

Hussein ismael Ibrahim

Web programming lab

Computer Network Evening Study

Discussion 4

1. Regular Expressions and Their Use in PHP

A regular expression (regex) is a special text pattern used for matching, searching, and manipulating strings. It defines a concise way to describe complex search criteria.

In PHP, regex is employed through various functions like `preg_match()`, `preg_match_all()`, `preg_replace()`, and `preg_split()`. These functions allow you to perform operations based on the patterns you create.

2. Commonly Used Regular Expression Functions in PHP

Here's a breakdown of some essential regex functions:

`preg_match(pattern, string, matches, flags):`

Checks if the provided pattern matches the string.

Returns 1 on a successful match, 0 on no match, and negative values for errors.

Optional matches array captures matched substrings.

Optional flags modify the matching behavior (e.g., case sensitivity, global matching).

`preg_match_all(pattern, string, matches, flags):`

Similar to `preg_match()`, but finds all occurrences of the pattern in the string.

Returns an array of captured substrings for each match.

`preg_replace(pattern, replacement, string, limit, count):`

Replaces all (or a limited number with `limit`) occurrences of the pattern in the string with the replacement.

`replacement` can be a string or a callback function for more complex replacements.

Returns the modified string.

`preg_split(pattern, string, limit, flags):`

Splits the string into an array based on the pattern.

Optional `limit` controls the maximum number of splits.

Optional flags can influence splitting behavior (e.g., `keep delimiters`).

3. preg_match() vs. preg_match_all()

The key difference lies in how many matches they find:

`preg_match()`: Returns 1 if the pattern is found anywhere in the string, even just once.

`preg_match_all()`: Returns an array containing information about all occurrences of the pattern in the string. It can potentially return an empty array if no matches are found.

4. Searching and Replacing Text with Regular Expressions

PHP

```
$text = "This is a string with the word 'test'.";
```

```
$pattern = "/test/"; // Matches the word "test"
```

```
$replacement = "replaced";
```

```
$newText = preg_replace($pattern, $replacement,  
$text);
```

```
echo $newText; // Output: This is a string with the  
word 'replaced'.
```