

# Online Java Compiler IDE

```
1  import java.util.ArrayList;
2  import java.util.List;
3  import java.util.concurrent.ExecutorService;
4  import java.util.concurrent.Executors;
5
6  // Book class representing a book in the online bookstore
7  class Book {
8      private String title;
9      private double price;
10
11     public Book(String title, double price) {
12         this.title = title;
13         this.price = price;14 }
14
15     public String getTitle() {
16         return title;18
17     }
18
19     public double getPrice() {
20         return price;22
21     }
22
23 }
24
25 // User class representing a user in the online bookstore
26 class User {
27     private String name;
28
29     public User(String name) {
30         this.name = name;31
31     }
32
33     public String getName() {
34         return name;35}
35
36 }
37
38 // ShoppingCart class representing the shopping cart for each user
39 class ShoppingCart {
40     private List<Book> books;
41
42     public ShoppingCart() {
43         books = new ArrayList<>();44 }
44
45     public void addToCart(Book book) {
46         books.add(book);48
47     }
48
49     public List<Book> getBooks() {
50         return books;52
51     }
52
53     public double getTotalPrice() {
54         double totalPrice = 0.0;
55         for (Book book : books) {
56             totalPrice += book.getPrice();58
57         }
58         return totalPrice;
59     }
60 }
61 }
62
```

```

63 // OnlineBookstore class representing the online bookstore
64 class OnlineBookstore {
65     private List<Book> books;
66
67     public OnlineBookstore(List<Book> books) {
68         this.books = books;69 }
69
70
71     public synchronized void purchase(User user, Book book) {
72         System.out.println(user.getName() + " is purchasing: " + book.getTitle());
73         // Simulate some processing time for purchasing the book
74         try {
75             Thread.sleep(200);
76         } catch (InterruptedException e) {
77             e.printStackTrace();78
78         }
79         System.out.println("Purchase completed for: " + book.getTitle());
80     }
81 }
82
83 public class Main {
84     public static void main(String[] args) {
85         // Create some books for the online bookstore
86         List<Book> books = new ArrayList<>();
87         books.add(new Book("Book 1", 10.0));
88         books.add(new Book("Book 2", 15.0));
89         books.add(new Book("Book 3", 20.0));
90
91         // Create the online bookstore
92         OnlineBookstore bookstore = new OnlineBookstore(books);
93
94         // Create some users
95         User user1 = new User("User 1");
96         User user2 = new User("User 2");
97         User user3 = new User("User 3");
98
99         // Create a thread pool to simulate multiple users
100        ExecutorService executorService = Executors.newFixedThreadPool(3);
101
102        // Simulate multiple users making purchases concurrently
103        executorService.submit(() -> bookstore.purchase(user1, books.get(0)));
104        executorService.submit(() -> bookstore.purchase(user2, books.get(1)));
105        executorService.submit(() -> bookstore.purchase(user3, books.get(2)));
106
107        // Shutdown the thread pool
108        executorService.shutdown();
109    }
110 }
111

```

## Result

**CPU Time: 0.22 sec(s), Memory: 36120 kilobyte(s)**

**compiled and executed in 1.54 sec(s)**

```

User 1 is purchasing: Book 1
Purchase completed for: Book 1
User 3 is purchasing: Book 3
Purchase completed for: Book 3
User 2 is purchasing: Book 2
Purchase completed for: Book 2

```