Pandas: Data Input and Output

Data Science Developer

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Outline

- CSV file
- Excel file
- JSON
- import data from web or HTML

CSV

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)
```

Excel

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')
```

JSON

JSON
Input

'records' writing structure

```
1    [{"nama":"Andi","umur":25,"pekerjaan":"Front End Developer"},
2        {"nama":"Budi","umur":18,"pekerjaan":"Back End Developer"},
3        {"nama":"Caca","umur":36,"pekerjaan":"Mobile Developer"}]
```

```
df = pd.read_json('data.json', orient='records')
df.head()
```
executed in 14ms, finished 14:23:04 2019-12-08

	nama	pekerjaan	umur
0	Andi	Front-End Developer	24
1	Budi	Back-End Developer	18
2	Caca	Mobile Developer	30

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JSON
Output

```python
df = pd.DataFrame({
    'nama': ['Andi','Budi','Caca'],
    'umur': [24,18,30],
    'pekerjaan': ['Front-End Developer','Back-End Developer', 'Mobile Developer']
})
df.head()
```

executed in 21ms, finished 14:18:55 2019-12-08

	nama	umur	pekerjaan
0	Andi	24	Front-End Developer
1	Budi	18	Back-End Developer
2	Caca	30	Mobile Developer

```python
df.to_json('data.json',orient='records')
```

executed in 4ms, finished 14:20:31 2019-12-08

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HTML

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

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Read Documentation For More Info

https://pandas.pydata.org/pandas-docs/stable/reference/io.html

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Reference

- Introducing JSON. https://www.json.org/json-en.html
- Importing single record using read_json in pandas. https://stackoverflow.com/questions/31656040/importing-single-record-using-read-json-in-pandas

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