Practical 4

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Div: C (C2 Batch)

```python
import pandas as pd
df=pd.read_csv("/content/movies_dataset1.CSV")
print(df)
```

Output:

```
0          0                       Ad Astra
1          1                      Bloodshot
2          2             Bad Boys for Life
3          3                        Ant-Man
4          4    Percy Jackson: Sea of Monsters
5          5                            NaN
6          6           Live Free or Die Hard
7          7                     Cold Blood
8          8                     Underwater
9          9                   The Platform
10        10         Jumanji: The Next Level
11        11       The Twilight Saga: Eclipse
12        12               Sonic the Hedgehog


                                        overview original_language
\
0   The near future, a time when both hope and har...              en
1   After he and his wife are murdered, marine Ray...              en
2   Marcus and Mike are forced to confront new thr...              en
3   Armed with the astonishing ability to shrink i...              en
4    In their quest to confront the ultimate evil, ...              en
5                                             NaN            NaN
6   John McClane is back and badder than ever, and...              en
7   A legendary but retired hit man lives in peace...              fr
8   After an earthquake destroys their underwater ...              en
9   A mysterious place, an indescribable prison, a...              es
10  As the gang return to Jumanji to rescue one of...              en
11  Bella once again finds herself surrounded by d...              en
12  Based on the global blockbuster videogame fran...              en


    vote_count  vote_average          director  facebook_likes
budget   \
0      2853.0           5.9    Kirsten Johnson             5.0
3.56784
1      1349.0           7.2               NaN             5.4
2.45834
2      2530.0           7.1               NaN             3.5
3.45682
3     13611.0           7.1    Julien Leclercq             6.7
4.35777
```

4	3542.0	5.9	Haile Gerima	8.0	2.67534
5	NaN	NaN	NaN	NaN	NaN
6	3714.0	6.5	Kongkiat Komesiri	7.9	3.65783
7	119.0	5.1	Christian Schwochow	5.7	1.56357
8	584.0	6.5	Adam Salky	5.6	3.56784
9	1924.0	7.2	Mike Gunther	5.4	2.67743
10	2974.0	6.8	Jerry Rothwell	6.5	2.57453
11	5687.0	6.1	Bradley Parker	6.7	1.56427
12	2066.0	7.4	Peter Chelsom	6.8	3.56753

```
     year
0   2013.0
1   2014.0
2   2013.0
3   2013.0
4   2015.0
5      NaN
6   2013.0
7   2014.0
8   2013.0
9   2015.0
10  2016.0
11  2017.0
12  2017.0
```

```python
#1 Calculate the highest director facebook likes
df1=pd.read_csv("/content/movies_dataset1.CSV",usecols=['facebook_likes'])
print(df1.max())
```

Output:

```
facebook_likes    8.0
```

```python
#2 Calculate the lowest director facebook likes
df1=pd.read_csv("/content/movies_dataset1.CSV",usecols=['facebook_likes'])
print(df1.min())
```

Output:

```
facebook_likes    3.5
```

```python
#3 find the number of movies released in french language in the data
a=df.groupby('original_language').get_group('fr')
print(a['original_language'])
```

Output:

```
7      fr
```

```
#4 check for missing values in dataframe
print(df.isnull().count())
```

Output:

```
Unnamed: 0          13
movies              13
overview            13
original_language   13
vote_count          13
vote_average        13
director            13
facebook_likes      13
```

```
#5 Drop rows with missing values
print(df.dropna(inplace=True))
```

Output:

```
None
```

```
#6 Calculate the highest voter count
df1=pd.read_csv("/content/movies_dataset1.CSV",usecols=['vote_count'])
print(df1.max())
```

Output:

```
vote_count     13611.0
```

```
#7 find the mean of number of people voted
df1=pd.read_csv("/content/movies_dataset1.CSV",usecols=['vote_average']
)
print(df1.mean())
```

Output:

```
vote_average    6.566667
```

```
#8 Give duplicates of data
df.drop_duplicates()
```

Output:

	Unnamed: 0	movies	overview	original_language	vote_count	vote_average	director	facebook_likes
0	0	Ad Astra	The near future, a time when both hope and har...	en	2853.0	5.9	Kirsten Johnson	5.0
3	3	Ant-Man	Armed with the astonishing ability to shrink i...	en	13611.0	7.1	Julien Leclercq	6.7
4	4	Percy Jackson: Sea of Monsters	In their quest to confront the ultimate evil, ...	en	3542.0	5.9	Haile Gerima	8.0
6	6	Live Free or Die Hard	John McClane is back and badder than ever, and...	en	3714.0	6.5	Kongkiat Komesiri	7.9
7	7	Cold Blood	A legendary but retired hit man lives in peace...	fr	119.0	5.1	Christian Schwochow	5.7
8	8	Underwater	After an earthquake destroys their underwater ...	en	584.0	6.5	Adam Salky	5.6
9	9	The Platform	A mysterious place, an indescribable prison, a...	es	1924.0	7.2	Mike Gunther	5.4
10	10	Jumanji: The Next Level	As the gang return to Jumanji to rescue one of...	en	2974.0	6.8	Jerry Rothwell	6.5
11	11	The Twilight Saga: Eclipse	Bella once again finds herself	en	5687.0	6.1	Bradley Parker	6.7
11	11	The Twilight Saga: Eclipse	Bella once again finds herself surrounded by d...	en	5687.0	6.1	Bradley Parker	6.7
12	12	Sonic the Hedgehog	Based on the global blockbuster videogame fran...	en	2066.0	7.4	Peter Chelsom	6.8

```
#9 show(drop) the duplicated rows
print(df.drop_duplicates())
```

Output:

```
Unnamed: 0                           movies  \
0            0                          Ad Astra
3            3                           Ant-Man
4            4   Percy Jackson: Sea of Monsters
6            6            Live Free or Die Hard
7            7                       Cold Blood
8            8                       Underwater
9            9                     The Platform
10          10          Jumanji: The Next Level
11          11       The Twilight Saga: Eclipse
12          12                Sonic the Hedgehog

                                            overview original_language  \
0    The near future, a time when both hope and har...                en
3    Armed with the astonishing ability to shrink i...                en
4    In their quest to confront the ultimate evil, ...                en
6    John McClane is back and badder than ever, and...                en
7    A legendary but retired hit man lives in peace...                fr
8    After an earthquake destroys their underwater ...                en
9    A mysterious place, an indescribable prison, a...                es
10   As the gang return to Jumanji to rescue one of...                en
11   Bella once again finds herself surrounded by d...                en
12   Based on the global blockbuster videogame fran...                en

    vote_count  vote_average               director  facebook_likes
0       2853.0           5.9        Kirsten Johnson             5.0
3      13611.0           7.1        Julien Leclercq             6.7
4       3542.0           5.9           Haile Gerima             8.0
6       3714.0           6.5      Kongkiat Komesiri             7.9
7        119.0           5.1    Christian Schwochow             5.7
```

```
8          584.0              6.5           Adam Salky              5.6
9         1924.0              7.2          Mike Gunther             5.4
10        2974.0              6.8         Jerry Rothwell            6.5
11        5687.0              6.1         Bradley Parker            6.7
12        2066.0              7.4          Peter Chelsom            6.8
```

```
#10 fill null vale with the column mean
print(df.fillna(df.mean()))
```

Output:

```
  Unnamed: 0                      movies  \
0           0                    Ad Astra
3           3                     Ant-Man
4           4  Percy Jackson: Sea of Monsters
6           6           Live Free or Die Hard
7           7                  Cold Blood
8           8                  Underwater
9           9                The Platform
10         10        Jumanji: The Next Level
11         11      The Twilight Saga: Eclipse
12         12             Sonic the Hedgehog

                                     overview original_language
\
0   The near future, a time when both hope and har...                en
3   Armed with the astonishing ability to shrink i...                en
4   In their quest to confront the ultimate evil, ...                en
6   John McClane is back and badder than ever, and...                en
7   A legendary but retired hit man lives in peace...                fr
8   After an earthquake destroys their underwater ...                en
9   A mysterious place, an indescribable prison, a...                es
10  As the gang return to Jumanji to rescue one of...                en
11  Bella once again finds herself surrounded by d...                en
12  Based on the global blockbuster videogame fran...                en

    vote_count  vote_average              director  facebook_likes
0       2853.0           5.9      Kirsten Johnson             5.0
3      13611.0           7.1      Julien Leclercq             6.7
4       3542.0           5.9         Haile Gerima             8.0
6       3714.0           6.5     Kongkiat Komesiri             7.9
7        119.0           5.1   Christian Schwochow             5.7
8        584.0           6.5           Adam Salky             5.6
9       1924.0           7.2          Mike Gunther             5.4
10      2974.0           6.8         Jerry Rothwell             6.5
11      5687.0           6.1         Bradley Parker             6.7
12      2066.0           7.4          Peter Chelsom             6.8
```

```
#11 find number of movies released in  the year 2013
df2 = df.groupby(['year']).get_group((2013)).count()
print(df2['year'])
```

Output:

```
5
```

```
#12 convert name of director column in lowercase
print(df['director'].str.lower())
```

Output:

```
0         kirsten johnson
1                     NaN
2                     NaN
3         julien leclercq
4            haile gerima
5                     NaN
6       kongkiat komesiri
7      christian schwochow
8              adam salky
9            mike gunther
10         jerry rothwell
11         bradley parker
12          peter chelsom
```

```
#13 give correlation of data
print(df.corr())
```

Output:

	Unnamed: 0	vote_count	vote_average	facebook_likes \
Unnamed: 0	1.000000	-0.161724	0.074744	0.358181
vote_count	-0.161724	1.000000	0.209970	0.310604
vote_average	0.074744	0.209970	1.000000	-0.163391
facebook_likes	0.358181	0.310604	-0.163391	1.000000
budget	-0.327850	0.420105	0.499008	-0.014047
year	0.753526	-0.093340	0.105194	0.353973

	budget	year
Unnamed: 0	-0.327850	0.753526
vote_count	0.420105	-0.093340
vote_average	0.499008	0.105194
facebook_likes	-0.014047	0.353973
budget	1.000000	-0.508680
year	-0.508680	1.000000

```
#14 convert name of director column in uppercase
print(df['director'].str.upper())
```

Output:

```
0           KIRSTEN JOHNSON
1                       NaN
2                       NaN
3           JULIEN LECLERCQ
4             HAILE GERIMA
5                       NaN
6          KONGKIAT KOMESIRI
7        CHRISTIAN SCHWOCHOW
8              ADAM SALKY
9             MIKE GUNTHER
10          JERRY ROTHWELL
11          BRADLEY PARKER
12           PETER CHELSOM
```

Excel sheet

A	B	C	D	E	F	G	H	I	J
	movies	overview	original_la	vote_cour	vote_aver	director	facebook_	budget	year
0	Ad Astra	The near f	en	2853	5.9	Kirsten Joh	5	3.56784	2013
1	Bloodshot	After he a	en	1349	7.2		5.4	2.45834	2014
2	Bad Boys f	Marcus ar	en	2530	7.1		3.5	3.45682	2013
3	Ant-Man	Armed wit	en	13611	7.1	Julien Lecl	6.7	4.35777	2013
4	Percy Jack	In their qu	en	3542	5.9	Haile Geri	8	2.67534	2015
5									
6	Live Free c	John McCl	en	3714	6.5	Kongkiat K	7.9	3.65783	2013
7	Cold Blooc	A legenda	fr	119	5.1	Christian S	5.7	1.56357	2014
8	Underwat	After an e	en	584	6.5	Adam Salk	5.6	3.56784	2013
9	The Platfo	A mysteri	es	1924	7.2	Mike Gunt	5.4	2.67743	2015
10	Jumanji: T	As the gan	en	2974	6.8	Jerry Roth	6.5	2.57453	2016
11	The Twilig	Bella once	en	5687	6.1	Bradley Pa	6.7	1.56427	2017
12	Sonic the	Based on f	en	2066	7.4	Peter Chel	6.8	3.56753	2017