Fingerprint MATCHING
menggunakan SIFT (ORB) & brute-force hamming distance

referensi:
https://github.com/kjanko/python-fingerprint-recognition
download kode dan contoh gambar fingerprint

Persiapan program tool :

Python versi 3.x.x
install opencv :   > pip install opencv-contrib-python
install SKImage: > pip install skimage update> *pip install scikit-image*
install Numpy: > pip install numpy

DOWNLOAD contoh KODE menggnakan git clone

> git clone https://github.com/kjanko/python-fingerprint-recognition.git
> cd python-fingerprint-recognition

atau download file ZIP: python-fingerprint-recognition-master.zip

modifikasi app.py pada baris ke-9

os.chdir("**/Users/sashwatk/Documents/projects/git-repos/python-fingerprint-recognition**")

sesuaikan lokasi program app.py dengan lokasi folder pada PC yang digunakan

os.chdir("**/home/it20/fp/python-fingerprint-recognition**")

contoh untuk sistem operasi WINDOWS:
os.chdir("C:\users\bana\biometrics**python-fingerprint-recognition**")

atau diberi tanda komentar diawal baris

#os.chdir("**/Users/sashwatk/Documents/projects/git-repos/python-fingerprint-recognition**")

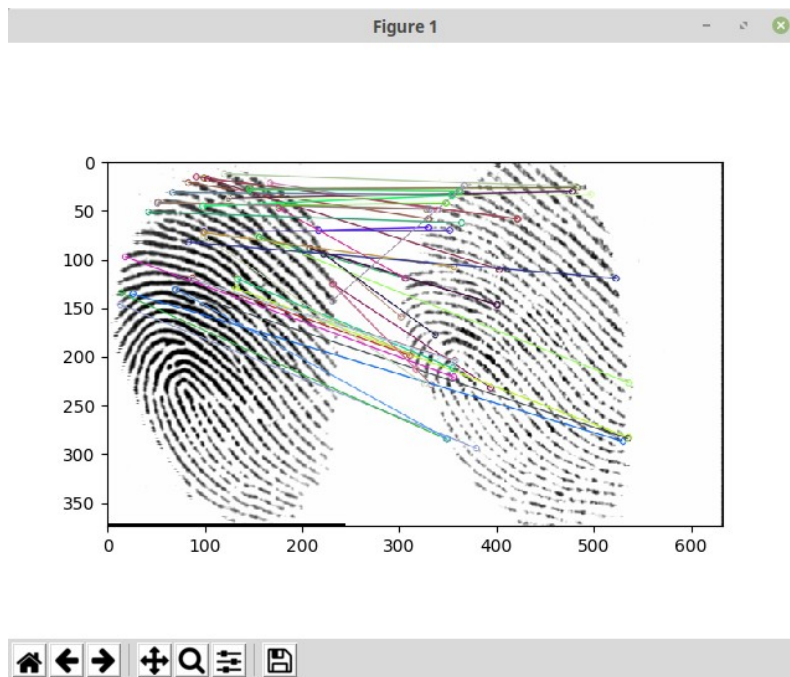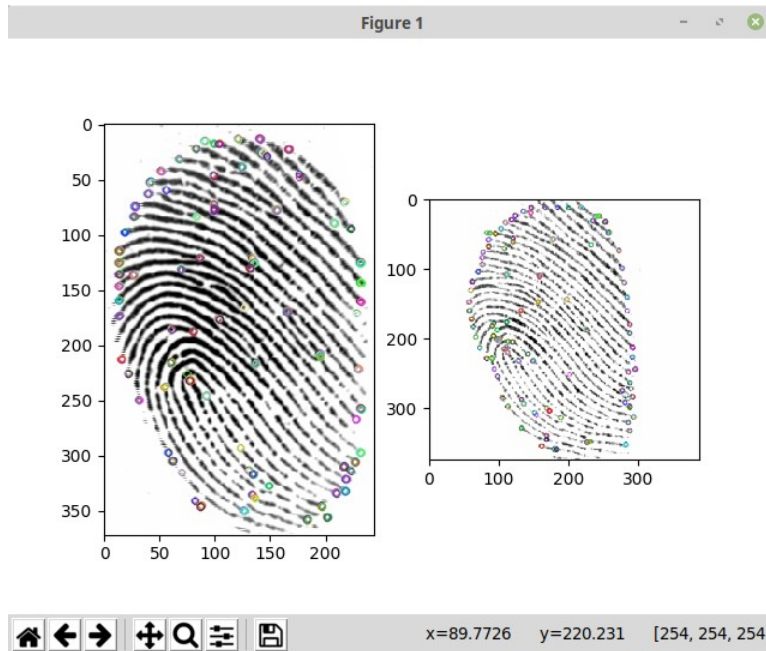Contoh eksekusi porgram untuk membandingkan DUA fingerprint

>python app.py 101_1.tif 101_2.tif [ENTER]

Jika muncul kesalahan diperlukannya modul Tkinter, maka perlu diinstall modul TkInter
linux:

> sudo apt-get install pyrhon3-tk

windows:
pip install tkinter

Result:

Figure 1

x=89.7726   y=220.231   [254, 254, 254]

Figure 1

it20@it20: ~/fp/python-fingerprint-recognition

File   Edit   View   Search   Terminal   Help

```
  File "app.py", line 91
    plt.show()
             ^
IndentationError: unindent does not match any outer indentation level
(env) it20@it20:~/fp/python-fingerprint-recognition$ python app.py 101_1.tif 101_2.tif
  File "app.py", line 91
    plt.show()
             ^
IndentationError: unindent does not match any outer indentation level
(env) it20@it20:~/fp/python-fingerprint-recognition$ python app.py 101_1.tif 101_2.tif
Fingerprint matches.
(env) it20@it20:~/fp/python-fingerprint-recognition$
```