**import** numpy **as** np

In [2]:

**import** pandas **as** pd

**Create any Series and print the output**

In [5]:

x **=** pd**.**Series([1,2,3,4])

print(x)

0 1

1 2

2 3

3 4

dtype: int64

**Create any dataframe of 10x5 with few nan values and print the output**

In [8]:

y **=** pd**.**DataFrame(np**.**random**.**rand(10,5))

y[4][4]**=**np**.**nan

y[2][1]**=**np**.**nan

y[3][3]**=**np**.**nan

y

Out[8]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **1** | 0.175011 | 0.602233 | NaN | 0.191360 | 0.225552 |
| **2** | 0.917813 | 0.412917 | 0.366001 | 0.680875 | 0.054624 |
| **3** | 0.423580 | 0.377233 | 0.202966 | NaN | 0.632497 |
| **4** | 0.618793 | 0.182057 | 0.095793 | 0.331943 | NaN |
| **5** | 0.976952 | 0.918954 | 0.140293 | 0.212313 | 0.315110 |
| **6** | 0.145651 | 0.840858 | 0.578499 | 0.317830 | 0.054014 |
| **7** | 0.930152 | 0.289849 | 0.593886 | 0.896811 | 0.093061 |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | 0.133385 | 0.642261 |

**Display top 7 and last 6 rows and print the output**

In [12]:

y**.**head(7)

Out[12]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **4** | 0.618793 | 0.182057 | 0.095793 | 0.331943 | NaN |
| **5** | 0.976952 | 0.918954 | 0.140293 | 0.212313 | 0.315110 |
| **6** | 0.145651 | 0.840858 | 0.578499 | 0.317830 | 0.054014 |
| **7** | 0.930152 | 0.289849 | 0.593886 | 0.896811 | 0.093061 |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | 0.133385 | 0.642261 |

In [13]:

y**.**tail(6)

Out[13]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **4** | 0.618793 | 0.182057 | 0.095793 | 0.331943 | NaN |
| **5** | 0.976952 | 0.918954 | 0.140293 | 0.212313 | 0.315110 |
| **6** | 0.145651 | 0.840858 | 0.578499 | 0.317830 | 0.054014 |
| **7** | 0.930152 | 0.289849 | 0.593886 | 0.896811 | 0.093061 |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | 0.133385 | 0.642261 |

**Fill with a constant value and print the output**

In [14]:

y**.**fillna("5.785678")

Out[14]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **1** | 0.175011 | 0.602233 | 5.785678 | 0.19136 | 0.225552 |
| **2** | 0.917813 | 0.412917 | 0.366001 | 0.680875 | 0.054624 |
| **3** | 0.423580 | 0.377233 | 0.202966 | 5.785678 | 0.632497 |
| **4** | 0.618793 | 0.182057 | 0.095793 | 0.331943 | 5.785678 |
| **5** | 0.976952 | 0.918954 | 0.140293 | 0.212313 | 0.31511 |
| **6** | 0.145651 | 0.840858 | 0.578499 | 0.31783 | 0.054014 |
| **7** | 0.930152 | 0.289849 | 0.593886 | 0.896811 | 0.093061 |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | 0.133385 | 0.642261 |

**Drop the column with missing values and print the output**

In [16]:

y**.**dropna(axis **=** 1)

Out[16]:

|  | **0** | **1** |
| --- | --- | --- |
| **0** | 0.862432 | 0.451345 |
| **1** | 0.175011 | 0.602233 |
| **2** | 0.917813 | 0.412917 |
| **3** | 0.423580 | 0.377233 |
| **4** | 0.618793 | 0.182057 |
| **5** | 0.976952 | 0.918954 |
| **6** | 0.145651 | 0.840858 |
| **7** | 0.930152 | 0.289849 |
| **8** | 0.769676 | 0.790173 |
| **9** | 0.922335 | 0.662388 |

**Drop the row with missing values and print the output**

In [17]:

y**.**dropna()

Out[17]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **2** | 0.917813 | 0.412917 | 0.366001 | 0.680875 | 0.054624 |
| **5** | 0.976952 | 0.918954 | 0.140293 | 0.212313 | 0.315110 |
| **6** | 0.145651 | 0.840858 | 0.578499 | 0.317830 | 0.054014 |
| **7** | 0.930152 | 0.289849 | 0.593886 | 0.896811 | 0.093061 |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | 0.133385 | 0.642261 |

**To check the presence of missing values in your dataframe**

In [18]:

y**.**isna()

Out[18]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | False | False | False | False | False |
| **1** | False | False | True | False | False |
| **2** | False | False | False | False | False |
| **3** | False | False | False | True | False |
| **4** | False | False | False | False | True |
| **5** | False | False | False | False | False |
| **6** | False | False | False | False | False |
| **7** | False | False | False | False | False |
| **8** | False | False | False | False | False |
| **9** | False | False | False | False | False |

**Use operators and check the condition and print the output**

In [19]:

y**=**y[y**>**0.3]

y

Out[19]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **1** | NaN | 0.602233 | NaN | NaN | NaN |
| **2** | 0.917813 | 0.412917 | 0.366001 | 0.680875 | NaN |
| **3** | 0.423580 | 0.377233 | NaN | NaN | 0.632497 |
| **4** | 0.618793 | NaN | NaN | 0.331943 | NaN |
| **5** | 0.976952 | 0.918954 | NaN | NaN | 0.315110 |
| **6** | NaN | 0.840858 | 0.578499 | 0.317830 | NaN |
| **7** | 0.930152 | NaN | 0.593886 | 0.896811 | NaN |
| **8** | 0.769676 | 0.790173 | 0.475551 | 0.483608 | 0.898164 |
| **9** | 0.922335 | 0.662388 | 0.895568 | NaN | 0.642261 |

**Display your output using loc and iloc, row and column heading**

In [20]:

y**.**loc[:2]

Out[20]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **1** | NaN | 0.602233 | NaN | NaN | NaN |
| **2** | 0.917813 | 0.412917 | 0.366001 | 0.680875 | NaN |

In [21]:

y**.**iloc[:2]

Out[21]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **0** | 0.862432 | 0.451345 | 0.562632 | 0.711208 | 0.717752 |
| **1** | NaN | 0.602233 | NaN | NaN | NaN |

**Display the statistical summary of data**

In [22]:

y**.**describe()

Out[22]:

|  | **0** | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
| **count** | 8.000000 | 8.000000 | 6.000000 | 6.000000 | 5.000000 |
| **mean** | 0.802717 | 0.632012 | 0.578690 | 0.570379 | 0.641157 |
| **std** | 0.191380 | 0.206443 | 0.177073 | 0.230981 | 0.211129 |
| **min** | 0.423580 | 0.377233 | 0.366001 | 0.317830 | 0.315110 |
| **25%** | 0.731955 | 0.441738 | 0.497321 | 0.369859 | 0.632497 |
| **50%** | 0.890123 | 0.632310 | 0.570566 | 0.582241 | 0.642261 |
| **75%** | 0.924289 | 0.802844 | 0.590039 | 0.703625 | 0.717752 |
| **max** | 0.976952 | 0.918954 | 0.895568 | 0.896811 | 0.898164 |

In [ ]: