

# MATH 4332

## Assignment# 5

Due : 10/06/2023, Friday, before 11:59pm

Term :Fall 2023

**Important Note: Please use only materials covered so far to solve your problems. You will be given zero if the materials used are not yet covered.**

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1. Use a **for** loop to create the list `['a','bb','ccc','dddd', . . . ]` that ends with 26 copies of the letter **z**.
  2. Write a program that asks the user for an integer and creates a list that consists of the factors of that integer.
  3. Using a **for** loop, create the list below, which consists of ones separated by increasingly many zeroes. The last two ones in the list should be separated by ten zeroes.

`[1,1,0,1,0,0,1,0,0,0,1,0,0,0,0,1,....]`

4. Write a program that generates 100 random integers that are either 0 or 1. Then find the longest run of zeros, the largest number of zeros in a row. For instance, the longest run of zeros in `[1,0,1,1,0,0,0,0,1,0,0]` is 4.
5. Write a program that removes any repeated items from a list so that each item appears at most once. For instance, the list `[1,1,2,3,4,3,0,0]` would become `[1,2,3,4,0]`.