*Session 2: Assignment 2*

**Table of Contents**

1. Introduction
2. Problem Statement
3. Output
4. Introduction

This assignment will help you to consolidate the concepts learnt in the session.

1. Problem Statement

Implement List comprehensions to produce the following lists.

Write List comprehensions to produce the following Lists

1. ['A', 'C', 'A', 'D', 'G', 'I', ’L’, ‘ D’]
2. ['x', 'xx', 'xxx', 'xxxx', 'y', 'yy', 'yyy', 'yyyy', 'z', 'zz', 'zzz', 'zzzz']
3. ['x', 'y', 'z', 'xx', 'yy', 'zz', 'xx', 'yy', 'zz', 'xxxx', 'yyyy', 'zzzz']
4. [[2], [3], [4], [3], [4], [5], [4], [5], [6]]
5. [[2, 3, 4, 5], [3, 4, 5, 6], [4, 5, 6, 7], [5, 6, 7, 8]]
6. [(1, 1), (2, 1), (3, 1), (1, 2), (2, 2), (3, 2), (1, 3), (2, 3), (3, 3)]

**NOTE: The solution shared through Github directory should contain the source**

**code used and screenshot of the output.**

1. Output

**Source Code:**

1. ***iter\_string = "ACADGILD"***

***comp\_list = [x for x in iter\_string if x !=" "]***

***print(comp\_list)***

1. ***A=['x'\*(1),'x'\*(2),'x'\*(3),'x'\*(4)]+['y'\*(1),'y'\*(2),'y'\*(3),'y'\*(4)]+['z'\*(1),'z'\*(2),'z'\*(3),'z'\*(4)]***

***A***

1. ***A=print('x'\*(1),'y'\*(1),'z'\*(1),'x'\*(2),'y'\*(2),'z'\*(2),'x'\*(2),'y'\*(2),'z'\*(2),'x'\*(4),'y'\*(4),'z'\*(4))***

***A***

1. ***a = [2,3,4]***

***b = [3,4,5]***

***c = [4,5,6]***

***print list(map(lambda x,y,z:[x+0],a,b,c))+ list(map(lambda x,y,z:[x+1],a,b,c))+ list(map(lambda x,y,z:[x+2],a,b,c))***

1. ***a = [2,3,4,5]***

***b = [3,4,5,6]***

***c = [4,5,6,7]***

***d = [5,6,7,8]***

***matrix = [a,b,c,d]***

***matrix***

1. ***[(a,b) for a in range(1,4)for b in range(1,4)]***

**Output**

1. **['A', 'C', 'A', 'D', 'G', 'I', 'L', 'D']**
2. **['x', 'xx', 'xxx', 'xxxx', 'y', 'yy', 'yyy', 'yyyy', 'z', 'zz', 'zzz', 'zzzz']**
3. **['x', 'y', 'z', 'xx', 'yy', 'zz', 'xx', 'yy', 'zz', 'xxxx', 'yyyy', 'zzzz']**
4. **[[2], [3], [4], [3], [4], [5], [4], [5], [6]]**
5. **[[2, 3, 4, 5], [3, 4, 5, 6], [4, 5, 6, 7], [5, 6, 7, 8]]**
6. **[(1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3)]**

**The screenshot of the output:**

