

Main.java

```
1 //2018.Final
2
3 import java.io.BufferedReader;
10
11 public class Main {
12
13     public static void main(String[] args) {
14         Library lib = new Library();
15         Map<Integer, User> users = readUserData();
16         for (User u : users.values()) {
17             lib.addUser(u);
18         }
19         Map<Integer, Book> books = readBookData();
20         for (Book b : books.values()) {
21             lib.addBook(b);
22         }
23         readTransactionData(lib);
24     }
25
26     public static Map<Integer, User> readUserData() {
27         HashMap<Integer, User> users = new HashMap<Integer, User>();
28
29         try (BufferedReader br = new BufferedReader(new FileReader("users.txt"))) {
30             String line = br.readLine();
31             while (line != null) {
32                 Scanner s = new Scanner(line);
33                 int id = s.nextInt();
34                 String name = s.nextLine().trim();
35                 User u = new User(id, name);
36                 users.put(id, u);
37                 line = br.readLine();
38                 s.close();
39             }
40         } catch (FileNotFoundException e) {
41             e.printStackTrace();
42         } catch (IOException e) {
43             e.printStackTrace();
44         }
45         return users;
46     }
47
48     public static Map<Integer, Book> readBookData() {
49         HashMap<Integer, Book> books = new HashMap<Integer, Book>();
50
51         try (BufferedReader br = new BufferedReader(new FileReader("books.txt"))) {
52             String id = br.readLine();
53             while (id != null) {
54                 Scanner s = new Scanner(id);
55                 int idI = s.nextInt();
56                 String title = br.readLine();
57                 String author = br.readLine();
58                 Book u = new Book(idI, title, author);
59                 books.put(idI, u);
60                 id = br.readLine();
61                 s.close();
62             }
63         } catch (FileNotFoundException e) {
64             e.printStackTrace();
65         } catch (IOException e) {
66             e.printStackTrace();
67         }
68         return books;
69     }
70 }
```

```
69  }
70
71  public static void readTransactionData(Library lib) {
72
73      try (BufferedReader br = new BufferedReader(new FileReader("transactions.txt"))) {
74          String line = br.readLine();
75          while (line != null) {
76              Scanner s = new Scanner(line);
77              String type = s.next();
78              int user = s.nextInt();
79              int date = s.nextInt();
80              int bookAmt = s.nextInt();
81              lib.processTransaction(type, user, date, bookAmt);
82
83              line = br.readLine();
84              s.close();
85          }
86      } catch (FileNotFoundException e) {
87          e.printStackTrace();
88      } catch (IOException e) {
89          e.printStackTrace();
90      }
91  }
92
93 }
94
```