Web programming 2

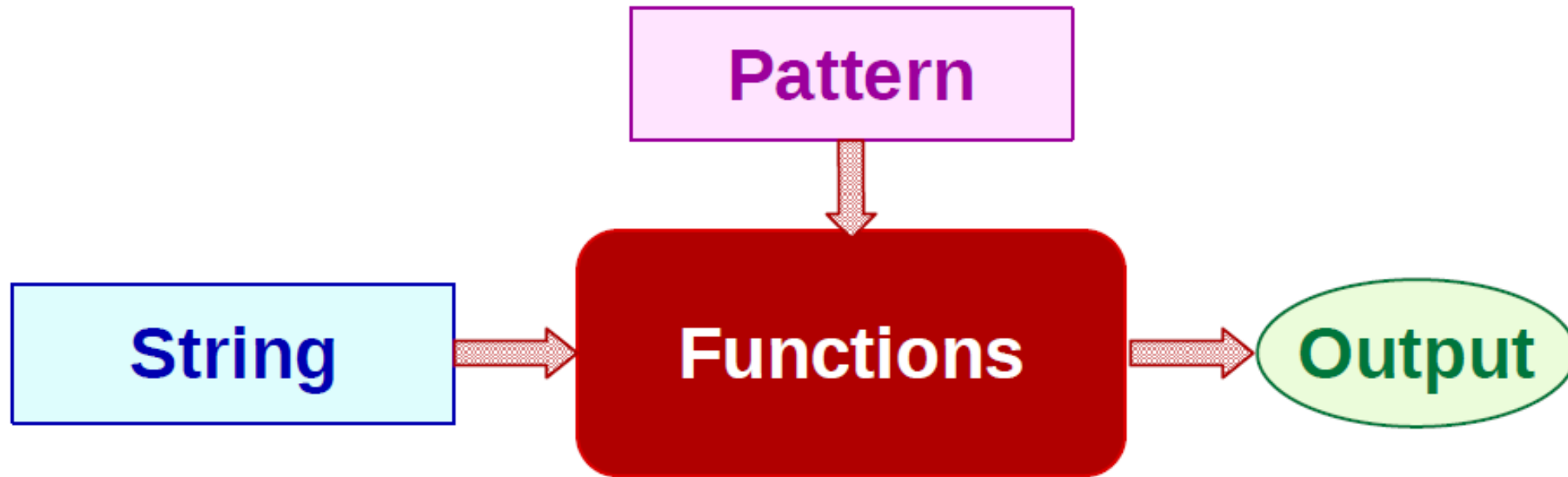**Dr Rasha**   **Eng. Rana**   **Eng. Gehad**

Regular Expression

- A **regular expression** is a sequence of characters that forms a search pattern.

- When you search for data in a text, you can use this search pattern to describe what you are searching for.

Regular Expression System

Pattern

String → Functions → Output

Match begin ^ / end of String $

Caret "^"

- **Check if a string starts with a certain character.**

Expression	String	Matches	Comments
^A	Ahmed Amin	Ahmed Amin	One Match
^A	Maher Ahmed	Maher Ahmed	No Match
^Ah	Ahmed Amin	Ahmed Amin	One Match
^Ah	Amin	Amin	No Match
^Ah	ahmed Amin	ahmed Amin	No Match

Dollar "$"

- **Check if a string ends with a certain character.**

Expression	String	Matches	Comments
h$	Sarah	Sara**h**	One Match
h$	Sarah Samir	No Match	Not at the end
ed$	Khaled	Khal**ed**	One Match
ed$	Shahd	No Match	Should match TWO Chars

Matched Characters / Patterns

Square Brackets "[ ]"

- **specifies a set of characters to match.**

Expression	String	Matches	Comments
[abc]	Sat	Sat	One Match
st[abc]r	star	star	Match
st[abc]r	store	No Match	There is no "a"/"b"/"c"
C[0123456789]Z	C3Z	C3Z	Match
C[0123456789]Z	C34Z	No Match	ONE Numeral Only

Square Brackets "[ ]"

Expression	String	Matches	Comments
t[a-z]r	tor	tor	One Match
t[a-z]r	tOr	No Match	"O" does not match "o"
t[a-f]r	tor	No Match	"O" is not in the range "a-f"
[0-39]	3	3	Match
A[0-39]	A39	A39	[0-39] matches {0,1,2,3,9}

Square Brackets "[ ]"

- **[^] matches Any Char EXCEPT ALL those defined inside Brackets**

Expression	String	Matches	Comments
t[^abc]r	tor	tor	"o" is not in exception list
t[^abc]r	tar	No Match	"a" is in the exception list
t[^a-zA-Z]r	t3r	t3r	Match any Number (no alphabet)
t[^a-zA-Z]r	t34r	No Match	one numeral Only
t[^a-z][^0-9]r	t3kr	t3kr	"t" then Num,Alphabet, then "r"
9[^a-z][^a-z]7	9AB7	9AB7	Matches **TWO** Alphabets Only

Period "."

- **period matches any single character.**

Expression	String	Matches	Comments
a.b	azb	azb	Match
a.b	a3b	a3b	Match
a.b	axyb	No Match	Matches Single char only
a...b	a123b	a123b	Match
a...b	a12b	No Match	

Alternation [OR] "|"

- **Match the string before "|" OR the string After it.**

Expression	String	Matches	Comments
a|b	ade	**a**de	Match
hamid|nasr dr	hamid nasr samir	**hamid** nasr samir	Match
hamid|nasr dr	hamad nasr dr	hamad **nasr dr**	Match
hamid|nasr dr	hamid nasr dr	**hamid nasr dr**	Two Matches
hamid|nasr dr	hamod nasr	No Match	

Match Number of Occurrence

Star "*"

- matches zero or more occurrences of the Char/Pattern (at the left of "*")

Expression	String	Matches	Comments
ma*n	mn	mn	"a" is repeated >=0 times
ma*n	man	man	Match
ma*n	maaaaan	maaaaan	Match
ma*n	woman	woman	Match
ma*n	can	No Match	
ma*n	Performance	Performance	Match

Plus "+"

- **matches One or more occurrences of the Char/Pattern (at the left of "+")**

Expression	String	Matches	Comments
ma+n	mn	No Match	There is no "a"
ma+n	man	man	Match
ma+n	maaaaan	maaaaan	Match
ma+n	woman	woman	Match
ma+n	can	No Match	
ma+n	Performance	Performance	Match

Question Mark "?"

- **matches Zero or One occurrences** of the Char/Pattern (at the left of "?")

Expression	String	Matches	Comments
ma?n	mn	mn	no "a" is accepted
ma?n	man	man	Match
ma?n	maaaaan	No Match	
ma?n	woman	woman	Match
ma?n	can	No Match	
ma?n	Performance	Performance	Match

Occurrence Count

- **m,n are Min and Max occurrences .**

Expression	String	Matches	Comments
ma{0,2}n	mn	mn	"a" exists Zero time
ma{0,2}n	man	man	Match
ma{0,2}n	maaaaan	No Match	
ma{2}n	woman	No Match	Required 2 occurrences of "a"
ma{0,2}n	can	No Match	
ma{,4}n	Performance	Performance	Any MIN value is accepted

Combination of "Occurrence" count and "Matched Patterns"

Period with Star

Expression	String	Matches	Comments
ma*n	maaan	maaan	a repeated any number of times
m.*n	man	man	any char repeated any number of times
m.*n	men	men	"e" Repeated one time
m.*n	mn	mn	Repeated Zero Times
m.*n	meeeeeen	meeeeeen	"e" Repeated 6 times
m.*n	mean	No Match	"e" repeated one time, "a" ??

Square Brackets with Star

Expression	String	Matches	Comments
m[0-9]*n	m3n	m3n	Accept one numeral
m[0-9]*n	m12345n	m12345n	Accept any number of numerals
m[0-9]*n	mn	mn	Accept ZERO numerals
m[0-9]*n	man	No Match	Alphabet is not accepted
m[^0-9]*n	m12345n	No Match	Numeral are not Accepted
m[^0-9]*n	mABCnn	mABCn	[^0-9] matches "ABCn"

Square Brackets

Expression	String	Matches	Comments
m[0-9]{1,3}n	m3n	m3n	Accept one numeral
m[0-9]{1,3}n	m12345n	No Match	Accept 3 numeral at most then "n"
m[0-9]+n	mn	No Match	Should be at least one Numeral
m[0-9]{1,3}n	man	No Match	Alphabet is not accepted
m[0-9]?n	m12345n	No Match	One Numeral at most
m[0-9]?n	mn	mn	Accept Zero or One Numeral

Grouping "( )"

- **Parentheses ( ) is used to group sub-patterns.**

Expression	String	Matches	Comments
(a|b|c)xz	ab xz	No Match	There is a "space" in between
(a|b|c)xz	abxz	a**bxz**	Match either axz, bxz, cxz
(a|b|c)xz	axz cabxz	**axz** ca**bxz**	Two matches
(ab|cd)xy	abxyabvxycdxycdfxy	**abxy**abvxy**cdxy**cdfxy	Two matches

```php
<?php
    $var = "My name is Mohamed";
    $pattern = "/Mohamed/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<?php
    $var = "My name is Mohame";
    $pattern = "/Mohamed*/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<?php
    $var = "My name is Mohameddddddd";
    $pattern = "/Mohamed*/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<?php
    $var = "My name is Mohamed";
    $pattern = "/Mohamed?/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<?php
    $var = "My name is Mohame";
    $pattern = "/Mohamed?/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<?php
    $var = "My name is Moham";
    $pattern = "/Mohamed?/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is False

```php
<?php
    $var = "My name is Moham";
    $pattern = "/(A|e)/";

    if (preg_match($pattern,$var))
    {
        echo "The Matching is True";
    }
    else
    {
        echo "The Matching is False";
    }
```

The Matching is True

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: re
Password:
Email:
Submit

The username is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: Rana
Password:
Email:
Submit

The username is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: rana
Password:
Email:
Submit

The username is Ture

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: rana mohamed
Password:
Email:
Submit

The username is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: ranamohamed_mohamed
Password:
Email:
Submit

The username is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="password" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">
</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching Username
    $allow = "/^[a-z0-9_-]{3,16}$/";
    if (preg_match($allow, $username))
    {
        echo "The username is Ture";
    }
    else
    {
        echo "The username is False";
    }
?>
```

Username: rana_mohamed
Password:
Email:
Submit

The username is Ture

```html
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">
</form>
```

```php
<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    $allowpass = "/^[a-z0-9_-]{6,18}$/";
    if (preg_match($allowpass, $password))
    {
        echo "The password is Ture";
    }
    else
    {
        echo "The password is False";
    }
?>
```

Username: [   ]
Password: [12345   ]
Email: [   ]
Submit

The password is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    $allowpass = "/^[a-z0-9_-]{6,18}$/";
    if (preg_match($allowpass, $password))
    {
        echo "The password is Ture";
    }
    else
    {
        echo "The password is False";
    }
?>
```

Username: [   ]
Password: [12345rana]
Email: [   ]

Submit

The password is Ture

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    // rana@gmail.com
    $allowemail = "/^([a-z0-9_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/";

    if (preg_match($allowemail, $Email))
    {
        echo "The Email is Ture";
    }
    else
    {
        echo "The Email is False";
    }
?>
```

Username: [   ]
Password: [   ]
Email: [rana@gmail.com   ]

Submit

The Email is Ture

```
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">
</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    // rana@gmail.com
    $allowemail = "/^([a-z0-9_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/";

    if (preg_match($allowemail, $Email))
    {
        echo "The Email is Ture";
    }
    else
    {
        echo "The Email is False";
    }
?>
```

Username: [   ]
Password: [   ]
Email: [r@stud.fci-cu.edu.eg]

Submit

The Email is Ture

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    // rana@gmail.com
    $allowemail = "/^([a-z0-9_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/";

    if (preg_match($allowemail, $Email))
    {
        echo "The Email is Ture";
    }
    else
    {
        echo "The Email is False";
    }
?>
```

Username: [   ]
Password: [   ]
Email: [r@stud.fci-cu.edu.egeeeew]
Submit

The Email is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    // rana@gmail.com
    $allowemail = "/^([a-z0-9_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/";

    if (preg_match($allowemail, $Email))
    {
        echo "The Email is Ture";
    }
    else
    {
        echo "The Email is False";
    }
?>
```

Username: [   ]
Password: [   ]
Email: rana.1234

Submit

The Email is False

```php
<form method = "POST">
    Username:
    <input type="text" name="username">
    <br>
    Password:
    <input type="text" name="password">
    <br>
    Email:
    <input type="text" name="email">
    <br>
    <input type="submit" name="submit">

</form>

<?php
    $username = $_POST["username"];
    $password = $_POST["password"];
    $Email = $_POST["email"];
    // Matching password
    // rana@gmail.com
    $allowemail = "/^([a-z0-9_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/";

    if (preg_match($allowemail, $Email))
    {
        echo "The Email is Ture";
    }
    else
    {
        echo "The Email is False";
    }
?>
```

Username: [ ]
Password: [ ]
Email: rana.9237.gabr@gmail.com
Submit

The Email is Ture