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'**

**f=open("test.txt",'a')**

**f.write(test1)**

**f.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. f = open("test.txt", "r")**

**test2=f.read()**

**print(test2)**

No there is no difference between test 1 and 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. 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’’’**

**f=open("book.csv",'a')**

**f.write(text)**

**f.close()**

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()**

**cur.execute('''CREATE TABLE marks (title text,author text,year integer)''')**

**db.close()**

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"]))**

**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 as sa**

**db=sa.create\_engine("sqlite:///books.db")**

**sql="select title from book order by title asc"**

**rows=db.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**

**db=redis.Redis()**

**db.hmset("test",{"count":"1","name":"Fester Besteretester"})**

**True**

**db.hgetall("test")**

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

**Ans. db.hincrby("test","count")**

**db.hget("test","count")**