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Capstone Project-1-Python and Mysql.py X Capstone Project-1.py
E: > Capstone Project-1-Pymysql > Capstone Project-1-Python and Mysql.py > ...
1  | Capstone Project-1- Application using Python Libraries and DB
2
3  # Project- Library Management System
4
5      # 1. Add book information
6      # 2. Display book information
7      # 3. To list all books of a given author
8      # 4. To list the count of books in the library
9      # 5. Exit
```



```
11
12 import pymysql # python + mysql = pymysql
13
14 lms = pymysql.connect(host='localhost', user='root', password='root123',database='anna_centenary_library_chennai') # Connect to the database
15
16 cursor = lms.cursor()
```

```
11
12 import pymysql # python + mysql = pymysql
13
14 lms = pymysql.connect(host='localhost', user='root', password='root123',database='anna_centenary_library_chennai') # Connect to the database
15
16 cursor = lms.cursor()
17
18 sql = '' # Table creation
19 create table books_info (
20     book_id INT(10) PRIMARY KEY,
21     title VARCHAR(50),
22     author VARCHAR(50),
23     type_of_book VARCHAR(30),
24     public_name VARCHAR(40),
25     edition INT(20),
26     pages INT(10),
27     price INT(10)
28 )
29 '''
30
31 try:
32     cursor.execute(sql)
33     print("Table created successfully")
34 except pymysql.MySQLError as e:
35     print(f"Error creating table: {e}")
36
37 lms.close() # Close the connection
```

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Capstone Project-1-Python and Mysql.py x Capstone Project-1.py
E: > Capstone Project-1-Pymysql > Capstone Project-1-Python and Mysql.py > display_books

39
40 # 1. Add book information
41
42 import pymysql
43
44 lms = pymysql.connect(host='localhost', user='root', password='root123', database='anna_centenary_library_chennai')
45
46 def add_book(book_id, title, author, type_of_book, public_name, edition, pages, price):
47     try:
48         with lms.cursor() as cursor:
49             query = 'insert into books_info (book_id, title, author, type_of_book, public_name, edition, pages, price) values (%s, %s, %s, %s, %s, %s, %s, %s)'
50             cursor.execute(query, (book_id, title, author, type_of_book, public_name, edition, pages, price))
51             lms.commit()
52             print("Book added successfully!")
53     except Exception as e:
54         print(f"Error: {e}")
55     finally:
56         cursor.close()
57
58 lms.close()
59
```

```
59
60 # 2. Display book information
61
62
63 import pymysql
64
65 lms = pymysql.connect(host='localhost', user='root', password='root123', database='anna_centenary_library_chennai')
66
67
68 def display_books():
69     with lms.cursor() as cursor:
70         query = 'select * from books_info'
71         cursor.execute(query)
72         complete = cursor.fetchall()
73
74         for row in complete:
75             print(row)
76
77
78 lms.close()
79
80
```

```
80 # 3. To list all books of a given author
81
82
83 import pymysql
84
85 lms = pymysql.connect(host='localhost', user='root', password='root123', database='anna_centenary_library_chennai')
86
87 def book_author(author):
88     try:
89         with lms.cursor() as cursor:
90             query = 'select * from books_info where author = %s'
91             cursor.execute(query, (author,))
92             complete = cursor.fetchall()
93
94             for row in complete:
95                 print(row)
96     except Exception as e:
97         print(f"Error: {e}")
98     finally:
99         cursor.close()
100
101 lms.close()
102
```

```
103
104 # 4. To list the count of books in the library
105
106 import pymysql
107
108 lms = pymysql.connect( host='localhost', user='root', password='root123', database='anna_centenary_library_chennai')
109
110 def count_books():
111     with lms.cursor() as cursor:
112         query = 'select count(*) from books_info'
113         cursor.execute(query)
114         complete = cursor.fetchone()
115
116         print(f'Total number of Books: {complete[0]}')
117
118 lms.close()
```

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Capstone Project-1-Python and Mysql.py x Capstone Project-1.py
E:\Capstone Project-1-Python and Mysql.py > main
121 # Main menu
122
123 import pymysql
124
125 lms = pymysql.connect(host='localhost', user='root', password='root123', database='anna_centenary_library_chennai')
126
127 def main():
128     while True:
129         print('\nLibrary Management System:')
130         print("1. Add book information")
131         print("2. Display book information")
132         print("3. List all books of a given author")
133         print("4. Count books in the library")
134         print("5. Exit")
135
136         step = input("Enter your choice: ")
137
138         if step == '1':
139             book_id = int(input("Enter Book ID: "))
140             title = input("Enter Book Title: ")
141             author = input("Enter Book Author: ")
142             type_of_book = input("Enter Type of Book: ")
143             public_name = input("Enter Publication Name: ")
144             edition = int(input("Enter Year of Publication: "))
145             pages = int(input("Enter Pages: "))
146             price = int(input("Enter Price of Book: "))
147             add_book(book_id, title, author, type_of_book, public_name, edition, pages, price)
148
149         elif step == '2':
150             display_books()
151
152         elif step == '3':
153             author = input("Enter Author Name: ")
154             book_author(author)
155
156         elif step == '4':
157             count_books()
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```
158
159     elif step == '5':
160         break
161
162     else:
163         print("Invalid choice, please try again.")
164
165 if __name__ == "__main__":
166     main()
167
168
169 lms.close()
170
171
```