Guided LAB - 303.9.2 - Basic Inheritance Example

Introduction

The process by which one class acquires the properties (data members) and functionalities (methods) of another class is called **inheritance**. The aim of inheritance is to provide the reusability of code so that a class has to write only the unique features, and the rest of the common properties and functionalities can be extended from the other class.

Lab Overview:

In this lab, we will explore and demonstrate Java Inheritance.

Learning Objective:

By the end of this lab, Learners will be able to use Inheritance in Java.

Instruction:

Child Class:

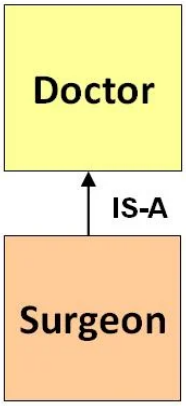
The class that extends the features of another class is known as a child class, subclass, or derived class.

Parent Class:

The class whose properties and functionalities are used (inherited) by another class is known as the parent class, superclass, or base class.

Begin

In this lab, we have a base class, **"Doctor,"** and a subclass, **"Surgeon."**



Step 1: Create a Java project named "**inheritanceDemo.**"

Step 2: Create a class named **Doctor,** and add the code below.

Doctor.java class

```
public class Doctor {
   String DoctorName;
   String Department;
  public void Doctor_Details() {
       System.out.println("Doctor Details...");
   }
}
```

Step 3: Create a class named **Surgeon,** and add the code below.

Surgeon.java class

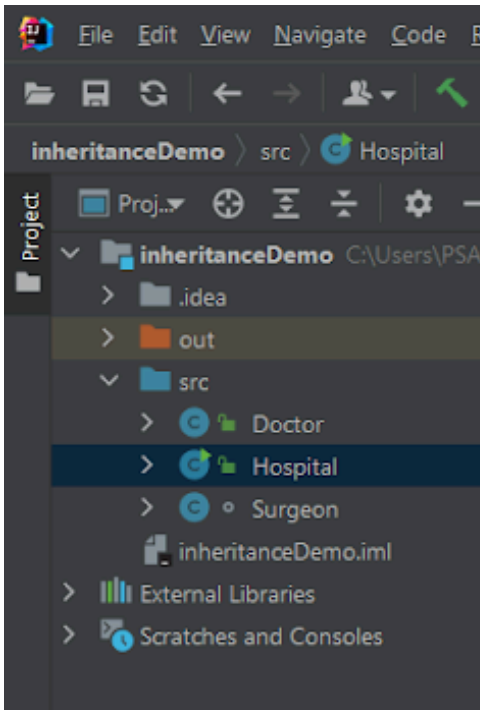
```
public class Surgeon extends Doctor {
   void Surgeon_Details() {
       System.out.println("Surgeon  Detail...");
       System.out.println(Department = "Cardio");
   }
}
```

Step 4: Create a class named **Hospital.** In this class, we will create a **main()** method.

Hospital.java class

```
public class Hospital {
   public static void main(String args[]) {
       Surgeon s = new Surgeon();
       s.Doctor_Details();
       s.Surgeon_Details();
   }
}
```

The project hierarchy will look like this:



Step 5: Run your Java Project.

Output on Console:

```
Doctor Details...
Surgeon Detail...
Cardio
```

Based on the above example, we can say that Surgeon IS-A Child. This means a child class has an IS-A relationship with the parent class. This inheritance is known as the IS-A relationship between the child and parent class.

Submission Instructions:

Include the following deliverables in your submission -

- Submit your source code using the Start Assignment button in the top-right corner of the assignment page in Canvas.

CANVAS STAFF USE ONLY: Canvas Submission Guideline:

Instructions for Canvas Assignment Creation
Assignment Name: GLAB - 303.9.2 Basic Inheritance Example **Points:** 100 **Assignment Group**: Module 303: Java SE Review (Not Graded) **Display Grade As:** Complete/Incomplete **Do not count this assignment towards the final grade:** Checked **Submission Types**: File uploads **Everything else is the default.**