

# OOCCJ MINI PROJECT 2022

## Bookstore System

# Group Members =

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# Work Distribution =

Name	Contribution
Rohan Nair	File Reading and Object Creation of Buffered Reader Class
Dhairya Hindoriya & Prajwal Mandavgane	Creation and Display of Text Document using the awt package of java and the creation of .jar + .exe file
Sudhanshu Kale	Test Cases and Exception Handling

**Introduction:** We have implemented a java program to stimulate the bookstore system. This system has features like user can request for which book he prefers to buy, then we can edit and view the remaining count of that specific book in the database, and at the same time we can buy any other book also. This Book store, also gives user the Receipt of the Product purchased.

**Methodology used:** We have applied the concept of File Handling in java and used several libraries for that purpose.

### Libraries used:

1. java.io.File - The File class is Java's representation of a file or directory pathname. Using this we have taken the .txt files in the program.
2. Java.io.FileWriter - Java FileWriter class of java.io package is used to write data in character form to file.
3. Java.io.IOException - IOException is the base class for exceptions thrown while accessing information using streams, files and directories. The Base Class Library includes the following types, each of which is a derived class of IOException, DirectoryNotFoundException, EOFException and FileNotFoundException.
4. Java.util.Scanner: The Scanner class is used to get user input, and it is found in the java.util package.

### **\*Code:-**

```
package Books;
import java.util.*;
import java.awt.Desktop;
import java.io.*;
import java.util.Scanner;
// These all are used to deal with the Files

public class Minigrp {
    // The public class of java and the file name

    static Scanner in = new Scanner(System.in);
    // This is to take the inputs from the users

    static String PathName1 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\BooksName.txt";
    static String PathName2 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\AuthorsName.txt";
    static String PathName3 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\Quantity.txt";
    static String PathName4 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\Price.txt";
    static String PathName5 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\Temp.txt";
    static String PathName6 = "C:\\Users\\Dhairya Hindoriya\\eclipse-
workspace\\Books\\Receipt.txt";
    // These are the PathNames of the files that contains the information of the
    Book Store

    static String ans;
    // This is to ask user whether he wants to proceed the transaction or not

    public static void main(String[] args) {
        // The Driver method

        int TOTAL_BOOKS_SOLD = 0;
        // Total books bought by the user
```

```

System.out.println(" ");
    System.out.println("----- Welcome to OOP Mini Project Book Store -----");
    System.out.println(" ");

    while (true) {

        System.out.print("Do you want to buy any Book(yes/no): ");
        String answer = in.next();
        System.out.println(" ");

        if (answer.equals("no")) {
            System.out.println("No Problem, Thanks for visiting !");
            System.out.println("Total Books sold were: " + TOTAL_BOOKS_SOLD);

            System.out.println(" ");
            System.out.print("Press any key to exit...");
            BufferedReader input = new BufferedReader(new
InputStreamReader(System.in));

            try {
                input.readLine();
            }
            catch (Exception e) {
                System.out.println(e);
            }

            return;
        }

        else if (answer.equals("yes")) {

            System.out.print("Enter the Name of the Book that you want to buy: ");
            in.nextLine();
            String Name = in.nextLine();
            System.out.println(" ");

            try {

```

```
File Book_Name = new File(PathName1);
File Author_Name = new File(PathName2);
File Quantity = new File(PathName3);
File Price = new File(PathName4);
File Temp = new File(PathName5);
// Opening all the necessary files

Scanner BookName = new Scanner(Book_Name);
Scanner AuthorName = new Scanner(Author_Name);
Scanner QuantityAvailable = new Scanner(Quantity);
Scanner PricePerBook = new Scanner(Price);
// Using Scanner Objects to read from the Files

int count = 0;
int num = 0;

while (BookName.hasNextLine()) {

    count++;
    String temp1 = BookName.nextLine();

    if (temp1.equals(Name)) {
        // If the Book is found, Display all the details of the Book
        System.out.println("Book Name: " + temp1);
        System.out.println("Book ID: " + count);

        for (int i = 0; i < count - 1; i++) {
            AuthorName.nextLine();
            QuantityAvailable.nextLine();
            PricePerBook.nextLine();
        }

        String temp2 = AuthorName.nextLine();
        int temp3 = QuantityAvailable.nextInt();
        int temp4 = PricePerBook.nextInt();
        System.out.println("Author Name: " + temp2);
        System.out.println("Available Quantity: " + temp3);
```

```

System.out.println("Price of One Book: " + temp4);
    System.out.println(" ");

    do {

        System.out.print("Enter the Number of Copies you want to
buy: ");

        num = in.nextInt();
        // Asking the User, how many copies are needed

        if (num > temp3) {
            System.out.println("Sorry but only " + temp3 + " copies are
left");

            System.out.println(" ");
        }

    }
    while (num > temp3);

    System.out.println(" ");

    Calculate_Price(num, temp4, temp1, temp2);
    // This will Calculate the Price to be paid by the user

    if (ans.equals("yes") && Temp.createNewFile()) {

        Scanner QuantityModify = new Scanner(Quantity);
        FileWriter modify = new FileWriter(PathName5);
        // This is to modify the information in the Inventory

        int i = 1;

        while (i != count) {
            modify.write(QuantityModify.nextInt() + "\n");
            i++;
        }
        // This loop is used to change the quantities of the sold book

        modify.write(temp3 - num + "\n");
    }

```

```
i += 1;
```

```
QuantityModify.nextInt();
```

```
while (i != 101) {  
    modify.write(QuantityModify.nextInt() + "\n");  
    i++;  
}
```

```
modify.close();  
QuantityModify.close();  
// Closing the Scanners and FileWriters
```

```
}  
break;  
}
```

```
else if (!BookName.hasNextLine()){  
    count += 1;  
}
```

```
else {  
    continue;  
}  
}
```

```
if (!BookName.hasNextLine() && count != 100) {  
    System.out.println("Sorry but this Book is not available right now");  
    System.out.println(" ");
```

```
BookName.close();  
AuthorName.close();  
QuantityAvailable.close();  
PricePerBook.close();  
// Closing the Scanners and FileWriters
```

```
}
```

```
else if (ans.equals("no")){
```

```
    BookName.close();  
    AuthorName.close();  
    QuantityAvailable.close();  
    PricePerBook.close();  
    // Closing the Scanners and FileWriters
```

```
}
```

```
else {
```

```
    BookName.close();  
    AuthorName.close();  
    QuantityAvailable.close();  
    PricePerBook.close();  
    // Closing the Scanners and FileWriters
```

```
    Quantity.delete();  
    Temp.renameTo(Quantity);  
    Temp.delete();  
    TOTAL_BOOKS_SOLD += num;
```

```
}
```

```
}
```

```
catch (Exception e) {
```

```
    System.out.println(" ");  
    System.out.println("Error has occurred");  
    System.out.println(e);  
    System.out.println(" ");  
    if (e.toString().contains("Input")) {  
        String temp = in.next();  
    }
```

```
}
```

```
}
```

```
else {
```

```
    System.out.println("Please Enter the Correct data !");
```

```
System.out.println(" ");
    }
}
}
```

```
private static void Calculate_Price(int quantity, int price, String Book, String
Author) throws IOException {
```

```
    int total = price * quantity;
    System.out.println("Total Amount to be paid: " + total);
    System.out.println(" ");
```

```
    while (true) {
```

```
        System.out.print("Would you like to proceed the transaction(yes/no): ");
        ans = in.next();
        System.out.println(" ");
```

```
        if (ans.equals("yes")) {
```

```
            System.out.print("Please enter your Name: ");
            in.nextLine();
            String name = in.nextLine();
            System.out.print("Please enter your Mobile number: ");
            long phone = in.nextLong();
            System.out.println(" ");
            System.out.println("Thank you for visiting, Here is your Receipt");
            System.out.println(" ");
```

```
            File Receipt = new File(PathName6);
            // Creating a new Text File to Display the Receipt
            if (Receipt.createNewFile()){
```

```
                FileWriter info = new FileWriter(PathName6);
                info.write("----- OOP MINI PROJECT BOOK STORE -----\\n");
                info.write(" \\n");
```



```

info.write("Name: " + name + "\n");
    info.write("Mobile number: " + phone + "\n");
    info.write("Name of the Purchased Book: " + Book + "\n");
    info.write("Name of Author: " + Author + "\n");
    info.write("Number of copies purchased: " + quantity + "\n");
    info.write("Total Amount: " + total + "\n");
    info.write("Paid Amount: " + total + "\n");
    info.write(" \n");
    info.write("Transaction Successful\n");
    // Writing the information inside the Receipt

    info.close();
    Desktop desktop = Desktop.getDesktop();
    desktop.open(Receipt);

}

Receipt.deleteOnExit();
break;
}

else if (ans.equals("no")) {
    return;
}

else {
    System.out.println("Please enter the correct data !");
    System.out.println(" ");
}

}

}

}

```

----- OOCJJ MINI PROJECT BOOK STORE -----

Name: Sahaj Mishra  
Mobile number: 9479818333  
Name of the Purchased Book: A  
Song of India Name of Author:  
Ruskin Bond  
Number of copies purchased: 3  
Total Amount: 1350

Paid Amount: 1350

Transaction Successful

Do you want to buy any Book(yes/no): yes

Enter the Name of the Book that you want to buy: A Song of India

Book Name: A Song of India

Book ID: 100

Author Name: Ruskin Bond

Available Quantity: 1

Price of One Book: 450

Enter the Number of Copies you want to buy: 1

Total Amount to be paid: 450

Would you like to proceed the transaction(yes/no): no

Do you want to buy any Book(yes/no): no

No Problem, Thanks for visiting !

Total Books sold were: 3

Press any key to exit...

Program executed with exit code 0