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NIM : 20/457264/SV/17711

Kelas : TRPL B

TUGAS 1

a. Import dan baca file csv

```
import pandas as pd


happiness = pd.read_csv("pertemuan11\\world-happiness-report-2021.csv")
```

Sebelum bisa import library pandas, kita harus sudah install pandas dulu sebelumnya. Untuk menginstall pandas bisa menggunakan terminal dan ketikkan “pip install pandas”. Lalu file world-happinness akan di taruh di variabel happiness, menggunakan method pandas read_csv().

b. Print data

```
# print data
print(happiness)
```

output :

```
    Country name  Regional indicator  ...  Explained by: Perceptions of corruption  Dystopia + residual
0        Finland      Western Europe  ...                                   0.481               3.253
1        Denmark      Western Europe  ...                                   0.485               2.868
2    Switzerland      Western Europe  ...                                   0.413               2.839
3        Iceland      Western Europe  ...                                   0.170               2.967
4    Netherlands      Western Europe  ...                                   0.384               2.798
..           ...                 ...  ...                                     ...                 ...
144      Lesotho  Sub-Saharan Africa  ...                                   0.015               1.800
145     Botswana  Sub-Saharan Africa  ...                                   0.088               0.648
146       Rwanda  Sub-Saharan Africa  ...                                   0.493               1.095
147     Zimbabwe  Sub-Saharan Africa  ...                                   0.075               1.205
148  Afghanistan          South Asia  ...                                   0.010               1.895

[149 rows x 20 columns]
```

Penjelasan :

Output diatas merupakan column dan row dari file world-happiness

c. Print top 5 of the data

```
# print top 5 rows of the data
print(happiness.head())
```

output :

```
  Country name Regional indicator  ...  Explained by: Perceptions of corruption  Dystopia + residual
0      Finland     Western Europe  ...                                   0.481               3.253
1      Denmark     Western Europe  ...                                   0.485               2.868
2  Switzerland     Western Europe  ...                                   0.413               2.839
3      Iceland     Western Europe  ...                                   0.170               2.967
4  Netherlands     Western Europe  ...                                   0.384               2.798

[5 rows x 20 columns]
```

Penjelasan :

Mengeluarkan 5 baris teratas dari file csv

d. Print top 5 data from the bottom

```
# print top 5 from bottom of the data
print(happiness.tail())
```

output :

```
    Country name  Regional indicator  ...  Explained by: Perceptions of corruption  Dystopia + residual
144      Lesotho  Sub-Saharan Africa  ...                                   0.015               1.800
145     Botswana  Sub-Saharan Africa  ...                                   0.088               0.648
146       Rwanda  Sub-Saharan Africa  ...                                   0.493               1.095
147     Zimbabwe  Sub-Saharan Africa  ...                                   0.075               1.205
148  Afghanistan          South Asia  ...                                   0.010               1.895

[5 rows x 20 columns]
```

Penjelasan :

Mengeluarkan 5 baris terbawah dari file csv

e. Print 10 random rows from the data

```
# print 10 random rows from the data
print(happiness.sample(10))
```

output :

```
    Country name  ... Dystopia + residual
88      Maldives  ...                1.520
51      Colombia  ...                2.794
39       Estonia  ...                2.103
70      Paraguay  ...                2.306
120        Kenya  ...                2.180
99          Laos  ...                2.204
138       India  ...                1.405
94        Ghana  ...                2.684
114   Mozambique  ...                2.783
43        Poland  ...                2.438

[10 rows x 20 columns]
```

Penjelasan :

Mengeluarkan 10 baris random (dipilihkan oleh pandas) dari file csv.

f. Print the columns of the data

```
# print the colums of the data
print(happiness.columns)
```

output :

```
Index(['Country name', 'Regional indicator', 'Ladder score',
       'Standard error of ladder score', 'upperwhisker', 'lowerwhiske
       'Logged GDP per capita', 'Social support', 'Healthy life expec
       'Freedom to make life choices', 'Generosity',
       'Perceptions of corruption', 'Ladder score in Dystopia',
       'Explained by: Log GDP per capita', 'Explained by: Social supp
       'Explained by: Healthy life expectancy',
       'Explained by: Freedom to make life choices',
       'Explained by: Generosity', 'Explained by: Perceptions of corr
       'Dystopia + residual'],
      dtype='object')
```

Penjelasan :

Mengeluarkan nama nama column yang ada pada file csv

g. Print specified column of the data

```
# print specified column of the data
print(happiness['Country name'])
```

output :

```
0          Finland
1          Denmark
2      Switzerland
3          Iceland
4      Netherlands
           ...
144        Lesotho
145       Botswana
147       Zimbabwe
148    Afghanistan
Name: Country name, Length: 149, dtype: object
```

Penjelasan :

Output diatas merupakan tiap data dari column country name.

h. Print two or more specified columns of the data

```
# print two or more specified columns of the data
print(happiness[['Country name', 'Freedom to make life choices']])
```

output :

```
    Country name  Freedom to make life choices
0        Finland                         0.949
1        Denmark                         0.946
2    Switzerland                         0.919
3        Iceland                         0.955
4    Netherlands                         0.913
..           ...                           ...
144      Lesotho                         0.715
145     Botswana                         0.824
146       Rwanda                         0.897
147     Zimbabwe                         0.677
148  Afghanistan                         0.382

[149 rows x 2 columns]
```

Penjelasan :

Mengeluarkan tiap data dari dua baris column yang ditentukan nama nya. Diataas saya menentukan column nya yaitu country name, dan freedom to make life choices.

i. Print specified column and specified row

```
# print specified column and specified row
print(happiness['Country name'][1])
```

output :

```
Denmark
```

Penjelasan :

Di column country name, akan di outputkan baris dengan index 1. Maka dari itu output diatas merupakan satu nama negara dimana column nya country name, dan baris nya berindex satu.

j. Print data that satisfy the given condition

```
# print data that statisfy the given condition
condition = (happiness['Freedom to make life choices'] > 0.8)
print(happiness[condition])
```

output :

	Country name	Regional indicator	...	Explained by: Perceptions of corruption	Dystopia + residual
0	Finland	Western Europe	...	0.481	3.253
1	Denmark	Western Europe	...	0.485	2.868
2	Switzerland	Western Europe	...	0.413	2.839
3	Iceland	Western Europe	...	0.170	2.967
4	Netherlands	Western Europe	...	0.384	2.798
..	...	...	...	...	...
128	Sri Lanka	South Asia	...	0.049	1.075
138	India	South Asia	...	0.106	1.405
141	Tanzania	Sub-Saharan Africa	...	0.231	1.263
145	Botswana	Sub-Saharan Africa	...	0.088	0.648
146	Rwanda	Sub-Saharan Africa	...	0.493	1.095

[75 rows x 20 columns]

Penjelasan :

Seperti halnya If else, variabel condition diatas akan mengecek satu persatu apakah tiap data dari column freedom to make life choices memenuhi condition tersebut.’

k. Store the data to numpy array

```
# store the data to numpy array
print(happiness.to_numpy())
```

output :

```
[['Finland' 'Western Europe' 7.842 ... 0.124 0.481 3.253]
 ['Denmark' 'Western Europe' 7.62 ... 0.208 0.485 2.868]
 ['Switzerland' 'Western Europe' 7.571 ... 0.204 0.413 2.839]
 ...
 ['Rwanda' 'Sub-Saharan Africa' 3.415 ... 0.227 0.493 1.095]
 ['Zimbabwe' 'Sub-Saharan Africa' 3.145 ... 0.157 0.075 1.205]
 ['Afghanistan' 'South Asia' 2.523 ... 0.122 0.01 1.895]]
```

Penjelasan :

Mengubah data csv menjadi numpy array. Numpy array berbeda dengan list python. Meskipun mirip, namun berbeda. Numpy array lebih cocok digunakan dalam data scientist atau data analysis.

Hasil akhir :

	id	nama_produk	jumlah	total_harga	link_produk
Ubah Salin Hapus	1	Mouse Gaming	2	498000	shorturl.at/bcBOT
Ubah Salin Hapus	2	Mechanical Keyboard	1	199000	shorturl.at/etzBZ
Ubah Salin Hapus	3	Macbook	1	18649000	shorturl.at/xAHM7
Ubah Salin Hapus	4	iPhone 11	1	19592000	shorturl.at/hwlX9
Ubah Salin Hapus	5	Meja Kursi Gaming Set	1	2418000	shorturl.at/dijuD

Kode :

```
import mysql.connector
# Mengkoneksikan MySQL ke Python

# connect ke mysql
mydb = mysql.connector.connect(
    host="localhost",
    user="root",
    password="",
    database="tugas_2_LanaSaifulAqil"
)

mycursor = mydb.cursor()

# Membuat Database
# mycursor.execute("CREATE DATABASE tugas_2_LanaSaifulAqil")

# buat tabel
mycursor.execute(
    "CREATE TABLE WISHLIST (id INT PRIMARY KEY, nama_produk VARCHAR(30), j
umlah INT, total_harga INT, link_produk VARCHAR(50))")

# insert data
sql = "INSERT INTO WISHLIST (id, nama_produk, jumlah, total_harga, link_pr
oduk) VALUES (1, 'Mouse Gaming', 2, 498000, 'shorturl.at/bcBOT')"

mycursor.execute(sql)
mydb.commit()

sql = "INSERT INTO WISHLIST(id, nama_produk, jumlah, total_harga, link_pro
duk) VALUES(2, 'Mechanical Keyboard', 1, 199000, 'shorturl.at/etzBZ')"
mycursor.execute(sql)
mydb.commit()
```

```
sql = "INSERT INTO WISHLIST(id, nama_produk, jumlah, total_harga, link_pro
duk) VALUES(3, 'Macbook', 1, 18649000, 'shorturl.at/xAHM7')"
mycursor.execute(sql)
mydb.commit()

sql = "INSERT INTO WISHLIST(id, nama_produk, jumlah, total_harga, link_pro
duk) VALUES(4, 'iPhone 12', 1, 12000000, 'shorturl.at/gtyG5')"
mycursor.execute(sql)
mydb.commit()

sql = "INSERT INTO WISHLIST(id, nama_produk, jumlah, total_harga, link_pro
duk) VALUES(5, 'Meja Kursi Gaming Set', 1, 2418000, 'shorturl.at/dijuD')"
mycursor.execute(sql)
mydb.commit()

# update table
mycursor.execute(
    "UPDATE WISHLIST SET nama_produk = 'iPhone 11', total_harga = 19592000
, link_produk = 'shorturl.at/hwIX9' WHERE id = 4")
mydb.commit()

# delete data from table
mycursor.execute("DELETE FROM WISHLIST WHERE id = 5")
mydb.commit()

# # drop table
# mycursor.execute("DROP TABLE WISHLIST")
# mydb.commit()
```