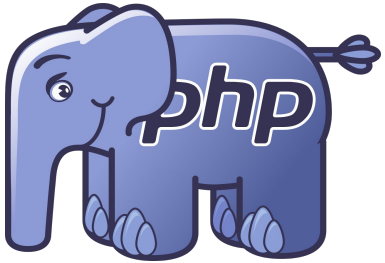
Information Technology Institute



Day03

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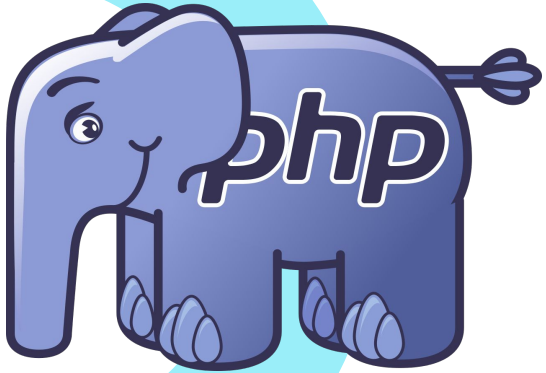
Agenda

- String Manipulations
- Regular expressions
- Uploading files
- Sessions
- Cookies

String Manipulation



Popular functions

- Trim white spaces
  - **trim(), ltrim(), rtrim()===chop()**
- Applying some more sophisticated formatting
  - **printf(), sprintf() , nl2br()**
- Format the string into upper or lower cases
  - **Strtoupper(), strtolower(), ucfirst() anducwords().**
- Formatting string to storage
  - **addslashes() andstripslashes()**

Popular functions

- Join, Split strings
  - **Explode, implode, join**
- Comparing strings
  - **strcmp(), strcasecmp()**
- Search string:
  - **strstr (), strchr(), and stristr()**
- String position:
  - **strpos (), strrpos () and stripos**
- String replacement:
  - **str_replace(), md5(), ord() str_repeat()**

Trim function examples

```php
$text = "\t\tThese are a few words :) ...  ";
var_dump($text);
$trimmed = trim($text);
var_dump($trimmed);
```

```
StringManuplation.php:14:string '		These are a few words :) ...  ' (length=32)

StringManuplation.php:16:string 'These are a few words :) ...' (length=28)
```

```php
$text = "\t\tThese are a few words :) ...  ";
var_dump($text);
$trimmed = trim($text, "\tThe");
var_dump($trimmed);
```

```
StringManuplation.php:14:string '		These are a few words :) ...  ' (length=32)

StringManuplation.php:16:string 'se are a few words :) ...  ' (length=27)
```

Sophisticated formatting

- nl2br(): Returns string with
 or
 inserted befo re all newlines (\r\n, \n\r, \n and \r)

```php
$str="You came
to me
in that hour
 of need";
echo($str."<br>");
echo "<h2> After applying the function </h2>";
echo(nl2br($str));
```

You came to me in that hour of need

After applying the function

You came
to me
in that hour
of need

Sophisticated formatting

- Printf("pattern",$string)

```
$txt="welcome to day3 in php";
printf("[%'#10s]\n",$txt); // standard string output
```

[welcome to day3 in php]

- Sprintf()

```
$num = 5;
$location = 'tree';
$format = 'There are %d monkeys in the %s';
echo sprintf($format, $num, $location);
```

There are 5 monkeys in the tree

String into upper or lower cases

- ucfirst ():
  - Capitalizes first character of string if it is alphabetic.
- Ucwords:
  - Capitalizes first character of each word in the string that begins with an alphabetic character.

```php
$string= "welcome to iti";
echo strtoupper($string)."</br>";
echo strtolower($string)."</br>";
echo ucfirst($string)."</br>";
echo ucwords($string)."</br>";
```

WELCOME TO ITI
welcome to iti
Welcome to iti
Welcome To Iti

Formatting string to storage

- Some strings can have quotation marks single or double, slash es and null char so you need to escape these chars, some dbms doesn't accept special chars, you can overcome this using **addslashes (), stripslashes().**

```php
$str = "What's your name?";
$newString=addslashes($str);
echo $newString . "<br>";
/// so it can be enterpreted in the databas
#stripslashes
echo stripslashes($newString) . "<br>";
```

What's your name?
What\'s your name?
What's your name?

Joining and splitting a string

- Implode: joins the array elements into one string, sperate them with a delimiter if it is specified.

```php
$InputArray = array('OS','Application','Track');
// Join without separator
print_r(implode($InputArray));
echo "<br>";
// Join with separator
print_r(implode("-",$InputArray));
echo "<br>";
print_r(join("_",$InputArray));
echo "<br>";
```

OSApplicationTrack

OS-Application-Track

OS_Application_Track

Joining and splitting a string

- explode():This function takes a string input and splits it into pieces on a specified separator string.
  - The pieces are returned in an array .
  - You can limit the number of pieces with the optional limit parameter

```php
$str="I love coffee so much";
$arrstr=explode(" ",$str);

var_dump($arrstr);
$arrstr1=explode(" ",$str,2);
var_dump($arrstr1);
```

```
array (size=5)
  0 => string 'I' (length=1)
  1 => string 'love' (length=4)
  2 => string 'coffee' (length=6)
  3 => string 'so' (length=2)
  4 => string 'much' (length=4)
```

```
array (size=2)
  0 => string 'I' (length=1)
  1 => string 'love coffee so much' (length=19)
```

Joining and splitting a string

- Splitting string using strtok(): strtok () gets pieces (called tokens) from a string one at a time.

```php
$string = "My name is Noha, I works at ITI";
$tok = strtok($string, " ");
while ($tok !== false) {
    echo "Word=$tok<br/>";
    $tok = strtok(" \n\t");
}
```

Word=My
Word=name
Word=is
Word=Noha,
Word=I
Word=works
Word=at
Word=ITI

Joining and splitting a string

- Splitting string using substr($str, offset, limit):substr —— Return part of a string.

```php
$phptxt="PHP is simple";
echo substr($phptxt,1); //  HP is simple
```

```php
echo substr($phptxt,1,5); //  "HP is"
```

- Can accept negative offsets

```php
echo substr($phptxt,-2); //  "le"
```

Comparing strings

- Strcmp:

```php
$var1 = "Hello";
$var2 = "hello";
if (strcmp($var1, $var2) !== 0) {
    echo '$var1 is not equal to $var2 in
    a case sensitive string comparison';
}
```

- Strcasecmp

```php
$var1 = "Hello";
$var2 = "hello";
if (strcasecmp($var1, $var2) !== 0) {
    echo '$var1 is equal to $var2 in
    an incase sensitive string comparison';
}
```

String length, Searching

- Strlen():

```php
$str="Welcome to php";
var_dump(strlen($str));  //int 14
```

- **strstr() ===strchr()** can be used to find a string or character match within a longer string.

```php
$email  = 'name@example.com';
$domain = strstr($email,'@');
echo $domain."<br>";
```

- If the string is found, the function returns with a string started from the pattern needed to be found to the end of the string

@example.com

String hashing functions

- md5()

```php
Calculate the md5 hash of a string
  $string = 'Hello World!';
  $testt= md5($string);
  echo($testt)."<br>";
```

ed076287532e86365e841e92bfc50d8c

- ord():Convert the first byte of a string to a value between 0 and 255

```php
echo(ord("Noha"))."<br>";    // 78
```

- Str_repeat,shuffle

```php
echo str_repeat("iti ", 5)."<br>";
$str = 'abcdef';
echo str_shuffle($str)."<br>";
```

iti iti iti iti iti
befdac

String replace functions,

- str_replace(),

```php
$vowels = array("a", "e", "i", "o", "u", "A", "E", "I", "O", "U");
$onlyconsonants = str_replace($vowels, "", "Hello World of PHP");
echo $onlyconsonants."<br>";
```

Hll Wrld f PHP

- substr_replace (string)

```php
$input = array('A: XXX', 'B: XXX', 'C: XXX');
$input=substr_replace($input, 'YYY', 3, 3);
var_dump($input);
echo implode('; ', $input);
```

A: YYY; B: YYY; C: YYY

Regular expressions

- PHP offers functions specific to two sets of regular expression functions, each corresponding to a certain type of regular expression. You can use any of them based on your comfort.

    - POSIX Regular Expressions
    - PERL Style Regular Expressions

Regular expressions (POSIX)

- A regular expression is a way of describing a pattern in a piece of text. (POSIX Syntax)
- Wild characters:
  - **. (DOT): matches single character.**
    - Ex .at will match cat rat hat ... or #at
  - **To match a character class, we use [az]**
    - Ex [a z]at will match letters only as hat rat cat NOT #at or $at

Regular expressions

- Common patterns
  - Get all words that contain any vowel: [aeiou]
  - [azA Z]
  - [^az] Not contain
  - [az]* can be repeated zero or more times.
  - [az]+ can be repeated one or more times.
  - ^[AZ] beginning with
  - [AZ]$ Ending by

PHP and regular expressions

- preg_ match (): function can be used to parse string using regular expression.
- To validate strings, like emails, passwords, user_names and others.

```php
# example:
$email='nshehab@iti.gov.eg';
$pattern="/^([a-z0-9\+_\-]+)(\.[a-z0-9\+_\-]+)*@([a-z0-9\-]+\.)+[a-z]{2,6}$/ix";
if(preg_match($pattern,$email)){
    echo "<br>".'well formed';
}else{
    echo "<br>".'not well formed';
}
```

well formed

PHP and regular expressions

- preg_ match (): function can be used to parse string using regular expression.
- Returns with the string if it matches the pattern specified, else returns with false.

```php
# example:
$email='nshehab@iti.gov.eg';
$pattern="/^([a-z0-9\+_\-]+)(\.[a-z0-9\+_\-]+)*@([a-z0-9\-]+\.)+[a-z]{2,6}$/ix";
if(preg_match($pattern,$email)){
    echo "<br>".'well formed';
}else{
    echo "<br>".'not well formed';
}
```

well formed

PHP and regular expressions

- preg_ match_all(“pattern”,$string,$outputArray):
  - Searches $string for all matches to the regular expression given in pattern and puts them in $outputArray.

```php
$str = "The rain in SPAIN falls mainly on the plains.";
    #pattern inside // , i for ignoring case
$pattern = "/ain/i";
if(preg_match_all($pattern, $str, $matches)) {
    print_r($matches);
}
```

```
Array ( [0] => Array ( [0] => ain [1] => AIN [2] => ain [3] => ain ) )
```

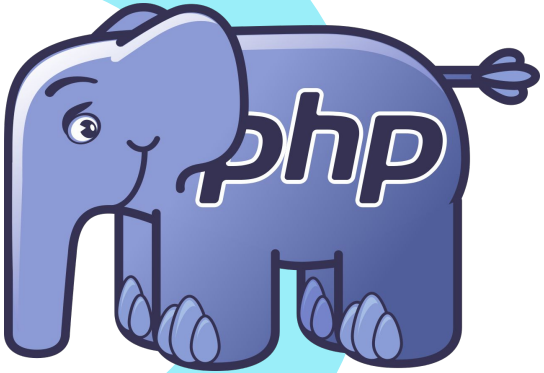
PHP and regular expressions

- Filtervar():

```php
$email="nohashehab.iti@gmail.com";
if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
    $emailErr = "Invalid email format";
}else{
    echo "<br>".'Checked by php functions and well formed';
}
```

Checked by php functions and well formed

File uploading



File uploading to PHP server

- You can control uploading files to your website via setting some parameters in php.ini
  - You need to restrict/ allow uploading files like
    - file_uploads = On
    - max_file_size or what like it

HTML Part

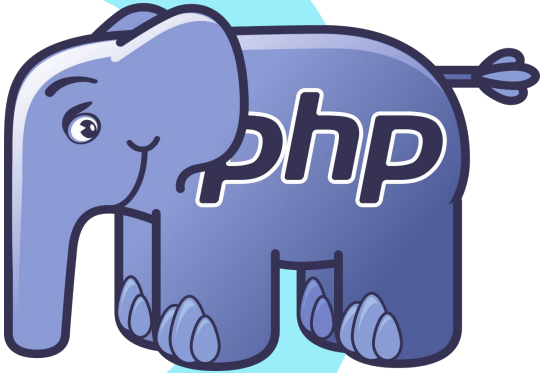
- **HTML Part: Files are uploaded to the servers using POST method only.**

```
<form action="uploadingfiles.php" method="POST"
      enctype="multipart/form-data">
    <h1>Please choose your file </h1>
    <label>File </label>
    <input type="file" name="file" />
    <input type="hidden" name="MAX_FILE_SIZE" value="1000000"/>
    <input type="text" name="opensource"/>
    <input type="submit"/>
</form>
```

PHP Part

```php
if(isset($_FILES['file'])){
     $errors= array();
    // var_dump($_FILES);
    $file_name = $_FILES['file']['name'];
    $file_size =$_FILES['file']['size'];
    $file_tmp =$_FILES['file']['tmp_name'];
    $file_type=$_FILES['file']['type'];
    // get file extension
    $ext=explode('.',$_FILES['file']['name']);
    $file_ext=strtolower(end($ext));
    // or
    $ext= pathinfo($file_name)["extension"];
    $extensions= array("jpeg","jpg","png","pdf","doc","txt","csv");
    if(in_array($file_ext,$extensions)=== false){
       $errors[]="extension not allowed, please choose a JPEG or PNG
file.";
    }
    if($file_size > 2097152){
        $errors[]='File size must be excately 2 MB';
    }
    if(empty($errors)==true){
        move_uploaded_file($file_tmp,"files/".$file_name);
        echo "Success";
    }else{
        print_r($errors);
    }
```

Sessions and cookies



Http Protocol

- HTTP
  - HTTP is a stateless protocol . This means that the protocol has no built in way of maintaining state between two transactions.

  - When a user requests one page, followed by another, HTTP does not provide a way for you to tell that both requests came from the same user.

Sessions

- Sessions
  - The idea of session control is to be able to track a user during a single session on a website.
  - If you can do this, you can easily support logging in a user and showing content according to her authorization level or personal preferences.

Session control in PHP

- Sessions in PHP are driven by a unique session ID , a cryptographically random number.
- This session ID is generated by PHP and stored on the server side for the lifetime of a session.
- It can be either stored on a user's computer in a cookie or passed along through URLs.

Session control in PHP

- The basic steps of using sessions are
  - Starting a session
  - Registering session variables
  - Using session variables
  - Deregistering variables and destroying the session

Starting sessions in PHP

- session_start()
  - It s essential to call session_start () at the start of all your scripts that use sessions.
  - If this function is not called, anything stored in the session will not be available to this script.
- you can begin a session automatically by setting PHP to start one automatically by setting **session.auto_start** option in your php.ini file.

Starting sessions in PHP

```php
#sent file

# 1- start session
session_start();
#PHPSessionID for each user , cookie
echo "Welcome to the server";

# use $_SESSION to store variables
$_SESSION["username"]= "Noha";
$_SESSION["course"]="PHP";
$_SESSION["msg"]="Goodmorning";
```

```php
session_start();
var_dump($_SESSION);
// remove the session variable
unset($_SESSION["msg"]);
session_destroy();
```

Starting sessions in PHP

- When you are finished with a session, you should first unset all the variables
    - $_SESSION = array();

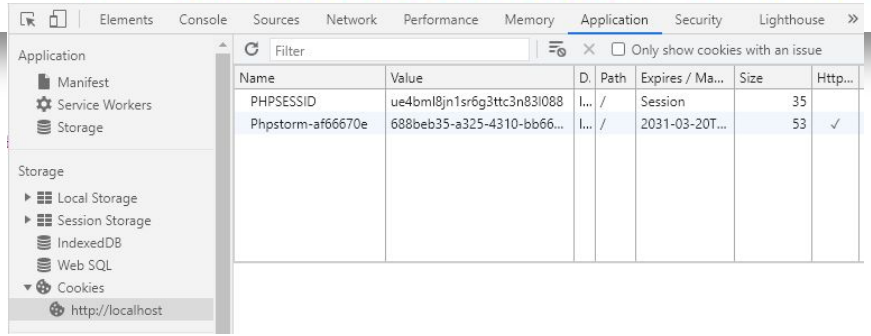
- Call session_destroy() to clean up the session ID.

Session and cookies

- Session is a place on server to store info about user.
- And cookie is a place on the #user machine that can hold info to identify the user.
- Session_Id is stored in the browser in a cookie...

```
var_dump($_COOKIE);
```

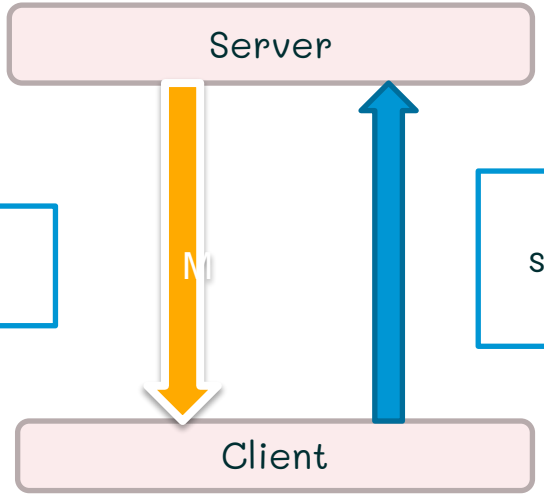
```
array (size=2)
  'Phpstorm-af66670e' => string '688beb35-a325-4310-bb66-09d0ec706578' (length=36)
  'PHPSESSID' => string 'ue4bml8jn1sr6g3ttc3n831088' (length=26)
```



Cookies

- A cookie is a small piece of information that scripts can store on a client side machine.
- Cookie life cycle
  - There are no cookies when the browser connects to server for first time
  - When the request is made to the PHP script, the script makes a call to the setcookie() function
  - This causes a Set-Cookie HTTP header to be sent in the response that contains the name and value of the cooki to be set.

Cookies



1- server request setting cookies

The next time you request the server, the server will access the cookies

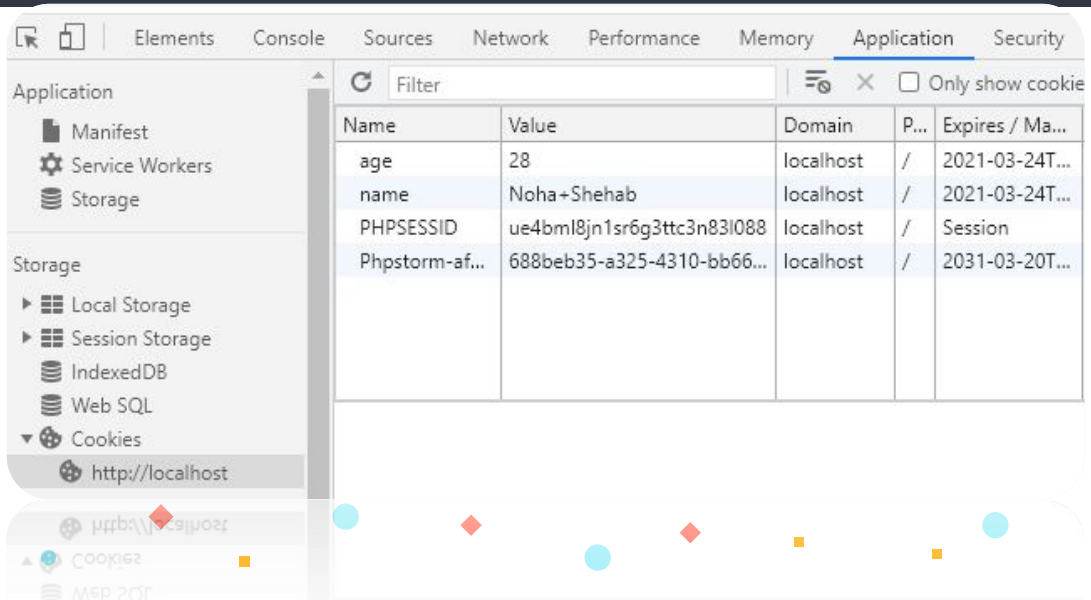
2- cookie is set now on the client

Cookies

- A cookie is a small piece of information that scripts can store on a client side machine.
- Cookie life cycle
  - There are no cookies when the browser connects to server for first time
  - When the request is made to the PHP script, the script makes a call to the setcookie() function
  - This causes a Set-Cookie HTTP header to be sent in the response that contains the name and value of the cooki to be set.

Cookies

```
#    #one cookie has one value
#1- set cookies
     setcookie("name", "Noha Shehab", time()+3600, "/","", 0);
     setcookie("age", "28", time()+3600, "/", "",  0);
    var_dump($_COOKIE);
```



Cookies

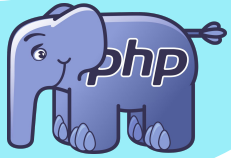
```php
#3- get cookies
 if (isset($_COOKIE["name"])){
     echo "welcome ".$_COOKIE["name"]. "<br />";
     setcookie( "name", "", time()- 60, "/","", 0);

 }else{
     echo 'no name cookie here'. "<br />";
 }

 if (isset($_COOKIE["age"])){
     echo "Your age is ".$_COOKIE["age"]. "<br />";
     setcookie( "age", "", time()- 60, "/","", 0);

 }else{
     echo 'no age cookie here'. "<br />";
 }
```

Lab 03



- 1-Implement the form in php
- 2-Apply the validation on the email field on the php side using 2 ways
- 3- Room number should be a drop down that contains ‘Application1, Application2 and cloud)
- 4-Upload a profile picture and ensure that is a photo

Lab 03

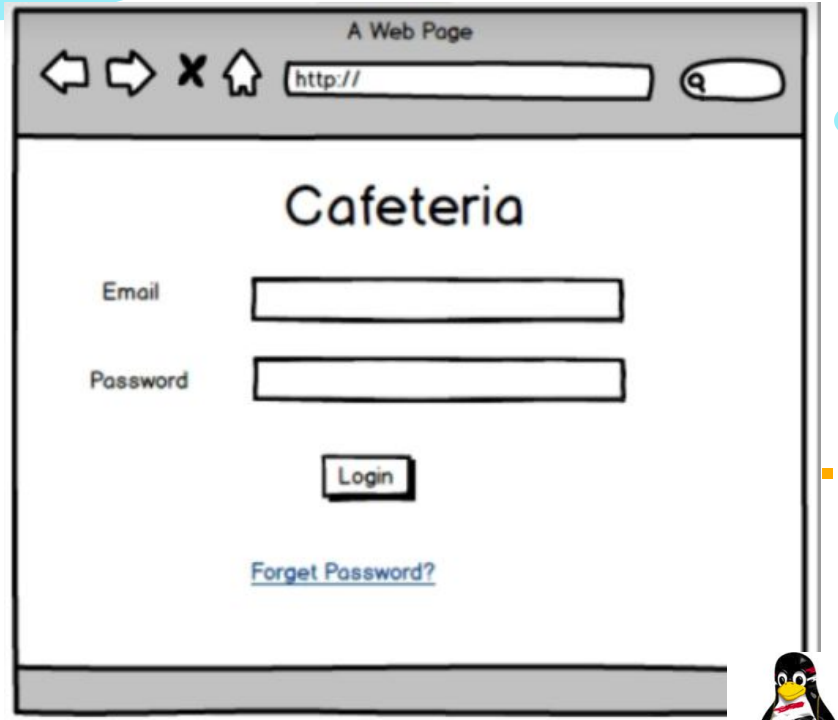
- Once the user submit his info, you should store it in a file called users.
- Create a login page with username and password ((check valid login data from the file))
- Once the user logged in, start a session and display a welcome message to him.

Bonus: add validation to the password field,

a.Only 8 chars

b.Doesn't allow special chars -only underscore allowed

c. Doesn't accept Capital characters



Thanks ^^

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