



# ***DATA SCIENCE COURSE***



**Python  
Assignment**

**Week - 2**

# Functions

1. Define a Sum Function Which accepts variable number of integers as an arguments.
2. Create a list With Square of all numbers from 1 to 10 using List Comprehension.
3. Write a lambda function which find square of a number
4. Declare a List With Numbers From 1 to 100 using List Comprehension. Use the lambda and filter function to filter all even numbers.  
( Syntax for filter Function :  
**filter(function, iterable)**  
iterable can be list ,tuples dict etc..

# File Handling

1. Python Program to Read the Contents of a File
2. Python Program to Count the Number of Words in a Text File
3. Python Program to Copy the Contents of One File into Another
4. Python Program to Read a File and Capitalize the First Letter of Every Word in the File

## Regular Expression

1. Validate email id using Regular Expression
2. Validate a mobile Phone Number using Regular Expression
3. Validate a credit card number using Regular Expression

# Numpy

1. Write a Python program to print the NumPy version in your system.
2. Write a Python program to convert a list of numeric value into a one-dimensional NumPy array.
3. Write a Python program to create an array with values ranging from 12 to 38.
4. Write a Python program to convert a list and tuple into arrays.
5. Write a Python program to find the number of elements of an array, length of one array element in bytes and total bytes consumed by the elements.
6. Write a Python program compare two arrays using numpy.
7. Write a Python program to get the number of nonzero elements in an array.
8. Write a Python program to check whether the numpy array is empty or not.
9. Write a Python program to get the powers of an array values element-wise.