

# PROJECT CODE:-

```
import mysql.connector
```

```
class LibraryManagementSystem:
```

```
    def __init__(self):
```

```
        self.connection = self.create_connection()
```

```
        self.create_books_table()
```

```
    def create_connection(self):
```

```
        connection = mysql.connector.connect(
```

```
            host="localhost",
```

```
            user="root",
```

```
            password="root",
```

```
            database="library"
```

```
        )
```

```
        return connection
```

```
    def create_books_table(self):
```

```
        cursor = self.connection.cursor()
```

```
        cursor.execute("""
```

```
            CREATE TABLE IF NOT EXISTS books (
```

```
                id INT AUTO_INCREMENT PRIMARY KEY,
```

```
                title VARCHAR(255) NOT NULL,
```

```
                author VARCHAR(255) NOT NULL,
```

```
                quantity INT NOT NULL
```

```
            )
```

```

        """)
        self.connection.commit()

def add_book(self, title, author, quantity):
    cursor = self.connection.cursor()
    cursor.execute("""
        INSERT INTO books (title, author, quantity) VALUES (%s, %s, %s)
        """, (title, author, quantity))
    self.connection.commit()
    print("Book added successfully!")

def delete_book(self, book_id):
    cursor = self.connection.cursor()
    cursor.execute("""
        DELETE FROM books WHERE id = %s
        """, (book_id,))
    self.connection.commit()
    print("Book deleted successfully!")

def update_book(self, book_id, new_title, new_author, new_quantity):
    cursor = self.connection.cursor()
    cursor.execute("""
        UPDATE books SET title = %s, author = %s, quantity = %s WHERE id
= %s
        """, (new_title, new_author, new_quantity, book_id))
    self.connection.commit()
    print("Book updated successfully!")

```

```

def view_books(self):
    cursor = self.connection.cursor()
    cursor.execute("""
        SELECT * FROM books
    """)
    books = cursor.fetchall()

    if not books:
        print("No books found in the library.")
    else:
        print("Books in the library:")
        for book in books:
            print(f"ID: {book[0]}, Title: {book[1]}, Author: {book[2]}, Quantity: {book[3]}")

if __name__ == "__main__":
    library_system = LibraryManagementSystem()

    while True:
        print("\n1. Add Book\n2. Delete Book\n3. Update Book\n4. View Books\n5. Exit")
        choice = int(input("Enter your choice: "))

        if choice == 1:
            title = input("Enter book title: ")
            author = input("Enter author name: ")
            quantity = int(input("Enter quantity: "))
            library_system.add_book(title, author, quantity)

```

```
elif choice == 2:

    book_id = int(input("Enter the book ID to delete: "))

    library_system.delete_book(book_id)


elif choice == 3:

    book_id = int(input("Enter the book ID to update: "))

    new_title = input("Enter new title: ")

    new_author = input("Enter new author: ")

    new_quantity = int(input("Enter new quantity: "))

    library_system.update_book(book_id, new_title, new_author,
new_quantity)


elif choice == 4:

    library_system.view_books()


elif choice == 5:

    print("Exiting the Library Management System.")

    break


else:

    print("Invalid choice. Please choose a valid option.")
```

## **OUTPUT-**

Python 3.11.4 (tags/v3.11.4:d2340ef, Jun 7 2023, 05:45:37) [MSC v.1934 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

= RESTART: D:\Zaki\cs final.py

1. Add Book
2. Delete Book
3. Update Book
4. View Books
5. Exit

Enter your choice: 4

Books in the library:

ID: 9, Title: MATHEMATICS PART-1, Author: NCERT, Quantity: 9

1. Add Book
2. Delete Book
3. Update Book
4. View Books
5. Exit

Enter your choice: 1

Enter book title: CHEMISTRY PART-1

Enter author name: NCERT

Enter quantity: 6

Book added successfully!

1. Add Book

2. Delete Book
3. Update Book
4. View Books
5. Exit

Enter your choice: 4

Books in the library:

ID: 9, Title: MATHEMATICS PART-1, Author: NCERT, Quantity: 9

ID: 10, Title: CHEMISTRY PART-1, Author: NCERT, Quantity: 6

1. Add Book
2. Delete Book
3. Update Book
4. View Books
5. Exit

Enter your choice: 1

Enter book title: BIOLOGY PART-1

Enter author name: NCERT

Enter quantity: 9

Book added successfully!

1. Add Book
2. Delete Book
3. Update Book
4. View Books
5. Exit

Enter your choice: 4

Books in the library:

ID: 9, Title: MATHEMATICS PART-1, Author: NCERT, Quantity: 9

ID: 10, Title: CHEMISTRY PART-1, Author: NCERT, Quantity: 6

ID: 11, Title: BIOLOGY PART-1, Author: NCERT, Quantity: 9

1. Add Book

2. Delete Book

3. Update Book

4. View Books

5. Exit

Enter your choice: 2

Enter the book ID to delete: 9

Book deleted successfully!

1. Add Book

2. Delete Book

3. Update Book

4. View Books

5. Exit

Enter your choice: 4

Books in the library:

ID: 10, Title: CHEMISTRY PART-1, Author: NCERT, Quantity: 6

ID: 11, Title: BIOLOGY PART-1, Author: NCERT, Quantity: 9

1. Add Book

2. Delete Book

3. Update Book

4. View Books

5. Exit

Enter your choice: 3

Enter the book ID to update: 10

Enter new title: Computer Science

Enter new author: NCERT

Enter new quantity: 7

Book updated successfully!

1. Add Book

2. Delete Book

3. Update Book

4. View Books

5. Exit

Enter your choice: 4

Books in the library:

ID: 10, Title: Computer Science, Author: NCERT, Quantity: 7

ID: 11, Title: BIOLOGY PART-1, Author: NCERT, Quantity: 9

1. Add Book

2. Delete Book

3. Update Book

4. View Books

5. Exit

Enter your choice: 5

Exiting the Library Management System.