IMDB Movie Recommendation :

Importing Libraries :

In [1]:
```
import pandas as pd
import numpy as np
```

In [2]:
```
df = pd.read_csv("final.csv")
```

In [3]:
```
df.head()
```

Out[3]:

	name	year	duration	genre	rating	director	type
0	The Shawshank Redemption	1994	142	Drama	9.3	Frank Darabont	Movie
1	The Godfather	1972	175	Crime,Drama	9.2	Francis Ford Coppola	Movie
2	The Dark Knight	2008	152	Action,Crime,Drama	9.0	Christopher Nolan	Movie
3	The Godfather: Part II	1974	202	Crime,Drama	9.0	Francis Ford Coppola	Movie
4	12 Angry Men	1957	96	Crime,Drama	9.0	Sidney Lumet	Movie

1. Ask from the user to select a movie :

In [4]:
```
movie_ = input("Select a movie :")
```

```
Select a movie :The Dark Knight
```

2. Find the directors of the movie that user has selected :

In [5]:
```
l = len(df['name'])
directors = []
for i in range(l):
    if(df.loc[i,'name'] == movie_):
        directors.append(df.loc[i,'director'])
for n in directors:
    print("The Director of the Movie is",n)
```

```
The Director of the Movie is Christopher Nolan
```

3. Recommend them top 10 movies based on the directors of the movie that user has selected :

In [6]:
```
l = len(df['name'])
movies = []
for j in directors:
    for i in range(l):
        if(df['director'][i]==j):
            movies.append(df['name'][i])
print("The Movies Recommended Based on Directors:")
for k in movies:
    print(k)
```

```
The Movies Recommended Based on Directors:
The Dark Knight
Inception
Interstellar
The Prestige
The Dark Knight Rises
Memento
Batman Begins
Dunkirk
```

4.Recommend the movies based on the name of the movie : (One Hot Encoding)

In [7]:
```
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.metrics.pairwise import cosine_similarity
```

In [8]:
```
count = CountVectorizer()
one_hot = count.fit_transform(df['name'])
similar = cosine_similarity(one_hot)
index = df[df['name'] == movie_].index[0]
similar_movies = list(enumerate(similar[index]))
sorted_similar_movies = sorted(similar_movies, key = lambda x:x[1], reverse=True)[1:11]
recommendations = [df.iloc[i[0]]['name'] for i in sorted_similar_movies]

print("The Movies Recommended Based on Movie similarity :")
for i, movie in enumerate(recommendations):
    print(i+1,movie)
```

```
The Movies Recommended Based on Movie similarity :
1 The Dark Knight Rises
2 Dancer in the Dark
3 Dark
4 The Lord of the Rings: The Return of the King
5 The Lord of the Rings: The Fellowship of the Ring
6 The Lord of the Rings: The Two Towers
7 The Silence of the Lambs
8 The Shop Around the Corner
9 The Night of the Hunter
10 The Trial of the Chicago 7
```