Iteration

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| C# Instructions covered previously covered:   * **Variables:** <data type> <name>; * Console.WriteLine(“ “); * Console.ReadLine(); * **Operations:** +, -, \*, / * **Selection:** If, switch | New C# Instructions used in these exercises:   * For (Count Controlled Loop) * While (Condition Controlled Loop) * Do (Condition Controlled Loop) |

# What is iteration?

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| Repetition of one or more line of code based on a condition |

# Why is iteration useful?

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| You don’t have to rewrite the same code |

## Iteration in Computer Science

There are 3 standard types of iteration used in programming: For, While, Do-While (also known as Repeat-until)

C# has a 4th type called “ForEach” which we will look at later

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| **The For Loop** | **Annotation** | **Output**  1  2  3  4  5 |
| **The While Loop** | **Annotation** | **Output** |
| **The Do Loop (Do-While)** | **Annotation** | **Output** |

# Self-Study Tasks (Programming 4)

Tick each box once you have completed a task to help keep organised

* Read class notes/hand out to make sure that you fully understand the content
* Complete any unfinished programming exercises
* Read/complete the following sections of the online tutorial: 
  + Loops
  + Functions

<http://csharp.net-tutorials.com/basics/loops/>