**Assignment 2**

**Date 17/02/2022 AM624D Submission by: 26/02/2022**

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## Submission Guidelines:

1. Create a folder on google drive by your Name_RollNo

   Eg. If your name is Rahul Kottaah and roll number is 12-12-01 then folder name should be **Rahul_Kottah_12-12-01**

2. Create a python notebook file (.ipynb) with name **AssnNo_Name_RollNo**

   Eg: Assn2_Rahul_Kottah_12-12-01

3. Submit the file by GDrive Link or file on the Google Classroom platform.

4. No Handwritten assignments will be accepted. Only ipynb, link to colab notebooks or pdf files generated form notebooks to be submitted.

5. Python Notebook file should be with output

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1 Write a program to input two numbers and perform their addition

2 Write a program to input marks and calculate the grade of a student as per the DIAT norms.

3 Write a program to find largest among 3 numbers

4 Write a program to input number of lines from the user and print the patterns:
If the user enters 4 following patters should be printed:

```
*
**
***
****
```

5 Write a program to print the Diamond Pattern

```
    *
   * *
 *   *   *
   *   *
    *
```

6 Write a program to print the following pattern

```
*
**
***
**
*
```

7. Write a program to make a List in Python and perform following operations on List:
   a) length using len() function
   b) print element at index 0
   c) adding an element to the list using + operator
   d) appending an element to the list
   e) negative indexing in list
   f) remove the first occurrence of element a from list
   g) reverse the list
   h) sort list

8. Write a program to demonstrate use of Dictionary in Python with their inbuilt functions.

9. Write a program to demonstrate use of Set in Python with their inbuilt functions.

10. Write a program to demonstrate use of Tuple in Python with their inbuilt functions.

11. Write a program to calculate Median using List.

12. Write a program to calculate Mode using List.

13. Write a program to calculate Mean using List.

14. Write a program to demonstrate list creation, append entire list to another list

15. Write a program to demonstrate slicing operations on the list

16. Write a program to find minimum, maximum in a list

17. Write a program to search an element in a list, find the number of occurrences and the index of its first occurrence

18. Write a program to create a 2D list

19. Write a program to iterate over a 2D list in different ways

20. Write a program to perform spilt and join operation on a list.