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.

**Ans:**

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

with open('test.txt', 'w') as f:

f.write(test1)

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

**Ans:**

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

with open('test.txt', 'r') as f:

test2= f.read()

print(test2)

there is no difference between content of test1 and test2.

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

**Ans:**

data="""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

"""

with open("books.csv", 'w') as f:

f.write(data)

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).

**Ans:**

import sqlite3 as sql

conn=sql.connect("books.db")

conn.execute('Create Table books(title text, author text, year int)')

conn.commit()

conn.close()

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

**Ans:**

import sqlite3 as sql

import pandas as pd

df=pd.read\_csv("books.csv",encoding='ISO-8859-1')

conn=sql.connect("books.db")

for ind in df.index:

conn.execute("insert into books(title, author, year) values('"+df['title'][ind]+"','"+df['author'][ind]+"','"+str(df['year'][ind])+"')")

conn.commit()

conn.close()

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

**Ans:**

import sqlite3 as sql

conn=sql.connect("books.db")

data=conn.execute("select title from books order by title")

l=list(data)

for i in l:

print(i)

conn.close()

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

**Ans:**

import sqlite3 as sql

conn=sql.connect("books.db")

data=conn.execute("select \* from books order by year")

l=list(data)

for i in l:

print(i)

conn.close()

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

**Ans:**

import sqlalchemy as sqa

db=sqa.create\_engine('sqlite:///books.db')

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.

**Ans:**

import redis as rs

redisClient=rs.StrictRedis(host='localhost',port=6379,db=0)

redisClient.hset("test", "count", "1")

redisClient.hset("test", "name", "Fester Bestertester")

print(redisClient.hget("test", "count"))

print(redisClient.hget("test", "name"))

10. Increment the count field of test and print it.

**Ans:**

redisClient.hincrby("test", "count", 1)

print(redisClient.hget("test", "count"))