Assignment 1

You are building a class Book with a constructor that accepts a title and an author. However, when creating a Book object using:

Book b = new Book();

You get a **compile-time error**.

public class Book {

    String title;

    String author;

    public Book(String title, String author) {

        this.title = title;

        this.author = author;

    }

}

**Question:**  
What is the reason for the compile-time error?

C. There is no default constructor defined

**2. Scenario: Method Overloading or Overriding?**

class Vehicle {

    void start() {

        System.out.println("Vehicle starting");

    }

}

class Car extends Vehicle {

    void start(String mode) {

        System.out.println("Car starting in " + mode + " mode");

    }

}

**Question:**  
If you run this:

Car car = new Car();

car.start();

What will be printed?

A. Vehicle starting  
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**3. Scenario: Tricky Reference Behavior**

class A {

    int num = 10;

}

public class Test {

    public static void main(String[] args) {

        A obj1 = new A();

        A obj2 = obj1;

        obj2.num = 20;

        System.out.println(obj1.num);

    }

}

**Question:**  
What will be printed and why?

B. 20 — obj2 and obj1 refer to the same object  
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**4. Scenario: Object Nullification**

public class Test {

    public static void main(String[] args) {

        String s = "abc";

        s = null;

        System.out.println(s.length());

    }

}

**Question:**  
What will be the result?

C. NullPointerException