**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.**

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

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

file.write(test1)

**2. Read the contents of the file test.txt into the variable test2. Is there a difference between test1 and test2?**

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

test2 = file.read()

print(test1 == test2) # Output: True

There is no difference between test1 and test2.

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

import csv

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', newline='') as file:

writer = csv.writer(file)

writer.writerows(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).**

import sqlite3

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

cursor = conn.cursor()

cursor.execute('''

CREATE TABLE books (

title TEXT,

author TEXT,

year INTEGER

)

''')

conn.commit()

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

import csv

import sqlite3

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

cursor = conn.cursor()

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

reader = csv.reader(file)

next(reader) # Skip the header row

for row in reader:

cursor.execute('INSERT INTO books (title, author, year) VALUES (?, ?, ?)', row)

conn.commit()

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

cursor.execute('SELECT title FROM books ORDER BY title')

for row in cursor.fetchall():

print(row[0])

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

cursor.execute('SELECT \* FROM books ORDER BY year')

for row in cursor.fetchall():

print(row)

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

from sqlalchemy import create\_engine

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

connection = engine.connect()

**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.**

import redis

# Connect to Redis

r = redis.Redis(host='localhost', port=6379, db=0)

# Create a hash

r.hset('test', mapping={'count': 1, 'name': 'Fester Bestertester'})

# Print all fields

print(r.hgetall('test')) # Output: {b'count': b'1', b'name': b'Fester Bestertester'}

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

r.hincrby('test', 'count', 1)

print(r.hget('test', 'count')) # Output: b'2'