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.

Answer:

test1 = 'this is a test of the emergency test system'

outfile = open('test.txt', 'wt')

outfile.write(test1)

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

Answer:

with open('test.txt','rt') as infile:

test2= infile.read()

test1 == test2

False

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

Answer:

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('books.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).

Answer:

import sqlite3

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

curs = db.cursor()

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

<sqlite3.Cursor at 0x2dbc91d96c0>

db.commit()

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

Answer:

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']))

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

Answer:

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

for row in db.execute(sql):

print(row)

('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.

Answer:

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

print(\*row, sep=',')

The Weirdstone of Brisingamen, Alan Garner, 1960

Small Gods, Terry Pratchett, 1992

Perdido Street Station, China Miéville, 2000

Thud!, Terry Pratchett, 2005

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.

Answer:

import sqlalchemy

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

sql = 'select title from book roder by title asc'

rows = conn.execute(sql)

for row in rows:

print(row)

('Perdido Street Station',)

('Small Gods',)

('The Spellman Files',)

('The Weirdstone of Brisingamen',)

('Thud!',)

1. 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.

Answer:

import redis

conn= redis.Redis()

conn.delete('test')

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.

Answer:

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

4

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

b'4'