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CLASS: AIML-C

USN: 22BTRCL107

DATE: 30th May 2024

PYTHON-SQL TASK

Please complete the following task individually:

1. Create a database called as "Library" using SQL queries executed through MySQL workbench.

CREATE DATABASE Library;

USE Library;

2. Create a table in this dataset called as "Books" using the same MySQL workbench, include following columns in this table:

a. bookID

b. bookName

c. USN

d. Author

e. price

CREATE TABLE Books(

bookID INT PRIMARY KEY,

bookName VARCHAR(255),

USN VARCHAR(255),

Author VARCHAR(255),

price DECIMAL(10,2));

```
1  CREATE TABLE Books(
2      bookID INT PRIMARY KEY,
3      bookName VARCHAR(255),
4      USN VARCHAR(255),
5      Author VARCHAR(255),
6      price DECIMAL(10,2)
7  );
```

3. Insert at least 5 records in this table through SQL queries using MySQL workbench.

INSERT INTO Books(bookID, bookName, USN, Author, price) VALUES

(1001, 'Book_One', 'USN001', 'Author1', 2000),

(1002, 'Book_Two', 'USN002', 'Author2', 3000),

(1003, 'Book_Three', 'USN003', 'Author3', 3500),

(1004, 'Book_Four', 'USN004', 'Author4', 4000),

(1005, 'Book_Five', 'USN005', 'Author5', 5000);

```
8  INSERT INTO Books(bookID, bookName, USN, Author, price) VALUES
9  (1001, 'Book_One', 'USN001', 'Author1', 2000),
10 (1002, 'Book_Two', 'USN002', 'Author2', 3000),
11 (1003, 'Book_Three', 'USN003', 'Author3', 3500),
12 (1004, 'Book_Four', 'USN004', 'Author4', 4000),
13 (1005, 'Book_Five', 'USN005', 'Author5', 5000);
```

THE PYTHON CODE:

```
# 22BTRCL107 - NEEV SHAH
import mysql.connector

mydb = mysql.connector.connect(
    host='localhost',
    user='root',
    password='1234',
    database='Library'
)
cursor = mydb.cursor()
```

4. Write a python program that fetches all these data from this table directly through python program itself. Show the output on IDLE.

```
#STEP-4: Fetch all the records
print("Fetching all records:")
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)
```

OUTPUT:

```
Fetching all records:
(1001, 'Book_One', 'USN001', 'Author1', Decimal('2200.00'))
(1002, 'Book_Two', 'USN002', 'Author2', Decimal('3000.00'))
(1003, 'Book_Three', 'USN003', 'Author3', Decimal('3500.00'))
(1004, 'Book_Four', 'USN004', 'Author4', Decimal('4000.00'))
(1005, 'Book_Five', 'USN005', 'Author5', Decimal('5000.00'))
```

5. Write another python program that updates a record in this table directly through python program. Show the output on IDLE.

#STEP-5: Update the price of the book with ID 1001

print("\n\n\nUpdating the price of the book with ID 1001:")

book_id = 1001

new_price = 2200

cursor.execute("UPDATE Books SET price = %s WHERE

bookID = %s", (new_price, book_id))

mydb.commit()

cursor.execute("SELECT * FROM Books")

records = cursor.fetchall()

for record in records:

print(record)

```
#STEP-5: Update the price of the book with ID 1001
print("\n\n\nUpdating the price of the book with ID 1001:")
book_id = 1001
new_price = 2200
cursor.execute("UPDATE Books SET price = %s WHERE bookID = %s", (new_price, book_id))
mydb.commit()
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)
```

OUTPUT:

```
Updating the price of the book with ID 1001:
(1001, 'Book_One', 'USN001', 'Author1', Decimal('2200.00'))
(1002, 'Book_Two', 'USN002', 'Author2', Decimal('3000.00'))
(1003, 'Book_Three', 'USN003', 'Author3', Decimal('3500.00'))
(1004, 'Book_Four', 'USN004', 'Author4', Decimal('4000.00'))
(1005, 'Book_Five', 'USN005', 'Author5', Decimal('5000.00'))
```

6. Write another python program that deleted a record in this table directly through python program. Show the output on IDLE.

#STEP-6: Delete the book with ID 1

print("\n\n\nDeleting the book with ID 1001:")

book_id_2 = 1001

cursor.execute("DELETE FROM Books WHERE bookID = %s", (book_id_2,))

mydb.commit()

cursor.execute("SELECT * FROM Books")

records = cursor.fetchall()

for record in records:

    print(record)

```
#STEP-6: Delete the book with ID 1
print("\n\n\nDeleting the book with ID 1001:")
book_id_2 = 1001
cursor.execute("DELETE FROM Books WHERE bookID = %s", (book_id_2,))
mydb.commit()
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)
```

OUTPUT:

```
Deleting the book with ID 1001:
(1002, 'Book_Two', 'USN002', 'Author2', Decimal('3000.00'))
(1003, 'Book_Three', 'USN003', 'Author3', Decimal('3500.00'))
(1004, 'Book_Four', 'USN004', 'Author4', Decimal('4000.00'))
(1005, 'Book_Five', 'USN005', 'Author5', Decimal('5000.00'))
```

AT LAST:

```
cursor.close()
mydb.close()
```

(You can also use one python program and execute these all tasks.)

THE ENTIRE CODE:

22BTRCL107_Python-SQL.py - D:/Jain University/Year2/INTERNSHIP/Assignment/Python-SQL Task/22BTRCL107_Python-SQL.py (3.12.2)

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```
# 22BTRCL107 - NEEV SHAH
import mysql.connector

mydb = mysql.connector.connect(
    host='localhost',
    user='root',
    password='1234',
    database='Library'
)
cursor = mydb.cursor()

#STEP-4: Fetch all the records
print("Fetching all records:")
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)

#STEP-5: Update the price of the book with ID 1001
print("\n\n\nUpdating the price of the book with ID 1001:")
book_id = 1001
new_price = 2200
cursor.execute("UPDATE Books SET price = %s WHERE bookID = %s", (new_price, book_id))
mydb.commit()
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)

#STEP-6: Delete the book with ID 1
print("\n\n\nDeleting the book with ID 1001:")
book_id_2 = 1001
cursor.execute("DELETE FROM Books WHERE bookID = %s", (book_id_2,))
mydb.commit()
cursor.execute("SELECT * FROM Books")
records = cursor.fetchall()
for record in records:
    print(record)


cursor.close()
mydb.close()
```

ENTIRE OUTPUT: