Python Lesson Quiz April 27th   Lists, Mod operation , and functions

Python data structure: Lists:

1.) How do you create an empty list in python ?
   List = []
2.) Create a list called "words" that contain the elements: string1 , string2 , string3
   words = ["string1", "string2", "string3"]
3.) True/False: Can you store different types of data in a python list structure. For example, If we had a list called "items" that contained a boolean and a string value, would that cause a compiler error ? **True , no compiler error**
4.) How can I get the size of the list with a function call ? **len(List)**
5.) Coding Question:
   Write a function called **isValidIndex** that takes in an **index number** and a **list** and determines if the index will not cause an error with the given list. The return value will be a boolean (True, False)

```python
def isValidIndex( List, indexNumber ):

  if( indexNumber >= 0 and indexNumber < len( List )  ):
    return True
  else:
    return False
```

Mod operator:
6.) Coding Question:
   Write a function called **isEven** that takes in an **number** and determines if it is even using the mod operation. The return value will be a boolean (True, False)

   ** Hint, the number 2 may be of use to you

```python
def isEven( num ):
  if num % 2 == 0:
    return True
  else:
    return False
```

7.) Can the return value of a mod ever be negative ? Nope, it's always positive.

Functions

8.) True/False: you cannot return multiple values in a python function ?
False, you can return multiple values in a python function.

9.) **Double_count_foo <- local version of count**
Double_count_bar <- global version of count

```python
count = 1

def double_count_foo( count ):
    print("value of count", count)
    return count + count

def double_count_bar():
    global count
    # count is local to the function increase_count
    print("value of count", count)
    return count + count
```


10.)   What would happen if the following code was compiled ?
   a.) ERROR
   b.) Other:

```python
def getId( name, company="robolink"):
    print("Hello", name, " from ", company)



getId("thomas")
```