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,'

file\_object = open('D:\\notebooks\ineuron\\assignments\\python\_basics\\test.txt', 'w+')

file\_object.write(test1)

file\_object.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 => no difference

f=open('D:\\notebooks\ineuron\\assignments\\python\_basics\\test.txt', "r")

contents =f.read()

print(contents)

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

fields = ['title', 'author', 'Year']

rows = [ ['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']]

filename = "D:\\notebooks\\ineuron\\assignments\\python\_basics\\books.csv"

with open(filename, 'w') as csvfile:

csvwriter = csv.writer(csvfile)

csvwriter.writerow(fields)

csvwriter.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')

print("Opened database successfully")

conn.execute('''CREATE TABLE books

         (id INT PRIMARY KEY     NOT NULL,

         title           TEXT    NOT NULL,

         author            Text     NOT NULL,

         year               INT);''')

print("Table created successfully")

conn.close()

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

Ans=>

import csv, sqlite3

con = sqlite3.connect('D:\\notebooks\\ineuron\\assignments\\python\_basics\\books.db')

cur = con.cursor()

filename = "D:\\notebooks\\ineuron\\assignments\\python\_basics\\books.csv"

with open(filename,'r') as fin:

    dr = csv.DictReader(fin)

    to\_db = [(i['title'], i['author'], i['Year']) for i in dr]

cur.executemany("INSERT INTO books (title, author, year) VALUES (?, ?, ?);", to\_db)

con.commit()

con.close()

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

Ans =>

import sqlite3

con = sqlite3.connect('D:\\notebooks\\ineuron\\assignments\\python\_basics\\books.db')

cur = con.cursor()

cur.execute('SELECT title FROM books ORDER BY title ASC')

rows = cur.fetchall()

print(rows)

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

Ans=>

import sqlite3

con = sqlite3.connect('D:\\notebooks\\ineuron\\assignments\\python\_basics\\books.db')

cur = con.cursor()

cur.execute('SELECT \* FROM books ORDER BY year DESC')

rows = cur.fetchall()

print(rows)

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

Ans=>

import sqlalchemy

dbEngine=sqlalchemy.create\_engine('sqlite:////D:/notebooks/ineuron/assignments/python\_basics/books.db')

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

redisClient = redis.StrictRedis(*host*='localhost',*port*=6379,*db*=0)

hashName = "test"

redisClient.hset(hashName, 'count', 1)

redisClient.hset(hashName, 'name', 'Fester Bestertester')

print(redisClient.hgetall(hashName))

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

Ans =>

import redis

redisClient = redis.StrictRedis(*host*='localhost',*port*=6379,*db*=0)

hashName = "test"

redisClient.hset(hashName, 'count', 1)

redisClient.hset(hashName, 'name', 'Fester Bestertester')

print(redisClient.hgetall(hashName))

redisClient.hdel(hashName, 'count')

redisClient.hset(hashName, 'count', 2)

print(redisClient.hgetall(hashName))