Functions #3

can either take in information (parameters) or not take in any information

functions can return a value, or not return anything

Example 1: Function that takes nothing in and returns nothing:

```
def main():
    # All Code here.


# Call it
main()
```

Functions that don't return anything are called on a line by itself.

Example 2: Function that takes something in and returns nothing:

```
def oneMonth(days):
    # Code here
```

The function does something different, based on what days equals.
days is the formal parameter, but when we CALL the function we put in an actual parameter, something like:

```
oneMonth(28)
myDays = int(input(""))
oneMonth(myDays)
```

Actual parameter can be any expression of the appropriate type.
Again, note that we call oneMonth on a line by itself because it doesn't return anything.

Example 3: Function that takes in information and returns something.

```
def isCorrectAns(num1, num2, userAnswer):
```

```
    # Code here
```

When you call a function that returns something, you don't call it on a line by itself

```
if isCorrectAns(num1, num2, answer):
    correct += 1
else:
    print("Sorry, wrong…")
```

Example 4: Function that takes nothing in and returns something.

```
def rollOneDie():
    # Code here
```

```
total = rollOneDie() + rollOneDie()
# Note we call the function twice and add both return values.
```

What is different between what is above and:

```
total = 2*rollOneDie()?
```

This is like rolling one die once and doubling the score which is different than rolling two dice, which is what the former code does.

Today's Task: Make Casino 1 Better.

1) Add the game of Craps
2) Integrate Craps into the main menu design so that the user can play Craps OR Arup's Game of Dice
3) Implement a simple version of Blackjack and add it as well.

What I won't do is unit test every function thoroughly…

Basic Rules of Craps

Roll a pair of dice
If you get 7 or 11, you win
If you get 2, 3 or 12, you lose
Otherwise, we call your roll X, the point.

Then you continue rolling until you get X again or 7, whichever comes first. If you get 7 first, you lose, if you get X first, you win.

Adding Blackjack (21)

Simplified Rules - you are playing by yourself. You win if you get 17 or higher.

You get 2 random cards…2,3,4,…,Ten,Jack,Queen,King,Ace
Each card has a value 2-10 are the numeric values
J = 10
Q = 10
K = 10
A = 11 or 1…for our simple version A = 11.

Generate a random card. (function)
function that takes in a card and returns its value.

Each card will be a character '2', '3', '4', …'9', 'T', 'J', 'Q', 'K', 'A'.

In the actual game the user can choose to hit or stay.

Dealing with characters and integers
----
ord(c) - c is a character, and this function returns the Ascii value of the character c as an integer.

chr(val) - if val is a valid ascii value, this function returns the corresponding character with that ascii value.

The Ascii values of all of the digits are consecutive.
The Ascii values of all of the lowercase letters are consecutive.
The Ascii values of all of the uppercase letters are consecutive.