**Working with Regular Expression**

A regular expression is a string that describes or matches a set of strings. It is often called a pattern as it describes a set of strings.

In QTP/VB Script, we can use regular expressions to deal with dynamic property values in object repository OR in descriptive programming OR while creating checkpoints with varying values.

**What are some of the commonly used regular expression characters?**

Given underneath is one of the most widely used and ever confused backslash character. The remaining expressions are serialized below that.

**Using the backward slash Character**

A backward slash \ instructs QTP to treat the next character as a literal character, if it is otherwise a special character. The backward slash \ can also instruct QTP to recognize certain ordinary characters as special characters.

In UserName.\* dot . is used as a special character. There may be instances where you may want to use a period as a literal character otherwise it may be mistaken as an indication for regular expression .(example: www.hp.com) In such a case you can use backward slash to escape the special meaning of this period. (example: www\.hp\.com)

**Note: If a backward slash character is used before a character that has no special meaning, the backward slash is ignored.**

**Expressions & Explanation:**

**Match any single character .**

Example: lear. will match learn, lear1 or lear%

**Match the preceding character zero or more times \***

Example: zo\* matches either z or zoo.

**Match any string starting with text specified just before the pattern .\***

This is one of the most frequently used regular expressions pattern.

Example: learn.\* will match any string starting with learn. Let us say you encounter a string “We are on learnqtp” but you see that the characters after the string “learn” keeps changing. In such a case you can simple make a regular expression as “We are on learn.\*”

**Match the beginning of a line ^**

Example: ^learnqtp will match any line that starts with learnqtp hence it will match learnqtp, learnqtp.com but not www.learnqtp.com

**Match the end of a line $**

Example: learnqtp$ will match any line that ends with learnqtp hence it will match learnqtp, www.learnqtp but not www.learnqtp.com

**Match the preceding character one or more times +**

Example: zo+ matches zoo but not z.

**Match the preceding character one or more times +**

Example: zo+ matches zoo but not z.

**Some common examples of Regular expression**

Example 1: Regular expression to match all valid email addresses

^[a-z0-9.\_%+-]+@[a-z0-9.-]+\.[a-z]{2,4}$

**We have assumed above that the TLD (.com, .org, .net, .in) is between 2 to 4 characters long. Also, we have only taken the case for lower case characters for validation.**

**Example 2: Regular expression to match a date in MM/DD/YYYY format**

^([1-9]|1[0-2])/([1-9]|[1-2][0-9]|3[0-1])/[0-9][0-9][0-9][0-9]$