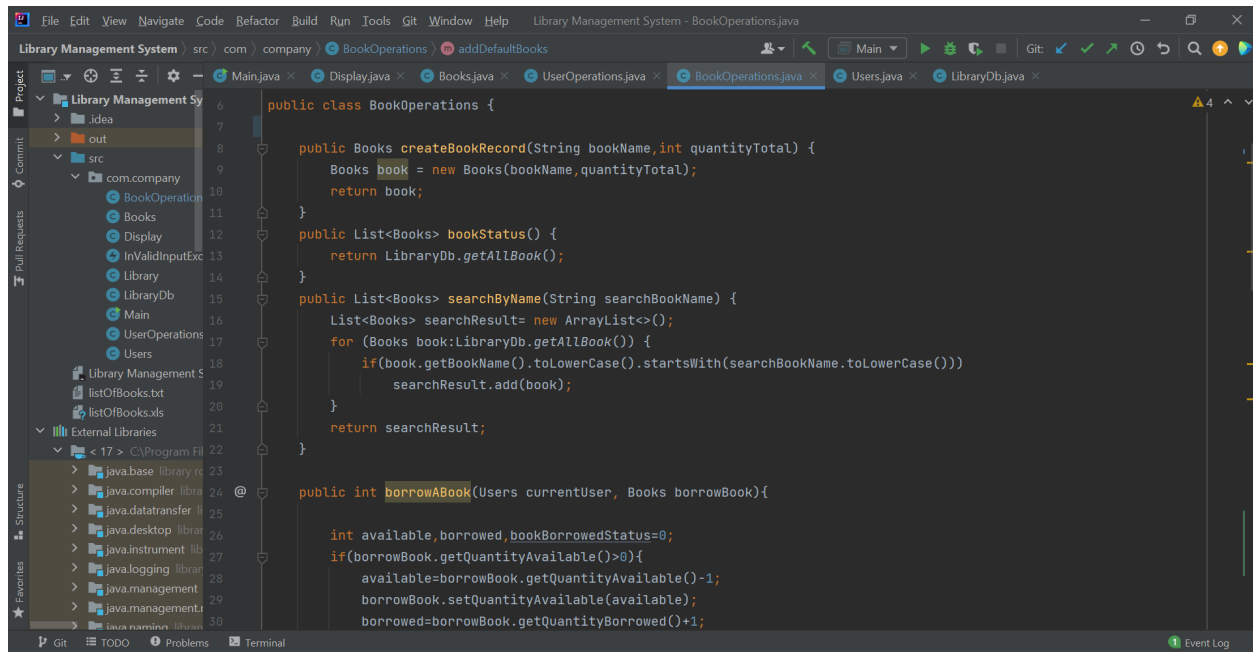


I worked on the console app library management system. It had two main responsibilities ie: Book Operations and User Operations. At first I had the functions to display the book details in BookOperations class and user details in UserOperations class. But later came to know that displaying or printing is not the responsibility of BookOperations class or UserOperations class. So I created another Display class for displaying all the book details and user details.

BookOperations class:



```
public class BookOperations {

    public Books createBookRecord(String bookName,int quantityTotal) {
        Books book = new Books(bookName,quantityTotal);
        return book;
    }

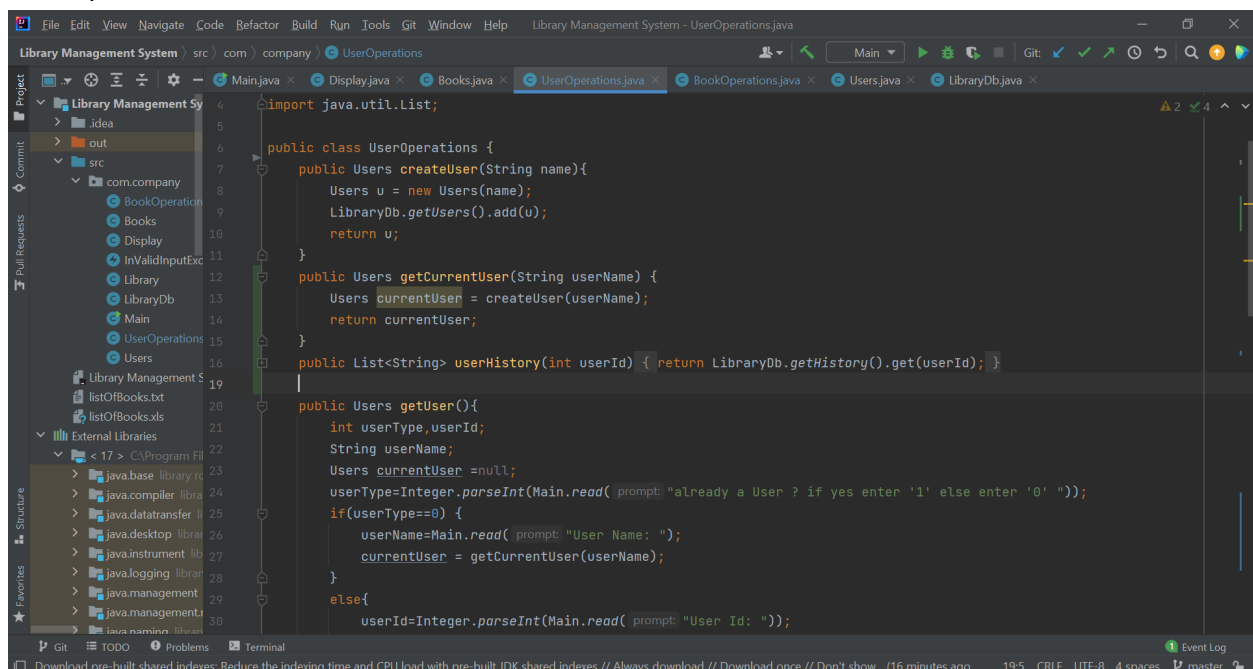
    public List<Books> bookStatus() {
        return LibraryDb.getAllBook();
    }

    public List<Books> searchByName(String searchBookName) {
        List<Books> searchResult= new ArrayList<>();
        for (Books book:LibraryDb.getAllBook()) {
            if(book.getBookName().toLowerCase().startsWith(searchBookName.toLowerCase()))
                searchResult.add(book);
        }
        return searchResult;
    }

    public int borrowABook(Users currentUser, Books borrowBook){

        int available,borrowed,bookBorrowedStatus=0;
        if(borrowBook.getQuantityAvailable(>0){
            available=borrowBook.getQuantityAvailable()-1;
            borrowBook.setQuantityAvailable(available);
            borrowed=borrowBook.getQuantityBorrowed()+1;
        }
    }
}
```

UserOperations class:



```
import java.util.List;

public class UserOperations {

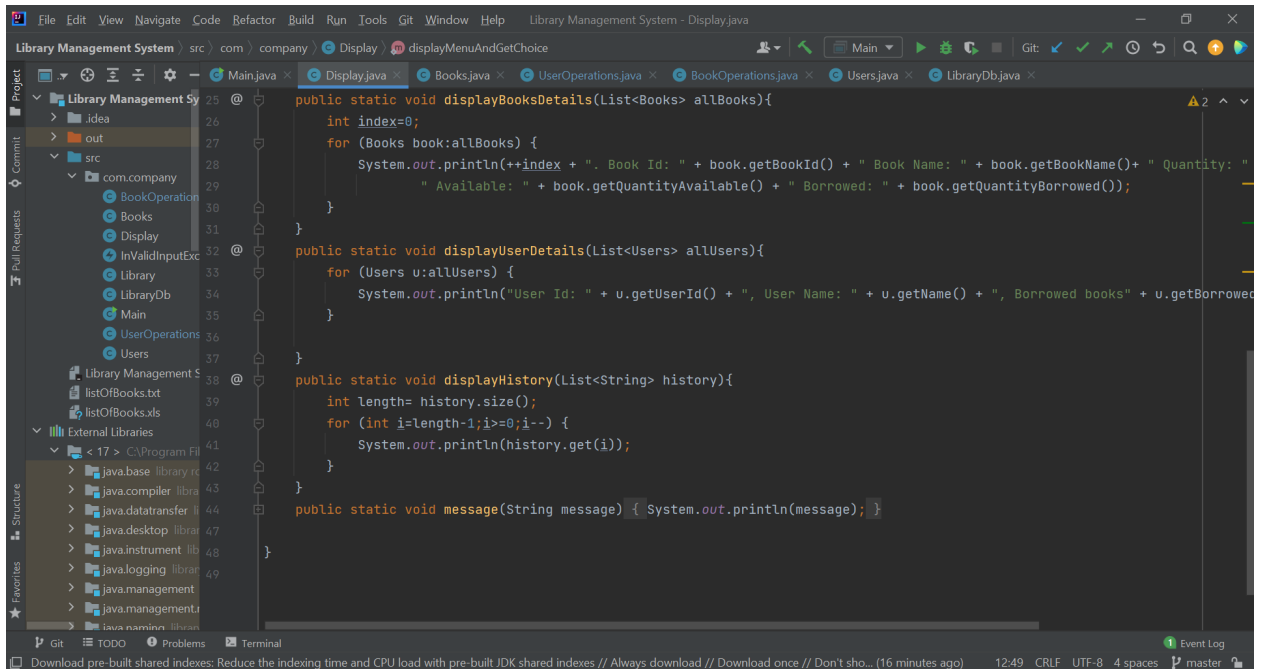
    public Users createUser(String name){
        Users u = new Users(name);
        LibraryDb.getUsers().add(u);
        return u;
    }

    public Users getCurrentUser(String userName) {
        Users currentUser = createUser(userName);
        return currentUser;
    }

    public List<String> userHistory(int userId) { return LibraryDb.getHistory().get(userId); }

    public Users getUser(){
        int userType,userId;
        String userName;
        Users currentUser =null;
        userType=Integer.parseInt(Main.read( prompt: "already a User ? if yes enter '1' else enter '0' "));
        if(userType==0) {
            userName=Main.read( prompt: "User Name: ");
            currentUser = getCurrentUser(userName);
        }
        else{
            userId=Integer.parseInt(Main.read( prompt: "User Id: "));
        }
    }
}
```

## Display class:



The screenshot shows an IDE window titled "Library Management System - Display.java". The project structure on the left includes "Library Management System" with subfolders "idea", "out", and "src". The "src" folder contains "com" and "company", with "company" containing "BookOperation", "Books", "Display", "InvalidInputExc", "Library", "LibraryDb", "Main", "UserOperations", and "Users". The "Display.java" file is open, showing the following code:

```
25 @
26
27 public static void displayBooksDetails(List<Books> allBooks){
28     int index=0;
29     for (Books book:allBooks) {
30         System.out.println(++index + ". Book Id: " + book.getBookId() + " Book Name: " + book.getBookName()+ " Quantity: "
31             " Available: " + book.getQuantityAvailable() + " Borrowed: " + book.getQuantityBorrowed());
32     }
33 }
34
35 public static void displayUserDetails(List<Users> allUsers){
36     for (Users u:allUsers) {
37         System.out.println("User Id: " + u.getUserId() + ", User Name: " + u.getName() + ", Borrowed books" + u.getBorrowedBooks());
38     }
39 }
40
41 public static void displayHistory(List<String> history){
42     int length= history.size();
43     for (int i=length-1;i>=0;i--) {
44         System.out.println(history.get(i));
45     }
46 }
47
48 public static void message(String message) { System.out.println(message); }
49 }
```

The bottom status bar shows "Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built JDK shared indexes // Always download // Download once // Don't show... (16 minutes ago) 12:49 CRLF UTF-8 4 spaces master".