Lab 5 - Exercise – All sections
Arrays
CS 262 – Spring 2022

The purpose of this activity is to practice arrays in C and use the `itoa` fuction to transform integers to an array of char.

If the compiler shows:

```
error: implicit declaration of function 'itoa'
```

Use the `sprintf()` function instead, it is in the `string.h` library.
Run the `man sprintf` command on zeus to get details.

Description

If the array content is modified in the function, it is automatically updated (in the point from the function was called) without need to return a value from the function.

Write a C program that prompts the user to enter a positive integer ranging from `[1-99999]` and outputs the number encoded in a "*text*" (string). Use this Table to encoded the integer

Digit	Letter
0	A
1	E
2	I
3	O
4	U

Digit	Letter
5	Z
6	P
7	T
8	B
9	Q

NOTE: **Assume** user input is an integer

Requirements:

- Define a constant `SIZE` for using it on `fgets()` and `sscanf()` to get user input
- Declare an array of characters `inBuf` to get the input user
- Implement a function to validate user input (range `[1-99999]`)
- If the user input is out of range, display "`out of range`" and prompt to re-enter the input
- Code a function to encode each digit (**note**: *the digit has already been converted to a char*)

Sample run 1:

```
--- Encoding an integer ---
Please, enter an integer ranging from [1-99999]: 231
Encoded integer: IOE
```

Sample run 2:

```
--- Encoding an integer ---
Please, enter an integer ranging from [1-99999]: -1
Out of range
Please, enter an integer ranging from [1-99999]: 262
Encoded integer: IPI
```

Sample run 3:

```
--- Encoding an integer ---
Please, enter an integer ranging from [1-99999]: 6073
Encoded integer: PATO
```