Lab 1

1. **Object**

An object is an instance of a class. The state of an object is stored in variables, while functions display the object's behavior.

Person john;

1. **Class**

A class is a user defined blueprint or prototype from which objects are created.  It represents the set of properties or methods that are common to all objects of one type.

Public class Student {}

1. **Instantiation of object**

Instantiation is the creation of a new instance of a class when an object is an instance of a class.

Person john = new Person();

1. **Visibility**

An interface can be declared public to make it visible outside its package. Under the default visibility, an interface is visible only inside its package. You can find 4 types of visibility. Default, private, public and protected.

private int grade;

public int getNewGrade() {}

1. **Member datas / methods**

Member data is a variable of an object. Method is same as a function. Method performs an action on data and returns a result or not.

john.setAge(18);

john.setName(“John Titor”);

1. **Inheritance**

**Inheritance in Java** is a mechanism in which one object acquires all the properties and behaviors of a parent object.

Public class MainActivity extends OtherActivity {}

1. **Interface**

Like a class, an interface can have methods and variables, but the methods declared in an interface are by default abstract.

Public interface tutor {}

1. **Polymorphism**

The word polymorphism means having many forms. In simple words, we can define polymorphism as the ability of a message to be displayed in more than one form.

1. **Overriding**

Overriding is a feature that allows a subclass or child class to provide a specific implementation of a method that is already provided by one of its super-classes or parent classes.

class Student extends Courses {

@Override

Void show()

{

System.out.println(“Student’s show()”);

}

}

1. **Abstract classes**

An abstract class is a superclass that cannot be instantiated and is used to state or define general characteristics.

Abstract public class Student {

Private String FirstName;

Private String LastName;

}