Name: Saad Bin Haroon:

Intern ID: TN/IN02/PY/026:

Internship domain: python language:

INTERNSHIP FINAL PROJECT:

(Library management system)

Code:

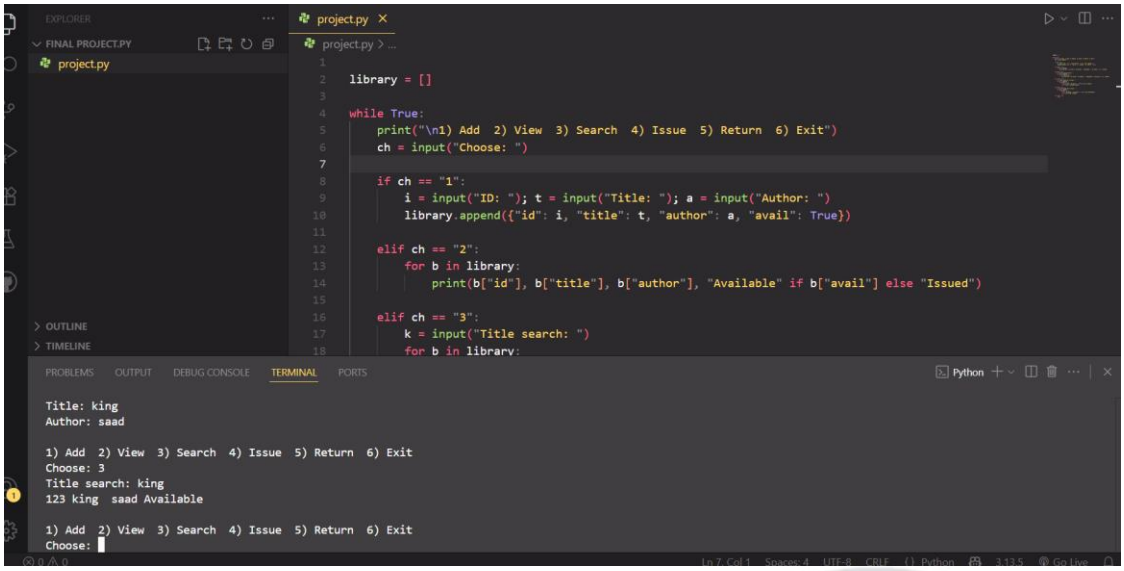
```
library = []

while True:
    print("\n1) Add  2) View  3) Search  4) Issue  5) Return  6) Exit")
    ch = input("Choose: ")

    if ch == "1":
        i = input("ID: "); t = input("Title: "); a = input("Author: ")
        library.append({"id": i, "title": t, "author": a, "avail": True})

    elif ch == "2":
        for b in library:
            print(b["id"], b["title"], b["author"], "Available" if b["avail"] else "Issued")

    elif ch == "3":
        k = input("Title search: ")
        for b in library:
            if k in b["title"]:
                print(b["id"], b["title"], b["author"], "Available" if b["avail"] else "Issued")

    elif ch == "4":
```

```
        i = input("Book ID to issue: ")
        for b in library:
            if b["id"] == i:
                if b["avail"]: b["avail"] = False; print("Issued!")
                else: print("Already issued")

    elif ch == "5":
        i = input("Book ID to return: ")
        for b in library:
            if b["id"] == i:
                if not b["avail"]: b["avail"] = True; print("Returned!")
                else: print("Not issued")

    elif ch == "6":
        break
```

Explanation:

1. Demo Books → At the start, the program creates a list library with some sample books. Each book has an ID, Title, Author, and availability (True = Available, False = Issued).
2. Loop with Menu → The program runs inside a while True loop so that the menu keeps repeating until the user chooses Exit.
3. Add Book → If the user chooses option 1, the program asks for Book ID, Title, and Author, then adds the book to the library.
4. View Books → Option 2 shows all books with their details (ID, Title, Author) and their status (Available or Issued).
5. Search Book → Option 3 allows the user to search for a book using either ID or Title. If it matches, the program displays that book.
6. Issue Book → Option 4 asks for a Book ID. If the book is available, it changes status to “Issued.” If it is already issued, it shows a message.
7. Return Book → Option 5 asks for a Book ID. If the book was issued, it changes status back to “Available.” Otherwise, it shows “Not issued.”
8. Exit → Option 6 breaks the loop and ends the program.

output:



Challenges faced:

The main challenges I faced during this project were about planning and keeping the code simple. At first, it was not easy to decide which features to include, because a real library system has many functions. I also had confusion about how to store data, whether in a file or only in memory. I finally chose the simple way, keeping it in memory for easy coding. Another challenge was making the search option work for both ID and Title, but I solved it using simple conditions. I also needed to handle the logic of issuing and returning books carefully so that the availability updates correctly. Overall, the biggest challenge was to make the project short, easy, and beginner-friendly while still covering the basic functions of a library system