

# **Regular Expressions**

#### **Audience Regular Expressions Course**

The course Regular Expressions is intended for application managers, developers and other interested parties who want to learn how regular expressions can be used for pattern matching in applications and tools.

#### **Prerequisites Course Regular Expressions**

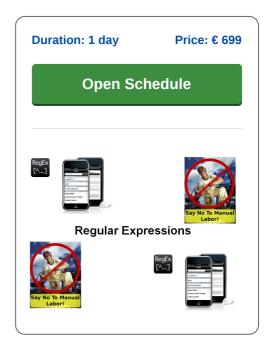
To participate in this course general basic knowledge of computer systems and software applications is required. Programming experience is beneficial for a proper understanding.

#### **Realization Training Regular Expressions**

The theory is treated on the basis of presentation slides. Illustrative demos are used to clarify the discussed concepts. The theory is interspersed with exercises. The course material is in English.

#### **Certification Course Regular Expressions**

Participants receive an official certificate Regular Expressions after successful completion of the course.



## **Content Course Regular Expressions**

The course Regular Expressions gives an overview of the capabilities of Regular Expressions and the way they work.

#### **Regular Expression Syntax**

After introducing the usages of Regular Expressions and the inner operation of Regular Expression engines, the syntax of Regular Expressions is treated.

#### **Meta Characters**

Attention is paid to the various meta characters such as those for quantification and choice and the escape sequences for special characters.

## **Character Classes**

Character classes are also discussed, including character ranges, characters to match at the beginning and end of a searched string and how to match on word boundaries. Here the difference between greedy and non-greedy Regular Expressions is addressed.

## Subgroups en Backreferences

Further advanced topics like the use of subgroups and backreferences are part of the course program. In this respect it is explained how subgroup expressions are defined by parentheses and how backreferences, addressed by an index or a name, ensure repeated execution of the Regular Expression.

#### **Substitutions**

Finally it is discussed how regular expressions can be used for substitutions.



# **Modules Course Regular Expressions**

Module 1 : Intro Regular Expressions	Module 2 : Meta Characters	Module 3 : Character Classes
What are Regular Expressions?	Meta Characters	Using Character Classes
Usages of Regular Expressions	Match Any Character with dot	Shorthand Character Classes
Origins of Regular Expressions	Matching Multiple Dots	Negated Character Classes
Regex Mini Language	Matching String Start and End	Start of Line versus Exclude
Regular Expression Engines	Word Boundaries	Character Ranges
Simple Regular Expressions	Alternatives with Pipes	Negating Characters and Ranges
Inner Workings RegEx Engines	Matching Alternatives	Meta Characters in Character Classes
Multiple Matches	Quantifiers	Matching Word Characters
Case Sensitivity	Optional Items	Matching Non-Word Characters
All Characters Count	Greediness	Matching White and Non-White Space
Non printable Characters	Match Length	Matching Digits and Non-Digits
Regex References	Escaping Special Characters	Repeating Character Classes
Regex Tools	Common Character Escapes	Named Character Classes
Module 4 : Subgroups	Module 5 : Substitutions	
Matching with Backreferences	Subsitution Example	
Match Character Next to Itself	Substitution in Rx Toolkit	
Using One Parentheses Group	Substitutions with s///	
Multiple Parentheses Groups	Substitute Operator	
Turning of Backreferences	More Substitution Examples	
Forward References	Modifiers Perl Style	
Subgroups in Languages	Global Modifier	
Named Subgroups	Case Sensitivity Modifiers	
Named Backreferences	Replacement Patterns	
Lookahead and Lookbehind	Transformations	
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