In [2]:

```python
import warnings
warnings.filterwarnings("ignore")
import pandas as pd
import sqlite3
import csv
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
from wordcloud import WordCloud
import re
import os
from sqlalchemy import create_engine # database connection
import datetime as dt
from sklearn import metrics
from sklearn.metrics import f1_score,precision_score,recall_score
from datetime import datetime
```

In [3]:

```python
conn = sqlite3.connect(r'D:\AppliedAI\Homework-n-Assignments\# 22 SQL Assignment on IMDB data\Db-I
MDB.db')
movie_table = pd.read_sql_query('SELECT * FROM Movie ', conn)
```

In [4]:

```python
print (movie_table)
```

```
      index       MID          title   year   rating   num_votes
0         0  tt2388771         Mowgli   2018      6.6       21967
1         1  tt5164214  Ocean's Eight   2018      6.2      110861
2         2  tt1365519    Tomb Raider   2018      6.4      142585
3         3  tt0848228   The Avengers   2012      8.1     1137529
4         4  tt8239946        Tumbbad   2018      8.5        7483
...     ...        ...            ...    ...      ...         ...
3470   3470  tt0090611    Allah-Rakha   1986      6.2          96
3471   3471  tt0106270          Anari   1993      4.7         301
3472   3472  tt0852989  Come December   2006      5.7          57
3473   3473  tt0375882     Kala Jigar   1939      3.3         174
3474   3474  tt0375890         Kanoon   1994      3.2         103

[3475 rows x 6 columns]
```

1. List all the directors who directed a 'Comedy' movie in a leap year. (You need to check that the genre is 'Comedy' and year is a leap year) Your query should return director name, the movie name, and the year.

In [9]:

```python
cmd1=pd.read_sql_query("SELECT p.Name as DirectorName,m.title as MoviesName, m.year as Year from P
erson p JOIN M_Director d on p.PID=d.PID JOIN Movie m on d.MID=m.MID JOIN M_Genre as mg on mg.MID=
m.MID JOIN Genre g on g.GID=mg.GID WHERE m.year %4==0 and trim(g.name) like 'Comedy'", conn)
```

In [10]:

```python
cmd1
```

Out[10]:

	DirectorName	MoviesName	Year
0	Milap Zaveri	Mastizaade	2016
1	Milap Zaveri	Mastizaade	2016
2	Umesh Ghadge	Kyaa Kool Hain Hum 3	2016
3	Umesh Ghadge	Kyaa Kool Hain Hum 3	2016

	DirectorName	MoviesName	Year
3	Umesh Ghadge	Kyaa Kool Hain Hum 3	2016
4	Sameer Sharma	Luv Shuv Tey Chicken Khurana	2012
5	Anees Bazmee	Thank You	I 2011
6	Anees Bazmee	Thank You	I 2011
7	Sanjeev Sharma	Saat Uchakkey	2016
8	Sanjeev Sharma	Saat Uchakkey	2016
9	Nitin Kakkar	Filmistaan	2012
10	Krishnadev Yagnik	Days of Tafree	2016
11	Abhishek Sharma	Tere Bin Laden: Dead Or Alive	2016
12	Abhishek Sharma	Tere Bin Laden: Dead Or Alive	2016
13	Mahesh Bhatt	Papa Kahte Hain	1996
14	Mahesh Bhatt	Papa Kahte Hain	1996
15	Sachin Yardi	Kyaa Super Kool Hain Hum	2012
16	Sachin	Navra Mazha Navsacha	2004
17	Sachin	Navra Mazha Navsacha	2004
18	Kawal Sharma	Maalamaal	1988
19	Aditya Datt	Will You Marry Me	2012
20	Rajnish Thakur	Mere Dost Picture Abhi Baaki Hai	2012
21	Rajnish Thakur	Mere Dost Picture Abhi Baaki Hai	2012
22	Karan Razdan	Mr Bhatti on Chutti	2012
23	Karan Razdan	Mr Bhatti on Chutti	2012
24	Jagdish Rajpurohit	Bumboo	2012
25	Jagdish Rajpurohit	Bumboo	2012
26	Suhas Kadav	Motu Patlu: King of Kings	2016
27	Vickrant Mahajan	Challo Driver	2012
28	Vickrant Mahajan	Challo Driver	2012
29	Bhagyaraj	Mr. Bechara	1996
30	Bhagyaraj	Mr. Bechara	1996
31	Rakesh Mehta	Life Ki Toh Lag Gayi	2012
32	Rakesh Mehta	Life Ki Toh Lag Gayi	2012
33	Anand Balraj	Daal Mein Kuch Kaala Hai	2012
34	Anand Balraj	Daal Mein Kuch Kaala Hai	2012
35	Govind Menon	Kis Kis Ki Kismat	2004
36	Govind Menon	Kis Kis Ki Kismat	2004
37	Pankaj Parashar	Ab Ayega Mazaa	1984
38	Jabbar Patel	Ek Hota Vidushak	1992
39	Jabbar Patel	Ek Hota Vidushak	1992
40	Srinivas Bhashyam	Paisa Vasool	2004
41	Raj Kaushal	Shaadi Ka Laddoo	2004
42	Raj Kaushal	Shaadi Ka Laddoo	2004
43	Siddharth Anand Kumar	Let's Enjoy	2004
44	Siddharth Anand Kumar	Let's Enjoy	2004

2. List the names of all the actors who played in the movie 'Anand' (1971)

In [7]:

```
cmd2 = pd.read_sql_query("SELECT p.Name as 'Actor Name',m.title as 'Movie Name' FROM Person p JOIN
M_Cast mc ON trim(p.PID)=trim(mc.PID) JOIN Movie M ON trim(mc.MID)=trim(m.MID) WHERE trim(m.Title)
= 'Anand' ", conn)
```

```
cmd2
```

Out[8]:

	Actor Name	Movie Name
0	Amitabh Bachchan	Anand
1	Rajesh Khanna	Anand
2	Sumita Sanyal	Anand
3	Ramesh Deo	Anand
4	Seema Deo	Anand
5	Asit Kumar Sen	Anand
6	Dev Kishan	Anand
7	Atam Prakash	Anand
8	Lalita Kumari	Anand
9	Savita	Anand
10	Brahm Bhardwaj	Anand
11	Gurnam Singh	Anand
12	Lalita Pawar	Anand
13	Durga Khote	Anand
14	Dara Singh	Anand
15	Johnny Walker	Anand
16	Moolchand	Anand

3. List all the actors who acted in a film before 1970 and in a film after 1990. (That is: < 1970 and > 1990.)

In [18]:

```
cmd3 = pd.read_sql_query("SELECT p.Name as 'Actor Name',m.title as 'Movie Name' FROM Person p JOIN
M_Cast mc ON trim(p.PID)=trim(mc.PID) JOIN Movie M ON trim(mc.MID)=trim(m.MID) WHERE trim(m.Year)<
1970 AND trim(m.Year)>1990", conn)
```

In [19]:

```
cmd3
```

Out[19]:

Actor Name	Movie Name

In [ ]: