WEEK 4 - ASSIGNMENT 2 LIST COMPREHENSION

NOTE:

- **No need to submit anywhere, just keep track of all the PDF you made in a specific folder.**
- **Compare your solution with the solution I'll provide, in case of doubts, kindly reach out to me.**
- **You may get assignment solution in format of PDF or VIDEO solution, depending on the difficulty level.**

Q1. Write a Python program to generate a list of powers of 2 less than 100 using list comprehension.

Example output: [1, 2, 4, 8, 16, 32, 64]

100 can be changed to anything.

Q2. Write a Python program to generate a list of factorials less than 1000 using list comprehension.

Example output: [1, 2, 6, 24, 120, 720]

1000 can be changed to anything.

Q3. Write a Python program to generate a list of prime numbers less than 500 using list comprehension.

Example output: [2, 3, 5, 7, 11, 13, 17, 19, 23, ..., 491, 499]

500 can be changed to anything.

Q4. Generate a list of numbers less than 1000 which are divisible by the sum of their digits. (These were solved in contests)

Output: [1, 2, 3, 4, 5, 6, 7, 8, 9, 22, 33, 44, 55, 66, 77, 88, 99, 111, 112, 113, 114, 115, 116, 117, 118, 119, 121, 122, 123, 124, 125, 126, 127, 128, 129, 132, 133, 134, 135, 136, 137, 138, 139, 141, 142, 143, 144, 145, 146, 147, 148, 149, 151, 152, 153, 154, 155, 156, 157, 158, 159, 162, 171, 181, 191, 201, 202, 211, 212, 221, 222, 231, 232, 241, 242, 251, 252, 261, 262, 271, 272, 281, 282, 291, 292,

301, 302, 311, 312, 321, 322, 331, 332, 333, 341, 351, 361, 371, 381, 391, 401, 411, 421, 431, 441, 451, 461, 471, 481, 491, 501, 511, 521, 531, 541, 551, 561, 571, 581, 591, 601, 611, 621, 631, 641, 651, 661, 671, 681, 691, 701, 711, 721, 731, 741, 751, 761, 771, 781, 791, 801, 811, 821, 831, 841, 851, 861, 871, 881, 891, 901, 911, 921, 931, 941, 951, 961, 971, 981, 991]

Q5. Count how many numbers are divisible by 3 and 6 between 1 to 1000 by using list comprehension.

Output: 166

Q6. Remove duplicates from the list just by using list comprehension.

Q7. Make two lists of same length and pass it to a function. Return a third list where each element is the sum of index. Use List Comprehension **(Week 3 - Assignment 4, Q7)**

Q8. Write a python program which prints all the values whose count is greater than 3. (Make sure to make a list with at least 15 numbers)

Store them in another list using list comprehension

(Week 3 - Assignment 4, Q11)