

Aim:

Write a Java program that demonstrates constructor overloading in a class named **Book**. The **Book** class should have the following attributes:

- title (String)
- author (String)
- pageCount (int)

Implement the following constructors in the **Book** class:

1. A default constructor that initializes the title and author to "Unknown Title" and "Unknown Author," respectively, and sets pageCount to 0.
2. A constructor that takes **title** and **author** as parameters and initializes the corresponding attributes. The **pageCount** should be set to 0.
3. A constructor that takes **title**, **author**, and **pageCount** as parameters and initializes the corresponding attributes.

Additionally, include a method named **displayBookDetails** that prints the details of the book, including the **title**, **author**, and **pageCount**.

Source Code:**Book.java**

```
import java.util.Scanner;

public class Book {
    //Attributed of the Book class
    private String title;
    private String author;
    private int pageCount;

    //default constructor
    public Book(){
        this.title = "Unknown Title";
        this.author = "Unknown Author";
        this.pageCount = 0;
    }

    //Constructor with title and author parameters
    public Book(String title, String author) {
        this.title = title;
        this.author = author;
        this.pageCount = 0;
    }

    //Constructor with title,author,and pageCount parameters
    public Book(String title, String author, int pageCount){
        this.title= title;
        this.author = author;
        this.pageCount = pageCount;
    }

    //Method to display book details
    public void displayBookDetails(){
        System.out.println("Title: "+ title);
        System.out.println("Author: "+ author);
    }
}
```

```

System.out.println("Page Count: "+ pageCount);
}

public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    // Taking user inputs for Book 1
    System.out.println("Details for Book 1:");
    System.out.print("Title: ");
    String title1 = scanner.nextLine();
    System.out.print("Author: ");
    String author1 = scanner.nextLine();

    // Creating Book 1 using the constructor with title and author parameters
    Book book1 = new Book(title1, author1);

    // Taking user inputs for Book 2
    System.out.println("Details for Book 2:");
    System.out.print("Title: ");
    String title2 = scanner.nextLine();
    System.out.print("Author: ");
    String author2 = scanner.nextLine();
    System.out.print("Page Count: ");
    int pageCount2 = scanner.nextInt();

    // Creating Book 2 using the constructor with all parameters
    Book book2 = new Book(title2, author2, pageCount2);

    // Displaying details of each book
    System.out.println("Book 1:");
    book1.displayBookDetails();

    System.out.println("Book 2:");
    book2.displayBookDetails();

    // Close the scanner
    scanner.close();
}
}

```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Details for Book 1: Introduction to Java Programming
Title: Introduction to Java Programming
Author: John Smith
Details for Book 2: Data Structures and Algorithms
Title: Data Structures and Algorithms
Author: Alice Johnson
Page Count: 350
Book 1:
Title: Introduction to Java Programming
Author: John Smith

Page Count: 0
Book 2:
Title: Data Structures and Algorithms
Author: Alice Johnson
Page Count: 350