NumPy Lab Questions (Unit - 2)

1. Create and Print a NumPy Array

Problem:
Create a 1D NumPy array with values [10, 20, 30, 40, 50] and print it.

---

2. Check NumPy Version

Problem:
Write a Python program to print the currently installed NumPy version.

---

3. Create 0-D Array

Problem:
Create a 0-D array with value 100 and print it along with its number of dimensions.

---

4. Create 1-D Array

Problem:
Create a 1-D array with numbers from 1 to 10.
Print the array and its type.

---

5. Create 2-D Array

Problem:
Create the following 2D array and print it:

[[1, 2, 3],

[4, 5, 6]]

---

6. Create 3-D Array

Problem:
Create a 3D array with two 2D arrays, each containing two 1D arrays:

[[[1, 2], [3, 4]],

[[5, 6], [7, 8]]]

---

7. Find Dimensions of Arrays

Problem:
Create a 1D, 2D, and 3D array.
Print the number of dimensions for each using .ndim.

---

8. Create Higher Dimensional Array

Problem:
Create a 1D array with elements [1, 2, 3] but with 4 dimensions using ndmin=4.
Print the array and number of dimensions.

---

9. Access Elements in 1-D Array

Problem:
Create an array [10, 20, 30, 40, 50] and print the 3rd element.

---

10. Access Elements in 2-D Array

Problem:
Create this 2D array:

[[11, 12, 13],

[14, 15, 16]]

Print the value 15 using indexing.

---

11. Access Elements in 3-D Array

Problem:
Create this 3D array:

[[[1, 2, 3], [4, 5, 6]],

[[7, 8, 9], [10, 11, 12]]]

Print the value 6 using indexing.

---

12. Negative Indexing in 2-D Array

Problem:
Create this 2D array:

[[1, 2, 3],

[4, 5, 6]]

Print the **last element of the second row** using negative indexing.