

```
[[-0.93158582 -0.25987699 -1.2165369 ]
 [ 0.225352    0.51948052  1.18113886]]

[[-9.31585816 -2.59876986 -12.16536903]
 [ 2.25351996  5.19480524 11.81138856]]

[[-1.86317163 -0.51975397 -2.43307381]
 [ 0.45070399  1.03896105  2.36227771]]
```

Shape of Randon Matrix : (2, 3)

DataType : float64

```
[6.  7.5 8.  0.  1. ]
```

```
[[1 2 3 4]
 [5 6 7 8]]
```

2

(2, 4)

float64

int64

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

```
[[0. 0. 0. 0. 0. 0.]
 [0. 0. 0. 0. 0. 0.]
 [0. 0. 0. 0. 0. 0.]]
```

```
[[[5. 5.]
   [5. 5.]
   [3. 3.]]
```

```
[[[3. 3.]
   [1. 1.]
   [1. 1.]]]
```

```
[ 0  1  2  3  4  5  6  7  8  9 10 11 12 13 14]
```

```
float64
int32
```

```
int64
```

```
float64
```

```
[ 3.7 -1.2 -2.6  0.5 12.9 10.1]
[ 3 -1 -2  0 12 10]
```

```
[ 1.25 -9.6  42.  ]
```

```
[0. 1. 2. 3. 4. 5. 6. 7. 8. 9.]
[          0 1075314688          0 1075707904          0 1075838976
          0 1072693248]
```

[[1. 4. 9.]
[16. 25. 36.]]

[[0. 0. 0.]
[0. 0. 0.]]

[[1. 0.5 0.33333333]
[0.25 0.2 0.16666667]]

[[1. 1.41421356 1.73205081]
[2. 2.23606798 2.44948974]]

[[0. 4. 1.]
[7. 2. 12.]]

[[False True False]
[True False True]]
[0 1 2 3 4 5 6 7 8 9]
5

[5 6 7]

[0 1 2 3 4 12 12 12 8 9]

[12 12 12]
[0 1 2 3 4 12 12345 12 8 9]

[0 1 2 3 4 64 64 64 8 9]

[7 8 9]

3

[[1 2 3]
[4 5 6]]

[[2 3]
[5 6]]

[4 5]

[3 6]

[[1]
[4]
[7]]

[[1 0 0]
[4 0 0]
[7 8 9]]

['Bob' 'Joe' 'Will' 'Bob' 'Will' 'Joe' 'Joe']

[[-0.23936358 0.06112937 -1.4326868 1.17900544]
[0.84751429 2.04202629 -1.02578312 0.23507386]
[-0.22949212 1.54352136 -1.45109578 -0.19059235]
[-0.15930563 1.38944276 1.10826242 -0.09593924]
[0.46619446 0.40237437 1.499485 -1.38403954]
[-1.16070033 1.19936563 -1.70519319 0.13741293]
[-1.30313592 -0.65297267 -0.33617551 1.18049277]]

```
[ True False False  True False False False]
```

```
[[ -0.23936358  0.06112937 -1.4326868  1.17900544]  
 [ -0.15930563  1.38944276  1.10826242 -0.09593924]]  
[[ -1.4326868  1.17900544]  
 [ 1.10826242 -0.09593924]]
```

```
[ 1.17900544 -0.09593924]
```

```
[False  True  True False  True  True  True]
```

```
[[ 0.84751429  2.04202629 -1.02578312  0.23507386]  
 [-0.22949212  1.54352136 -1.45109578 -0.19059235]  
 [ 0.46619446  0.40237437  1.499485  -1.38403954]  
 [-1.16070033  1.19936563 -1.70519319  0.13741293]  
 [-1.30313592 -0.65297267 -0.33617551  1.18049277]]  
[[ 0.84751429  2.04202629 -1.02578312  0.23507386]  
 [-0.22949212  1.54352136 -1.45109578 -0.19059235]  
 [ 0.46619446  0.40237437  1.499485  -1.38403954]  
 [-1.16070033  1.19936563 -1.70519319  0.13741293]  
 [-1.30313592 -0.65297267 -0.33617551  1.18049277]]
```

```
[ True False  True  True  True False False]
```

```
[[ -0.23936358  0.06112937 -1.4326868  1.17900544]  
 [-0.22949212  1.54352136 -1.45109578 -0.19059235]  
 [-0.15930563  1.38944276  1.10826242 -0.09593924]  
 [ 0.46619446  0.40237437  1.499485  -1.38403954]]
```

```
[[0.          0.06112937 0.          1.17900544]
 [0.84751429 2.04202629 0.          0.23507386]
 [0.          1.54352136 0.          0.          ]
 [0.          1.38944276 1.10826242 0.          ]
 [0.46619446 0.40237437 1.499485    0.          ]
 [0.          1.19936563 0.          0.13741293]
 [0.          0.          0.          1.18049277]]]
```

```
[[7.          7.          7.          7.          ]
 [0.84751429 2.04202629 0.          0.23507386]
 [7.          7.          7.          7.          ]
 [7.          7.          7.          7.          ]
 [7.          7.          7.          7.          ]
 [0.          1.19936563 0.          0.13741293]
 [0.          0.          0.          1.18049277]]]
```

```
[[0. 0. 0. 0.]
 [1. 1. 1. 1.]
 [2. 2. 2. 2.]
 [3. 3. 3. 3.]
 [4. 4. 4. 4.]
 [5. 5. 5. 5.]
 [6. 6. 6. 6.]
 [7. 7. 7. 7.]]]
```

```
[[4. 4. 4. 4.]  
 [3. 3. 3. 3.]  
 [0. 0. 0. 0.]  
 [6. 6. 6. 6.]]
```

```
[[5. 5. 5. 5.]  
 [3. 3. 3. 3.]  
 [1. 1. 1. 1.]]
```

```
[[ 0  1  2  3]  
 [ 4  5  6  7]  
 [ 8  9 10 11]  
 [12 13 14 15]  
 [16 17 18 19]  
 [20 21 22 23]  
 [24 25 26 27]  
 [28 29 30 31]]
```

```
[ 4 23 29 10]
```

```
[[ 4  7  5  6]  
 [20 23 21 22]  
 [28 31 29 30]  
 [ 8 11  9 10]]
```

```
[[ 0  1  2  3  4]  
 [ 5  6  7  8  9]  
 [10 11 12 13 14]]
```

```
[[ 0  5 10]
 [ 1  6 11]
 [ 2  7 12]
 [ 3  8 13]
 [ 4  9 14]]
```

```
[[ 2.05099621  0.52250348 -0.83621424]
 [-0.04887342 -0.58579817  1.99247738]
 [-0.32917265  1.60925944 -0.52942677]
 [ 2.18951486 -0.06005326  0.36554222]
 [ 0.03665528  2.01589762  0.20447877]
 [-1.59547332  3.0866077  -0.63256475]]
```

```
[[11.65818274 -4.41163601  0.17891692]
 [-4.41163601 16.80048204 -4.01832242]
 [ 0.17891692 -4.01832242  5.5250839  ]]
```

```
[[[ 0  1  2  3]
   [ 4  5  6  7]]]
```

```
[[ 8  9 10 11]
 [12 13 14 15]]]
```

```
[[[ 0  1  2  3]
   [ 8  9 10 11]]]
```

```
[[ 4  5  6  7]
 [12 13 14 15]]]
```

```
[[[ 0  1  2  3]
   [ 4  5  6  7]]]
```



```
[[ 8  9 10 11]
 [12 13 14 15]]]
```

```
[[[ 0  4]
 [ 1  5]
 [ 2  6]
 [ 3  7]]]
```

```
[[ 8 12]
 [ 9 13]
 [10 14]
 [11 15]]]
```

```
[0 1 2 3 4 5 6 7 8 9]
```

```
[0.          1.          1.41421356  1.73205081  2.          2.23606798
 2.44948974  2.64575131  2.82842712  3.          ]
```

```
[1.00000000e+00  2.71828183e+00  7.38905610e+00  2.00855369e+01
 5.45981500e+01  1.48413159e+02  4.03428793e+02  1.09663316e+03
 2.98095799e+03  8.10308393e+03]
```

```
[ 0.8549107  0.14913031  0.61772338 -0.43026098  2.02427373  0.91342738
 -2.41411303 -0.95508361]
```

```
[ 0.88259907 -0.5149385  -0.72213423  0.51543511 -0.73308948 -0.27542927
 1.39540642  0.66231784]
```

```
[0.88259907 0.14913031 0.61772338 0.51543511 2.02427373 0.91342738
 1.39540642 0.66231784]
```

```
[-7.34074888  5.41797274 15.14343969  2.06370506 -3.32087783  1.8070444
 6.73153872]
```

```
[-0.34074888  0.41797274  0.14343969  0.06370506 -0.32087783  0.8070444
 0.73153872]
```

```
[-7.  5. 15.  2. -3.  1.  6.]
```

```
[-7.34074888  5.41797274 15.14343969  2.06370506 -3.32087783  1.8070444
 6.73153872]
```

```
[          nan  2.32765391  3.89145727  1.43656015          nan  1.34426351
 2.5945209 ]
```

```
[          nan  2.32765391  3.89145727  1.43656015          nan  1.34426351
 2.5945209 ]
```

```
[          nan  2.32765391  3.89145727  1.43656015          nan  1.34426351
 2.5945209 ]
```