# PM SHRI Kendriya Vidyalya Babina Cantt



तत् त्वं पूषन् अपावृणु
केन्द्रीय विद्यालय संगठन

# *Computer Science Project file*

# *2023 – 2024*



**Submitted By-**          **Guided By-**

**Anurag Gupta**          **Mr. Sumit Sahu**

**12th 'A'**               **(PGT Computer Science)**

# <u>**CERTIFICATE**</u>

This is to certify that **Master Anurag Gupta** of **Class 12th Science** bearing **CBSE Roll number:_____**

has satisfactorily completed his individual <u>Project work</u> on Topic **Library Management**.

Done as per the prescribed syllabus of *<u>CBSE: 2023-24</u>* under the guidance of **Mr. Sumit Sahu (PGT Computer Science)** of this Vidyalaya. This Project work is a result of his great efforts and attention.

*Internal Examiner*          *External Examiner*


*Principal*

# <u>ACKNOWLEDGEMENT</u>

I would like to convey our sincere gratitude to **Shri Sanjay Kumar Chohan (Principal)** for letting me to do this Project.

A special thanks to **Mr. Sumit Sahu (PGT Computer Science)** for guiding throughout the project for helping me in this Project.

 Last but not least I would like to thank my **Parents** and **Classmates** for their valuable suggestion about this Project.

**Date:_____**                    *Anurag Gupta*

# INDEX

# Title of the Project

## " *Library Management system* "

# __Introduction__

Project on Library Management explores the enduring significance of libraries in our information-driven society. It delves into the challenges faced by librarians, including cataloging, circulation, acquisitions, and user services.

The project highlights the importance of embracing modern technology and management systems to optimize library operations. Libraries have evolved from conventional book repositories to dynamic information centers. This project aims to enhance our understanding of efficient library management and the evolving role of libraries in the digital age.

# **Imported Files & Used Functions**

## **Modules :-**

The script uses **mysql.connector** to connect to a MySQL database.

## **Built in functions :-**

1.  **connect()-** For database and table connection
2.  **cursor()-** For row by row processing of records in resultset
3.  **execute()-** For execute an SQL statement
4.  **commit()-** For change/update the database
5.  **fetchall()-** For fetch all rows
6.  **fetchone()-** For fetch one row.

# User defined functions :-

1. **addbook()-** adds books with name, code, quantity, and subject to the "books" table.

2. **issueb()-**issues a book to a student, updating quantities in "books."

3. **submitb()-**records returned books, updating quantities in "books."

4. **bookup()-** updates book quantities; called by **issueb()** and **submitb()** .

5. **dbook()-** deletes books from "books" based on their code.

6. **dispbook()-** displays book details.

7. **main()-** offers a menu to perform actions.

8. **pswd()** checks a password (default: "1234) to access the main menu.

# MySQL Initialisation

```
mysql> create database Library;
Query OK, 1 row affected (0.82 sec)

mysql> use Library;
Database changed
mysql> create table books (bname varchar(50), bcode varchar(10),
 total int, subject varchar(50));
Query OK, 0 rows affected (2.26 sec)

mysql> create table issue (name varchar(50), regno varchar(10),
bcode int, issue varchar(50));
Query OK, 0 rows affected (0.40 sec)

mysql> create table submit (name varchar(58), regno varchar(10),
 bcode int, submit varchar(50));
Query OK, 0 rows affected (0.23 sec)

mysql> show tables;
+-------------------+
| Tables_in_library |
+-------------------+
| books             |
| issue             |
| submit            |
+-------------------+
3 rows in set (0.52 sec)

mysql>
```

# Programme

```python
print("\n*********************************************************************")
print("###                     # LIBRARY MANAGEMENT SYSTEM #                ###")
print("*********************************************************************")


import mysql.connector as a
con = a.connect(host="localhost", user="root", passwd="1234", database="Library")
def addbook():
    bn = input("Enter BOOK Name: ")
    c = input("Enter BOOK Code: ")
    t = input("Total Books: ")
    s = input("Enter Subject: ")
    data = (bn, c, t, s)
    sql = 'insert into books values(%s, %s, %s, %s)'
    c = con.cursor()
    c.execute(sql, data)
    con.commit()
    print(">-------------------------------------------------------<")
    print("Data Entered Successfully")
    main()
def issueb():
    n = input("Enter Name: ")
    r = input("Enter Reg No: ")
    co = input("Enter Book Code: ")
    d = input("Enter Date: ")
    a = "insert into issue values(%s, %s, %s, %s)"
    data = (n, r, co, d)
    c = con.cursor()
    c.execute(a, data)
    con.commit()
 print(">-------------------------------------------------------<")
 print("Book issued to:", n)
 bookup(co, -1)
```

```python
def submitb():
    n = input("Enter Name: ")
    r = input("Enter Reg No: ")
    co = input("Enter Book Code: ")
    d = input("Enter Date: ")
    a = "insert into submit values(%s, %s, %s, %s)"
    data = (n, r, co, d)
    c = con.cursor()
    c.execute(a, data)
    con.commit()
    print(">-----------------------------------------------<")
    print("Book Submitted from:", n)
    bookup(co, 1)
def bookup(co, u):
    a = "select TOTAL from books where BCODE=%s"
    data = (co,)
    c = con.cursor()
    c.execute(a, data)
    myresult = c.fetchone()
    t = myresult[0] + u
    sql = "update books set TOTAL = %s where BCODE = %s"
    d = (t, co)
    c.execute(sql, d)
    con.commit()
    main()

def dbook():
    ac = input("Enter Book Code: ")
    a = "delete from books where BCODE = %s"
    data = (ac,)
    c = con.cursor()
    c.execute(a, data)
    con.commit()
    print(">-----------------------------------------------<")
    main()
def dispbook():
    a = "select * from books"
    c = con.cursor()
    c.execute(a)
    myresult = c.fetchall()
    for i in myresult:
        print("Book Name:", i[0])
        print("Book Code:", i[1])
        print("Total:", i[2])
```

```python
    print(">------------------------------------------------<")
    main()


def main():
    print("1. ADD BOOK \n2. ISSUE BOOK \n3. SUBMIT BOOK ")
    print("4. DELETE BOOK \n5. DISPLAY BOOKS \n6. STOP ")
    choice = int(input("Enter Task No: "))
    if choice == 1:
        addbook()
    elif choice == 2:
        issueb()
    elif choice == 3:
        submitb()
    elif choice == 4:
        dbook()
    elif choice == 5:
        dispbook()
    elif choice == 6:
        print("....THANK YOU....")
        return
    else:
        print("Wrong choice....  Try again ")
        print(">------------------------------------------------<")
        main()
def pswd():
    ps = input("Enter Password: ")
    if ps == "1234":
        main()
    else:
        print("Wrong Password\n")
        pswd()
pswd()
```
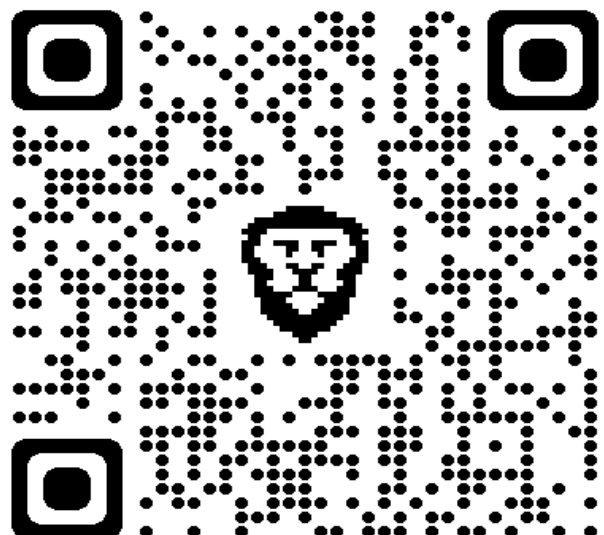
## Get code

## from here -

# Python Output Screen

```
>>>
    = RESTART: A:\Coding Anurag\CS 12 file\Project\library management system.py

    ********************************************************************
    ###                    # LIBRARY MANAGEMENT SYSTEM #             ###
    ********************************************************************
    Enter Password: 123
    Wrong Password

    Enter Password: 1234
    1. ADD BOOK
    2. ISSUE BOOK
    3. SUBMIT BOOK
    4. DELETE BOOK
    5. DISPLAY BOOKS
    6. STOP
    Enter Task No: 1
    Enter BOOK Name: Sumit Arora
    Enter BOOK Code: 23
    Total Books: 5
    Enter Subject: CS
    Data Entered Successfully
    >-------------------------------------------------<
    1. ADD BOOK
    2. ISSUE BOOK
    3. SUBMIT BOOK
    4. DELETE BOOK
    5. DISPLAY BOOKS
    6. STOP
    Enter Task No: 2
    Enter Name: Anurag
    Enter Reg No: 12105
    Enter Book Code: 23
    Enter Date: 27-10-2023
    >----------------------------------------------------------<
    Book issued to: Anurag
    1. ADD BOOK
    2. ISSUE BOOK
    3. SUBMIT BOOK
    4. DELETE BOOK
    5. DISPLAY BOOKS
    6. STOP
    Enter Task No: 1
    Enter BOOK Name: SC Verma
    Enter BOOK Code: 89
    Total Books: 6
    Enter Subject: Physics
```

```
Data Entered Successfully
>-----------------------------------------------<
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 2
Enter Name: Hariom
Enter Reg No: 12110
Enter Book Code: 89
Enter Date: 05-11-2023
>-----------------------------------------------<
Book issued to: Hariom
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 1
Enter BOOK Name: Vistas
Enter BOOK Code: 12
Total Books: 3
Enter Subject: English
Data Entered Successfully
>-----------------------------------------------<
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 3
Enter Name: Anurag
Enter Reg No: 12105
Enter Book Code: 23
Enter Date: 06-11-2023
>-----------------------------------------------<
Book Submitted from: Anurag
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 2
Enter Name: Hariom
Enter Reg No: 12110
```

```
Enter Book Code: 89
Enter Date: 12-11-2023
>-----------------------------------------------------<
Book issued to: Hariom
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 5
Book Name: Sumit Arora
Book Code: 23
Total: 5
Book Name: SC Verma
Book Code: 89
Total: 4
Book Name: Vistas
Book Code: 12
Total: 3
>-----------------------------------------------------<
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 4
Enter Book Code: 23
>-----------------------------------------------------<
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 4
Enter Book Code: 12
>-----------------------------------------------------<
1. ADD BOOK
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 12
Wrong choice....  Try again
>-----------------------------------------------------<
1. ADD BOOK
```

```
2. ISSUE BOOK
3. SUBMIT BOOK
4. DELETE BOOK
5. DISPLAY BOOKS
6. STOP
Enter Task No: 6
....THANK YOU....
>>>
```

# MySQL Output Screen

```
mysql> use Library;
Database changed
mysql> select * from books ;
+-----------+-------+-------+---------+
| bname     | bcode | total | subject |
+-----------+-------+-------+---------+
| SC Verma  | 89    |     5 | Physics |
+-----------+-------+-------+---------+
1 row in set (0.00 sec)

mysql> select * from issue ;
+--------+-------+-------+------------+
| name   | regno | bcode | issue      |
+--------+-------+-------+------------+
| Anurag | 12105 |    23 | 27-10-2023 |
| Hariom | 12110 |    89 | 05-11-2023 |
| Hariom | 12110 |    89 | 12-11-2023 |
+--------+-------+-------+------------+
3 rows in set (0.00 sec)

mysql> select * from submit ;
+--------+-------+-------+------------+
| name   | regno | bcode | submit     |
+--------+-------+-------+------------+
| Anurag | 12105 |    23 | 06-11-2023 |
| Hariom | 12110 |    89 | 12-11-2023 |
+--------+-------+-------+------------+
2 rows in set (0.00 sec)

mysql>
```

# BIBLIOGRAPHY

**I have taken help from:**

- ✓ Internet
- ✓ Computer Practical file
- ✓ Computer book
- ✓ My Classmates
- ✓ My elder brother
- ✓ Computer Lab (For Output and Programme …. )

**********************************************