

ASSIGNMENT 5

Due Date: 28/11/2025

Instructor: SHOAIB FAOOQ

Maximum Points: 150

Note: Plagiarism will result in zero marks for all assignments. Submissions will not be accepted via email, WhatsApp, or any group platform under any circumstances. Only submissions through Google Classroom will be considered.

The file name must follow this format: 2020_AG_xxx_Assignment5.ipynb.

Import numpy package as given example **import numpy as your first name**

Q1: Must follow following seps:

Develop two 1-D integer arrays named **A** and **B**.

The size of each array should be equal to the last four digits of your AG number.
For example, if the last four digits are **5010**, then the array size will be **5010**.

- Let the last four digits of your AG number be **5010**.
Then the starting point is **-5010** and the ending point is **5010**.

Perform the following operations:

- Find the sum of the two arrays.
- Find the difference of the two arrays.
- Find the element-wise multiplication of the two arrays.
- Divide one array by the other (element-wise division).
- Find the cube (power of 3) of the first array.
- Find the maximum value in array **A**.
- Find the minimum value in array **B**.
- Find the index positions containing the maximum and minimum values.

Q2: Must follow following seps:

Develop 2-D integer arrays named A.

For example, if the last four digits are 5010 then the array size will be 50x10

OR if the last four digits are 5000 then the array size will be 50x50

• Let the last four digits of your AG number be 5010.

Then the starting point is -5010 and the ending point is 5010.

Perform the following operations:

- Print Positive Even
- Print negative even
- Print Positive odd
- Print negative odd
- Print sum of all elements
- Print row wise sum
- Print column wise sum
- Print number may be even or dividable on 10
- Print number must be odd, positive and dividable 11
- Print total number of positive even
- Print total number of negative even
- Print total number of even
- Print total number of odd

Q3: Must follow following seps:

Develop 4-D integer arrays named A.

For example, if the last four digits are 5010 then the array size will be 50x10X10X10

OR if the last four digits are 5000 then the array size will be 50x50X50X50

- Let the last four digits of your AG number be **5010**.
Then the starting point is **-5010** and the ending point is **5010**.

Perform the following operations:

- Print Positive Even
- Print numbers those dividable your first two digits of AG numbers.
- Print total number of zeros
- Print only negative values
- Print size of original arrays
- Print negative even
- Print Positive odd
- Print negative odd
- Print number may be even or dividable on 10
- Print number must be odd, positive and dividable 11
- Print total number of positive even
- Print total number of negative even
- Print total number of even
- Print total number of odd