Karanjot singh

In [12]:

```
import random
import numpy as np
a = np.array([100*random.random() for i in range(0,100)]).reshape(10,10)
print(a)
print("Max Element form array is:",np.amax(a))
print("Min Element from array is:",np.amin(a))
```

```
[[93.6824342  93.24080768 54.08769555 77.91634744 12.02023605 70.36800437
  41.00746823  7.7588077  74.25424359 64.29639617]
 [66.88119156 87.86032145 79.39481919 43.68913628 69.28089431 85.47438219
  49.18783908 66.77213457 80.03163505 32.38718844]
 [86.07782386 46.51538476 11.87734602  8.85230076 51.86455688 70.85651234
  41.40683071 56.17154929 82.21081678 29.19519158]
 [70.23641707 39.7916185  14.54351678 64.79731585 63.42335025 24.58299548
  86.91800413 32.50161111 14.66301986 76.88661576]
 [29.65973899 70.54507823 37.68540254  5.74077406 32.55577497 95.71792015
  60.97753024 54.00443515 42.90315727 57.73397678]
 [ 5.22877535 71.53492153 33.12574892 48.04129545 37.38682128 75.78612557
  56.62021378 45.74200277 80.1762554  91.77356008]
 [26.61428793 57.58413467 39.40730347 22.05153035  9.37920061 46.46940636
  25.08910541  2.05598474 19.32304577 58.15847571]
 [14.87213801 56.19549774 41.89940035  7.35056153 94.18263681 46.49584015
  21.75249134 41.43025099 74.65980403 56.39333941]
 [ 8.21510579 53.40617527 20.6222406  21.1475366  28.16339929 16.8548186
  77.68232449 66.51514791 21.42138434 44.56858329]
 [15.30532284  4.18876514 47.82001012  1.84601791 29.27792391 60.42565908
  38.57634835 72.28409985 81.70832725 29.59923326]]
Max Element form array is: 95.717920151664
Min Element from array is: 1.8460179080637462
```

In [28]:

```
import numpy as np
a = np.arange(0,20).reshape(5,4)
b = np.array([100*random.random() for i in range(0,20)]).reshape(5,4)
print("First Array is:\n",a)
print("Second Array is:\n",b)
print("Addition of Arrays A and B:\n",a+b)
print("Subtraction of Array A and B:\n",a-b)
print("Multiplication of Array A and B:\n",a*b)
print("Division of Arrays A and B:\n",a/b)
print("Modulus of Arrays A and B:\n",a%b)
```

```
First Array is:
 [[ 0  1  2  3]
 [ 4  5  6  7]
 [ 8  9 10 11]
 [12 13 14 15]
 [16 17 18 19]]
Second Array is:
 [[22.04313585 51.32674879 30.66068083 66.94282059]
 [24.45408955 56.89414146 87.98495329 25.14389587]
 [26.61181637 39.97036082 58.06577912 27.87944326]
 [95.22474323 56.30845545 60.88226153 14.51150361]
 [25.01401042 35.67134936 91.22535934 53.44141001]]
Addition of Arrays A and B:
 [[ 22.04313585  52.32674879  32.66068083  69.94282059]
 [ 28.45408955  61.89414146  93.98495329  32.14389587]
 [ 34.61181637  48.97036082  68.06577912  38.87944326]
 [107.22474323  69.30845545  74.88226153  29.51150361]
 [ 41.01401042  52.67134936 109.22535934  72.44141001]]
Subtraction of Array A and B:
 [[-22.04313585 -50.32674879 -28.66068083 -63.94282059]
 [-20.45408955 -51.89414146 -81.98495329 -18.14389587]
 [-18.61181637 -30.97036082 -48.06577912 -16.87944326]
 [-83.22474323 -43.30845545 -46.88226153   0.48849639]
 [ -9.01401042 -18.67134936 -73.22535934 -34.44141001]]
Multiplication of Array A and B:
 [[   0.           51.32674879   61.32136166  200.82846178]
 [  97.8163582   284.47070731  527.90971975  176.00727107]
 [ 212.89453097  359.73324738  580.65779116  306.67387588]
 [1142.69691874  732.00992084  852.35166141  217.6725542 ]
 [ 400.22416668  606.4129391  1642.05646813 1015.3867902 ]]
Division of Arrays A and B:
 [[0.         0.01948302 0.06523012 0.04481437]
 [0.16357182 0.08788251 0.06819348 0.27839759]
 [0.30061834 0.22516684 0.17221848 0.39455594]
 [0.12601767 0.23087119 0.22995204 1.0336627 ]
 [0.63964153 0.47657294 0.19731356 0.35552954]]
Modulus of Arrays A and B:
 [[ 0.          1.          2.          3.        ]
 [ 4.          5.          6.          7.        ]
 [ 8.          9.         10.         11.        ]
 [12.         13.         14.          0.48849639]
 [16.         17.         18.         19.        ]]
```

In [29]:

```
import numpy as np
a = np.arange(2,17).reshape(5,3)
b = np.arange(60,66).reshape(3,2)
print("First Array is:\n",a)
print("Second Array is:\n",b)
print("Dot Product of A and B is:\n",a.dot(b))
```

```
First Array is:
 [[ 2  3  4]
 [ 5  6  7]
 [ 8  9 10]
 [11 12 13]
 [14 15 16]]
Second Array is:
 [[60 61]
 [62 63]
 [64 65]]
Dot Product of A and B is:
 [[ 562  571]
 [1120 1138]
 [1678 1705]
 [2236 2272]
 [2794 2839]]
```

In [36]:

```
import numpy as np
date = np.datetime64('today')
print("Current Date:",date)
print("Kal ki Date:",date+1)
print("Betay Huyay kal ki date:",date-1)
```

```
Current Date: 2020-01-20
Kal ki Date: 2020-01-21
Betay Huyay kal ki date: 2020-01-19
```

In [51]:

```
import numpy as np
import random
a = np.array([100*random.random() for k in range(0,10)])
a = np.round(a,decimals=2)
unique,counts = np.unique(a,return_counts=True)
dict(zip(unique,counts))
```

Out[51]:

```
{21.34: 1,
 23.62: 1,
 28.08: 1,
 39.52: 1,
 41.85: 1,
 44.91: 1,
 50.17: 1,
 66.46: 1,
 79.05: 1,
 79.54: 1}
```