**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,'**

**filee = open('test.txt','w')**

**filee.write(test1)**

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

**ANS:-**

**file2 = open('test.txt','r')**

**test2 = file2.readline()**

**test2**

**'This is a test of the emergency text system,'**

**if test1==test2:**

**print('Both are same')**

**Both are same**

**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:-**

**import csv**

**rows =[ ['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(rows)**

**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**

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

**c = conn.cursor()**

**c.execute('create table books(title varchar(20),author varchar(20), year int)')**

**conn.commit()**

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

**ANS:-**

**import pandas as pd**

**read\_books = pd.read\_csv('books.csv',encoding='unicode\_escape')**

**read\_books.to\_sql('books', conn, if\_exists='append', index = False)**

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

**ANS:-**

**c.execute('select title from books order by title asc')**

**print(c.fetchall())**

**[('Perdido Street Station',), ('Small Gods',), ('The Spellman Files',), ('The Weirdstone of Brisingamen',), ('Thud!',)]**

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

**ANS:-**

**c.execute('select title, author,year from books order by year')**

**df = pd.DataFrame(c.fetchall(), columns=['title','author','year'])**

**df**

|  | **title** | **author** | **year** |
| --- | --- | --- | --- |
| **0** | **The Weirdstone of Brisingamen** | **Alan Garner** | **1960** |
| **1** | **Small Gods** | **Terry Pratchett** | **1992** |
| **2** | **Perdido Street Station** | **China MiÃ©ville** | **2000** |
| **3** | **Thud!** | **Terry Pratchett** | **2005** |
| **4** | **The Spellman Files** | **Lisa Lutz** | **2007** |

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

**ANS:-**

**import sqlalchemy**

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

**rows = engine.execute('select \* from books')**

**for i in rows:**

**print(i)**

**('The Weirdstone of Brisingamen', 'Alan Garner', 1960)**

**('Perdido Street Station', 'China MiÃ©ville', 2000)**

**('Thud!', 'Terry Pratchett', 2005)**

**('The Spellman Files', 'Lisa Lutz', 2007)**

**('Small Gods', 'Terry Pratchett', 1992)**

**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:-**

**!pip install redis**

**Collecting redis**

**Downloading redis-3.5.3-py2.py3-none-any.whl (72 kB)**

**|████▌ | 10 kB 16.9 MB/s eta 0:00:01**

**|█████████ | 20 kB 20.2 MB/s eta 0:00:01**

**|█████████████▋ | 30 kB 25.0 MB/s eta 0:00:01**

**|██████████████████▏ | 40 kB 28.6 MB/s eta 0:00:01**

**|██████████████████████▊ | 51 kB 31.4 MB/s eta 0:00:01**

**|███████████████████████████▎ | 61 kB 25.5 MB/s eta 0:00:01**

**|███████████████████████████████▉| 71 kB 26.6 MB/s eta 0:00:01**

**|████████████████████████████████| 72 kB 440 kB/s**

**Installing collected packages: redis**

Successfully installed redis-3.5.3

**import redis**

**conn = redis.Redis()**

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

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

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

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

**ANS:-**

**conn.hincrby('test','count', 3)**