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,'

print(test1)

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

file.write(test1)

file.close()

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

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

test2 = file.read()

print(test2)

print(test1 == 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 file:

file.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

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

cursor = db.cursor()

cursor.execute("CREATE TABLE books (title text, author text, year int)")

db.commit()

db.close()

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

Ans. import sqlite3

import csv

conn = sqlite3.connect("books.db")

cursor = conn.cursor()

with open("books.csv","r") as file:

books = csv.DictReader(file)

for book in books:

cursor.execute("INSERT INTO books VALUES (?,?,?)",(book['title'],book['author'],book['year']))

conn.commit()

conn.close()

6. Select andimport sqlite3

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

cursor = conn.cursor()

output = cursor.execute("SELECT title FROM books ORDER BY title ASC")

for ele in output:

print(ele[0])

conn.commit()

conn.close() print the title column from the book table in alphabetical order.

Ans. import sqlite3

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

cursor = conn.cursor()

output = cursor.execute("SELECT title FROM books ORDER BY title ASC")

for ele in output:

print(ele[0])

conn.commit()

conn.close()

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

Ans. import sqlite3

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

cursor = conn.cursor()

ouput = cursor.execute("SELECT \* FROM books ORDER BY year")

for record in ouput:

print(record)

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

Ans. import sqlalchemy

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

conn

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. ! python -m pip install redis

import redis

conn = redis.Redis()

conn.hset('test',{

'count':1,

'name':'Fester Bestertester'

})

conn.hgetall('test')

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

Ans. conn.hincrby('test', 'count', 1)

conn.hget('test', 'count')