Exercise – Loops

First are quick review questions that you should write down the answers for in a document. The second part is practical exercises. Both are important for your learning and to help you retain the concepts.

Review Questions

1. Describe what a loop is:

   A loop is a piece of code that continues to run until a certain condition is met.

2. Write an example of a **while loop:**

   int count = 0; int playerHealth = 100; int damage = 5; while (count < 10) { count++; playerHealth -= damage;}

3. Write an example of a **for loop:**

   for(int i=0; i<=100; i++) { Console.WriteLine(i); }

4. What does the word **break** do when used inside a loop?

   The word break when used in a loop will stop the code from running any further(in the loop), then runs whatever code comes after the loop.

5. What are loops generally used for?

   They are often used to search for data in groups, random generation or to perform the same task multiple times.

Practical Exercise

Create a new C# console application called **LoopsExercise.**

1. Inside the **Main** function of your Program class:
   a. Create a **while loop**
   b. Make it run 10 times
   c. Every time it runs, print out how many times it has run
2. Now create a **for loop**
   a. Make it run 20 times
   b. Every time it runs, print out how many times it has run
3. Create a variable called score in your **Main** function. Then, inside one of your loops:
   a. If score is less than 100, add 20 to score
   b. If score is greater than 100, break out of the loop