I. Access dataset

```
import pandas as pd
import numpy as np
from sklearn.neighbors import NearestNeighbors
```

```
df = pd.read_csv('/content/drive/MyDrive/MSBA_Colab_2020/ML_Algorithms/movies_recommendation_data.csv')
```

```
df.head()
```

	Movie ID	Movie Name	IMDB Rating	Biography	Drama	Thriller	Comedy	Crime	Mystery	History	Label
0	58	The Imitation Game	8.0	1	1	1	0	0	0	0	0
1	8	Ex Machina	7.7	0	1	0	0	0	1	0	0
2	46	A Beautiful	8.2	1	1	0	0	0	0	0	0

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 30 entries, 0 to 29
Data columns (total 11 columns):
 #   Column       Non-Null Count  Dtype
---  ------       --------------  -----
 0   Movie ID     30 non-null     int64
 1   Movie Name   30 non-null     object
 2   IMDB Rating  30 non-null     float64
 3   Biography    30 non-null     int64
 4   Drama        30 non-null     int64
```

```
 5   Thriller     30 non-null     int64
 6   Comedy       30 non-null     int64
 7   Crime        30 non-null     int64
 8   Mystery      30 non-null     int64
 9   History      30 non-null     int64
 10  Label        30 non-null     int64
dtypes: float64(1), int64(9), object(1)
memory usage: 2.7+ KB
```

II. Split the data to y and x

```
df.drop(columns=['Label','Movie ID'], inplace= True)
```

```
x = df.iloc[:, 1:].values
y = df.iloc[:, 0].values
```

III. Set up the Method for Nearest Neighbor model

```
neigh = model_knn = NearestNeighbors(metric = 'minkowski', algorithm = 'brute', n_neighbors = 5, p = 2)
neigh.fit(x,y)
```

```
NearestNeighbors(algorithm='brute', leaf_size=30, metric='minkowski',
                 metric_params=None, n_jobs=None, n_neighbors=5, p=2,
                 radius=1.0)
```

IV. Apply the values and check the prediction

```
prediction = (neigh.kneighbors([[7.2,1,1,0,0,0,0,1]], return_distance=False))
prediction
```

```
array([[28, 27, 29, 16,  9]])
```

```
for movies in prediction:
  print(df.iloc[movies]['Movie Name'])
```

```
28    12 Years a Slave
27       Hacksaw Ridge
29      Queen of Katwe
16      The Wind Rises
9       The Karate Kid
Name: Movie Name, dtype: object
```

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