

Visual C# combining if clauses

One or more if clauses can be nested within another if clause. The following 2 code segments are not the same.

```
int numberToTest;
if (numberToTest < 10)
{
    Console.WriteLine("number is below 10");
    if( (numberToTest)%2 == 0)
        Console.WriteLine("Number is a multiple of 2");
}
```

Segment 2:

```
int numberToTest;
if (numberToTest < 10)
    Console.WriteLine("number is below 10");
if( (numberToTest)%2 == 0)
    Console.WriteLine("Number is a multiple of 2");
```

Assigning a value of 16 to numberToTest will output a different result in the 2 code segments.

The 1st segment tested if a number is less than 10 and is a multiple of 2. Multiple if conditions can be chained together into a single clause with the either the and (&&) or the or (||) operators.

One of the following code sections will decide if a number is between 11 and 99. The other will be true for any number.

```
if ((numberToTest > 10) && (numberToTest < 100))
{
    Console.WriteLine("Code will fire");
}
```

Example 2:

```
if ((numberToTest > 10) || (numberToTest < 100))
{
    Console.WriteLine("Code will fire");
}
```

A number of OR and AND conditions can be written in the same statement. If the code becomes hard to follow it is better to use a nested if solution.

Exercises

1. Ask the user for a number and output if it is or is not between 1 and 10.
2. Ask the user for a number divisible by 7 and between 1 and 100. Output if the number fulfils these criteria or not.
3. Ask the user what the weather is and if they have a coat. If the weather is cold and they have a coat ask them to put on their coat.
4. Ask the user what the weather is and if they have a coat. Whatever the user's response the program should ask them to buy an anorak.
5. Ask the user 3 questions. If they are all answered correctly output a reply stating that they are very clever.