PRACTICAL NO : 01

DATA WRANGLING 1

CODE :

```
import pandas as pd
df1=pd.read_csv(r'E:\DSBDA\DSBDA Datasets\n_movies.csv')
print(df1)
df1.head(n=5)
df1.tail(n=6)
df1.index
df1.shape
df1.columns
df1.dtypes
df1.columns.values
df1.describe(include='all')
df1.title
df1.sort_index(axis=1,ascending=False)
df1.sort_values(by='year')
df1.iloc[5]
df1[0:3]
df1.loc[:,['title','rating']]
df1.iloc[:,:3]
```

OUTPUT :

```
df1.head(n=5)
```

Out[45]:

	title	...	votes
0	Cobra Kai	...	177,031
1	The Crown	...	199,885
2	Better Call Saul	...	501,384
3	Devil in Ohio	...	9,773
4	Cyberpunk: Edgerunners	...	15,413

[5 rows x 9 columns]

df1.tail(n=6)

Out[46]:

	title	...	votes
9951	Breaking Bad	...	1,831,359
9952	The Imperfects	...	3,130
9953	The Walking Dead	...	970,067
9954	The Crown	...	199,898
9955	Supernatural	...	439,601
9956	Devil in Ohio	...	9,786

[6 rows x 9 columns]

df1.index

Out[47]: RangeIndex(start=0, stop=9957, step=1)

df1.shape

```
Out[48]: (9957, 9)

df1.columns
Out[49]:
Index(['title', 'year', 'certificate', 'duration', 'genre', 'rating',
       'description', 'stars', 'votes'],
      dtype='object')

df1.dtypes
Out[50]:
title          object
year           object
certificate    object
duration       object
genre          object
rating        float64
description    object
stars          object
votes          object
dtype: object

df1.columns.values
Out[51]:
array(['title', 'year', 'certificate', 'duration', 'genre', 'rating',
       'description', 'stars', 'votes'], dtype=object)
```

```
df1.describe(include='all')
```

Out[52]:

	title	year	certificate	...	description	stars	votes
count	9957	9430	6504	...	9957	9957	8784
unique	7912	498	20	...	9433	8615	4862
top	Top Gear (2020)		TV-MA	...	Add a Plot	[]	30
freq	92	663	2520	...	434	403	33
mean	NaN	NaN	NaN	...	NaN	NaN	NaN
std	NaN	NaN	NaN	...	NaN	NaN	NaN
min	NaN	NaN	NaN	...	NaN	NaN	NaN
25%	NaN	NaN	NaN	...	NaN	NaN	NaN
50%	NaN	NaN	NaN	...	NaN	NaN	NaN
75%	NaN	NaN	NaN	...	NaN	NaN	NaN
max	NaN	NaN	NaN	...	NaN	NaN	NaN

[11 rows x 9 columns]

```
df1.title
```

Out[53]:

```
0                Cobra Kai
1                The Crown
2           Better Call Saul
3              Devil in Ohio
4       Cyberpunk: Edgerunners

9952          The Imperfects
```

9953 The Walking Dead

9954 The Crown

9955 Supernatural

9956 Devil in Ohio

Name: title, Length: 9957, dtype: object

```
df1.sort_index(axis=1,ascending=False)
```

Out[54]:

	year	...	certificate
0	(2018–)	...	TV-14
1	(2016–)	...	TV-MA
2	(2015–2022)	...	TV-MA
3	(2022)	...	TV-MA
4	(2022–)	...	TV-MA
...	...	...	...
9952	(2022–)	...	TV-MA
9953	(2010–2022)	...	TV-MA
9954	(2016–)	...	TV-MA
9955	(2005–2020)	...	TV-14
9956	(2022)	...	TV-MA

[9957 rows x 9 columns]

```
df1.sort_values(by='year')
```

Out[55]:

	title	...	votes

7229 The Southsiders ... 81

1445 Scarface ... 28,107

7637 Kära släkten ... 43

6499 Death at a Broadcast ... 323

6197 Midshipman Easy ... 172

... ...

7980 Game Changer ... NaN

7982 Detektyw Forst ... NaN

7995 Informacja zwrotna ... NaN

7999 Horton Hears a Who! ... NaN

8001 Bad Dinosaurs ... NaN

[9957 rows x 9 columns]

df1.iloc[5]

Out[56]:

title The Sandman

year (2022–)

certificate TV-MA

duration 45 min

genre Drama, Fantasy, Horror

rating 7.8

description Upon escaping after decades of imprisonment by...

stars ['Tom Sturridge, ', 'Boyd Holbrook, ', 'Patton...

votes 116,358

Name: 5, dtype: object

```
df1[0:3]
Out[57]:
           title  ...    votes
0        Cobra Kai  ...  177,031
1        The Crown  ...  199,885
2  Better Call Saul  ...  501,384

[3 rows x 9 columns]

df1.loc[:,['title','rating']]
Out[58]:
                  title  rating
0               Cobra Kai     8.5
1               The Crown     8.7
2         Better Call Saul     8.9
3            Devil in Ohio     5.9
4     Cyberpunk: Edgerunners     8.6
                   ...     ...
9952         The Imperfects     6.3
9953       The Walking Dead     8.1
9954             The Crown     8.7
9955          Supernatural     8.4
9956          Devil in Ohio     5.9

[9957 rows x 2 columns]
```

```
df1.iloc[:,:3]
Out[59]:
                    title        year certificate
0                Cobra Kai     (2018– )       TV-14
1                The Crown     (2016– )       TV-MA
2          Better Call Saul  (2015–2022)       TV-MA
3             Devil in Ohio       (2022)       TV-MA
4     Cyberpunk: Edgerunners     (2022– )       TV-MA
                    ...         ...         ...
9952         The Imperfects     (2022– )       TV-MA
9953       The Walking Dead  (2010–2022)       TV-MA
9954             The Crown     (2016– )       TV-MA
9955           Supernatural  (2005–2020)       TV-14
9956          Devil in Ohio       (2022)       TV-MA

[9957 rows x 3 columns]

runfile('E:/DSBDA/dsbdapr1.py', wdir='E:/DSBDA')
                    title  ...    votes
0                Cobra Kai  ...  177,031
1                The Crown  ...  199,885
2          Better Call Saul  ...  501,384
3             Devil in Ohio  ...    9,773
4     Cyberpunk: Edgerunners  ...   15,413
                    ...  ...      ...
```

9952 The Imperfects ... 3,130

9953 The Walking Dead ... 970,067

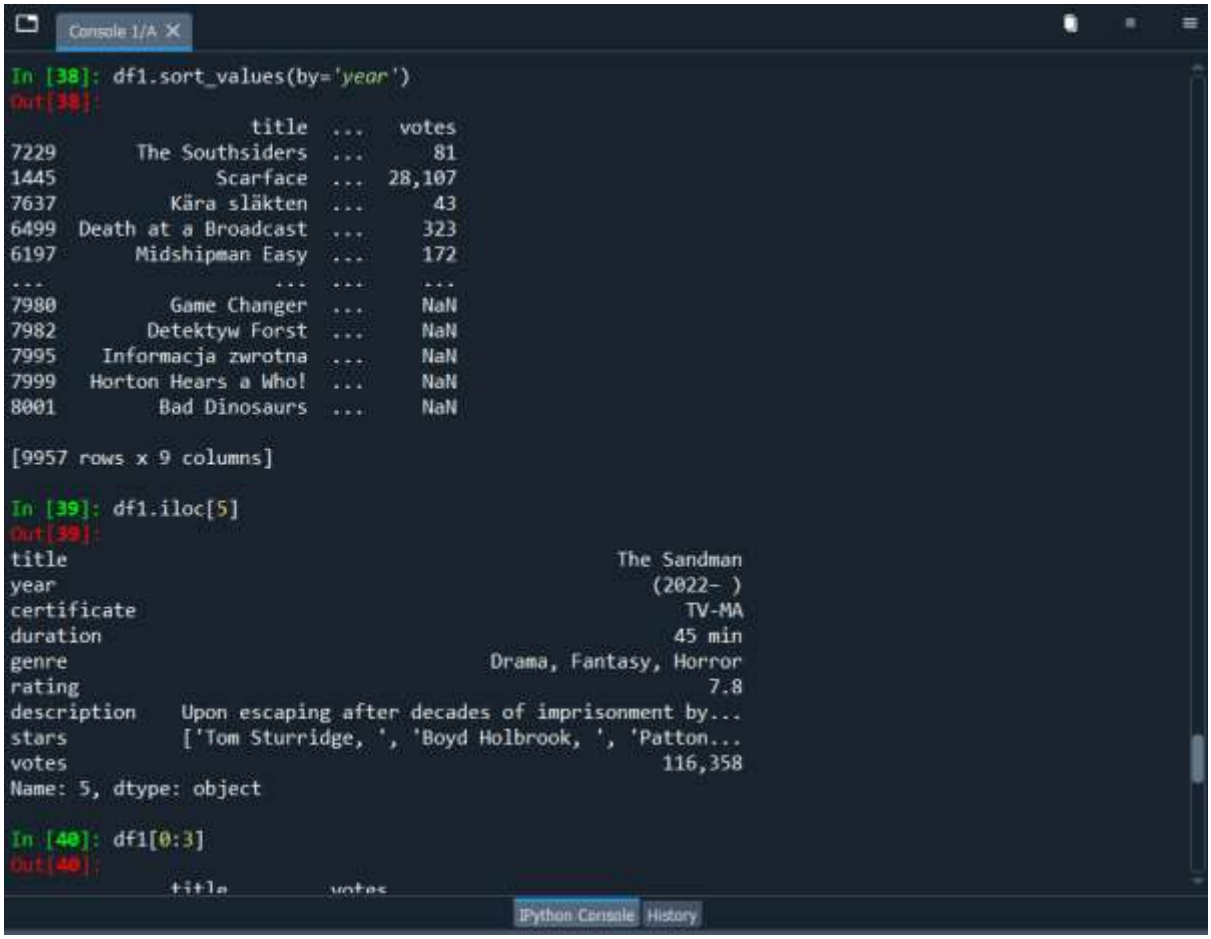
9954 The Crown ... 199,898

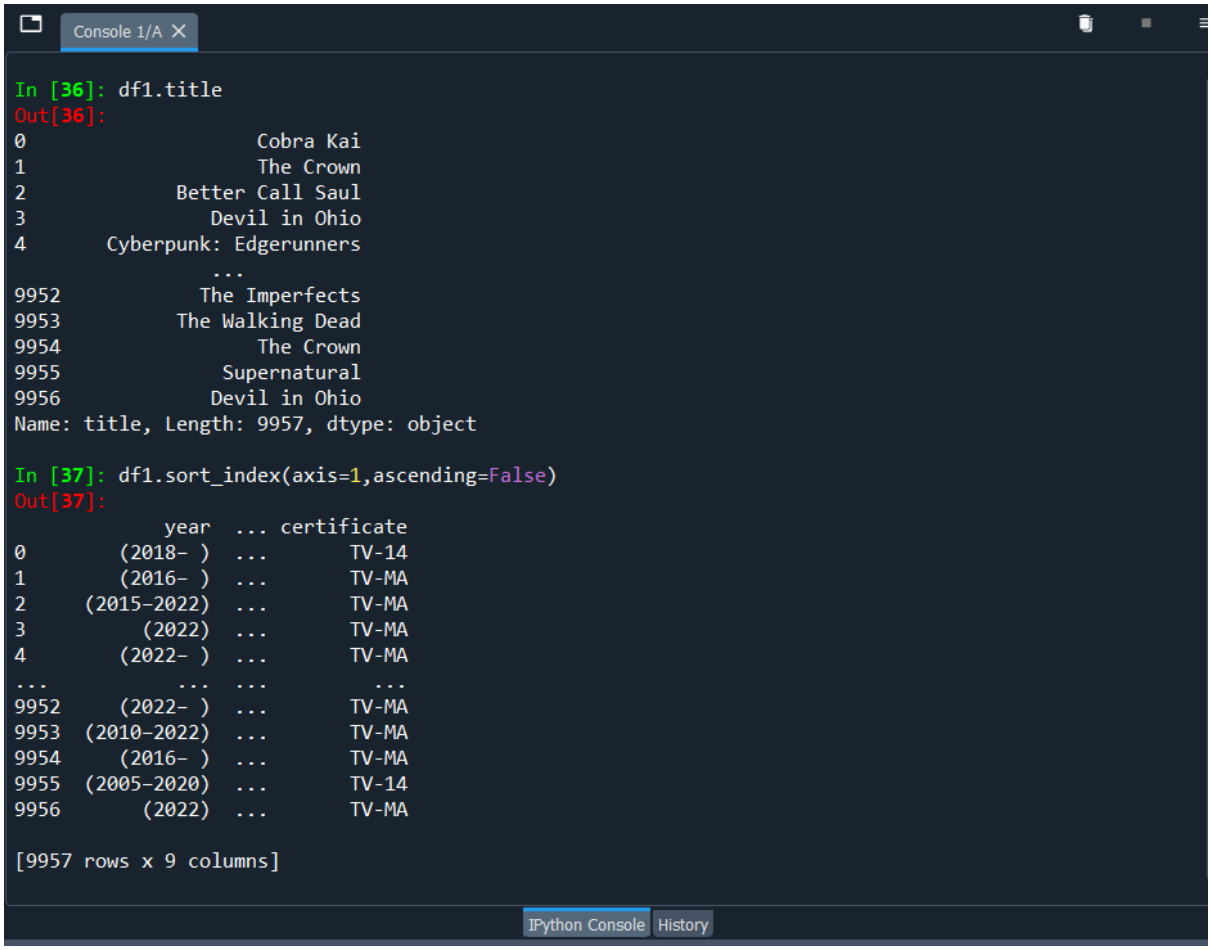
9955 Supernatural ... 439,601

9956 Devil in Ohio ... 9,786

[9957 rows x 9 columns]

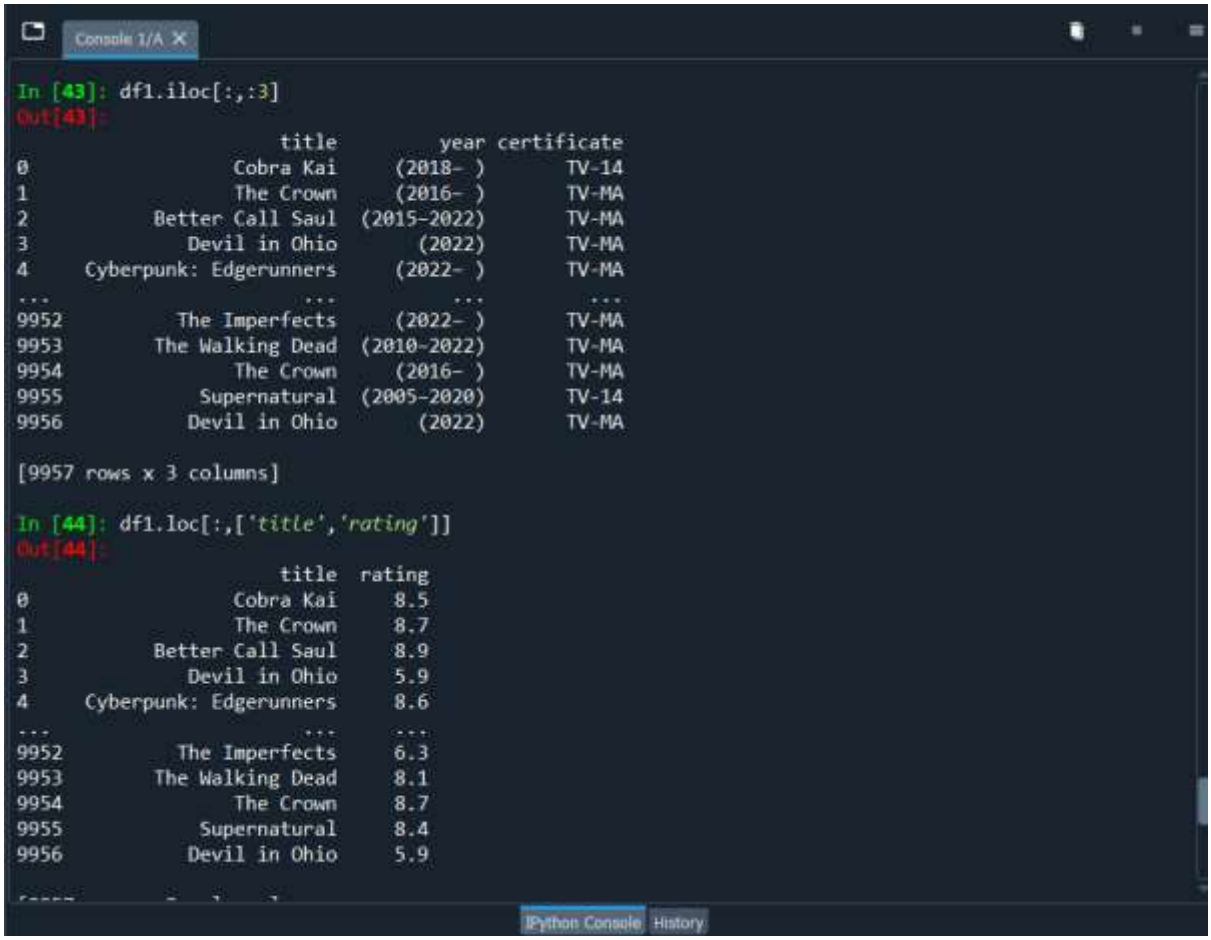
OUTPUT :


Console 1/A
In [38]: df1.sort_values(by='year')
Out[38]:
title ... votes
7229 The Southsiders ... 81
1445 Scarface ... 28,107
7637 Kära släkten ... 43
6499 Death at a Broadcast ... 323
6197 Midshipman Easy ... 172
... ...
7980 Game Changer ... NaN
7982 Detektyw Forst ... NaN
7995 Informacja zwrotna ... NaN
7999 Horton Hears a Who! ... NaN
8001 Bad Dinosaurs ... NaN
[9957 rows x 9 columns]
In [39]: df1.iloc[5]
Out[39]:
title The Sandman
year (2022–)
certificate TV-MA
duration 45 min
genre Drama, Fantasy, Horror
rating 7.8
description Upon escaping after decades of imprisonment by...
stars ['Tom Sturridge, ', 'Boyd Holbrook, ', 'Patton...
votes 116,358
Name: 5, dtype: object
In [40]: df1[0:3]
Out[40]:
IPython Console
History


Console 1/A
In [36]: df1.title
Out[36]:
0 Cobra Kai
1 The Crown
2 Better Call Saul
3 Devil in Ohio
4 Cyberpunk: Edgerunners
...
9952 The Imperfects
9953 The Walking Dead
9954 The Crown
9955 Supernatural
9956 Devil in Ohio
Name: title, Length: 9957, dtype: object
In [37]: df1.sort_index(axis=1,ascending=False)
Out[37]:
year ... certificate
0 (2018-) ... TV-14
1 (2016-) ... TV-MA
2 (2015-2022) ... TV-MA
3 (2022) ... TV-MA
4 (2022-) ... TV-MA
... ...
9952 (2022-) ... TV-MA
9953 (2010-2022) ... TV-MA
9954 (2016-) ... TV-MA
9955 (2005-2020) ... TV-14
9956 (2022) ... TV-MA
[9957 rows x 9 columns]
IPython Console
History

```
Console 1/A

In [33]: df1.dtypes
Out[33]:
title          object
year           object
certificate    object
duration       object
genre          object
rating        float64
description    object
stars          object
votes          object
dtype: object

In [34]: df1.columns.values
Out[34]:
array(['title', 'year', 'certificate', 'duration', 'genre', 'rating',
       'description', 'stars', 'votes'], dtype=object)

In [35]: df1.describe(include='all')
Out[35]:
          title    year certificate  ... description stars  votes
count      9957    9430        6504  ...        9957  9957   8784
unique     7912     498          20  ...        9433  8615   4862
top     Top Gear  (2020)       TV-MA  ...  Add a Plot    []     30
freq         92     663        2520  ...         434   403     33
mean        NaN     NaN         NaN  ...         NaN   NaN    NaN
std         NaN     NaN         NaN  ...         NaN   NaN    NaN
min         NaN     NaN         NaN  ...         NaN   NaN    NaN
25%         NaN     NaN         NaN  ...         NaN   NaN    NaN
50%         NaN     NaN         NaN  ...         NaN   NaN    NaN
75%         NaN     NaN         NaN  ...         NaN   NaN    NaN
max         NaN     NaN         NaN  ...         NaN   NaN    NaN

IPython Console  History
```

```
Console 1/A

In [28]: df1.head(n=5)
Out[28]:
                 title  ...    votes
0          Cobra Kai  ...  177,031
1          The Crown  ...  199,885
2       Better Call Saul  ...  501,384
3          Devil in Ohio  ...    9,773
4  Cyberpunk: Edgerunners  ...   15,413

[5 rows x 9 columns]

In [29]: df1.tail(n=6)
Out[29]:
                 title  ...      votes
9951      Breaking Bad  ...  1,831,359
9952    The Imperfects  ...      3,130
9953  The Walking Dead  ...    970,067
9954         The Crown  ...    199,898
9955      Supernatural  ...    439,601
9956     Devil in Ohio  ...      9,786

[6 rows x 9 columns]

In [30]: df1.index
Out[30]: RangeIndex(start=0, stop=9957, step=1)

In [31]: df1.shape
Out[31]: (9957, 9)

In [32]: df1.columns
Out[32]:
Index(['title', 'year', 'certificate', 'duration', 'genre', 'rating',

IPython Console  History
```


Console 1/A
In [43]: df1.iloc[:,:3]
Out[43]:
title year certificate
0 Cobra Kai (2018–) TV-14
1 The Crown (2016–) TV-MA
2 Better Call Saul (2015–2022) TV-MA
3 Devil in Ohio (2022) TV-MA
4 Cyberpunk: Edgerunners (2022–) TV-MA
... ...
9952 The Imperfects (2022–) TV-MA
9953 The Walking Dead (2010–2022) TV-MA
9954 The Crown (2016–) TV-MA
9955 Supernatural (2005–2020) TV-14
9956 Devil in Ohio (2022) TV-MA
[9957 rows x 3 columns]
In [44]: df1.loc[:,['title','rating']]
Out[44]:
title rating
0 Cobra Kai 8.5
1 The Crown 8.7
2 Better Call Saul 8.9
3 Devil in Ohio 5.9
4 Cyberpunk: Edgerunners 8.6
... ...
9952 The Imperfects 6.3
9953 The Walking Dead 8.1
9954 The Crown 8.7
9955 Supernatural 8.4
9956 Devil in Ohio 5.9
IPython Console
History