

Regular Expression

java.util.regex

- Pattern: 定義一個regular expression
- Matcher: 指定搜尋的字串

PatternExample.java

Character Classes

- .: 任意單一字元（字元、數字或特殊字元）
- [abc]: a、b或c
- [^abc]: 不是a、b或c
- [a-c]: 指定一個範圍的字元
- |: 或

Examples: It was the best of times

- w.s: It **was** the best of times
- w[abc]s: It **was** the best of times
- t[^aeo]mes: It was the best of **times**

CustomCharClassExamples.java

Predifined Character Classes

- \d: 數字, [0-9]
- \D: 不是數字, [^0-9]
- \w: 文字, [a-zA-Z0-9_]
- \W: 不是文字, [^a-zA-Z0-9_]
- \s: 空白, [\r\t\n\f\0XB]
- \S: 不是空白, [^\r\t\n\f\0XB]
 - \t: Tab
 - \n: New line
 - \r: Carriage return
 - \f: Form feed
 - \0XB: Vertical tab

Examples: Jo told me 20 ways to San Jose in 15 minutes.

- \d\d: Jo told me 20 ways to San Jose in 15 minutes.
- \s\s: Jo told me 20 ways to San Jose in 15 minutes.
- \S\S: Jo told me 20 ways to San Jose in 15 minu tes.

PredefinedCharClassExample.java

Quantifiers

- *: 前面的字元出現零到多次
- +: 前面的字元出現一到多次
- ?: 前面的字元必須出現一或零次
- {n}: 前面的字元必須出現n次
- {m,n}: 前面的字元必須出現m到n次
- {m,}: 前面的字元必須出現m或多次
- (xx){n}: 指定的一組字元出現n次

Examples: Longlonglong ago, in a galaxy far far away

- ago.*: Longlonglong ago, in a galaxy far far away
- gal.{3}: Longlonglong ago, in a galaxy far far away
- (long){2}: Long longlong ago, in a galaxy far far away

QuantifierExample.java

Greediness

Longlonglong ago, in a galaxy far far away.

- ago.*far: Longlonglong ago, in a galaxy far far away.
- ago.*?far: Longlonglong ago, in a galaxy far far away.

GreedinessExample.java

Boundary Matchers

- ^: 一行的開頭
- \$: 一行的結尾
- \b: 一行的開頭或結尾
- \B: 不是一行的開頭或結尾

Examples: it was the best of times or it was the worst of times

- ^it.*?times: it was the best of times or it was the worst of times

- \sit.*times\$: it was the best of times or `it was the worst of times`
- \bor\b.{3}: it was the best of times `or it` was the worst of times

BoundaryCharExample.java

java.util.regex.Matcher

- replaceAll(String): 搜尋與取代所有內容
- replaceFirst(String): 搜尋與取代第一個內容

Matching and Groups

- simon.johnson@google.com
- (simon).(johnson)@(google.com)
- (1).(2)@(3)
- (\S+?)\.(\S+?)@(\S+)

MatchingExample.java