In [1]:

```python
import numpy as np
```

In [3]:

```python
#Q1.
x = np.zeros(10)
x[4] = 1
print(x)
```

```
[0. 0. 0. 0. 1. 0. 0. 0. 0. 0.]
```

In [4]:

```python
#Q2.
v = np.arange(10,49)
print(v)
```

```
[10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48]
```

In [7]:

```python
#Q3.
p = np.arange(0,9).reshape(3,3)
print(p)
```

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

In [15]:

```python
#Q4.
q = np.array([1,2,0,0,4,0])
np.nonzero(q)
```

Out[15]:

```
(array([0, 1, 4], dtype=int64),)
```

In [16]:

```python
#Q5.
value = np.random.random((10,10))
print(value)
xmin,xmax = x.min() , x.max()
print(xmin , xmax)
```

```
[[0.72007927 0.87820921 0.57743868 0.03114379 0.56048332 0.17470421
  0.25193795 0.93091087 0.31293448 0.08302542]
 [0.32139683 0.20830106 0.37566716 0.31567018 0.20691879 0.2575701
  0.15988519 0.37527227 0.10258508 0.99616629]
 [0.70413922 0.60149698 0.50619802 0.74836495 0.50978918 0.05876805
  0.32074227 0.15481392 0.70260934 0.37506947]
 [0.79563168 0.47198702 0.3546795  0.71627296 0.014182   0.27620569
  0.03048361 0.65052952 0.54646733 0.6511798 ]
 [0.35682753 0.59198186 0.56491145 0.73767352 0.49385899 0.69380099
  0.69362224 0.24539584 0.98838653 0.53104532]
 [0.14168066 0.63570636 0.39041512 0.00489794 0.96528766 0.38561681
  0.25917306 0.18657973 0.83777225 0.27546793]
 [0.78604056 0.29879672 0.57204266 0.61634775 0.4649709  0.72261413
  0.8517747  0.89885357 0.2100995  0.09839194]
 [0.10569255 0.620544   0.75308556 0.87663033 0.47955529 0.70537929
  0.20056964 0.85458796 0.8861115  0.85127768]
```

```
[0.86028688 0.46128304 0.41748665 0.06763959 0.70317853 0.07691043
  0.49509488 0.65501293 0.54569838 0.30253561]
 [0.10925345 0.71575931 0.50114436 0.06323074 0.64839264 0.56903224
  0.9161057  0.23663544 0.83578247 0.54825074]]
0.0 1.0
```

In [21]:

```python
#Q6.
value_ = np.random.random(size = 30)
print(value_)
np.mean(value_)
```

```
[0.9212953  0.76884605 0.4781682  0.04041363 0.8744619  0.86097277
 0.1195024  0.42118189 0.46677611 0.03957107 0.39624558 0.80166
 0.00271725 0.21952574 0.91391166 0.14995935 0.70022918 0.03621963
 0.2452672  0.13115829 0.98435454 0.69547221 0.78089973 0.14033432
 0.91510344 0.20764252 0.34569773 0.94245174 0.88910501 0.1475995 ]
```

Out[21]:

```
0.4878914631111232
```

In [ ]: