# Assignment – 3

# Theory

1. What is Inheritance?

Ans: Inheritance can be defined as the process where one class acquires the properties (methods and fields) of another. With the use of inheritance, the information is made manageable in a hierarchical order.

The class which inherits the properties of other is known as subclass (derived class, child class) and the class whose properties are inherited is known as superclass (base class, parent class).

extends is the keyword used to inherit the properties of a class. Following is the syntax of extends keyword.

Syntax:

class Super {

.....

.....

}

class Sub extends Super {

.....

.....

}

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1. What is Multiple Inheritance?

Ans: Object Oriented Programming provides a user the feature of multiple inheritance, wherein a class can inherit the properties of more than a single parent class. In simpler terms, multiple inheritance means a class extending more than one class.

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1. What is the use of Super keyword?

Ans: The super keyword refers to superclass (parent) objects. It is used to call superclass methods, and to access the superclass constructor. The most common use of the super keyword is to eliminate the confusion between super classes and subclasses that have methods with the same name.

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1. What is abstract method in java?

Ans: A method without body (no implementation) is known as abstract method. A method must always be declared in an abstract class, or in other words you can say that if a class has an abstract method, it should be declared abstract as well.

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1. What is abstract class?

Ans: A class that is declared using “abstract” keyword is known as abstract class. It can have abstract methods (methods without body) as well as concrete methods (regular methods with body). ... An abstract class cannot be instantiated, which means you are not allowed to create an object of it.

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1. What is the use of final modifier in java?

Ans:

1) The final is a modifier in Java, which can be applied to a variable, a method or a class.

2) When a final modifier is used with a class then the class cannot be extended further. This is one way to protect your class from being sub classed and often sensitive classes are made final due to security reason. This is also one of the reasons why String and wrapper classes are final in Java.

3) When the final keyword is used with a method that it cannot be overridden in Java, which means you cannot override the logic of the method in the subclass. This is also done to protect the original logic of method.

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1. What is interface? Write the syntax interface?

Ans: The interface in Java is a mechanism to achieve abstraction. There can be only abstract methods in the Java interface, not method body. It is used to achieve abstraction and multiple inheritance in Java. In other words, you can say that interfaces can have abstract methods and variables.

interface <interface name> {

// declare constant fields

// declare methods that abstract

// by default.

}

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1. What is package?

Ans: A Java package organizes Java classes into namespaces, providing a unique namespace for each type it contains. Classes in the same package can access each other's package-private and protected members.

1. What is exception?

Ans: Exception: Exception are events that occur during the execution of programs that disrupt the normal flow of instructions.

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1. What is the use of finally block?

Ans: Java finally block is always executed whether exception is handled or not. It identifies a block of statements that needs to be executed regardless of whether or not an exception occurs within the try block.