```
# !pip install deepface

from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.m
```

```
%cd /content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2
```

```
/content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2
```

```
import os
import cv2
import pickle
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.metrics.pairwise import cosine_similarity

from os import listdir
from deepface import DeepFace
from retinaface import RetinaFace

folder='AnggotaKelas/'
database = []
model = ['VGG-Face', 'OpenFace', 'Facenet', 'FbDeepFace']
i = 2

for filename in listdir(folder):
    path = folder + filename
    number = DeepFace.represent(path, model_name=model[i], align=False
                                enforce_detection = True)
    number = np.array(number)
    data = [path, number]
    database.append(data)
```

Saved successfully!

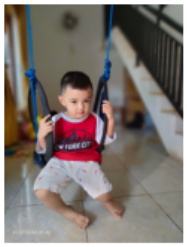
```
img_path):
  prediksi = 0
  jarak = 0
  hasil = []
  pic2 = np.array(DeepFace.represent(img_path, model_name=model[i],
```

```
                                        align=False,
                                        enforce_detection = True))
    for db in database:
      pic1 = database[index][1]
      distance_vector = np.square(pic1 - pic2)
      distance = cosine_similarity(pic1.reshape(1,-1),pic2.reshape(1,-1)
      hasil.append([database[index][0],distance])
      if(distance > jarak ):
          prediksi = index
          jarak = distance
      index += 1

    df = pd.DataFrame(hasil, columns = ['Photo', 'Prediksi'])
    df.sort_values(by='Prediksi', ascending=False, inplace=True)

    df = menampilkan_hasil(img_path, df)

    return df


  def menampilkan_hasil(img_path, df):

    fig = plt.figure(figsize=(20,10))
    fig.add_subplot(3,2,1)
    img2 = plt.imread(img_path)
    plt.title("Asli")
    plt.imshow(img2)
    plt.axis('off')
    z = 2
    for index, row in df.head().iterrows():
        fig.add_subplot(3,2,z)
        img2 = plt.imread(row['Photo'])
        plt.title(f"Kemiripan: {row['Prediksi']}")
        plt.imshow(img2)
        plt.axis('off')
        z = z + 1

    plt.show()
    return df
```

Saved successfully!

```
img_path = '/content/drive/MyDrive/Arkhana 001.jpeg'
img = cv2.imread(img_path)
df = mencocokan_wajah_cosine(img_path)
```

Asli



Kemiripan: [[0.63266096]]

Kemiripan: [[0.59832038]]

Kemiripan: [[0.5082422]]

Kemiripan: [[0.45135446]]

Kemiripan: [[0.44839403]]

```
df
```

Saved successfully!

	Photo	Prediksi
23	AnggotaKelas/Meza Silvana.jpg	[[0.6326609637702697]]
18	AnggotaKelas/Meredita Susanty.jpg	[[0.5983203828358556]]
7	AnggotaKelas/M Khaerul Naim.jpg	[[0.5082421976184587]]
12	AnggotaKelas/Ahmad Luky Ramdani.jpg	[[0.4513544618286020 6]]
6	AnggotaKelas/Adiyasa Nurfalah.jpg	[[0.4483940268155452 4]]
13	AnggotaKelas/Yaya Setiyadi.jpg	[[0.4145374129192594]]
0	AnggotaKelas/Varulianto Dear.jpg	[[0.3937941762804707 5]]
19	AnggotaKelas/Mina Ismu Rahayu.jpg	[[0.3865969983060990 6]]
14	AnggotaKelas/Leni Fitriani.jpg	[[0.3727193419270748]]
1	AnggotaKelas/Mohamad Idris.jpg	[[0.3684800156627618]]
4	AnggotaKelas/Kemas Muhammad Irsan Riza.jpg	[[0.3437022015191427 7]]

```
%cd /content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2/Upload
from google.colab import files

uploaded = files.upload()

for fn in uploaded.keys():
  print('User uploaded file "{name}" with length {length} bytes'.forma
      name=fn, length=len(uploaded[fn])))

%cd /content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2
img_path = "UploadFiles/" + fn
# print(img_path)
df = mencocokan_wajah_cosine(img_path)
```

Saved successfully!

```
/content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2/UploadFiles
```

Choose Files teuku wisnu.jfif

- **teuku wisnu.jfif**(image/jpeg) - 87700 bytes, last modified: 5/7/2022 - 100% done

```
Saving teuku wisnu.jfif to teuku wisnu.jfif
User uploaded file "teuku wisnu.jfif" with length 87700 bytes
/content/drive/MyDrive/Colab Notebooks/Kode/DFR/PML-TugBes2
```

Asli

Kemiripan: [[0.53777665]]

Kemiripan: [[0.43212224]]

Kemiripan: [[0.39159766]]

Kemiripan: [[0.3898569]]

Kemiripan: [[0.38168073]]

✓ 22s completed at 10:57 AM

Saved successfully!