Module 02

Data Input and Output

Data Science Developer

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Using Pandas

```
In [1]: import pandas as pd
```

CSV

Input

```
In [2]: df = pd.read_csv('example')
        df
```

Out[2]:

	a	b	c	d
0	0	1	2	3
1	4	5	6	7
2	8	9	10	11
3	12	13	14	15

CSV

Output

```
In [3]: df.to_csv('example',index=False)
```

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Excel

Input

```
In [4]: pd.read_excel('Excel_Sample.xlsx',sheet_name='Sheet1')
```

Out[4]:

	a	b	c	d
0	0	1	2	3
1	4	5	6	7
2	8	9	10	11
3	12	13	14	15

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Excel

Output

```
In [5]: df.to_excel('Excel_Sample.xlsx',sheet_name='Sheet1')
```

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HTML
Input

In [6]:
```
df = pd.read_html('http://www.fdic.gov/bank/individual/failed/banklist.html')
```

In [8]:
```
df[0].head()
```

Out[8]:

	Bank Name	City	ST	CERT	Acquiring Institution	Closing Date	Updated Date
0	Washington Federal Bank for Savings	Chicago	IL	30570	Royal Savings Bank	December 15, 2017	February 21, 2018
1	The Farmers and Merchants State Bank of Argonia	Argonia	KS	17719	Conway Bank	October 13, 2017	February 21, 2018
2	Fayette County Bank	Saint Elmo	IL	1802	United Fidelity Bank, fsb	May 26, 2017	July 26, 2017
3	Guaranty Bank, (d/b/a BestBank in Georgia & Mi...	Milwaukee	WI	30003	First-Citizens Bank & Trust Company	May 5, 2017	March 22, 2018
4	First NBC Bank	New Orleans	LA	58302	Whitney Bank	April 28, 2017	December 5, 2017

MySQL (Open Connection & Get Data)

```
import pandas as pd
from sqlalchemy import create_engine
```

```
# MYSQL_USER = 'root'
# MYSQL_PASSWORD = 'abc123'
# MYSQL_HOST_IP = 'localhost'
# MYSQL_PORT = '3306'
# MYSQL_DATABASE = 'toko'
engine = create_engine(
      "mysql+mysqlconnector://root:abc123@localhost/toko?host=localhost?port=3306")
```

```
conn = engine.connect()
results = conn.execute("SELECT * from salaries").fetchall()
# print(results[0].keys())
df1 = pd.DataFrame(results)
df1.columns = results[0].keys()
df1.head()
```

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MySQL (CRUD Examples)

- Example executing query (Insert,Update, and Delete) from python :

```
#Insert Data To MySQL
conn.execute("Insert into product values(Null, '" + inputNama + "', " + inputCatId + ")");
#Update Data
conn.execute("Update product set Nama = '" + inputNamaBaruProd + " where id = " + inputIdProd);
#Delete Data
conn.execute("Delete from product where id = " + inputIdProd);
```

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