

# Regular Expressi ons

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# Learning Objective

- ▶ After this lecture you will be able to
  - ▶ Create a pattern with RegExp constructor
  - ▶ Create a pattern with out RegExp constructor
  - ▶ Use RegExp Object Methods
  - ▶ Know how to use ReGex tools
    - ▶ Square bracket
    - ▶ Escape character
    - ▶ One or more times
    - ▶ Period
    - ▶ Zero or one times
    - ▶ Cart
    - ▶ Exact match



What is regular  
Expression?

# Intro to ReGex

- ▶ A regular expression or RegExp is a small programming language that helps to find pattern in data.
- ▶ A RegExp can be used to check if some pattern exists in a different data types.
- ▶ We can create a pattern in two ways.
  - ▶ To use RegExp in JavaScript either we use RegExp constructor
  - ▶ We can declare a RegExp pattern using two forward slashes followed by a flag.
- ▶ To declare a regular expression we use two forward slashes and an optional flag. The flag could be a i

# Regular Expression Parameters?

**Pattern**

**Flags**

- A REGULAR EXPRESSION TAKES TWO PARAMETERS. ONE REQUIRED SEARCH PATTERN AND AN OPTIONAL FLAG.

# Patterns

- A PATTERN COULD BE A TEXT OR ANY FORM OF PATTERN WITH SOME SORT OF SIMILARITY. FOR INSTANCE THE WORD SPAM IN AN EMAIL COULD BE A PATTERN WE ARE INTERESTED TO LOOK FOR IN AN EMAIL OR A PHONE NUMBER FORMAT NUMBER MIGHT BE OUR INTEREST TO LOOK FOR.



# Flags

**FLAGS ARE OPTIONAL PARAMETERS IN A REGULAR EXPRESSION WHICH DETERMINE THE TYPE OF SEARCHING. LET SEE SOME OF THE FLAGS:**

**G:IS A GLOBAL FLAG WHICH MEANS LOOKING FOR A PATTERN IN WHOLE TEXT**

**I: CASE INSENSITIVE FLAG(IT SEARCHES FOR BOTH LOWERCASE AND UPPERCASE)**

**M: MULTILINE**



# Creating a Pattern with RegExp Constructors

- **DECLARING REGULAR EXPRESSION WITHOUT GLOBAL FLAG AND CASE INSENSITIVE FLAG.**
- **DECLARING REGULAR EXPRESSION WITH GLOBAL FLAG AND CASE INSENSITIVE FLAG.**
- **DECLARING A REGEX PATTERN USING REGEXP OBJECT. WRITING THE PATTERN AND THE FLAG INSIDE THE REGEXP CONSTRUCTOR**





# Creating a Pattern without RegExp Constructors

- **DECLARING REGULAR EXPRESSION WITH GLOBAL FLAG AND CASE INSENSITIVE FLAG.**
- **THE ABOVE REGULAR EXPRESSION IS THE SAME AS THE ONE WHICH WE CREATED WITH REGEXP CONSTRUCTOR**

# Regular Expression Object Methods

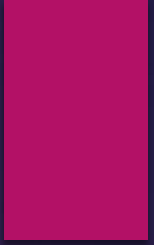
**Testing for  
a Match**

**Array  
Containing  
all of the  
Match**

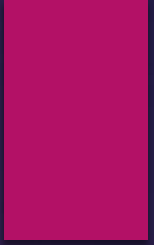
**Replacing a  
Substring**

# Square Bracket

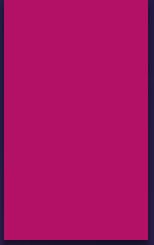
- LET'S USE SQUARE BRACKET TO INCLUDE LOWER AND UPPER CASE



Escape  
character(\) in  
RegExp

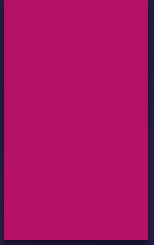


One or more  
times(+)



Zero or more  
times(\*)





Zero or one  
times(?)

# Quantifier in RegExp

Cart  $\wedge$



Exact match