Using the Vertical Bar to Match

Introduction

Our next special character or "metacharacter" is the vertical bar ("|"). The vertical bar allows us to choose from a list of alternatives, and is thus also called the "alternation" operator, and also the "Logical OR" operator. ***The vertical bar metacharacter is used with a list of alternatives, from which any will be a match***.

Why Use the Vertical Bar?

We will remember that sometimes when people are emailing me, instead of "Damian" they type "Damien", and that we can use the period metacharacter to match both of these, using the following Regular Expression:

```
RegEx_Pattern = "Dami.n"
```

However, this is an *approximate solution*, as we know this will also match other variations, including: "Damisn", "Dami7n", "Dami@n", "Dami n", and many others. If we want a *precise solution*, that will match only to the Strings "Damian" or "Damien", we can use the vertical bar with the following Regular Expression:

```
RegEx_Pattern = "Damian|Damien"
```

This Regular Expression matches with EITHER "Damian" OR "Damien".

My friend Rebecca has a lot more trouble than I do, in her emails people address her as "Rebecca", "Becca", "Becks", and "Becky", so if she asked us to search for her name, we could use the following Regular Expression:

```
RegEx_Pattern = "Rebecca|Becca|Becks|Becky"
```

This reads as EITHER "Rebecca" OR "Becca" OR "Becks" OR "Becky".

Combining Metacharacters

We notice that two of Rebecca's nicknames are very similar: "Becks" and "Becky". So we could use the Period metacharacter to represent these using the following Regular Expression: "Beck.", with the Vertical Bar for the other alternatives:

```
RegEx_Pattern = "Rebecca|Becca|Beck."
```

And this is a good approximate solution that will match any of the required names, but will match a few others as well, like "Beckr" or "Becko". We could use an even shorter Regular Expression: "Bec.." to cover three alternatives:

```
RegEx_Pattern = "Rebecca|Bec.."
```

And this will match any of the required names, but also match lots of other Strings like "Becss", "Bechg" and "Becdh", but it's a more compact Regular Expression.

Matching the Vertical Bar Character

If we are searching for the actual vertical bar character (not the metacharacter), then mathematically we represent the actual vertical bar as follows: \|
However, most programming languages typically prefer we state it as follows:

```
RegEx_Pattern = "\\|"
```

And this will allow us to locate the vertical bar character ("|") in a String.