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'**

**>>> len(test1)**

**43**

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', 'rt') as infile:**

**test2 = infile.read()**

**>>> len(test2)**

**43**

**>>> test1 == test2**

**True**

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 : >>> text = ‘ ‘ ‘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(‘test.csv’, ‘wt’) as outfile:**

**outfile.write(text)**

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')**

**>>> curs = db.cursor()**

**>>> curs.execute('''create table book (title text, author text, year int)''')**

**<sqlite3.Cursor object at 0x1006e3b90>**

**>>> db.commit()**

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

**Ans : >>> import csv**

**>>> import sqlite3**

**>>> ins\_str = 'insert into book values(?, ?, ?)'**

**>>> with open('books.csv', 'rt') as infile:**

**books = csv.DictReader(infile)**

**for book in books:**

**curs.execute(ins\_str, (book['title'], book['author'], book['year']))**

**<sqlite3.Cursor object at 0x1007b21f0>**

**<sqlite3.Cursor object at 0x1007b21f0>**

**<sqlite3.Cursor object at 0x1007b21f0>**

**<sqlite3.Cursor object at 0x1007b21f0>**

**<sqlite3.Cursor object at 0x1007b21f0>**

**>>> db.commit()**

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

**Ans : >>> sql = 'select title from book order by title asc'**

**>>> for row in db.execute(sql):**

**print(row)**

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

**Ans : for row in db.execute('select \* from book order by year'):**

**print(row)**

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')**

**>>> sql = 'select title from book order by title asc'**

**>>> rows = conn.execute(sql)**

**>>> for row in rows:**

**print(row)**

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**

**>>> conn = redis.Redis()**

**>>> conn.delete('test')**

**1**

**>>> conn.hmset('test', {'count': 1, 'name': 'Fester Bestertester'})**

**True**

**>>> conn.hgetall('test')**

**{b'name': b'Fester Bestertester', b'count': b'1'**

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

**Ans : >>> conn.hincrby('test', 'count', 3)**

**4**

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

**b'4'**