**ASSIGNMENT 20**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 1. Set the variable test1 to the string 'This is a test of the emergency text system,' and save test1 to a file named test.txt.**

**Answer 1:**

test1 = 'This is a test of the emergency text system,'

file =open('test.txt','w')

file.write(test1)

file.close()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 2. Read the contents of the file test.txt into the variable test2. Is there a difference between test 1 and test 2?**

**Answer 2:**

file =open('test.txt','r')

test2 = file.read()

test2

No difference between test1 and test2

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 3. Create a CSV file called books.csv by using these lines:**

**title,author,year**

**The Weirdstone of Brisingamen,Alan Garner,1960**

**Perdido Street Station,China Miéville,2000**

**Thud!,Terry Pratchett,2005**

**The Spellman Files,Lisa Lutz,2007**

**Small Gods,Terry Pratchett,1992**

**Answer 3:**

text = ''' title,author,year

The Weirdstone of Brisingamen,Alan Garner,1960

Perdido Street Station,China Miéville,2000

Thud!,Terry Pratchett,2005

The Spellman Files,Lisa Lutz,2007

Small Gods,Terry Pratchett,1992 '''

books = open('books.csv', 'w', newline='')

books.write(text)

books.close()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 4. Use the sqlite3 module to create a SQLite database called books.db, and a table called books with these fields: title (text), author (text), and year (integer).**

**Answer 4:**

import sqlite3

connection = sqlite3.connect('books.db')

cursor = connection.cursor()

## query to create a table

query = ''' create table books(title varchar(20), author varchar(20), year int) '''

cursor.execute(query)

cursor.execute(''' insert into books values('Balbharati', 'Mr.Deshpande','1990')''')

result = cursor.fetchall

print(result)

connection.commit()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question** 5. Read books.csv and insert its data into the book table.

Answer 5:

import sqlite3

import csv

connection = sqlite3.connect('books.db')

cursor = connection.cursor()

## create table in database

cursor.execute(" create table book(title varchar(20), author varchar(20), year int) ")

## import csv file and read

csvfile = open('book.csv')

## create reader object

csvreaderobj = csv.reader(csvfile)

## query to insert csv file data

insert\_csv\_query = "insert into book values(?,?,?)"

## importing all or many data in database table using executemany()

cursor.executemany(insert\_csv\_query, csvreaderobj)

## fetchall data

cursor.execute("select \* from book")

csvdata = cursor.fetchall()

## check data is inserted

print( "csv data inserted in table in database")

print( "book table data as below:")

for row in csvdata:

print(row)

connection.commit()

connection.close()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 6. Select and print the title column from the book table in alphabetical order.**

**Answer 6:**

import sqlite3

import csv

connection = sqlite3.connect('books.db')

cursor = connection.cursor()

## fetchall data

cursor.execute("select title from book order by title asc")

csvdata = cursor.fetchall()

## check data is inserted

print('csvdata is as follows',csvdata)

connection.commit()

connection.close()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Question 7. From the book table, select and print all columns in the order of publication.**

**Answer 7 :**

import sqlite3

import csv

connection = sqlite3.connect('books.db')

cursor = connection.cursor()

## fetchall data

cursor.execute("select \* from book order by year asc")

csvdata = cursor.fetchall()

## check data is inserted

print('csvdata is as follows',csvdata)

connection.commit()

connection.close()

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 8. Use the sqlalchemy module to connect to the sqlite3 database books.db that you just made in exercise 6.**

**Answer 8:**

import sqlalchemy as db

engine = db.create\_engine("sqlite:///books.db")

row = engine.execute('select \* from book')

for i in row:

print(i)

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Question 9. Install the Redis server and the Python redis library (pip install redis) on your computer. Create a Redis hash called test with the fields count (1) and name ('Fester Bestertester'). Print all the fields for test.**

**Answer 9:**

!pip install redis

import redis

conn = redis.Redis()

conn.delete('test')

conn.hmset('test', {'count': 1, 'name': 'Fester Bestertester'})

conn.hgetall('test')

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Question 10. Increment the count field of test and print it.**

**Answer 10:**

conn.hincrby('test','count', 3)

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