

Nama : Astuti novita wulandari

Nim : 211001007

Pemograman python C

## Task 5 Modul 3

1.

The screenshot shows a Jupyter Notebook with the following content:

```
#1. Membuat Series
#Series Object
import pandas as pd
data=[1,2,3,4]
series1=pd.Series(data)
series1
```

The output of the first cell is:

```
0    1
1    2
2    3
3    4
dtype: int64
```

The second cell contains the code:

```
[ ] type(series1)
```

The output is:

```
pandas.core.series.Series
```

The third cell contains the code:

```
[ ] series1=pd.Series(data,index=['a','b','c','d'])
series1
```

The output is:

```
a    1
b    2
c    3
d    4
```

2.

The screenshot shows a Jupyter Notebook with the following content:

**DataFrame:**DataFrame merupakan array dua dimensi dengan baris dan kolom. Struktur data ini merupakan cara paling standar untuk menyimpan data. Secara sederhana, DataFrame merupakan tabel/data tabular. Setiap kolom pada DataFrame merupakan objek dari Series, dan baris terdiri dari elemen yang ada pada Series. Contoh DataFrame.

**1. DataFrame menggunakan List**

```
import pandas as pd
data=[1,2,3,4]
df=pd.DataFrame(data)
df
```

The output of the first cell is:

```
0    1
1    2
2    3
3    4
```

**2. DataFrame Menggunakan Dictionary**

```
[ ] dictionary={'buah':['Apel','Jeruk','Lemon'],'Jumlah':[10,5,12]}
df=pd.DataFrame(dictionary)
df
```

3.

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Visualisasi Data : Pandas DataFrame.ipynb

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[ ]

	buah	Jumlah
0	Apel	10
1	Jonak	5
2	Lemon	12

3. DataFrame Menggunakan List dengan Tipe Data Campuran

```
import pandas as pd
data=[['Berti',90,85,95,90],
      ['Qorygore',80,85,90,86],
      ['Bimo',70,75,80,78]]
index=[0,1,2]
kolom=['Nama','Tugas','UTS','UAS','Rata-rata']
df=pd.DataFrame(data, index, kolom)
df
```

	Nama	Tugas	UTS	UAS	Rata-rata
0	Berti	90	85	95	90
1	Qorygore	80	85	90	86
2	Bimo	70	75	80	78

4. DataFrame Menggunakan List & Dictionary dengan Tipe Data Campuran

```
#Menggunakan Dictionary
import pandas as pd
```

4.

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[ ]

```
#Menggunakan Dictionary
import pandas as pd
nama=['Berti','Qorygore','Bimo']
tugas=[90,80,70]
uts=[85,85,75]
uas=[95,90,80]
ratarata=[90.5,86.6,78.5]
df2=pd.DataFrame({'Nama':nama,'Tugas':tugas,'UTS':uts,'UAS':uas,'Rata-Rata':ratarata})
df2
```

	Nama	Tugas	UTS	UAS	Rata-Rata
0	Berti	90	85	95	90.5
1	Qorygore	80	85	90	86.6
2	Bimo	70	75	80	78.5

Merge, Join, & Concatenate DataFrame

Ketiga fungsi ini pengertiannya adalah operasi penggabungan. Perbedaanny adalah sebagai berikut.

1. Merge: Merge adalah operasi penggabungan antara DataFrame Objects.

• Siapkan 2 Data

```
#Data pertama
import pandas as pd
```

5.

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Slapkan 2 Data

```
#Data pertama
import pandas as pd
nama=['Berti','Ryndes','Anin']
tugas=[95,90,75]
jurusan=['IF','SI','KA']
df3=pd.DataFrame({'Nama':nama,'Tugas':tugas,'Jurusan':jurusan})
df3
```

	Nama	Tugas	Jurusan
0	Berti	95	IF
1	Ryndes	90	SI
2	Anin	75	KA

```
[ ] #Data Kedua
nama=['Berti','Ryndes','Rylo']
uts=[85,84,70]
jurusan=['IF','SI','SI']
df4=pd.DataFrame({'Nama':nama,'UTS':uts,'Jurusan':jurusan})
df4
```

	Nama	UTS	Jurusan
0	Berti	85	IF
1	Ryndes	84	SI
2	Rylo	70	SI

6.

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Inner Merge

```
[ ] #Left merge
df3.merge(df4,on='Nama',how='left')
```

	Nama	Tugas	Jurusan_x	UTS	Jurusan_y
0	Berti	95	IF	85.0	IF
1	Ryndes	90	SI	84.0	SI
2	Anin	75	KA	NaN	NaN

Right Merge

```
[ ] #Right merge
df3.merge(df4,on='Nama',how='right')
```

	Nama	Tugas	Jurusan_x	UTS	Jurusan_y
0	Berti	95.0	IF	85	IF
1	Ryndes	90.0	SI	84	SI
2	Rylo	NaN	NaN	70	SI

Outer Merge


```
[ ] #Outer merge
df3.merge(df4,on='Nama',how='outer')
```

7.

1

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Visualisasi Data : Pandas DataFrame.ipynb

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• Right Merge

```
#Right merge
df3.merge(df4, on='Nama', how='right')
```

	Nama	Tugas	Jurusan_x	UTS	Jurusan_y
0	Berli	95.0	IF	85	IF
1	Ryndes	90.0	SI	84	
2	Rylo	NaN	NaN	70	SI

• Outer Merge

```
#Outer merge
df3.merge(df4, on='Nama', how='outer')
```

	Nama	Tugas	Jurusan_x	UTS	Jurusan_y
0	Berli	95.0	IF	85.0	IF
1	Ryndes	90.0	SI	84.0	SI
2	Arim	75.0	KA	NaN	NaN
3	Rylo	NaN	NaN	70.0	SI

2. Join

Join adalah operasi penggabungan dengan menggunakan index.

• Siapkan 2 Data