**Computer Programming - RND Function**

The RND function will create a random, decimal number in the range between 0 to 1. (.000001 to .999999)

We can use this function to create random integers within a range of our choosing. Look at this code:

**Dim num1 as Integer This number controls the number of possible values**

**num1 = INT( RND() \* 10) + 1**

 This controls the lowest possible value in the range

This will multiply the random number by 10, then convert it to an integer, dropping off any decimal places. The end result is a number in the range from (.00001 to 9.9999, which converts to 0 to 9 (when converted to an integer). Typically, we will add 1 to this code to produce a range of 1 to 10.

So, if I wanted to create a random whole number in the range from 1 to 100, I would use this code:

**num1 = INT( RND() \* 100) + 1**

If I wanted to create a random number between 10 and 20, I would write this code:

**num1 = INT( RND() \* 11) + 10 (11 possible values between 11 and 20, and 11 is the lowest value)**

Essentially, the number you are multiply RND() by is the total number of different values possible in your chosen range. (10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20) There are 11 numbers here. The number that I add in the end is simply the starting (first number) for the range.

**Randomize()**

This code should be entered into the Form\_Load event when you want to obtain a truly random number. This function uses the clocking function within the PC’s processor to generate a different starting point each time the application is run.

Assignment – Write a program called RandomPractice that has 4 buttons and 4 labels. When each button is clicked, the following random number ranges are displayed. Declare (DIM) and use the variables RAN1, RAN2, RAN3 and RAN4 (integers) to store and output the values. The finished product is in the shared drive and is called Random Practice. Write down below the 2 statements you used to generate the random number and output it to the appropriate label. Rename the four labels *may*, *room*, *salary* and *year*.

1. 1 to 31 (Random day in the month of March)
2. 13 to 21 (Random room in the business department)
3. 75,000 to 100,000 (Random Salary for a Computer Programmer)
4. 1970 to 2011 (Random Year in which Mr. Dixon has lived)