

## Problem 6

Create a 10x10 array with random values and find the minimum and maximum values

```
import numpy as np
Z = np.random.random(100).reshape(10,10)
print("max = ", np.max(Z))
print("min = ", np.min(Z))
```

## Problem 7

Create a random vector of size 30 and find the mean value

```
import numpy as np
Z = np.random.random(30)
print("mean = ", np.mean(Z))
```

## Problem 8

Create a 5x5 matrix with values 1,2,3,4 just below the diagonal

```
import numpy as np
import random

Z = np.zeros([5,5], dtype=int)
for i in range(5):
    for j in range(5):
        if i > j:
            Z[i,j] = random.randint(1,5)
print(Z)
```

## Problem 9

Create a random vector of size 10 and sort it

```
import numpy as np
Z = np.random.random(10)
Z = np.sort(Z)
print(Z)
```

## Problem 10

Subtract the mean of each row of a matrix (Use `x = np.random.rand(5, 10)` to generate the array)

```
import numpy as np
X = np.random.rand(5, 10)
mean_each_row = X.mean(axis=1)
for i in range(5):
    X[i,:] = X[i,:] - mean_each_row[i]
print(X)
```