SUMANTH S
AF0363570

PYTHON LAB: 16 NUMPY

DEFINITION:

"NumPy is a Python library used for scientific computing and data analysis. It provides a high-performance multidimensional array object, and tools for working with these arrays. NumPy is particularly useful for manipulating numerical data, such as in scientific computing, data analysis, and machine learning."

QUESTIONS:

1. Convert the below list into numpy array then display the array
Input: my_list = [1, 2, 3, 4, 5]

```
import numpy as np
my_list = [1, 2, 3, 4, 5]
# Convert list to numpy array
my_array = np.array(my_list)
# Display the array
print("The array is = ", my_array)
```

Output:

The array is = [1 2 3 4 5]

2. Convert the below list into a numpy array then display the array then display the first and last index and then multiply each element by 2 and display the result.
Input: my_list = [1, 2, 3, 4, 5]

```
import numpy as np
my_list = [1, 2, 3, 4, 5]
# Convert list to numpy array
my_array = np.array(my_list)
# Display the array
print("The array is = ", my_array)
# Display the first and last index
print("The first element is = ", my_array[0])
print("The last element is = ", my_array[-1])
# Multiply each element by 2 and display the result
print("The multiplication array is = ", my_array * 2)
```

Output:

```
The array is =  [1 2 3 4 5]
The first element is =  1
The last element is =  5
The multiplication array is =  [ 2  4  6  8 10]
```