Here are the answers and code for your questions:

**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()

# Checking for difference

test1 == test2 # Returns True or False

Since we wrote the exact string from test1 to the file and then read it back into test2, the contents of test1 and test2 should be the same, unless there was any unintended modification (e.g., a newline or extra character).

**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', mode='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

# Connect to SQLite database (or create it)

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

cursor = conn.cursor()

# Create table

cursor.execute('''

CREATE TABLE IF NOT EXISTS books (

title TEXT,

author TEXT,

year INTEGER

)

''')

conn.commit()

conn.close()

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

import csv

import sqlite3

# Read books.csv and insert data into the database

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

cursor = conn.cursor()

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

reader = csv.reader(file)

next(reader) # Skip header row

for row in reader:

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

conn.commit()

conn.close()

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

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

cursor = conn.cursor()

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

rows = cursor.fetchall()

for row in rows:

print(row[0])

conn.close()

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

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

cursor = conn.cursor()

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

rows = cursor.fetchall()

for row in rows:

print(row)

conn.close()

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

from sqlalchemy import create\_engine

from sqlalchemy.orm import sessionmaker

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

Session = sessionmaker(bind=engine)

session = Session()

# Example query

result = session.execute("SELECT title FROM books ORDER BY title ASC")

for row in result:

print(row)

session.close()

**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 server

r = redis.Redis()

# Create a Redis hash

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

r.hset('test', 'name', 'Fester Bestertester')

# Print all fields of the hash

test\_data = r.hgetall('test')

print(test\_data)

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

# Increment the 'count' field

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

# Print updated value

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