

Mo Tu We Th Fr Sa Su

Memo No. _____

Date: / /

import java.util.*;

class Book implements Comparable <Book> {

int id;

String title, author;

Book (int id, String t, String a) {

this.id = id

title = t;

author = a;

}

public int compareTo (Book b) {

return title.compareTo (b.title);

}

}

public class Library Manager {

Scanner sc = new Scanner (System.in);

ArrayList <Book> books = new ArrayList <>();

HashMap <Integer, Integer> issued = new HashMap <>();

void addBook() {



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try {

System.out.print("Book ID:"); int id = sc.nextInt();
sc.nextLine();

System.out.print("Title:"); String t = sc.nextLine();

System.out.println("Author:"); String a = sc.nextLine();

books.add(new Book(id, t, a));

System.out.println("Added! \n");

3 catch (Exception e) { sc.nextLine(); System.out.println
3 ("Invalid!");

4

void searchBook() {

try {

System.out.print("Enter Book ID:");

int id = sc.nextInt();

for (Book b : books) {

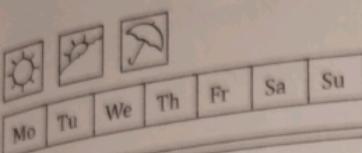
if (b.id == id) {

System.out.println("ID: " + b.id);

System.out.println("Title: " + b.title);

System.out.println("Author: " + b.author);

System.out.println("Status: " + (issued.contains(id)?
"Issued": "Available"));



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return;

}

}

System.out.println("Not Found");

} catch (Exception e) { sc.nextLine(); System.out.println("Invalid!");

}

}

void sortBooks() {

Collections.sort(books);

System.out.println("Sorted Books:");

for (Book b : books)

System.out.println(b.id + " - " + b.title + " - " + b.author);

System.out.println();

y

void issueBooks() {

try {

System.out.print("Book ID:"); int id = sc.nextInt();

System.out.print("Member ID:"); int m = sc.nextInt();

for (Book b : books) {



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```
if (bid == id) {  
    if (issued.containsKey(id)) {System.out.println  
        ("Already Issued"); return; }  
    issued.put(id, m);  
    System.out.println("Issued! \n");  
}
```

}

```
System.out.println("Not Found");  
} catch (Exception e) {sc.nextLine(); System.out.println("Invalid!");  
}
```

}

```
void returnBook() {
```

```
try {
```

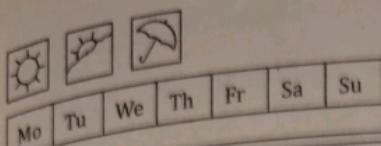
```
    System.out.print("Book ID: ");
```

```
    int id = sc.nextInt();
```

```
    System.out.println(issued.remove(id) != null ? "Returned! \n":  
        "Not Issued");
```

```
} catch (Exception e) {sc.nextLine(); System.out.println("Invalid!");  
}
```

}



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```
void menu() {
```

```
    int ch = 0;
```

```
    while (ch != 6) {
```

```
        System.out.println ("1. Add Book\n2. Search Book\n3.
```

```
        Sort Books\n4. Issue\n5. Return\n6. Exit");
```

```
        System.out.print ("choice:");
```

```
    try { ch = sc.nextInt(); }
```

```
    catch (Exception e) { sc.nextLine(); continue; }
```

```
    switch (ch) {
```

```
        case 1 -> addBook();
```

```
        case 2 -> searchBook();
```

```
        case 3 -> sortBook();
```

```
        case 4 -> issueBook();
```

```
        case 5 -> returnBook();
```

```
        case 6 -> System.out.println ("Exiting...");
```

```
        default -> System.out.println ("Invalid");
```

```
}
```

```
    }
```

```
}
```

```
public static void main (String [] args) {
```



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New Library Manager U. manual;

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