, wait, finalize, getClass, hashCode, notify, notifyAll, toString

Question 12. Can You Instantiate The Math Class?

Answer :

You can't instantiate the math class. All the methods in this class are static. And the constructor is not public.

Question 13. What Is Singleton?

Answer :

It is one of the design pattern. This falls in the creational pattern of the design pattern. There will be only one instance for that entire JVM. You can achieve this by having the private constructor in the class.

For eg.,

```
public class Singleton
{
private static final Singleton s = new Singleton();
private Singleton()
{
}
public static Singleton getInstance()
{
return s;
}
// all non static methods …
}
```

Question 14. What Is Driver Manager?

Answer :

The basic service to manage set of JDBC drivers.

Question 15. What Is Class.forname() Does And How It Is Useful?

Answer :

It loads the class into the ClassLoader. It returns the Class. Using that you can get the instance (“class-instance”.newInstance()).

Question 16. What Is A Marker Interface?

Answer :

An interface with no methods.

Example: Serializable, Remote, Cloneable

Question 17. What Interface Do You Implement To Do The Sorting?

Answer :

Comparable

Question 18. What Is The Eligibility For A Object To Get Cloned?

Answer :

It must implement the Cloneable interface

Question 19. What Is The Purpose Of Abstract Class?

Answer :

It is not an instantiable class. It provides the concrete implementation for some/all the methods. So that they can reuse the concrete functionality by inheriting the abstract class.

Question 20. What Is The Difference Between Interface And Abstract Class?

Answer :

Abstract class defined with methods. Interface will declare only the methods. Abstract classes are very much useful when there is a some functionality across various classes. Interfaces are well suited for the classes which varies in functionality but with the same method signatures.

Question 21. What Do You Mean By Rmi And How It Is Useful?

Answer :

RMI is a remote method invocation. Using RMI, you can work with remote object. The function calls are as though you are invoking a local variable. So it gives you a impression that you are working really with a object that resides within your own JVM though it is somewhere.

Question 22. What Is The Protocol Used By Rmi?

Answer :

RMI-IIOP

Question 23. What Is A Hashcode?

Answer :

hashcode value for this object which is unique for every object.

Question 24. What Is A Thread?

Answer :

Thread is a block of code which can execute concurrently with other threads in the JVM.

Question 25. What Is The Algorithm Used In Thread Scheduling?

Answer :

Fixed priority scheduling.

Question 26. What Is Hash-collision In Hashtable And How It Is Handled In Java?

Answer :

Two different keys with the same hash value. Two different entries will be kept in a single hash bucket to avoid the collision.

Question 27. What Are The Different Driver Types Available In Jdbc?

Answer :

A JDBC-ODBC bridge
A native-API partly Java technology-enabled driver
A net-protocol fully Java technology-enabled driver
A native-protocol fully Java technology-enabled driver For more information.
Question 28. Is Jdbc-odbc Bridge Multi-threaded?

Answer No

Question 29. Does The Jdbc-odbc Bridge Support Multiple Concurrent Open Statements Per Connection?

Answer No

Question 30. What Is The Use Of Serializable?

Answer :

To persist the state of an object into any perminant storage device.