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02/18/2021

CSC\_157\_Lab\_015\_QA

**(1) Review the program segment that is given below and answer each of these questions.**

**(a) What is the name of the database file that was created?**

The name of the DB file is “test.db”

**(b) Which sqlite3 method was used to connect to the named database file?**

The “connect()” method was used to connect to the db file.

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**import sqlite3**

**conn = sqlite3.connect("test.db")**

**print ("Opened database successfully")**

**(2) Review the program segment that is given below and answer each of these questions.**

1. **Considering the CREATE TABLE statement given in this program, how many fields in the Sales table were included?**

Five fields were created.

**(b) What is the purpose of this statement segment, as it is used below?**

**IF NOT EXISTS**

CREATE TABLE IF NOT EXISTS will create a table if one doesn’t exist already. Without this constraint, you run the risk of overwriting a previously existing table.

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**import sqlite3**

**conn = sqlite3.connect("test.db")**

**print ("database opened successfully")**

**sqlQueryStr = "DROP TABLE IF EXISTS Sales;"**

**conn.cursor()**

**conn.execute(sqlQueryStr)**

**print ("table successfully dropped")**

**sqlQueryStr = "CREATE TABLE IF NOT EXISTS Sales"**

**sqlQueryStr += "(ID INT PRIMARY KEY NOT NULL,"**

**sqlQueryStr += "Agent\_Name TEXT NOT NULL,"**

**sqlQueryStr += "Years\_Of\_Service INT NOT NULL,"**

**sqlQueryStr += "Address CHAR(50),"**

**sqlQueryStr += "Salary REAL);"**

**conn.execute(sqlQueryStr)**

**print ("table successfully created")**

**conn.close()**

**(3) Review the program segment that is given below and answer each of these questions.**

1. **Considering the INSERT statement given in this program, how many fields from the Sales table were included?**

FIVE fields were included.

**(b) What is the purpose of this statement, as it is used below?**

**conn.commit()**

The purpose of the conn.commit() statement instructs the connection object to save changes made during a transaction.

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**import sqlite3**

**conn = sqlite3.connect("test.db")**

**print ("database opened successfully")**

**sqlQueryStr = "INSERT INTO Sales"**

**sqlQueryStr += "(ID, Agent\_Name, Years\_Of\_Service,"**

**sqlQueryStr += "Address, Salary)"**

**sqlQueryStr += "VALUES (1, 'Ivy', 7, 'Gary', 3000);"**

**conn.cursor()**

**conn.execute(sqlQueryStr)**

**conn.commit()**

**print ("record successfully posted")**

**conn.close()**

**(4) Review the program segment that is given below and answer each of these questions.**

1. **Considering the SELECT statement given in this program, which field from the Sales table was absent in the query?**

**SELECT \* FROM Sales;**

In the segment below, it looks like “Years\_of\_service” is absent in the sql query string. SELECT \* FROM Sales would return every field, however.

1. **In reference to the Sales table, how and why is the for loop used below?**

The for loop is used to loop through the rows returned by the cursor and print each field.

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**import sqlite3**

**conn = sqlite3.connect("test.db")**

**print ("database opened successfully")**

**sqlQueryStr = "SELECT ID, Agent\_Name,"**

**sqlQueryStr += "Address, Salary FROM Sales;"**

**cursor = conn.cursor()**

**cursor = conn.execute(sqlQueryStr)**

**for row in cursor :**

**print ("Agent ID = ", row[0])**

**print ("Agent Name = ", row[1])**

**print ("Address = ", row[2])**

**print ("Salary = ", row[3], "\n")**

**print ("operation performed successfully")**

**conn.close()**

**(5) Review the program segment that is given below and answer each of these questions.**

1. **In the query string that follows, what is the purpose of the \* symbol? As it is used here, what is the symbol \* often called?**

**SELECT \* FROM Sales;**

The asterisk semantically means “all fields” in this statement, and is often called a wildcard character.

1. **What is the purpose of this statement, as it is used below?**

**conn.commit()**

This saves the transcation made (here, an update) to the database.

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**import sqlite3**

**conn = sqlite3.connect("test.db")**

**print ("database opened successfully")**

**sqlQueryStr = "UPDATE Sales SET Salary = '25000'"**

**sqlQueryStr += "WHERE ID = 1;"**

**conn.execute(sqlQueryStr)**

**conn.commit()**

**print ("total rows updated =", conn.total\_changes)**

**cursor = conn.execute("SELECT \* FROM Sales;")**

**for row in cursor :**

**print ("ID = ", row[0])**

**print ("Agent Name = ", row[1])**

**print ("Years of Service = ", row[2])**

**print ("Address = ", row[3])**

**print ("Salary = ", row[4], "\n")**

**print ("operation performed successfully")**

**conn.close()**