GENRES = ("Fiction", "Non-Fiction", "Sci-Fi")  
  
books = {  
 "50001": {"title": "The Gamer", "author": "amara kabba", "genre": "Sci-Fi", "total\_copies": 3, "available": 3},  
}  
  
members = [  
 {"member\_id": "M001", "name": "haroun", "email": "haroun@example.com", "borrowed\_books": []}  
]  
  
  
# --- CORE FUNCTIONS ---  
  
def add\_book(isbn, title, author, genre, total\_copies):  
 if isbn in books:  
 print(" Book with this ISBN already exists.")  
 return  
 if genre not in GENRES:  
 print("Invalid genre.")  
 return  
 books[isbn] = {"title": title, "author": author, "genre": genre, "total\_copies": total\_copies, "available": total\_copies}  
 print(" Book added successfully.")  
  
  
def add\_member(member\_id, name, email):  
 for m in members:  
 if m["member\_id"] == member\_id:  
 print(" Member ID already exists.")  
 return  
 members.append({"member\_id": member\_id, "name": name, "email": email, "borrowed\_books": []})  
 print("Member added successfully.")  
  
  
def search\_book(keyword):  
 found = [b for b in books.values() if  
 keyword.lower() in b["title"].lower() or keyword.lower() in b["author"].lower()]  
 if not found:  
 print("No books found.")  
 else:  
 for b in found:  
 print(f"{b['title']} by {b['author']} | Genre: {b['genre']} | Available: {b['available']}")  
  
  
def update\_book(isbn, title=None, author=None, genre=None, total\_copies=None):  
 if isbn not in books:  
 print("Book not found.")  
 return  
 if genre and genre not in GENRES:  
 print("Invalid genre.")  
 return  
 if title:  
 books[isbn]["title"] = title  
 if author:  
 books[isbn]["author"] = author  
 if genre:  
 books[isbn]["genre"] = genre  
 if total\_copies:  
 diff = total\_copies - books[isbn]["total\_copies"]  
 books[isbn]["total\_copies"] = total\_copies  
 books[isbn]["available"] += diff  
 print("Book updated successfully.")  
  
  
def delete\_book(isbn):  
 if isbn not in books:  
 print("Book not found.")  
 return  
 for m in members:  
 if isbn in m["borrowed\_books"]:  
 print("Cannot delete book. It’s currently borrowed.")  
 return  
 del books[isbn]  
 print("Book deleted successfully.")  
  
  
def borrow\_book(member\_id, isbn):  
 member = next((m for m in members if m["member\_id"] == member\_id), None)  
 if not member:  
 print("Member not found.")  
 return  
 if isbn not in books:  
 print("Book not found.")  
 return  
 if len(member["borrowed\_books"]) >= 3:  
 print("Cannot borrow more than 3 books.")  
 return  
 if books[isbn]["available"] <= 0:  
 print("No copies available.")  
 return  
  
 books[isbn]["available"] -= 1  
 member["borrowed\_books"].append(isbn)  
 print(f"{member['name']} borrowed '{books[isbn]['title']}'.")  
  
  
def return\_book(member\_id, isbn):  
 member = next((m for m in members if m["member\_id"] == member\_id), None)  
 if not member:  
 print("Member not found.")  
 return  
 if isbn not in member["borrowed\_books"]:  
 print("Book not borrowed by this member.")  
 return  
  
 member["borrowed\_books"].remove(isbn)  
 books[isbn]["available"] += 1  
 print(f"{member['name']} returned '{books[isbn]['title']}'.")  
  
  
# --- TESTING FUNCTIONALITY (EXAMPLES) ---  
  
add\_book("50002", "gods of our land", "alfred jay", "Sci-Fi", 5)  
add\_member("M002", "john", "bob@gmail.com")  
search\_book("space")  
borrow\_book("M002", "50002")  
return\_book("M002", "50002")  
delete\_book("50002")  
  
  
# --- MENU INTERFACE ---  
  
def menu():  
 while True:  
 print("\n===== Library Menu =====")  
 print("1. Add Book\n2. Add Member\n3. Search Book\n4. Borrow Book\n5. Return Book\n6. Exit")  
 choice = input("Choose an option: ")  
  
 if choice == "1":  
 isbn = input("ISBN: ")  
 title = input("Title: ")  
 author = input("Author: ")  
 genre = input("Genre: ")  
 total = int(input("Total copies: "))  
 add\_book(isbn, title, author, genre, total)  
 elif choice == "2":  
 mid = input("Member ID: ")  
 name = input("Name: ")  
 email = input("Email: ")  
 add\_member(mid, name, email)  
 elif choice == "3":  
 key = input("Enter title/author to search: ")  
 search\_book(key)  
 elif choice == "4":  
 mid = input("Member ID: ")  
 isbn = input("ISBN: ")  
 borrow\_book(mid, isbn)  
 elif choice == "5":  
 mid = input("Member ID: ")  
 isbn = input("ISBN: ")  
 return\_book(mid, isbn)  
 elif choice == "6":  
 print("👋 Goodbye!")  
 break  
 else:  
 print("Invalid option.")