In [9]:

```
# Question 1: Create a numpy array starting from 2 till 50 with a stepsize of 3.
arr = np.arange(2, 50, 3)
print(arr)
```

```
[ 2  5  8 11 14 17 20 23 26 29 32 35 38 41 44 47]
```

In [13]:

```
# Question 2:Accept two lists of 5 elements each from the user.
#Convert them to numpy arrays. Concatenate these arrays and print it. Also sort
import numpy
lst1 = [1,2,3,4,5]
lst2 = [6,7,8,9,10]
arr1 = numpy.array(lst1)
arr2 = numpy.array(lst2)
arr = np.concatenate((arr1, arr2))
print(arr)
```

```
[ 1  2  3  4  5  6  7  8  9 10]
```

In [15]:

```
# Question 3: Write a code snippet to find the dimensions of a ndarray and its s
import numpy as np

a_1d = np.arange(3)
print(a_1d)
print(a_1d.ndim)
print(type(a_1d.ndim))
```

```
[0 1 2]
1
<class 'int'>
```

In [16]:

```
# Question 4:How to convert a 1D array into a 2D array? Demonstrate with the hel
a_1d_array = np.array([9,8,0,0]) #ONE-DIMENSION ARRAY
print(a_1d_array)
reshaped_to_2d = np.reshape(a_1d_array, (-1, 2)) #Converting process using resha
print(reshaped_to_2d)
```

```
[9 8 0 0]
[[9 8]
 [0 0]]
```

In [17]:

```
# Question 5: Consider two square numpy arrays. Stack them vertically and horizo

import numpy as np

a = np.array([[9, 8],
              [7, 6]])

b = np.array([[5, 4],
              [3, 2]])

print("Vertical stacking:\n", np.vstack((a, b))) # vertical stacking

print("\nHorizontal stacking:\n", np.hstack((a, b))) # horizantal stacking

c = [5, 4]

print("\nColumn stacking:\n", np.column_stack((a, c)))# column stacking

print("\nConcatenating to 2nd axis:\n", np.concatenate((a, b), 1)) # concatenaat
```

```
Vertical stacking:
 [[9 8]
 [7 6]
 [5 4]
 [3 2]]

Horizontal stacking:
 [[9 8 5 4]
 [7 6 3 2]]

Column stacking:
 [[9 8 5]
 [7 6 4]]

Concatenating to 2nd axis:
 [[9 8 5 4]
 [7 6 3 2]]
```

In [20]:

```
# Question 6:How to get unique items and counts of unique items?
a_list = [1,1,2,2,3]
a_set = set(a_list)
number_of_unique_values = len(a_set)
print(number_of_unique_values)
```

```
3
```