

Question .1.

```
In [1]: # How to creat pandas and check the versions  
import pandas as pd  
print(pd.__version__)
```

1.0.5

Question .2.

```
In [2]: # How to creat a series from numpy array  
import numpy as np  
import pandas as pd  
  
data = np.array(['p', 'o', 'o', 'j', 'a'])  
  
s = pd.Series(data)  
print(s)
```

```
0    p  
1    o  
2    o  
3    j  
4    a  
dtype: object
```

Question .3.

In [15]: *# How to convert index of series into column of dataframe*

```
import pandas as pd

# series
marks = pd.Series([90, 65, 73, 81, 76])

# Index
index_ = ['piya', 'Sam', 'rohit', 'rahul', 'Dev',]

# set the index
marks.index = index_

# Print the series
print(marks)
```

```
piya    90
Sam     65
rohit   73
rahul   81
Dev     76
dtype: int64
```

In [16]: *# reset the index*
result = marks.reset_index()

```
# Print the result
print(result)
```

```
   index  0
0  piya  90
1   Sam  65
2  rohit  73
3  rahul  81
4   Dev  76
```

Question .4.

```
In [15]: # seaborn
import seaborn as sns

mpg=sns.load_dataset('mpg')

print(mpg)
```

	mpg	cylinders	displacement	horsepower	weight	acceleration	\
0	18.0	8	307.0	130.0	3504	12.0	
1	15.0	8	350.0	165.0	3693	11.5	
2	18.0	8	318.0	150.0	3436	11.0	
3	16.0	8	304.0	150.0	3433	12.0	
4	17.0	8	302.0	140.0	3449	10.5	
..	
393	27.0	4	140.0	86.0	2790	15.6	
394	44.0	4	97.0	52.0	2130	24.6	
395	32.0	4	135.0	84.0	2295	11.6	
396	28.0	4	120.0	79.0	2625	18.6	
397	31.0	4	119.0	82.0	2720	19.4	

	model_year	origin	name
0	70	usa	chevrolet chevelle malibu
1	70	usa	buick skylark 320
2	70	usa	plymouth satellite
3	70	usa	amc rebel sst
4	70	usa	ford torino
..
393	82	usa	ford mustang gl
394	82	europa	vw pickup
395	82	usa	dodge rampage
396	82	usa	ford ranger
397	82	usa	chevy s-10

[398 rows x 9 columns]

Question .5.

```
In [10]: # Which country origin cars are a part of this dataset
import pandas as pd

import seaborn as sns

mpg=sns.load_dataset('mpg')

df = pd.DataFrame(mpg)

df.origin.unique()
```

Out[10]: array(['usa', 'japan', 'europa'], dtype=object)

Question .6.

```
In [14]: # Extract the part of dataframe which contains cars belonging to 'usa'
import pandas as pd

import seaborn as sns

mpg=sns.load_dataset('mpg')

df = pd.DataFrame(mpg)

df[df['origin'].str.contains("usa")]
```

Out[14]:

	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 3
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	american rebel
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
395	32.0	4	135.0	84.0	2295	11.6	82	usa	dodge rampart
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	chevrolet

249 rows × 9 columns

```
In [ ]:
```