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)

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

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

test2 = file.read()

print(test1 == test2) # Should print True if no changes

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

import csv

with open('books.csv', 'w', newline='') as file:

writer = csv.writer(file)

writer.writerow(['title', 'author', 'year'])

writer.writerow(['The Weirdstone of Brisingamen', 'Alan Garner', '1960'])

writer.writerow(['Perdido Street Station', 'China Miéville', '2000'])

writer.writerow(['Thud!', 'Terry Pratchett', '2005'])

writer.writerow(['The Spellman Files', 'Lisa Lutz', '2007'])

writer.writerow(['Small Gods', 'Terry Pratchett', '1992'])

1. 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')

c = conn.cursor()

c.execute('''

CREATE TABLE books (

title TEXT,

author TEXT,

year INTEGER

)

''')

conn.commit()

conn.close()

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

import sqlite3

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

c = conn.cursor()

c.execute('''

CREATE TABLE books (

title TEXT,

author TEXT,

year INTEGER

)

''')

conn.commit()

conn.close()

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

import sqlite3

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

c = conn.cursor()

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

titles = c.fetchall()

for title in titles:

print(title[0])

conn.close()

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

import sqlite3

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

c = conn.cursor()

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

titles = c.fetchall()

for title in titles:

print(title[0])

conn.close()

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

from sqlalchemy import create\_engine

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

connection = engine.connect()

1. 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

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

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

print(r.hgetall('test'))

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

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

print(r.hget('test', 'count'))