



- Data frame and series in pandas
- index insplisit and eksplisit

INTRODUCTION

Data manipulation is the process of changing or altering data in order to make it more readable and organized. For example, you can arrange data alphabetically to expedite the process of finding useful information. Another example of data manipulation is website management.

Data manipulation



SERIES IN PANDAS

A pandas Series is a one-dimensional labelled data structure which can hold data such as strings, integers and even other Python objects.

```
import pandas as pd
import numpy as np
data=[0,0.25,0.5,0.75,1]
data=pd.Series(data)
print(data)
     0.00
     0.25
    0.50
    0.75
     1.00
dtype: float64
```

DATAFRAME IN PANDAS

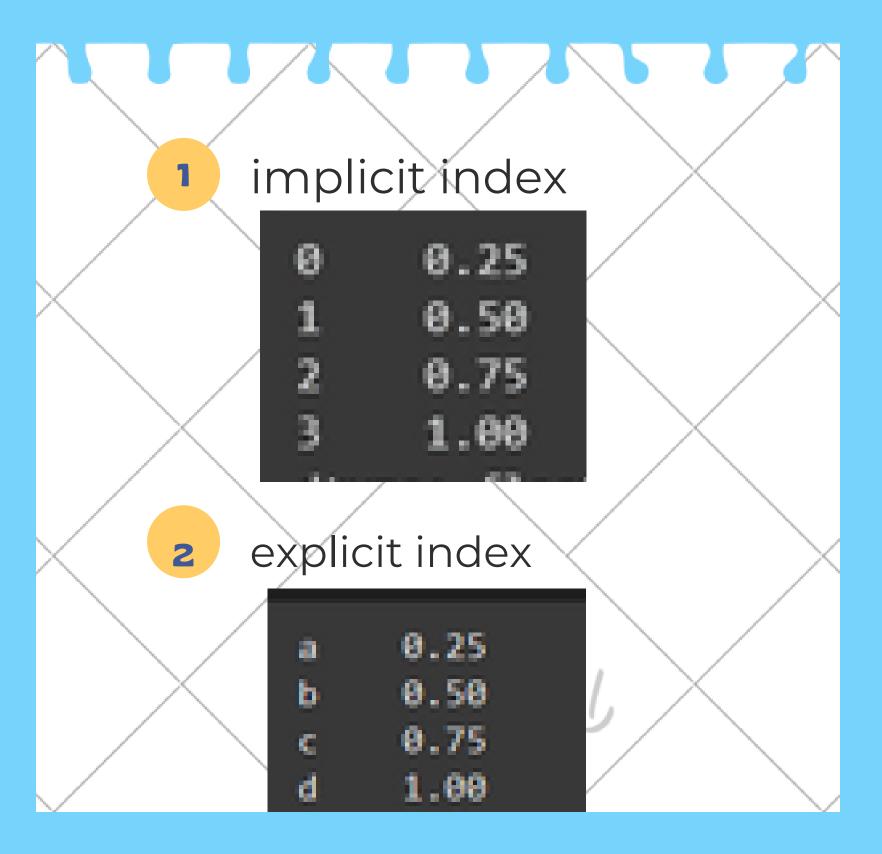
DataFrame is a 2-dimensional labeled data structure with columns of potentially different types

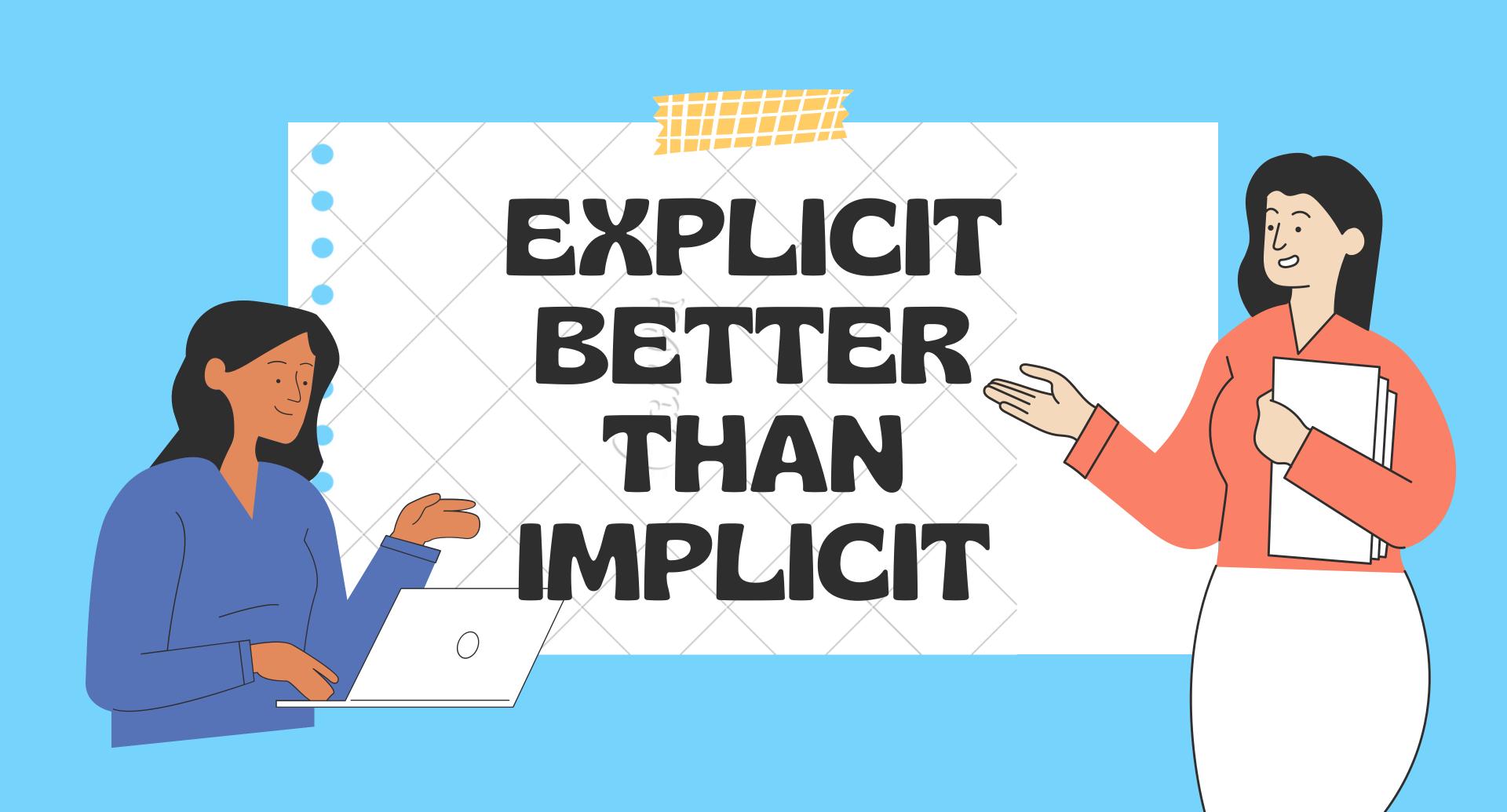
```
import pandas as pd
import numpy as np
data=[0,0.25,0.5,0.75,1]
data-pd.DataFrame(data)
print(data)
  0.25
  0.75
```



INDEX ÎMPLIST AND EXPLISIT

- index implisit (null index)
 is an default index in
 python
- index explicit is an customized indexin python





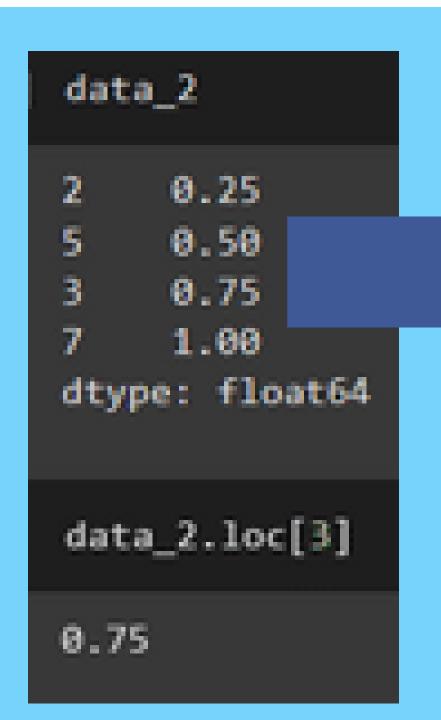
EXPILICT BETTER THAN IMPLICIT

Explicit is better than implicit is a sentence we heard when we learn about indexing in pandas. these sentence means if we do slicing using index. excelicit index will be prioritize than implicit index if both of index have same member of index

LOC AND LOC

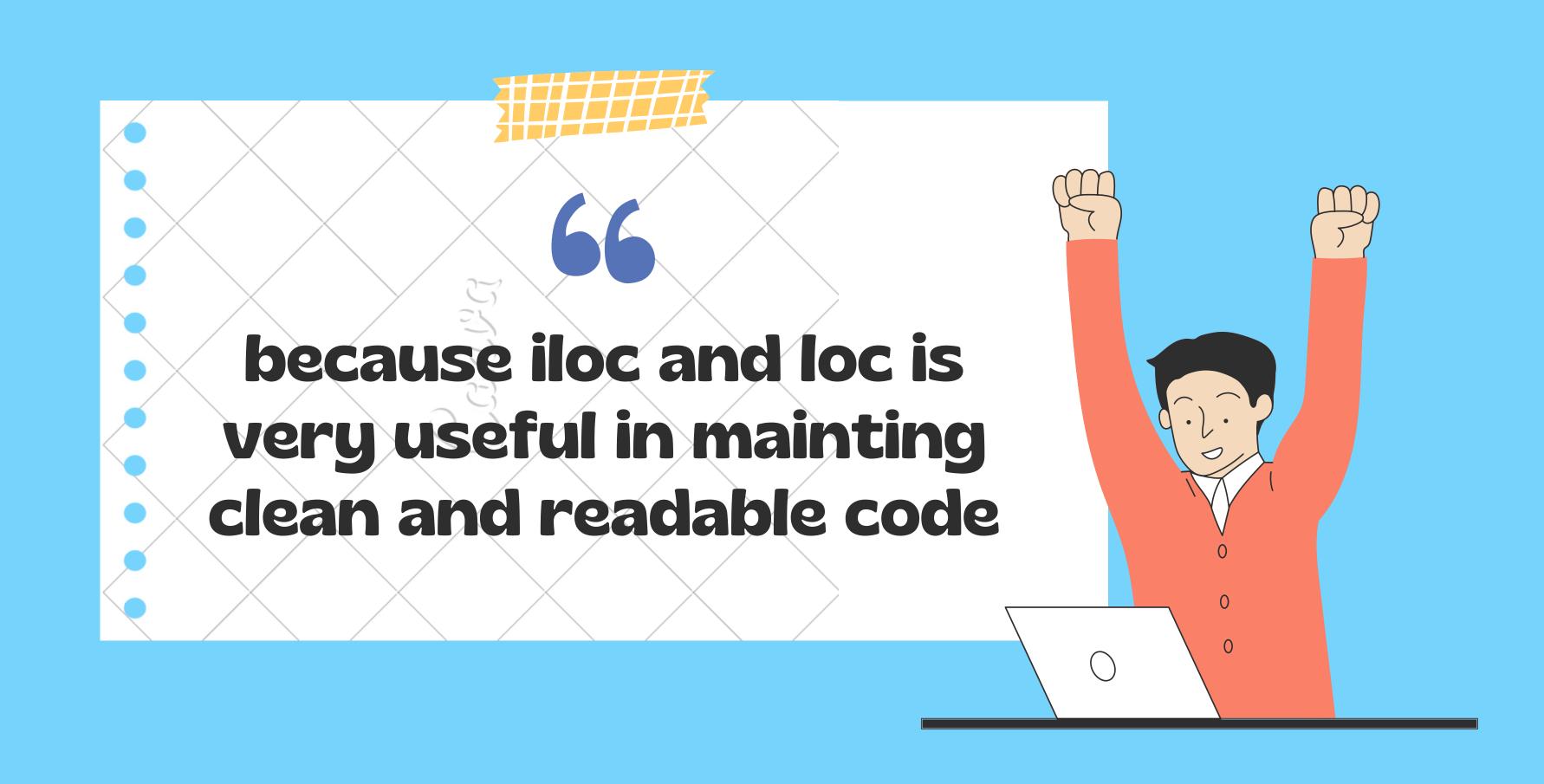
```
data_2
    0.25
    0.50
    0.75
    1.00
dtype: float64
data_2.iloc[3]
1.0
```











HOW TO ADD A NEW ROW

code:

```
daerah_tambahan=pd.DataFrame({"bandung":[342,980,342/980]})
daerah_tambahan=daerah_tambahan.T
daerah_tambahan.columns=daerah.columns
pd.concat([daerah,daerah_tambahan])
```

output:

	populasi	luas	populasi per area	1
jakarta	370	720	0.513889	
bogor	490	230	2.130435	
depok	350	560	0.625000	
tanggeringan	270	420	0.642857	
bekasi	670	290	2.310345	

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bandung	342.0	980.0	0.348980

