Question .1.

In [2]:
```
#Creat a numpy array starting from 2 till 50 with a stepsize of 3

import numpy as np

np.arange(start=2,stop=50,step=3)
```

Out[2]:
```
array([ 2,  5,  8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47])
```

Question .2.

In [9]:
```
#Accept two list of five elements each from the user.Concatenate them to numpy ar
#Also sort these arrays and print it
import numpy as np

# Empty list
lst_1 = []
lst_2 = []

# list 1 values
for i in range(5):
    x=int(input("\nEnter values for lst_1 : "))
    lst_1.append(x)

# List 2 values
for i in range(5):
    x=int(input("\nEnter values for lst_2 : "))
    lst_2.append(x)

# Converting list into array
arr_1 = np.array(lst_1)
arr_2 = np.array(lst_2)

# Concatenate to numpy array
arr = (np.concatenate((arr_1, arr_2), axis=0))
print("\nValue for concatenate arr :",arr)

# Sort the arrays and print
sortArr = (np.sort(arr))
print("\nSorted the arrays for concatenated arr :",sortArr)
```

```
Enter values for lst_1 : 10

Enter values for lst_1 : 8

Enter values for lst_1 : 6

Enter values for lst_1 : 4

Enter values for lst_1 : 2

Enter values for lst_2 : 1

Enter values for lst_2 : 3

Enter values for lst_2 : 5

Enter values for lst_2 : 7

Enter values for lst_2 : 9

Value for concatenate arr : [10  8  6  4  2  1  3  5  7  9]

Sorted the arrays for concatenated arr : [ 1  2  3  4  5  6  7  8  9 10]
```

Question .3.

In [18]:
```
#Write a code snippet to find the dimensions of a ndarrary and its size

import numpy as np

#Creat 2d array
arr = np.array( [ [1,2,3] , [1,5,6] ] )

# print dimensions of array (axes)
print("\nDimensions in array : ", arr.ndim)

#print size of array
print("\nSize of array : ", arr.size)
```

```
Dimensions in array :  2

Size of array :  6
```

Question .4.

In [19]:
```
#How to convert 1D array into 2D array? Demonstrate with the help of code snippet
import numpy as np

#1d array
arr = np.arange(8)
print("\nShape of Array : ", arr.shape)

row_arr = arr[np.newaxis, :]
print("\nShape of 2D Array in row : ", row_arr.shape)

col_arr = arr[np.newaxis, :]
print("\nShape of 2D Array in Column : ", col_arr.shape)
```

```
Shape of Array :  (8,)

Shape of 2D Array in row :  (1, 8)

Shape of 2D Array in Column :  (1, 8)
```

Question .5.

In [11]:
```
# Consider two square numpy arrays.Stack them vertically and horizontally
import numpy as np

arr_1 = np.array([2,3,4,5])
arr_2 = np.array([6,7,8,9])

# Stack and print
print("\nHorizontal :" , np.hstack((arr_1, arr_2)))
print("\nVertical :" , np.vstack((arr_1, arr_2)))
```

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

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

Question .6.

In [24]:
```
# How to get unique items and counts of unique items
import numpy as np

list = [1,2,4,6,4,8,7,8,3]
print("The unique value from list:  ")
print(np.unique(list))
```

```
The unique value from list:
[1 2 3 4 6 7 8]
```

In [ ]:
```

```