**Assignment\_2 iNeuron**

**Task – 1 :**

* 1. Write a Python Program to implement your own myreduce() function which works exactly like Python's built-in function reduce()

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**1.2** Write a Python program to implement your own myfilter() function which works exactly like

Python's built-in function filter()

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2. Implement List comprehensions to produce the following lists.

Write List comprehensions to produce the following Lists

**['A', 'C', 'A', 'D', 'G', 'I', ’L’, ‘ D’]**

**['x', 'xx', 'xxx', 'xxxx', 'y', 'yy', 'yyy', 'yyyy', 'z', 'zz', 'zzz', 'zzzz']**

**['x', 'y', 'z', 'xx', 'yy', 'zz', 'xx', 'yy', 'zz', 'xxxx', 'yyyy', 'zzzz']**

**[[2], [3], [4], [3], [4], [5], [4], [5], [6]]**

**[[2, 3, 4, 5], [3, 4, 5, 6], [4, 5, 6, 7], [5, 6, 7, 8]]**

**[(1, 1), (2, 1), (3, 1), (1, 2), (2, 2), (3, 2), (1, 3), (2, 3), (3, 3)]**

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**3. Implement a function longestWord() that takes a list of words and returns the longest one.**

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**TASK – 2**

**1.1 Write a Python Program(with class concepts) to find the area of the triangle using the below**

**formula.**

**area = (s\*(s-a)\*(s-b)\*(s-c)) \*\* 0.5**

**Function to take the length of the sides of triangle from user should be defined in the parent**

**class and function to calculate the area should be defined in subclass.**

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**1.2**

**Write a function filter\_long\_words() that takes a list of words and an integer n and returns the list**

**of words that are longer than n.**

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**2.1**

**Write a Python program using function concept that maps list of words into a list of integers**

**representing the lengths of the corresponding words .**

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**2.2**

**Write a Python function which takes a character (i.e. a string of length 1) and returns True if it is**

**a vowel, False otherwise.**

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