Instructions:-

- *The programs should be user friendly.*
- *Each program should have comment at the top with given information*
  """Assignment1 Question1 Done By Your Name
  Date """
- *Program should be documented properly with necessary comments.*
- *The program outputs should formatted.* **Make a word file and copy the output screenshots.**
  Students can take the print of the sample output.

Q1 The main purpose for the new series of the PAN numbers was that they needed to be unique to each person in the country, only then it could be effective.

There is much to learn about the structuring of the PAN which is generated automatically online after accounting for the information provided by the applicant.

The PAN structure is as follows:-

AAAPL1234C: First five characters are letters, next four numerals, last character is a letter.

- First Three Characters
  - The first three characters of PAN are a sequence of alphabets from AAA to ZZZ
- Fourth Character
    The fourth character signifies the status of taxpayer.
  - A Stands for Association of Persons (AOP)
  - B Stands for Body of Individuals (BOI)
  - C Stands for Company
  - F Stands for Firm
  - G Stands for Government
  - H Stands for HUF (Hindu Undivided Family)
  - L Stands for Local Authority
  - J Stands for Artificial Judicial Person
  - P Stands for Individual
  - T Stands for AOP (Trust)
- So if an individual obtains PAN, his/her PAN will have the fourth character as 'P' which stands for individual taxpayer.
- Fifth Character
  - The fifth character in PAN represents the first character of the PAN holder's last name / surname in case of an individual. In case of non-individual PAN holder's, the fifth character represents the first character of PAN holder's name. So, if an individual is named 'Vijay Kumar, the fifth character of his PAN will be 'K'
- Next four characters are sequential numbers running from 0001 to 9999
- Last character, i.e., the tenth character is an alphabetic check digit

To find the alphabetic check digit- add all the numbers corresponding the characters and divide the total with 26. Whatever is the reminder take the character correspond to that number as the last character for PAN Number.

A is taken as 0 and Z is taken as 25. Digits are taken as it is .

Write a python program to generate five unique Pan Card numbers for the given information.

Input the full name of the person and display the PAN card numbers generated.

Q2.Input a list containing only strings. Now, take a string input from user and rearrange the elements of the list according to the number of occurrence of the string taken from user in the elements of the list.

E.g.-LIST : ["no bun","bug bun bug bun bug bug","bunny bug","buggy bug bug buggy"]

STRING TAKEN : "bug"

OUTPUT LIST:["bug bun bug bun bug bug","buggy bug bug buggy","bunny bug","no bun"]

Note: Don't use the built in functions.

Q3 Largest Factor among Left Rotated Numbers

Given a four digit number 'n', find the largest factor among the left rotated numbers. Here left rotated numbers of a number 'n' is formed by rotating 'n' left 1 to 3 times. For example, if n is 2456, then when it is rotated once we get 4562, when it is rotated twice we get 5624 and when it is rotated thrice we get 6245. Factors of these numbers are

2456 - 1, 2, 4, 8, 307, 614, 1228

4562 - 1, 2, 2281

5624 - 1, 2, 4, 8, 19, 37, 38, 74, 76, 148, 152, 296, 703, 1406, 2812

6245 - 1, 5, 1249

The largest factor is 2812 and left rotated number with this factor is 5624.

Note: Read the input as integer and do entire processing as integer. Don't use the built in functions.