In [1]:
```python
"""

big data exercises
Erick Heredia

"""
```

Out[1]: `'\n\nbig data exercises \nErick Heredia\n\n'`

In [2]:
```python
import sqlite3
import pandas as pd
```

In [15]:
```python
database = sqlite3.connect("books.db")
```

In [16]:
```python
book_db = database.cursor()

book_db.execute("SELECT title FROM titles")

des = book_db.description

data = book_db.fetchall()

print(des, "\n")

print(data)
```

```
(('title', None, None, None, None, None, None),)

[('Intro to Python for CS and DS',), ('Internet & WWW How to Program',), ('Java How
to Program',), ('C How to Program',), ('Visual Basic 2012 How to Program',), ('Visu
al C# How to Program',), ('Visual C++ How to Program',), ('C++ How to Program',),
('Android How to Program',), ('Android 6 for Programmers',)]
```

In [17]:
```python
pd.options.display.max_columns = 10

pd.read_sql('SELECT * FROM authors ORDER BY Last DESC ', database, index_col=['id']
```

Out[17]:

id	first	last
5	Alexander	Wald
4	Dan	Quirk
1	Paul	Deitel
2	Harvey	Deitel
3	Abbey	Deitel

In [18]:
```python
pd.read_sql('SELECT * FROM titles ORDER BY title ASC', database)
```

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Out[18]:

	isbn	title	edition	copyright
0	0134289366	Android 6 for Programmers	3	2016
1	0134444302	Android How to Program	3	2017
2	0133976890	C How to Program	8	2016
3	0134448235	C++ How to Program	10	2017
4	0132151006	Internet & WWW How to Program	5	2012
5	0135404673	Intro to Python for CS and DS	1	2020
6	0134743350	Java How to Program	11	2018
7	0133406954	Visual Basic 2012 How to Program	6	2014
8	0134601548	Visual C# How to Program	6	2017
9	0136151574	Visual C++ How to Program	2	2008

In [28]:

```python
pd.read_sql("""
SELECT first, last, isbn, title,copyright
FROM authors
INNER JOIN titles
""", database).head()
```

Out[28]:

	first	last	isbn	title	copyright
0	Paul	Deitel	0135404673	Intro to Python for CS and DS	2020
1	Paul	Deitel	0132151006	Internet & WWW How to Program	2012
2	Paul	Deitel	0134743350	Java How to Program	2018
3	Paul	Deitel	0133976890	C How to Program	2016
4	Paul	Deitel	0133406954	Visual Basic 2012 How to Program	2014

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```python
In [19]: book_cur = database.cursor()

         book_cur = book_cur.execute("""INSERT INTO authors(first, last)
         VALUES ('James','bond')""")

         pd.read_sql('SELECT * FROM authors', database, index_col=['id'])
```

Out[19]:

	first	last
id		
1	Paul	Deitel
2	Harvey	Deitel
3	Abbey	Deitel
4	Dan	Quirk
5	Alexander	Wald
6	James	bond

```python
In [20]: book_cur = book_cur.execute(""" INSERT INTO titles(title, isbn, edition, copyright)
         VALUES('how to be a spy','234567890','1','2024')""")

         pd.read_sql('SELECT * FROM titles', database)
```

Out[20]:

	isbn	title	edition	copyright
0	0135404673	Intro to Python for CS and DS	1	2020
1	0132151006	Internet & WWW How to Program	5	2012
2	0134743350	Java How to Program	11	2018
3	0133976890	C How to Program	8	2016
4	0133406954	Visual Basic 2012 How to Program	6	2014
5	0134601548	Visual C# How to Program	6	2017
6	0136151574	Visual C++ How to Program	2	2008
7	0134448235	C++ How to Program	10	2017
8	0134444302	Android How to Program	3	2017
9	0134289366	Android 6 for Programmers	3	2016
10	234567890	how to be a spy	1	2024

```python
In [21]: book_cur = book_cur.execute("""INSERT INTO author_ISBN(id,isbn)
         VALUES('6','234567890')""")
```

```python
In [22]: pd.read_sql('SELECT * FROM author_ISBN', database)
```

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Out[22]:

	id	isbn
0	1	0134289366
1	2	0134289366
2	5	0134289366
3	1	0135404673
4	2	0135404673
5	1	0132151006
6	2	0132151006
7	3	0132151006
8	1	0134743350
9	2	0134743350
10	1	0133976890
11	2	0133976890
12	1	0133406954
13	2	0133406954
14	3	0133406954
15	1	0134601548
16	2	0134601548
17	1	0136151574
18	2	0136151574
19	4	0136151574
20	1	0134448235
21	2	0134448235
22	1	0134444302
23	2	0134444302
24	6	234567890

In [10]:
```python
database.close()
```

In [ ]:

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