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AUTÓNOMAS Y COMPILADORES

# EXPRESIONES REGULARES REGEX-101 PATTERN MATCHER

Licenciatura en Ciencias Computacionales

Instituto de Ciencias Básicas e Ingeniería

Universidad del Estado de Hidalgo

Nivel educativo: Superior (Universidad - Licenciatura)

Periodo: Enero - Junio 2025

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Semestre: 6 Grupo: 3

# Expresiones regulares

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## ° Gramatica formal:

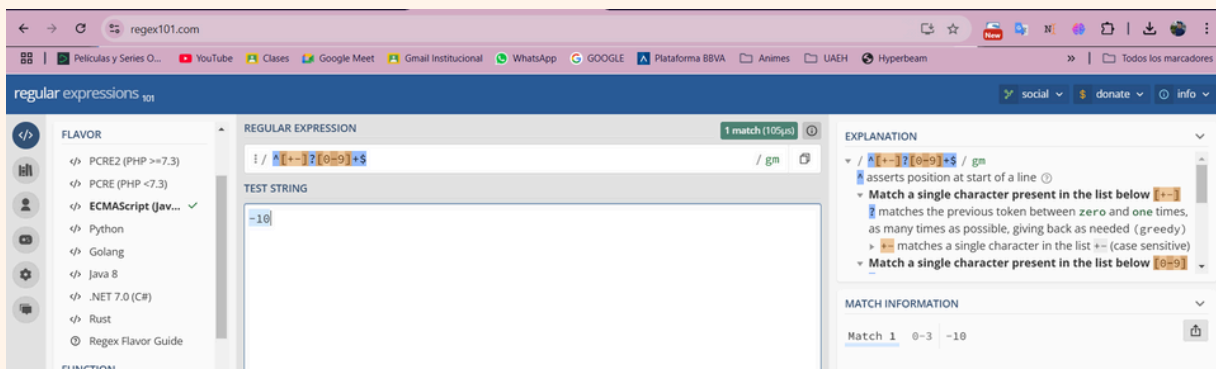
### • Alfabeto:

- $\Sigma = \{ a-z, A-Z, 0-9, @ . - _ / : ? = \& \% + \# , + - * / \wedge , /s \}$

## ° Lenguajes (REGEX):

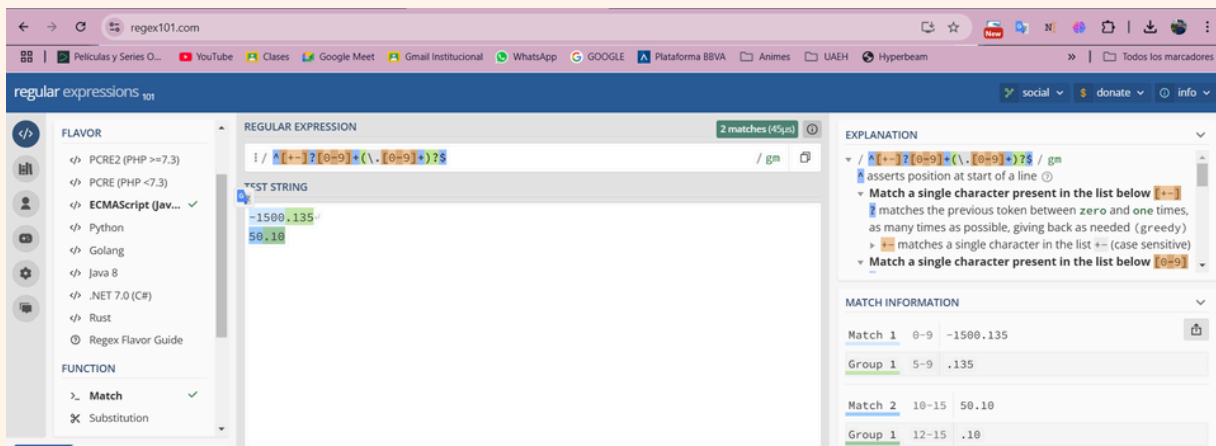
### • Número entero:

- **Hecho en Clase:** `[+-][0-9]+`
- **Corregida a REGEX:** `^[+-]?[0-9]+$`



### • Número de decimal:

- **Hecho en Clase:** `[+-][0-9]+.[0-9]+`
- **Corregida a REGEX:** `^[+-]?[0-9]?(\.[0-9]+)?$`



### • Número de teléfono:

- **Hecho en Clase:** `[+]*[0-9]*[-.()]*[0-9]+[+]*[0-9]+`
- **Corregida a REGEX:** `^\+?\d{1,3}?(?!\s)(?!\d{1,4})?\d{3,4}[-.\s]?\d{3,4}$`



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The screenshot shows the regex101.com interface. The regular expression is: `^\+?([1-9])\d{0,2}[-.\s]?(\d{1,4})?[-.\s]?(\d{1,4})?[-.\s]?(\d{1,9})?$`. The test string is: `7761239322  
+527761239322  
+52(776)1239322  
+52-776-123-9322  
776-123-9322`. The results show three matches: Match 1 (0-10) for `7761239322`, Match 2 (11-24) for `+527761239322`, and Match 3 (25-40) for `+52(776)1239322`.

- **Dirección email:**

- **Hecho en Clase:** `[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}`
- **Corregida a REGEX:** `^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$`

The screenshot shows the regex101.com interface. The regular expression is: `^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$`. The test string is: `lopez.solis.christian@gmail.com  
lo476626@uaeh.edu.mx  
christian.lsi@hotmail.com`. The results show three matches: Match 1 (0-31) for `lopez.solis.christian@gmail.com`, Match 2 (32-52) for `lo476626@uaeh.edu.mx`, and Match 3 (53-79) for `christian.lsi@hotmail.com`.

- **URL:**

- **Hecho en Clase:** `(https://|http/|)*([www.]*[a-zA-Z0-9.-]+\.[a-zA-Z]{2,})?/[0-9]*`
- **Corregida a REGEX:** `^(https?:\W)?(www\.)?[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}([/?].*)?`



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regular expressions 101

FLAVOR

- PCRE2 (PHP >=7.3)
- PCRE (PHP <7.3)
- ECMAScript (JavaScript) ✓
- Python
- Golang
- Java 8
- .NET 7.0 (C#)
- Rust
- Regex Flavor Guide

FUNCTION

- Match
- Substitution ✓

REGULAR EXPRESSION

4 matches (175µs)

TEST STRING

https://www.google.com  
http://openai.com  
www.github.com  
mywebsite.net/page?id=123

SUBSTITUTION

insert your replacement value here

EXPLANATION

^ asserts position at start of a line  
https? matches the previous token between zero and one times, as many times as possible, giving back as needed (greedy)  
1st Capturing Group https?:// matches the characters http literally (case sensitive)

MATCH INFORMATION

Match	0-22	https://www.google.com
Group 1	0-8	https://
Group 2	8-12	www.
Match 2	23-40	http://openai.com

- **Red IPv4:**

- **Hecho en Clase:** [0-9]+[.][0-9]+[.][0-9]+[.][0-9]+
- **Corregida a REGEX:** ^((25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\$

regular expressions 101

FLAVOR

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- ECMAScript (JavaScript) ✓
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FUNCTION

- Match
- Substitution ✓

REGULAR EXPRESSION

4 matches (60µs)

TEST STRING

255.255.255.245  
8.8.8.8  
8.8.8.8  
10.255.123.69

SUBSTITUTION

insert your replacement value here

EXPLANATION

^ asserts position at start of a line  
1st Capturing Group ((25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|1?[0-9][0-9]?)\$

MATCH INFORMATION

Match	0-15	255.255.255.245
Group 1	0-3	255
Group 2	4-7	255
Group 3	8-11	255

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