Title : Python Basic Assignment_20
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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.

In [1]:

```
test1 = 'This is a test of the emergency text system,'
my_file = open('test.txt', 'w')
my_file.write(test1)
my_file.close()
```

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

In [4]:

```
read_file = open('test.txt', 'r')
test2 = read_file.readline()

print(test2) # just for reference

read_file.close()
if test1 == test2:
    print("Both test1 and test2 are same")
```

```
This is a test of the emergency text system,
Both test1 and test2 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

In [5]:

```
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)

with open('books.csv','r',newline='') as file:
    for line in file.readlines():
        print(line)
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
```

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).

In [6]:

```
import sqlite3
conn = sqlite3.connect('books.db')
c = conn.cursor()
c.execute('DROP TABLE IF EXISTS books')
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.

In [7]:

```
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.

In [9]:

```
c.execute('select title from books order by title asc')
print(c.fetchall())
[('Perdido Street Station',), ('Small Gods',), ('The Spellman Files',), ('T
he Weirdstone of Brisingamen',), ('Thud!',)]
```

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

In [10]:

```
c.execute('select title, author,year from books order by year')
#print(c.fetchall())

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

Out[10]:

	title	author	year
0	The Weirdstone of Brisingamen	Alan Garner	1960
1	Small Gods	Terry Pratchett	1992
2	Perdido Street Station	China Miéville	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.

In [11]:

```
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 Miéville', 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.

In [ ]:

```
#pip install redis
```

In [ ]:

```
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.

In [ ]:

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