SIL774 - Biometrics (Assignment 1 - Fingerprint Recognition)

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1. **How To Run?**
   $python3 file_name.py images_path train_image test_image threshold

2. **Important points:**
   a. Images are kept inside the folder database
   b. Processed images will be stored in the output folder

Example:

$python3 2019MCS2567.py ‘database/’ ‘101_1.tif’ ‘101_2.tif’ 35

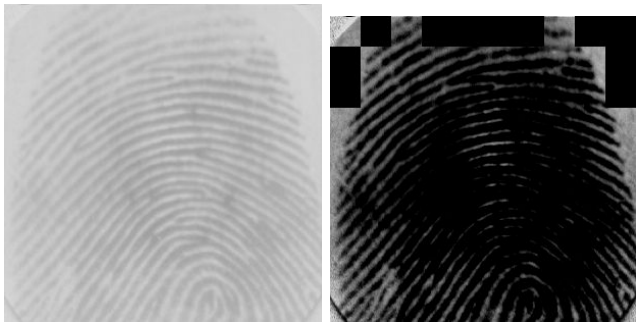
Samples:-

1. **<u>Images are of the same person</u>**

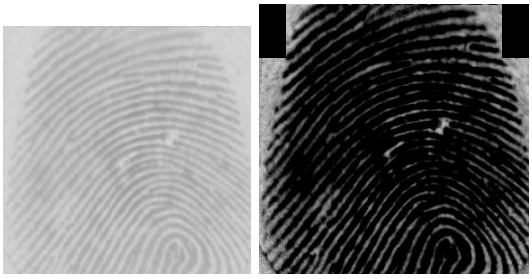
   $python3 2019MCS2567.py 'database/' '101_1.tif' '101_8.tif' 40

   Output:- Fingerprint matches.

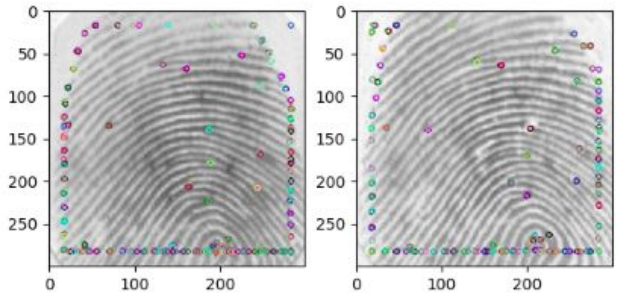
   a. 101_1.tif after normalization and segmentation



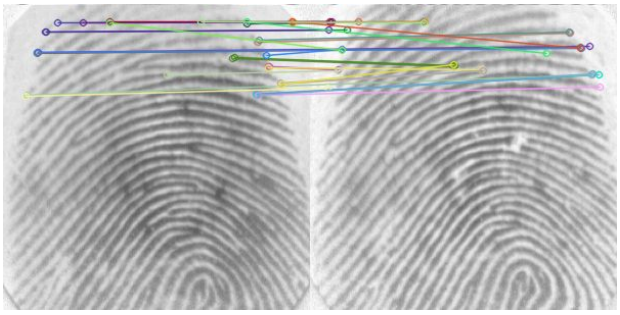
   b. 101_8.tif after normalization and segmentation



   c. Processing of images



   d. Matching process

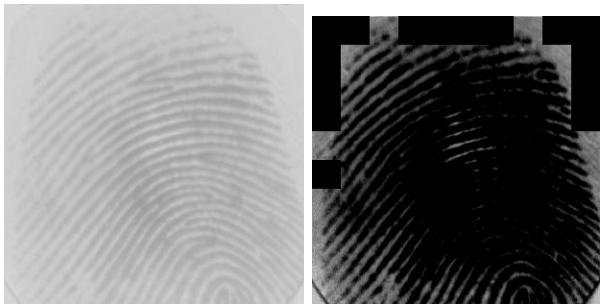


2. **Images belong to two different person:**

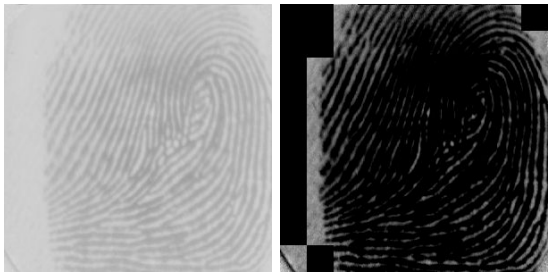
Command: $python3 2019MCS2567.py 'database/' '101_3.tif' '102_1.tif' 40

Output: Fingerprint does not match

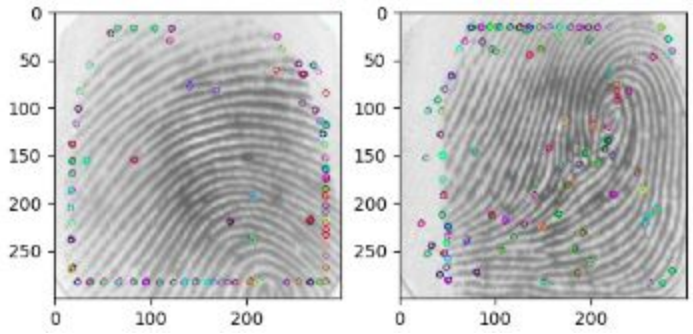
a. 101_3.tif after normalization and segmentation



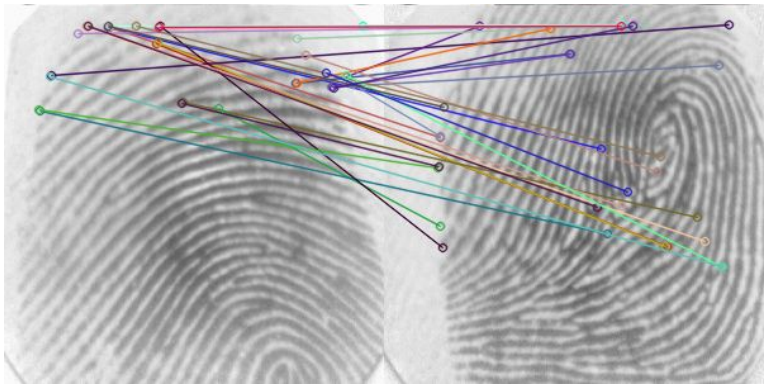
b. 102_1.tif after normalization and segmentation



c. Processing of images



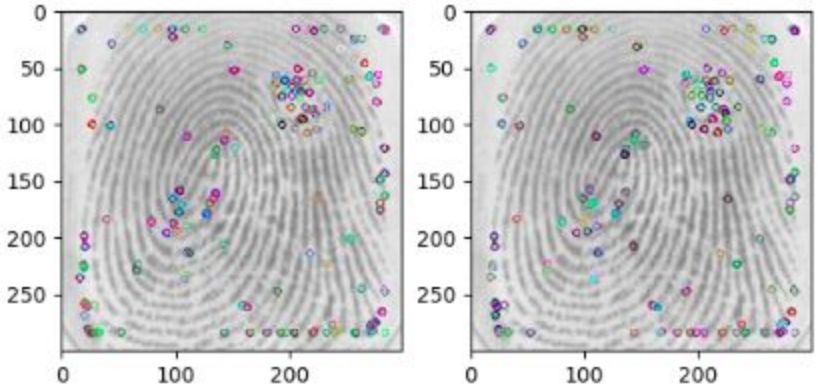
d. Matching process



3. If the same fingerprints are matched:
Command: python3 2019MCS2567.py 'database/' '103_1.tif' '103_1.tif' 40
Output: Fingerprint Matches

a. 101_3.tif after normalization and segmentation

b. Processing of images



c. Matching process