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In [1]: 1 #Implement List comprehensions to produce the following lists.
2 #Write List comprehensions to produce the following Lists
3 #['A', 'C', 'A', 'D', 'G', 'I', 'L', 'D']
4 #['x', 'xx', 'xxx', 'xxxx', 'y', 'yy', 'yyy', 'yyyy', 'z', 'zz', 'zzz', 'zzzz']
5 #['x', 'y', 'z', 'xx', 'yy', 'zz', 'xx', 'yy', 'zz', 'xxxx', 'yyyy', 'zzzz']
6 #[[2], [3], [4], [3], [4], [5], [4], [5], [6]]
7 #[[2, 3, 4, 5], [3, 4, 5, 6], [4, 5, 6, 7], [5, 6, 7, 8]]
8 #[(1, 1), (2, 1), (3, 1), (1, 2), (2, 2), (3, 2), (1, 3), (2, 3), (3, 3)]
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In [2]: 1 word = "ACADGILD"
2 alphabet_list = [ alphabet for alphabet in word ]
3 print ("ACADGILD => " + str(alphabet_list))
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ACADGILD => ['A', 'C', 'A', 'D', 'G', 'I', 'L', 'D']

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In [3]: 1 input_list = ['x','y','z']
2 result = [ item*num for item in input_list for num in range(1,5) ]
3 print("['x','y','z'] => " + str(result))
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['x','y','z'] => ['x', 'xx', 'xxx', 'xxxx', 'y', 'yy', 'yyy', 'yyyy', 'z', 'z', 'z', 'zzz', 'zzzz']

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In [4]: 1 input_list = ['x','y','z']
2 result = [ item*num for num in range(1,5) for item in input_list ]
3 print("['x','y','z'] => " + str(result))
```

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

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In [5]: 1 input_list = [2,3,4]
2 result = [ [item+num] for item in input_list for num in range(0,3)]
3 print("[2,3,4] =>" + str(result))
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[2,3,4] =>[[2], [3], [4], [3], [4], [5], [4], [5], [6]]

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In [6]: 1 input_list = [2,3,4,5]
2 result = [ [item+num for item in input_list] for num in range(0,4) ]
3 print("[2,3,4,5] =>" + str(result))input_list=[1,2,3]
4 result = [ (b,a) for a in input_list for b in input_list]
5 print("[1,2,3] =>" + str(result))
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[2,3,4,5] =>[[2, 3, 4, 5], [3, 4, 5, 6], [4, 5, 6, 7], [5, 6, 7, 8]]

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In [7]: 1 input_list=[1,2,3]
2 result = [ (b,a) for a in input_list for b in input_list]
3 print("[1,2,3] =>" + str(result))
```

[1,2,3] =>[(1, 1), (2, 1), (3, 1), (1, 2), (2, 2), (3, 2), (1, 3), (2, 3), (3, 3)]

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In [ ]: 1
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In []:

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