LAB 11

Intro to Numpy

1. Perform the following operations and print the results:

- Create a 1D NumPy array named `arr1` with elements `[1, 2, 3, 4, 5]`.
- Create a 2D NumPy array named `arr2` with elements `[[1, 2, 3], [4, 5, 6], [7, 8, 9]]`.
- Print the first and last elements of `arr1`.
- Print the element in the second row and third column of `arr2`.
- Calculate the determinant and inverse of a matrix arr1 & arr2.

2. Perform the following operations and print the results:
- Add 10 to each element of `arr1`.
- Multiply each element of `arr2` by 2.
- Calculate the square root of each element in `arr1`.

3. Perform the following operations and print the results:
- Create a 2D array named `matrix` with elements `[[1, 2, 3], [4, 5, 6], [7, 8, 9]]`.
- Add a 1D array `[10, 20, 30]` to each row of the matrix using broadcasting.
- Multiply `arr2` by its transpose and print the result.
- Calculate the determinant of `arr2` and print the result.
- Calculate the inverse of `arr2` and print the result.