```
In [ ]:
from google.colab import drive
drive.mount('/content/drive')
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount
("/content/drive", force remount=True).
In [ ]:
!pip install scikit-learn
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/publi
c/simple/
Requirement already satisfied: scikit-learn in /usr/local/lib/python3.8/dist-packages (1.
0.2)
Requirement already satisfied: scipy>=1.1.0 in /usr/local/lib/python3.8/dist-packages (fr
om scikit-learn) (1.7.3)
Requirement already satisfied: numpy>=1.14.6 in /usr/local/lib/python3.8/dist-packages (f
rom scikit-learn) (1.21.6)
Requirement already satisfied: joblib>=0.11 in /usr/local/lib/python3.8/dist-packages (fr
om scikit-learn) (1.2.0)
Requirement already satisfied: threadpoolctl>=2.0.0 in /usr/local/lib/python3.8/dist-pack
ages (from scikit-learn) (3.1.0)
In [ ]:
from sklearn.feature extraction.text import TfidfVectorizer
import glob
import os
In [ ]:
data dir = '/content/drive/MyDrive/tweet files'
file list = glob.glob(os.path.join(data dir, '*.txt'))
In [ ]:
file subset = file list[0:1000]
In [ ]:
# Read the text from each file and store it in a list
texts = []
for filename in file subset:
    with open(os.path.join('/content/drive/MyDrive/tweet files', filename), 'r') as f:
        texts.append(f.read())
In [ ]:
In [ ]:
#print(file subset[0:5])
texts[0:2]
Out[]:
['"Hey guys have you heard about this if didn\'t so must focus on it #JeepGrandCherokee #
OIIIIIIIO \n\'Simranshukla355\'',
 "'All the models are made in our own country , what a solid achievement @JeepIndia #Jeep
GrandCherokee \n'iAdityaSaxena '"]
In [ ]:
vectorizer = TfidfVectorizer()
```

```
In [ ]:
 vectorizer = TfidfVectorizer(stop words=None)
In [ ]:
 vectorizer = TfidfVectorizer(min df=0.005)
 In [ ]:
 vectors = vectorizer.fit transform(texts)
In [ ]:
 from sklearn.metrics.pairwise import cosine similarity
In [ ]:
 similarities = cosine similarity(vectors)
In [ ]:
print((similarities[26][97]))
0.0
In [ ]:
 from sklearn.feature extraction.text import CountVectorizer
 count vectorizer = CountVectorizer(stop words='english', min df=0.00005)
 corpus2 = count vectorizer.fit transform(texts)
 print(count_vectorizer.get_feature_names())
['000', '00iakki', '060', '01', '11', '18', '1899netflix', '18th', '19', '1993', '1995jay sharma', '1999indian', '1day', '1slamic', '2014', '2015', '2016', '2017', '2018', '2018b', '2020', '2021', '2022', '2023', '20x9', '22', '26', '270', '28500', '2amgossipp', '30', '30500', '32', '3minutes', '40', '400', '400nm', '45abhumanyu', '4k', '4x4', '4xe', '50',
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/usr/local/lib/python3.8/dist-packages/sklearn/utils/deprecation.py:87: FutureWarning: Fu nction get_feature_names is deprecated; get_feature_names is deprecated in 1.0 and will be removed in 1.2. Please use get_feature_names_out instead.

warnings.warn(msg, category=FutureWarning)

In []:

```
import pandas as pd

df= pd.DataFrame(corpus2.toarray(),columns=count_vectorizer.get_feature_names())

df2 = pd.DataFrame(cosine_similarity(df, dense_output=True))

df2.head()
```

/usr/local/lib/python3.8/dist-packages/sklearn/utils/deprecation.py:87: FutureWarning: Fu nction get_feature_names is deprecated; get_feature_names is deprecated in 1.0 and will be removed in 1.2. Please use get_feature_names_out instead.

warnings.warn(msg, category=FutureWarning)

Out[]:

	0	1	2	3	4	5	6	7	8	9	 990	991
0	1.000000	0.133631	0.400892	0.267261	0.098058	0.375000	0.144338	0.250000	0.250000	0.400892	 0.000000	0.000000
1	0.133631	1.000000	0.142857	0.142857	0.209657	0.133631	0.308607	0.133631	0.133631	0.285714	 0.000000	0.000000
2	0.400892	0.142857	1.000000	0.428571	0.104828	0.534522	0.154303	0.267261	0.400892	0.428571	 0.119523	0.000000
3	0.267261	0.142857	0.428571	1.000000	0.104828	0.267261	0.154303	0.267261	0.267261	0.285714	 0.119523	0.000000
4	0.098058	0.209657	0.104828	0.104828	1.000000	0.294174	0.113228	0.098058	0.098058	0.209657	 0.000000	0.240192

5 rows × 1000 columns

```
df2
Out[]:
           0
                            2
                                    3
                                             4
                                                     5
                                                              6
                                                                               8
                                                                                                  990
  0 1.000000 0.133631 0.400892 0.267261 0.098058 0.375000 0.144338 0.250000 0.250000 0.400892 ... 0.000000 0.00000
  1 0.133631 1.000000 0.142857 0.142857 0.209657 0.133631 0.308607 0.133631 0.133631 0.285714 ... 0.000000 0.00000
                                       0.104828
                                               0.534522 0.154303
    0.400892 0.142857
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                                                                 0.267261
                                                                         0.400892
  3 0.267261
             0.142857 0.428571
                              1.000000 0.104828 0.267261 0.154303 0.267261
                                                                         0.267261
                                                                                  0.285714 ... 0.119523 0.0000
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                                                                 0.098058
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                                                                                          ---
                                                                               ...
                              0.000000 0.240192 0.000000 0.000000 0.102062 0.102062 0.000000 ... 0.000000 0.3333
995
    0.000000 0.000000 0.000000
    0.000000
             0.000000 0.000000
                              0.000000 ... 0.111803 0.00000
                     0.000000
                              0.000000
                                      0.000000 0.000000 0.000000
                                                                0.098058
                                                                                  0.104828 ... 0.175412 0.0000
    0.000000
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997
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                              0.000000 0.230769 0.000000 0.000000 0.098058
                                                                         0.000000
                                                                                  0.104828 ... 0.175412 0.24019
    0.000000
    0.000000 0.000000 0.000000 0.000000 0.222375 0.000000 0.000000 0.094491 0.000000 0.101015 ... 0.084515 0.2314
1000 rows × 1000 columns
                                                                                                         •
In [ ]:
from sklearn.feature extraction.text import CountVectorizer
count vectorizer = CountVectorizer(stop words='english')
count vectorizer = CountVectorizer()
sparse_matrix = count_vectorizer.fit transform(texts)
doc term matrix = sparse matrix.todense()
df = pd.DataFrame(doc term matrix, columns=count vectorizer.get feature names())
df.head()
In [ ]:
from sklearn.metrics.pairwise import cosine similarity
dj=pd.DataFrame(cosine similarity(df, dense output=True))
dj.head()
Out[]:
                          2
                                                                     7
         0
                 1
                                  3
                                                    5
                                                                             8
                                                                                      9 ...
                                                                                                990
                                                                                                        991
                                                            6
0 1.000000 0.062622 0.257248 0.259281 0.054233 0.210042 0.148522 0.313112 0.206835 0.269069 ... 0.047565 0.137505
  0.062622 1.000000 0.091287 0.069007 0.288675 0.149071 0.263523 0.133333 0.110096 0.358057 ... 0.151911 0.000000
2 0.257248 0.091287 1.000000 0.283473 0.079057 0.408248 0.072169 0.182574 0.226134 0.294174 ... 0.069338 0.000000
3 0.259281 0.069007 0.283473 1.000000 0.059761 0.154303 0.054554 0.138013 0.113961 0.148250 ... 0.052414 0.000000
  0.054233 0.288675 0.079057 0.059761 1.000000 0.193649 0.045644 0.057735 0.047673 0.124035 ... 0.000000 0.126773
5 rows × 1000 columns
                                                                                                         •
```

ın []: