Day 13: Abstract Classes 🔖

by **Shafaet**

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Objective

Today, we're taking what we learned yesterday about *Inheritance* and extending it to *Abstract Classes*. Because this is a very specific Object-Oriented concept, submissions are limited to the few languages that use this construct. Check out the Tutorial tab for learning materials and an instructional video!

Task

Given a *Book* class and a *Solution* class, write a *MyBook* class that does the following:

- Inherits from *Book*

- Has a parameterized constructor taking these **3** parameters:

  1. string *title*

  2. string *author*

  3. int *price*

- Implements the *Book* class' abstract *display()* method so it prints these **3** lines:

  1. `Title:`, a space, and then the current instance's *title*.

  2. `Author:`, a space, and then the current instance's *author*.

  3. `Price:`, a space, and then the current instance's *price*.

Note: Because these classes are being written in the same file, you must not use an access modifier (e.g.: `public`) when declaring *MyBook* or your code will not execute.

Input Format

You are not responsible for reading any input from stdin. The *Solution* class creates a *Book* object and calls the *MyBook* class constructor (passing it the necessary arguments). It then calls the *display* method on the *Book* object.

Output Format

The ***void display()*** method should print and label the respective ***title***, ***author***, and ***price*** of the *MyBook* object's instance (with each value on its own line) like so:

```
Title: $title
Author: $author
Price: $price
```

Note: The **$** is prepended to variable names to indicate they are placeholders for variables.

Sample Input

The following input from stdin is handled by the locked stub code in your editor:
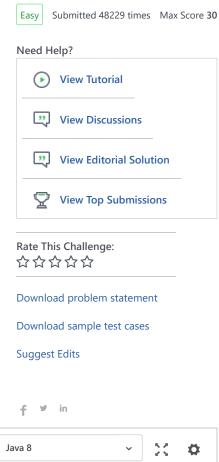
```
The Alchemist
Paulo Coelho
248
```

Sample Output

The following output is printed by your *display()* method:

```
Title: The Alchemist
Author: Paulo Coelho
Price: 248
```

Easy   Submitted 48229 times   Max Score **30**

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Current Buffer (saved locally, editable) ⑂ 🕘   Java 8   ⌄   ⤢   ⚙

```java
 1 ▶ import ↔;
 2
 3 ▾ abstract class Book {
 4       String title;
 5       String author;
 6
 7 ▾     Book(String title, String author) {
 8           this.title = title;
 9           this.author = author;
10       }
11
12       abstract void display();
13   }
14 ▾ class MyBook extends Book {
15       int price;
16
17 ▾     /**
18        * Class Constructor
19        *
20        * @param title  The book's title.
21        * @param author The book's author.
```

```java
22         * @param price   The book's price.
23         **/
24    // Write your constructor here
25
26 ▼    MyBook(String title, String author, int price) {
27            super(title, author);
28            this.price = price;
29        }
30
31 ▼    /**
32         * Method Name: display
33         * <p>
34         * Print the title, author, and price in the specified format.
35         **/
36    // Write your method here
37        @Override
38 ▼    void display() {
39            System.out.println("Title: " + title);
40            System.out.println("Author: " + author);
41            System.out.println("Price: " + price);
42        }
43    }
44
45    // End class
46 ▼ public class Solution {
47
48 ▼    public static void main(String[] args) {
49            Scanner scanner = new Scanner(System.in);
50            String title = scanner.nextLine();
51            String author = scanner.nextLine();
52            int price = scanner.nextInt();
53            scanner.close();
54
55            Book book = new MyBook(title, author, price);
56            book.display();
57        }
58    }
```

Line: 52 Col: 39

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

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Testcase 0 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
The Alchemist
Paulo Coelho
248
```

Your Output (stdout)

```
Title: The Alchemist
Author: Paulo Coelho
Price: 248
```

Expected Output

```
Title: The Alchemist
Author: Paulo Coelho
Price: 248
```

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