Movie Recommendation

In [ ]:

```
import pandas as pd
import numpy as np
import warnings
```

In [ ]:

```
warnings.filterwarnings('ignore')
column_name=['user_id','item_id','rating','timestamp']
df=pd.read_csv('u.data',sep="\t",names=column_name)
df.head()
```

In [ ]:

```
df.shape
```

In [ ]:

```
df['user_id']
```

In [ ]:

```
movies_title=pd.read_csv(r'u.item',sep="\|",header=None,encoding='ISO-8859-1')
movies_titles=movies_title[[0,1]]
movies_titles.columns=["item_id","title"]
movies_titles.head()
```

In [ ]:

```
df=pd.merge(df,movies_titles,on="item_id")
```

In [ ]:

```
df
```

In [ ]:

```
ratings=pd.DataFrame(df.groupby('title').mean()['rating'])
ratings.head()
```

In [ ]:

```
ratings['num of ratings']=pd.DataFrame(df.groupby('title').count()['rating'])
```

In [ ]:

```
df.head()
```

In [ ]:

```
moviemat=df.pivot_table(index="user_id",columns="title",values="rating")
moviemat.head()
```

In [ ]:

```
copycat_user_ratings=moviemat['Copycat (1995)']
```

In [ ]:

```
copycat_user_ratings.head()
```

In [ ]:

```
similar_to_copycat=moviemat.corrwith(copycat_user_ratings)
```

In [ ]:

```
similar_to_copycat
```

In [ ]:

```
corr_copycat=pd.DataFrame(similar_to_copycat,columns=['correlation'])
corr_copycat.dropna(inplace=True)
corr_copycat
```

In [ ]:

```
corr_copycat.sort_values('correlation',ascending=False).head(10)
```

In [ ]:

```
corr_copycat=corr_copycat.join(ratings['num of ratings'])
corr_copycat
```

In [ ]:

```
def predict_movies(movie_name):
    movie_user_ratings=moviemat[movie_name]
    similar_to_movie=moviemat.corrwith(movie_user_ratings)
    corr_movie=pd.DataFrame(similar_to_movie,columns=['correlation'])
    corr_movie.dropna(inplace=True)
    corr_movie=corr_movie.join(ratings['num of ratings'])

    predictions=corr_movie[corr_movie['num of ratings']>100].sort_values('correlation',ascending=False)

    return predictions
```

In [ ]:

```
predict_my_movie=predict_movies("Titanic (1997)")
predict_my_movie.head()
```

In [ ]:

```

```

In [ ]:

```

```