In [3]:
```python
# 1. Write a NumPy program to create an array of 10 zeros, 10 ones, and 10 fives

import numpy as np

# Create an array of 10 zeros
zeros_array = np.zeros(10)

# Create an array of 10 ones
ones_array = np.ones(10)

# Create an array of 10 fives
fives_array = np.full(10, 5)

# Print the arrays
print("Array of 10 zeros:", zeros_array)
print("Array of 10 ones:", ones_array)
print("Array of 10 fives:", fives_array)
```

```
Array of 10 zeros: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
Array of 10 ones: [1. 1. 1. 1. 1. 1. 1. 1. 1. 1.]
Array of 10 fives: [5 5 5 5 5 5 5 5 5 5]
```

In [4]:
```python
# 2. Write a NumPy program to create a 3x3 matrix with values ranging from 2 to 10.
import numpy as np

# Create a 1D array with values from 2 to 10 (inclusive)
matrix_values = np.arange(2, 11)

# Reshape the 1D array into a 3x3 matrix
matrix_3x3 = matrix_values.reshape(3, 3)

# Print the 3x3 matrix
print("3x3 Matrix with values from 2 to 10:")
print(matrix_3x3)
```

```
3x3 Matrix with values from 2 to 10:
[[ 2  3  4]
 [ 5  6  7]
 [ 8  9 10]]
```

In [5]:
```python
# 3. Write a NumPy program to create an array with values ranging from 12 to 38.

import numpy as np

# Create an array with values from 12 to 38 (inclusive)
array = np.arange(12, 39)

# Print the array
print("Array with values from 12 to 38:")
print(array)
```

```
Array with values from 12 to 38:
[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]
```

In [7]:
```python
# 4. Write a NumPy program to convert a list and tuple into arrays. Input: my_list = [1, 2, 3, 4, 5, 6, 7, 8]
 # Input: my_tuple = ([8, 4, 6], [1, 2, 3])

import numpy as np

# Input list
my_list = [1, 2, 3, 4, 5, 6, 7, 8]

# Input tuple
my_tuple = ([8, 4, 6], [1, 2, 3])

# Convert list to a NumPy array
array_from_list = np.array(my_list)

# Convert tuple to a NumPy array
array_from_tuple = np.array(my_tuple)

# Print the results
print("Array from List:", array_from_list)

print("Array from Tuple:", array_from_tuple)
```

```
Array from List: [1 2 3 4 5 6 7 8]
Array from Tuple: [[8 4 6]
 [1 2 3]]
```

In [ ]: