Lecture 24

Validating user input

Mr. Mubashir Ali
Lecturer (Dept. of Computer Science)
dr.mubashirali1@gmail.com

Summary of the previous lecture

- **Super Global variables**
- **Passing form data**
- **Passing data with sessions**

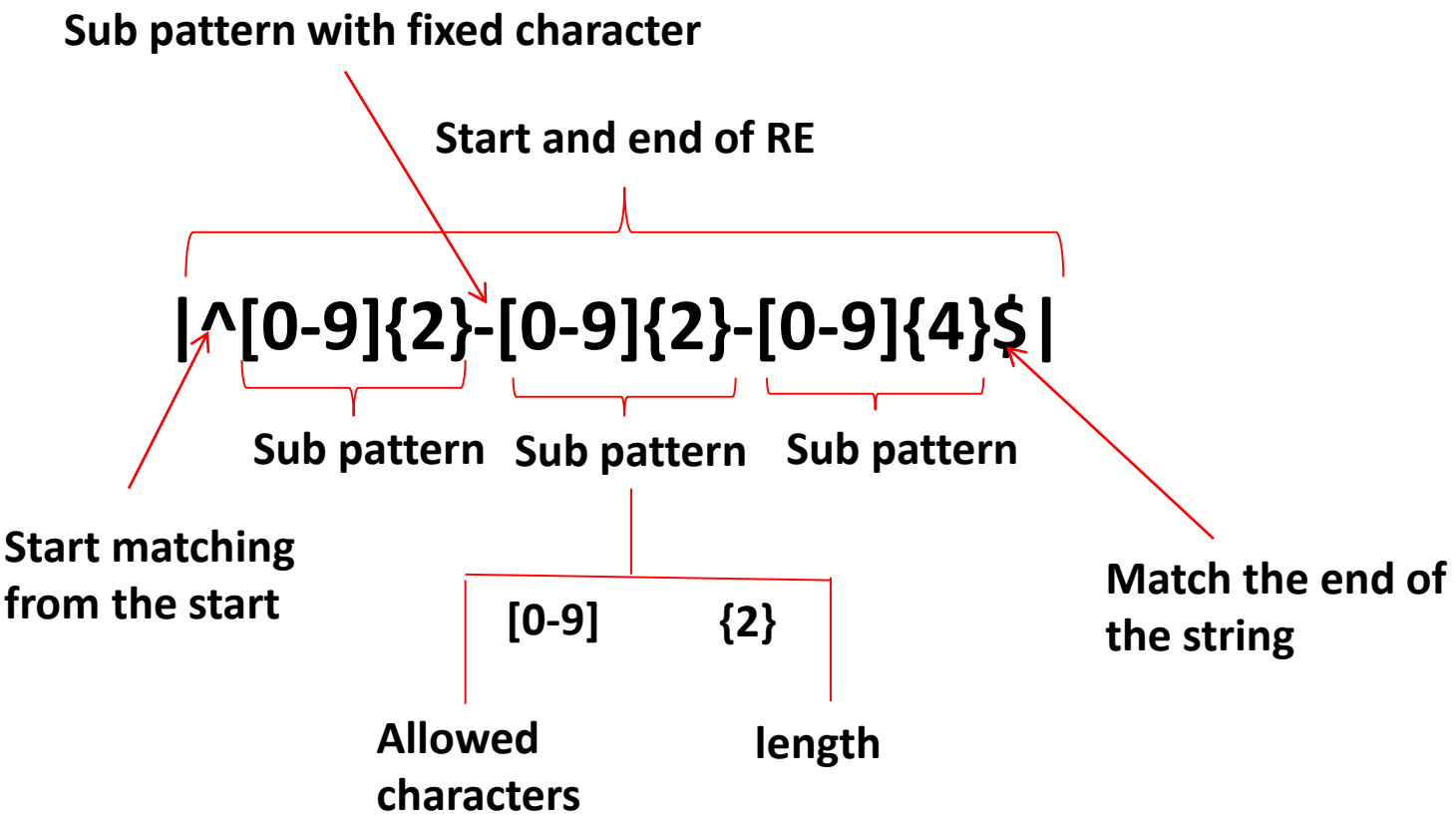
Outline

- **Regular expressions in PHP**
- **Validating user input at server**
- **String functions**

1. Regular expressions in PHP

- A regular expression is a concise notation to describe patterns in strings
- Regular expressions provide the foundation for describing or matching data according to defined syntax rules
  - Example: |^[0-9]{2}-[0-9]{2}-[0-9]{4}$|

1. Regular expressions in PHP…



1. Regular expressions in PHP…

- **Start and end of the RE:**
  - **optional, | |**
- **Sub-patterns:**
  - **range of allowed characters**
  - **Allowed length**
- **Sub-patterns with fixed character:**

1. Regular expressions in PHP…

- **Matching from the start:**
  - **1212-12-2014**

Pattern exists if do not match from start

- **Matching till end:**
  - **12-12-2014123**

Pattern exists if do not match till end

- **For exact match we should use both ^ and $**

1.1 Notations for RE

- **^: match strings that start with the given pattern**
- **$: match strings that end with the given pattern**
- **-: means a range of characters**
- **[ ]: makes a class of characters**
- **[^]: negates the class of character**

1.1 Notation for RE…

- **Quantifiers:**
- **{n}: matches a character, class or sub-pattern for n times**
- **{ n, m}: matches a character, class or sub-pattern for minimum n times and maximum m times**

1.1 Notation for RE…

- **?: matches the character, class or sub-pattern 0 or 1 time**
  - **equal to {0,1}**
- **+: matches the character, class or sub-pattern 1 or more times**
  - **equals to {1, }**
- ***: matches the character, class or sub-pattern 0 or any number of time**
  - **equals {0, }**

1.1 Notation for RE…

Predefined character ranges:

- **\d: means exactly as [0-9]**
- **\D: means exactly as [^0-9]**
- **\w: means exactly as [a-zA-Z0-9]**

1.1 Notation for RE…

RE examples:

- **Validating date:**
  - **|^\d{2}-\d{2}-\d{4}$|**
- **Validating CNIC:**
  - **|^\d{5}-\d{7}-\d{1}$|**
- **Validating Email:**
  - **|^[a-zA-Z0-9_.]+@[a-z]{3,5}.[a-z]{2,3}$|**

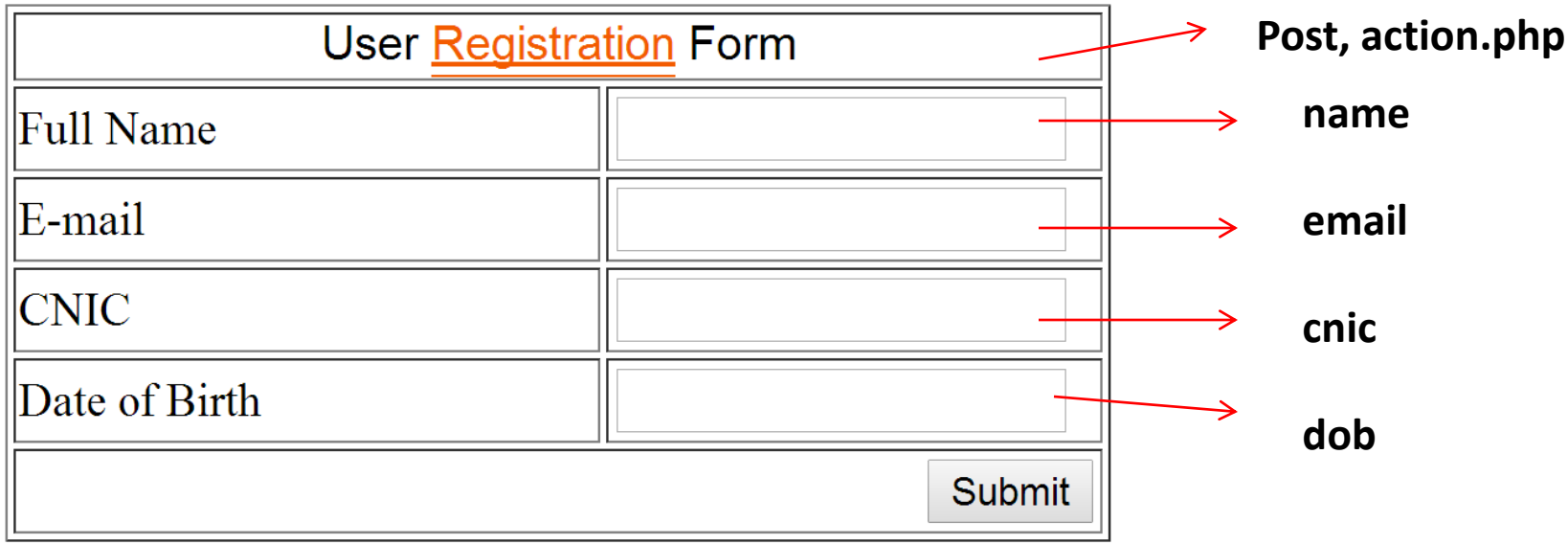
1.1 Notation for RE…

- **Validating name:**
  - **|^[a-zA-Z]{5,25}$|**
- **Validating Password:**
  - **must contain ‘@’**
  - **|@|**

2. Validating user's input

- **preg_match():**
  - **searches a string for a specific pattern**
  - **returns TRUE if it exists and FALSE otherwise**
  - **preg_match("pattern",$string);**

2. Validating user's input



2. Validating user's input

```
1  <?php
2  $name    =    $_POST['name'];
3  $email   =    $_POST['email'];
4  $cnic    =    $_POST['cnic'];
5  $dob     =    $_POST['dob'];
6
7  if(!preg_match("|^[a-zA-Z ]{3,25}$|",$name))
8  echo "Invalid input for name";
```

Receiving values

Validating name

2. Validating user's input

```
 9 echo "<br>";
10 if(!preg_match(
   "|^[a-zA-Z0-9_.]+@[a-z]{3,5}.[a-z]{3}$|",$email))
11 echo "Invalid Email address";

12 echo "<br>";
13 if(!preg_match("|^\d{5}-\d{7}-\d{1}$|",$cnic))
14 echo "Invalid CNIC";

15 echo "<br>";
16 if(!preg_match("|^\d{2}-\d{2}-\d{4}$|",$dob))
17 echo "Invalid Date of Birth";
18 ?>
```

email

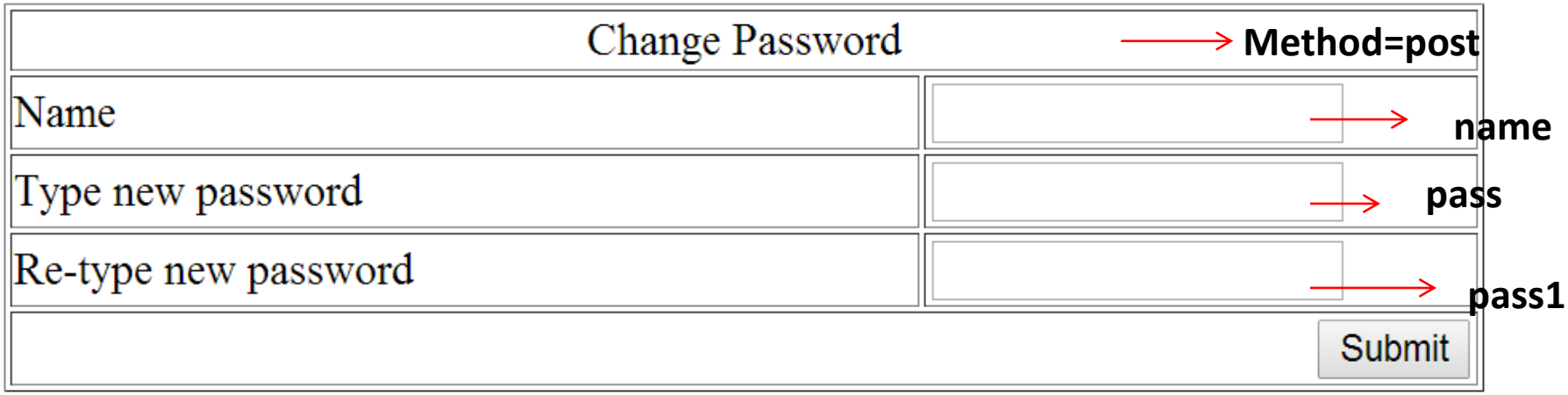
CNIC

DoB

3. String functions in PHP

- **strlen():**
  - Returns the length of the string
  - strlen($string);
- **strcmp():**
  - Compares two strings
  - Returns 0 if strings are equal, 1 if first string is greater and -1 if second is greater
  - strcmp($string1,$string2);
- **Strcasecmp():**
  - Compares two strings in case insensitive manner
  - strcasecmp($string1,$string2);

3. String functions in PHP…



3. String functions in PHP…

```php
<?php
$name = $_POST['name'];
$pass = $_POST['pass'];
$pass1 = $_POST['pass1'];
if(strlen($pass)<6)
echo "Too short password";
```

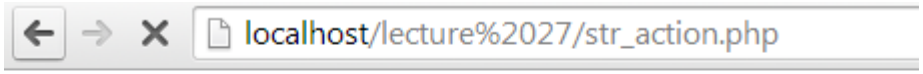
Getting variables

Using strlen()

3. String functions in PHP…

Change Password	
Name	Basharat
Type new password	123
Re-type new password	123
	Submit

Password is short



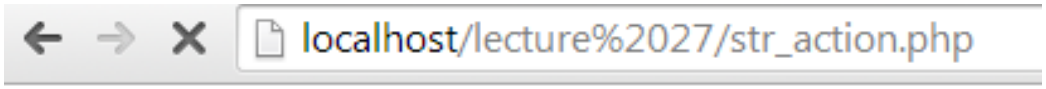
Too short password

3. String functions in PHP…

```
7  if(strcmp($pass,$pass1)<>0)
8  echo "Password mismatch";
```

Compares pass and pass1

Change Password	
Name	Basharat
Type new password	1233456
Re-type new password	1232222
	Submit

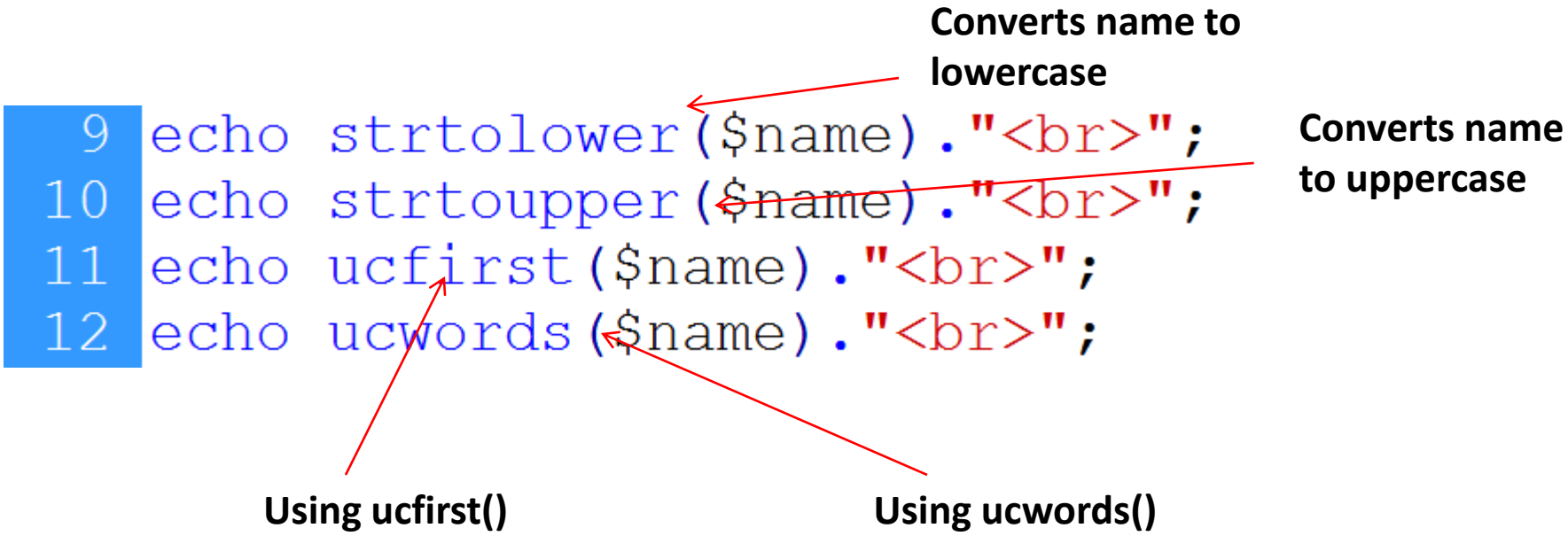


Password mismatch

3. String functions in PHP…

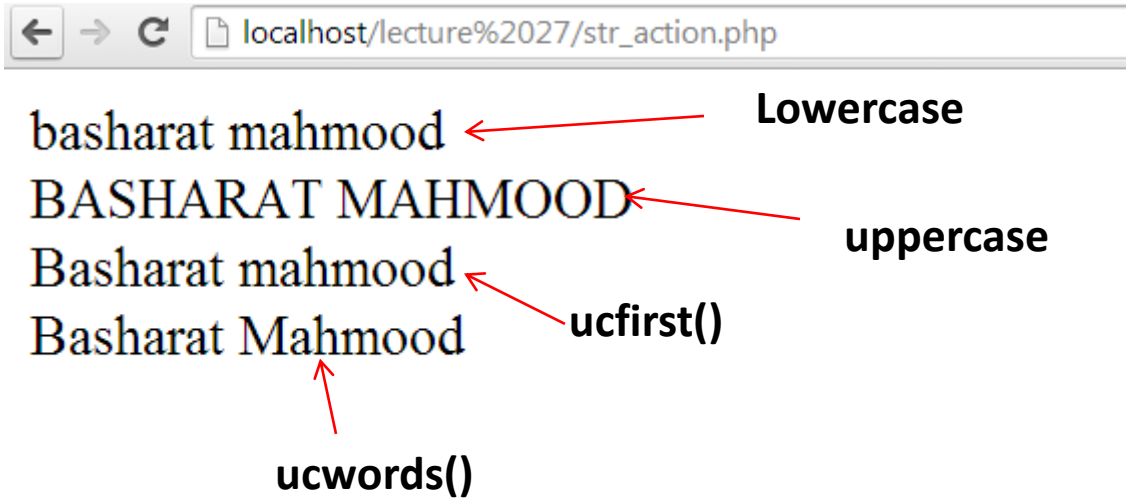
- **strtolower():**
  - **Convert a string in lower case**
  - **strtolower($string);**
- **strtoupper():**
  - **Convert a string in upper case**
  - **strtoupper($string);**
- **ucfirst():**
  - **Convert the first character of a string to upper case**
  - **ucfirst($string);**
- **ucwords():**
  - **Convert the first character of each word in a string to upper case**
  - **ucfirst($string);**

3. String functions in PHP…



3. String functions in PHP…

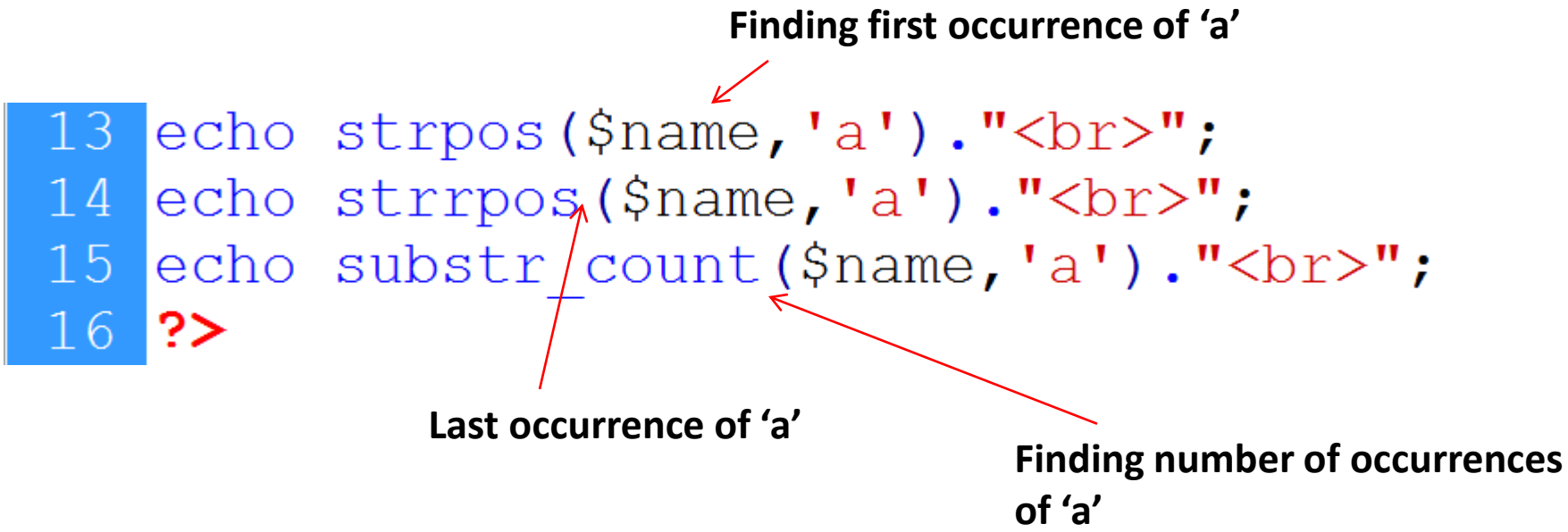
Change Password	
Name	Basharat mahmood
Type new password	1233456
Re-type new password	1233456
	Submit



3. String functions in PHP…

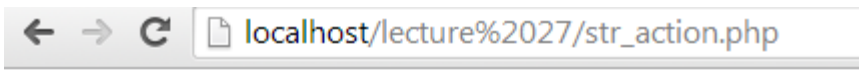
- **strpos():**
  - finds the position of the first case-sensitive occurrence of a substring in a string
  - strpos($string,sub-string);
- **strrpos():**
  - finds the position of the last case-sensitive occurrence of a substring in a string
  - strrpos($string,sub-string);
- **substr_count():**
  - returns the number of times one string occurs within another
  - substr_count($string,sub-string);

3. String functions in PHP…



3. String functions in PHP…

Change Password	
Name	Basharat mahmood
Type new password	1233456
Re-type new password	1233456
	Submit



basharat mahmood
BASHARAT MAHMOOD
Basharat mahmood
Basharat Mahmood
1 ← First occurrence of ‘a’
16 ← Last occurrence of ‘a’
4 ← Number of occurrences of ‘a’

Summary

- **Writing regular expression in PHP**
- **Validating user's input**
- **String functions**

References

- **Chapter 9, "**Beginning PHP and MySQL" by W. Jason Gilmore, Apress publisher, 4th edition; 2010, ISBN-13 (electronic): 978-1-4302-3115-8.