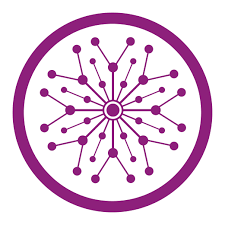
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**The Superior University**

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| Name: Mohid | Roll No:049 | Course: dsa Lab |
| Semester:3 | Section:3A | Department: |
| Submitted To: | Total Marks: 10 | Date: |

**Lab Task 07**

**Numpy (Task 01)**

**Objective:**

To practice and enhance understanding of NumPy in Python, focusing on mathematical operations, matrix operations, and handling N-dimensional arrays.

**Part 1:**

Mathematical Operations with NumPy:

1. Basic Operations:

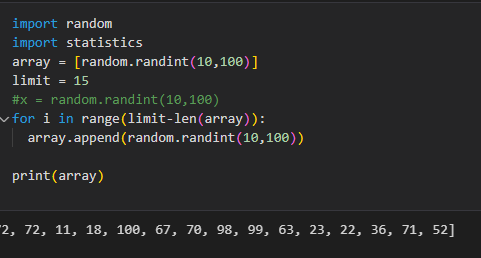
* Find the sum, mean, median, standard deviation, and variance of the array.
* Sort the array in ascending and descending order.

2. Elementwise Operations:

* Create a second array of 15 random integers.
* Perform the following operations elementwise between the two arrays: addition, subtraction, multiplication, and division.
* Use broadcasting to multiply the first array by a scalar (e.g., 3).

3. Trigonometric Operations:

* Apply the sine, cosine, and tangent functions to the first array.
* Convert angles (in degrees) to radians and apply the sine function on an array of angles [0, 30, 60, 90].

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