11 Which type of regex does \$LINUX_UTIL use?

((Coming soon))

12 More learning resources

((Coming soon))

13 Conclusion

((Coming soon))

Regular Expressions in Python and Perl

1 Introduction

((Coming soon))

2 Basic Symbols

| Wat do? | How Perl do? | How Python do? |
|------------------------|----------------------------|----------------------------|
| Custom character class | [] | [] |
| Negated custom | [^] | [^] |
| character class | | |
| Ranges | [a-z] (with '-' escaped if | [a-z] (with '-' escaped if |
| | it comes last) | it comes last) |
| Alternation ("or") | | |

3 Zero-width assertions

| Wat do? | How Perl do? | How Python do? |
|--------------------|--------------|----------------|
| Word boundary | \ b | $\setminus b$ |
| Anywhere but word | \B | \B |
| boundary | | |
| Beginning of | ^ / \A | ^ / \A |
| line/string | | |
| End of line/string | \$ / \Z | \$ / \Z |

4 Captures and Groups

| Wat do? | How Perl do? | How Python do? |
|---------------------|--|--------------------------|
| Capturing group | () or (? <name>)</name> | () or (?P <name>)</name> |
| Non-capturing group | (?:) | (?:) |
| Backreference to a | \1, \g1 | $\setminus 1$ |
| specific group | | |
| Named backreference | $ackslash \mathrm{k}{<}\mathrm{name}{>}$ | (?P=name) |

5 Character Classes

| Wat do? | How Perl do? | How Python do? |
|-------------------------|---------------------------------------|------------------------|
| Any character (except | | |
| newline) | | |
| Match a non-"word" | \W | \W |
| character | · | · · |
| Match a "word" | \w or [[:word:]] | $\setminus \mathbf{w}$ |
| character | | |
| Case | [[:upper:]] or [[:lower:]] | N/A |
| Whitespace (not | N/A | N/A |
| including newlines) | | |
| Whitespace (including | $\setminus s \text{ or } [[:space:]]$ | $\setminus \mathbf{s}$ |
| newline) | | |
| Match a non-whitespace | \S | $\setminus S$ |
| character | | |
| Match a digit character | \d or [[:digit:]] | $\setminus d$ |
| Match a non-digit | \D | $\setminus \mathbf{D}$ |
| character | | |
| Any hexadecimal digit | [[:xdigit:]] | N/A |
| Any octal digit | N/A | N/A |
| Any graphical character | [[:punct:]] | N/A |
| excluding "word" | | |
| characters | | |
| Any alphabetical | [[:alpha:]] | N/A |
| character | | |
| Any alphanumerical | [[:alnum:]] | N/A |
| character | | |
| ASCII character | [[:ascii:]] | N/A |

6 Lookarounds

| Wat do? | How Perl do? | How Python do? |
|---------------------|----------------------------------|----------------|
| Positive lookahead | (?=) | (?=) |
| Negative lookahead | (?!) | (?!) |
| Positive lookbehind | (?<=) | (?<=) |
| Negative lookbehind | (?)</td <td>(?<!--)</td--></td> | (?)</td |

Lookaheads assert that the character or series of characters immediately following the current position can be represented by the given expression (here represented by '...'), while lookbehinds assert that the expression is representative of the character immediately preceding the current position.

Positive lookarounds suggest the presence of a match, while negative lookarounds assert the absense of an expression match.

7 Multiplicity

| Wat do? | How Perl do? | How Python do? |
|---|----------------------------------|----------------------------------|
| 0 or 1 | ? | ? |
| 0 or 1, non-greedy | ?? | ?? |
| 0 or 1, don't give back on backtrack | ?+ | N/A |
| 0 or more | * | * |
| 0 or more, non-greedy | *? | *? |
| 0 or more, don't give | *+ | N/A |
| back on backtrack | | |
| 1 or more | + | + |
| 1 or more, non-greedy | *? | *? |
| 1 or more, don't give | ++ | N/A |
| back on backtrack | | |
| Specific number | $\{n\}$ or $\{n,m\}$ or $\{n,\}$ | $\{n\}$ or $\{n,m\}$ or $\{n,\}$ |
| Specific number, | $\{n,m\}$? or $\{n,\}$? | $\{n,m\}$? or $\{n,\}$? |
| non-greedy | | |
| Specific number, don't give back on backtrack | ${n,m}+ or{n,}+$ | N/A |

8 Other basic regex characters

| Wat do? | How Perl do? | How Python do? |
|-------------------|---------------|----------------|
| Independent | (?>) | N/A |
| non-backtracking | | |
| pattern | | |
| Anywhere but word | (?i) or (?-i) | (?i) or (?-i) |
| boundary | | |

9 Examples

((Coming soon))

10 What type of regex does my text editor use?

((Coming soon))