

TOPIC : Use the `this` keyword in `Book` class constructors and setters to refer to instance variables.

AIM:

To implement a `Book` class using the `this` keyword in constructors and setters to refer to instance variables.

ALGORITHM:

1. Start the program.
2. Define a `Book` class with instance variables `title`, `author`, and `price`.
3. Create a constructor and use the `this` keyword to initialize instance variables.
4. Define setter methods and use the `this` keyword to assign parameter values to instance variables.
5. Create a method to display book details.
6. In the `main` method, create a `Book` object, set values, and display details.
7. Stop the program.

PROGRAM:

```
package assignment;

public class Book {

    private String title;

    private String author;

    private double price;

    public Book(String title, String author, double price) {

        this.title = title;

        this.author = author;

        this.price = price;

    }

    public void setTitle(String title) { this.title = title; }

    public void setAuthor(String author) { this.author = author; }

    public void setPrice(double price) { this.price = price; }

    public String getTitle() { return title; }

    public String getAuthor() { return author; }

    public double getPrice() { return price; }

    public void displayBook() {

        System.out.println("Title : " + title);

        System.out.println("Author : " + author);

    }

}
```

```
System.out.println("Price : Rs. " + price);

System.out.println("-----");

}
```

```
public static void main(String[] args) {
```

```
    Book b1 = new Book("Java Programming", "James Gosling", 550.0);

    Book b2 = new Book("Python Basics", "Guido van Rossum", 450.0);

    System.out.println("Initial Book Details:");

    b1.displayBook();

    b2.displayBook();

    b1.setPrice(600.0);

    b2.setAuthor("Rossum G.");

    System.out.println("Updated Book Details:");

    b1.displayBook();

    b2.displayBook();

}
```

OUTPUT:

```
Initial Book Details:
Title : Java Programming
Author : James Gosling
```

Price : Rs. 550.0

Title : Python Basics

Author : Guido van Rossum

Price : Rs. 450.0

Updated Book Details:

Title : Java Programming

Author : James Gosling

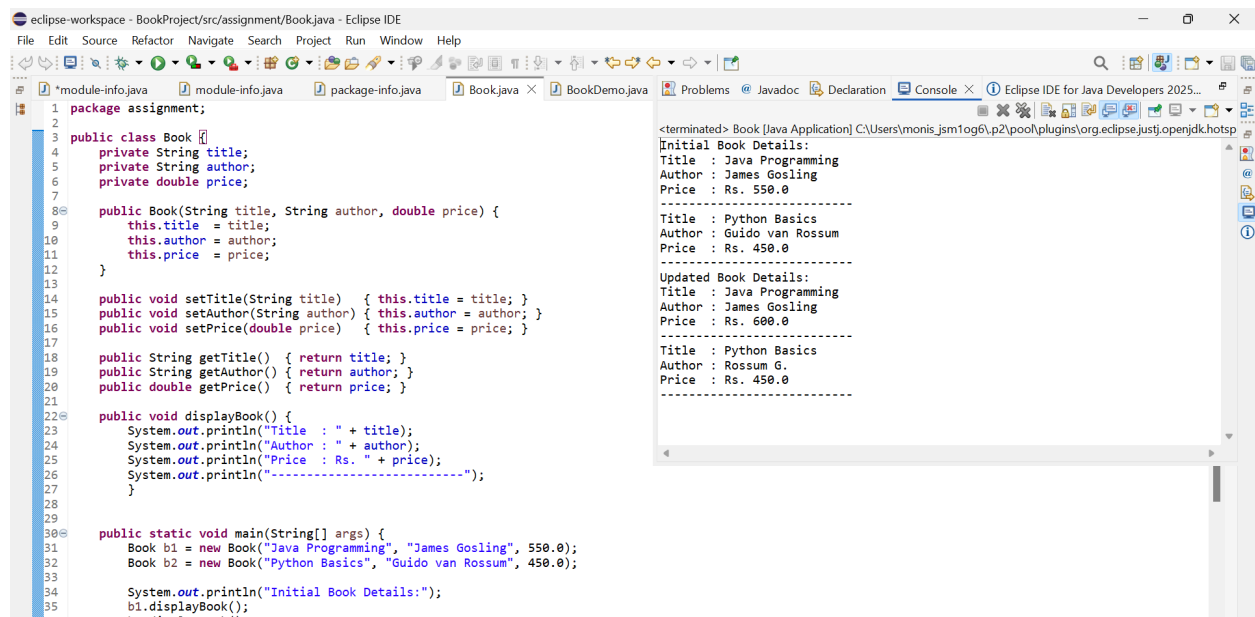
Price : Rs. 600.0

Title : Python Basics

Author : Rossum G.

Price : Rs. 450.0

SCREENSHOT:



The screenshot shows the Eclipse IDE interface. The left pane displays the source code for a Java application named 'BookDemo.java'. The code defines a 'Book' class with attributes 'title', 'author', and 'price', and methods for setting and getting these attributes, as well as a 'displayBook()' method. The 'main' method creates two 'Book' objects: 'b1' (Java Programming, James Gosling, 550.0) and 'b2' (Python Basics, Guido van Rossum, 450.0). The right pane shows the console output, which displays the initial book details for 'b1' and then the updated details for 'b2' after the 'displayBook()' method is called.

```
1 package assignment;
2
3 public class Book {
4     private String title;
5     private String author;
6     private double price;
7
8     public Book(String title, String author, double price) {
9         this.title = title;
10        this.author = author;
11        this.price = price;
12    }
13
14    public void setTitle(String title) { this.title = title; }
15    public void setAuthor(String author) { this.author = author; }
16    public void setPrice(double price) { this.price = price; }
17
18    public String getTitle() { return title; }
19    public String getAuthor() { return author; }
20    public double getPrice() { return price; }
21
22    public void displayBook() {
23        System.out.println("Title : " + title);
24        System.out.println("Author : " + author);
25        System.out.println("Price : Rs. " + price);
26        System.out.println("-----");
27    }
28
29
30    public static void main(String[] args) {
31        Book b1 = new Book("Java Programming", "James Gosling", 550.0);
32        Book b2 = new Book("Python Basics", "Guido van Rossum", 450.0);
33
34        System.out.println("Initial Book Details:");
35        b1.displayBook();
36        b2.displayBook();
37    }
38 }
```

<terminated> Book [Java Application] C:\Users\monis_jsm1og6\p2\pool\plugins\org.eclipse.justj.openjdk.hotsp
Initial Book Details:
Title : Java Programming
Author : James Gosling
Price : Rs. 550.0

Title : Python Basics
Author : Guido van Rossum
Price : Rs. 450.0

Updated Book Details:
Title : Java Programming
Author : James Gosling
Price : Rs. 600.0

Title : Python Basics
Author : Rossum G.
Price : Rs. 450.0

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