Q2.

A Differentiate throw and throws

Solution:

|  |  |
| --- | --- |
| Throw | Throws |
| 1. used to declare an exception | 1. used to handle multiple exceptions |
| 1. throw keyword is used within the method. | 2. throws keyword is used with the method signature |
| 1. Syntax wise throw keyword is followed by the instance variable. | 3. Syntax wise throws keyword is followed by exception class names. |
| |  |  | | --- | --- | | 1. Checked exception cannot be propagated using throw only. |  | | 4.Checked exception can be propagated with throws. |
| 1. Example:   void m(){  throw new ArithmeticException("sorry");  } | 5.Example  void m()throws ArithmeticException{  //method code  } |

B. Difference between Abstract class and interfaces.

|  |  |
| --- | --- |
| Abstract Class | interfaces |
| 1. An abstract class can extend only one class or one abstract class at a time | 1. An interface can extend any number of interfaces at a time |
| 1. It contain  both abstract and concrete methods | 1. It contains only Abstract methods |
| 1. In abstract class keyword “abstract” is mandatory to declare a method as an abstract | . 3. In an interface keyword “abstract” is optional to declare a method as an abstract |
| 1. An abstract class can have protected and public abstract methods | 1. An Interface can have Only public abstract methods |

C. What are assertions in java?

Solution:

Assertion: it allows testing the correctness of any assumptions that have been made in the program.

It can be used using assert statement in java.

with a Boolean expression and can be written in two different ways.

assert expression;

or

assert expression1 : expression2;

D. Short note on try with resource in java?

Solution:

In Java, the try-with-resources statement is a try statement that declares one or more resources. The resource is as an object that must be closed after finishing the program. The try-with-resources statement ensures that each resource is closed at the end of the statement execution.

To pass any object that implements java.lang.AutoCloseable, which includes all objects which implement java.io.Closeable

try (resource declaration) {

// use of the resource

} catch (ExceptionType e1) {

// catch block

}

Explaiation:

we declare the try-with-resources statement by,

1. declaring and instantiating the resource within the try clause.
2. specifying and handling all exceptions that might be thrown while closing the resource.

E. Short note on serialization?

Solution:

Serialization: Serialization is a mechanism of converting the state of an object into a byte stream.

It is mainly used in Hibernate, RMI, JPA, EJB and JMS technologies.

The reverse operation of serialization is called deserialization where byte-stream is converted into an object. The serialization and deserialization process is platform-independent, it means you can serialize an object in a platform and deserialize in different platform.

For serializing the object, we call the **writeObject()** method ObjectOutputStream, and for deserialization we call the **readObject()** method of ObjectInputStream class.