1. What is thread?

A thread is the path followed when executing a program. In Java, creating a thread is accomplished by implementing an interface and extending a class. This increases the performance of the execution.

1. What is the difference between multitasking and multithreading?

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| Multitasking | Multithreading |
| More than one program gets executed simultaneously | More than one part of the program gets executed simultaneously |
| It is a time-sharing process | It is a time-sharing process |
| Since each program occupies different memory location. Multitasking is a heavy weight process | Here each thread occupies same memory location it is a light weight process |

1. What is Enumeration?

**Enumeration** means a list of named constant. In Java, enumeration defines a class type. An Enumeration can have constructors, methods and instance variables. It is created using **enum** keyword. Each enumeration constant is *public*, *static* and *final* by default. Even though enumeration defines a class type and have constructors, you do not instantiate an **enum** using **new**. Enumeration variables are used and declared in much a same way as you do a primitive variable.

1. What is autoboxing?

Autoboxing is the automatic conversion that the Java compiler makes between the primitive types and their corresponding object wrapper classes.

1. What is wrapper class?

Wrapper classes provide a way to use primitive data types (int, boolean, etc..) as objects.

1. What is transient modifier?

The transient modifier tells the Java object serialization subsystem to exclude the field when serializing an instance of the class. When the object is then deserialized, the field will be initialized to the default value; i.e. null for a reference type, and zero or false for a primitive type.

1. What is generic class? write the syntax of generic?

A class, interface, or method that operates on a parameterized type is called generic, as in generic class or generic method.

Class Gen<T>

{

//Constructor

Gen<T> ()

{

}

Public static void main (String a [])

{

Gen<Integer> I = new Gen<Integer> ();

}

}

1. What is stream?

A stream is a sequence of objects that supports various methods which can be pipelined to produce the desired result.

1. What is predefined stream?

Java. Lang package defines a class called System, which encapsulates several aspects of the runtime environment. System also contains three predefined stream variables in, out, and err. These fields are declared as public, static, and final within system. This means that they can be used by any other part of our program and without reference to a specific system object.

1. What is multithreading?

Multithreaded program contains two or more parts that can run concurrently. Each part of such a program is called a thread and each thread defines a separate path of execution.

1. What is the use of toString ()?

The toString method is used to return a string representation of an object. If any object is printed, the toString() method is internally invoked by the java compiler.

1. What is deadlock?

Deadlock in java is a part of multithreading. Deadlock can occur in a situation when a thread is waiting for an object lock, that is acquired by another thread and second thread is waiting for an object lock that is acquired by first thread. Since, both threads are waiting for each other to release the lock, the condition is called deadlock.

1. Write inter thread communication methods?

Inter thread communication must be used in a synchronized block only.

Wait (): It tells the calling thread to give up the lock and go to sleep until some other thread enters the same monitor and calls notify ().

Notify (): It wakes up one single thread that called wait () on the same object. It should be noted that calling notify () does not actually give up a lock on a resource.

Notifyall (): It wakes up all the threads that called wait () on the same object.

1. Write the difference between the checked exception and un checked exception?

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| --- | --- |
| checked Exception | Unchecked Exception |
| Checked exceptions are also known as compile time exceptions | Unchecked exceptions are also known run time exceptions |
| Checked exception are propagated using throws keyword | Unchecked exception is automatically propagated |
| We can create custom exception by extending java. Lang exception class | By extending runtime exception we can create custom exception |

1. What is thread synchronization?

Thread Synchronization in java is the capability to control the access of multiple threads to any shared resource