

## Lab 2 Functions

**1. Given a list of integers, return True if the sequence of numbers 1, 2, 3 appears in the list somewhere.**

Example:

```
arrayCheck([1, 1, 2, 3, 1]) → True  
arrayCheck([1, 1, 2, 4, 1]) → False  
arrayCheck([1, 1, 2, 1, 2, 3]) → True
```

**2. Given a string, return a new string made of every other character starting with the first, so "Hello" yields "Hlo".**

Example:

```
stringBits('Hello') → 'Hlo'  
stringBits('Hi') → 'H'  
stringBits('Heeololeo') → 'Hello'
```

**3. Given a string, return a string where for every char in the original, # there are two chars.**

```
doubleChar('The') → 'TThhee'  
doubleChar('AAbb') → 'AAAAbbbb'  
doubleChar('Hi-There') → 'HHii--TThheerree'
```

**4. Return the number of even integers in the given array/list.**

Examples:

```
count_evens([2, 1, 2, 3, 4]) → 3
```

```
count_evens([2, 2, 0]) → 3  
count_evens([1, 3, 5]) → 0
```

## 5. Optional Lab:

You can actually make a simple command line game. You could put together everything you've learned so far about Python. The game goes like this:

1. The computer will think of 3 digit number that has no repeating digits.
2. You will then guess a 3 digit number
3. The computer will then give back clues, the possible clues are:

Close: You've guessed a correct number but in the wrong position

Match: You've guessed a correct number in the correct position

Nope: You haven't guess any of the numbers correctly

4. Based on these clues you will guess again until you break the code with a perfect match!

There are a few things you will have to discover for yourself for this game!  
Here are some useful hints:

Try to figure out what this code is doing and how it might be useful to you

```
import random  
digits = list(range(10))  
random.shuffle(digits)  
print(digits[:3])
```

Another hint:

```
guess = input("What is your guess? ")  
print(guess)
```

Think about how you will compare the input to the random number, what format should they be in? Maybe some sort of sequence?