1.Ans

In [4]:

```
# importing pandas

import pandas as ps

# pandas Version

print(ps.__version__)
```

```
0.25.1
```

2.Ans

In [9]:

```
# Creating Series from a numpy array

import numpy as np

# Creating numpy array

arr=np.array([1,3,6,8,10,11])

type(arr)
```

Out[9]:

```
numpy.ndarray
```

In [35]:

```
# Converting numpy array into Series

pan_ser = ps.Series(arr)

pan_ser
```

Out[35]:

```
0     1
1     3
2     6
3     8
4    10
5    11
dtype: int32
```

In [17]:

```
type(pan_ser)
```

Out[17]:

```
pandas.core.series.Series
```

3.Ans

In [21]:
```
# Creating Series along with index value

ser=ps.Series([1,2,3,4,5],index=['a','b','c','d','e'])

ser
```

Out[21]:
```
a    1
b    2
c    3
d    4
e    5
dtype: int64
```

In [39]:
```
print(ser[3], ser['a'], type(ser))
```

```
4 1 <class 'pandas.core.series.Series'>
```

In [34]:
```
#  Converting the index of a series into a column of a dataframe

df=ps.DataFrame(ser,columns = ["value"])

df
```

Out[34]:

	value
a	1
b	2
c	3
d	4
e	5

In [38]:
```
type(df)
```

Out[38]:
```
pandas.core.frame.DataFrame
```

4.Ans

In [52]:

```
# Importing seaborn

import seaborn as sb

# Listing all the datasets in seaborn library

sb.get_dataset_names()
```

Out[52]:

```
['anagrams',
 'anscombe',
 'attention',
 'brain_networks',
 'car_crashes',
 'diamonds',
 'dots',
 'exercise',
 'flights',
 'fmri',
 'gammas',
 'geyser',
 'iris',
 'mpg',
 'penguins',
 'planets',
 'tips',
 'titanic']
```

In [57]:

```
# Loading mpg dataset

mpg=sb.load_dataset('mpg')

mpg
```

Out[57]:

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year	origin	name
0	18.0	8	307.0	130.0	3504	12.0	70	usa	chevrole chevelle malibu
1	15.0	8	350.0	165.0	3693	11.5	70	usa	buick skylark 320
2	18.0	8	318.0	150.0	3436	11.0	70	usa	plymouth satellite
3	16.0	8	304.0	150.0	3433	12.0	70	usa	amc rebel ss
4	17.0	8	302.0	140.0	3449	10.5	70	usa	ford torino
...	...	...	...	...	...	...	...	...	..
393	27.0	4	140.0	86.0	2790	15.6	82	usa	ford mustang g
394	44.0	4	97.0	52.0	2130	24.6	82	europe	vw pickup
395	32.0	4	135.0	84.0	2295	11.6	82	usa	dodge rampage
396	28.0	4	120.0	79.0	2625	18.6	82	usa	ford range
397	31.0	4	119.0	82.0	2720	19.4	82	usa	chevy s 10

398 rows × 9 columns

5.Ans

In [59]:

```
# Country of origin

mpg['origin'].unique()
```

Out[59]:

```
array(['usa', 'japan', 'europe'], dtype=object)
```

6.Ans

In [64]:

```
# Extracting the part of the dataframe which contains cars belonging to 'usa'

mpg1=mpg[mpg['origin'].str.contains("usa")]
```

In [65]:

```
mpg1
```

Out[65]:

	mpg	cylinders	displacement	horsepower	weight	acceleration	model_year	origin	name
0	18.0	8	307.0	130.0	3504	12.0	70	usa	chevrolet chevelle malibu
1	15.0	8	350.0	165.0	3693	11.5	70	usa	buick skylark 320
2	18.0	8	318.0	150.0	3436	11.0	70	usa	plymouth satellite
3	16.0	8	304.0	150.0	3433	12.0	70	usa	amc rebel sst
4	17.0	8	302.0	140.0	3449	10.5	70	usa	ford torino
...	...	...	...	...	...	...	...	...	...
392	27.0	4	151.0	90.0	2950	17.3	82	usa	chevrolet camaro
393	27.0	4	140.0	86.0	2790	15.6	82	usa	ford mustang gl
395	32.0	4	135.0	84.0	2295	11.6	82	usa	dodge rampage
396	28.0	4	120.0	79.0	2625	18.6	82	usa	ford ranger
397	31.0	4	119.0	82.0	2720	19.4	82	usa	chevy s-10

249 rows × 9 columns