

Homework 5:

Telephone numbers used to be encoded with letters so that it was easier to remember numbers. The encoding was

1: —
2: abc
3: def
4: ghi
5: jkl
6: mno
7: pqrs
8: tuv
9: wxyz
0: —

A telephone number such as 1-414-846-6270 would represent “Thomas “ and phone numbers that represent names are called vanity numbers. Any name with 7 letters can be represented by one vanity number and names with less letters can be represented by more by interspersing with the numbers 0 and 1 especially at the beginning and end.

Write a function that given a lower-case letter return the corresponding digit (as a letter, not as an integer.) Right now, we have to do this with case distinctions, but soon, we will learn to do it more efficiently using dictionaries.

Write a function that takes a seven-digit phone number (a string, NOT an integer) and returns a string without 0 and 1 digits.

Write a function that tests (returns a True or False) whether a vanity number can represent a name.

Use the file “first.txt” that contains first names from the US census bureau. The first word on each line is a first name. Use this text file to implement a function that prints out all names that could have a given phone number as a vanity number.

For example, for “3284310”, your function should return “david”.