# Data Access using PHP



Course Code: **CSC 3215** Course Title: WEB TECHNOLOGIES

Dept. of Computer Science Faculty of Science and Technology

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## Lecture Outline



- 1. Learning outcome
- 2. Data Access using PHP
  - Data Read / Write in text file
  - II. PHP SimpleXML Read /write in xml File
- 3. PHP Include Files
- 4. Upload File in PHP
- 5. Books and References

# Learning outcome

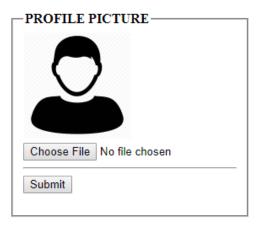


- In this lecture, we will learn read/write data using PHP.
- Discussing the techniques to read and write text files, XML and JSON using PHP script.
- We will also learn, PHP "include function" to add script to the other PHP script and file upload techniques in server.

# Upload File in PHP



· Suppose we want to upload profile picture or any kind of file.





### **Upload script**

- There is one global PHP variable called \$\_FILES. This variable is an associate double dimension array and keeps all the information related to uploaded file.
- **\$\_FILES['myfile']['tmp\_name']** the uploaded file in the temporary directory on the web server.
- **\$\_FILES['myfile']['name']** the actual name of the uploaded file.
- **\$\_FILES['myfile']['size']** the size in bytes of the uploaded file.
- **\$\_FILES['myfile']['type']** the MIME type of the uploaded file.
- **\$\_FILES['myfile']['error']** the error code associated with this file upload.
- The following code upload file.
- move\_uploaded\_file(\$\_FILES["myfile"]["tmp\_name"], "images/".\$\_FILES["myfile"]["name"])

## **JSON**



- A JSON file is a file that stores simple data structures and objects in JavaScript Object Notation (JSON) format, which is a standard data interchange format.
- It is primarily used for transmitting data between a web application and a server. JSON files are lightweight, textbased, human-readable, and can be edited using a text editor.

## JSON vs XML

#### Similarities:

- Both JSON and XML are "self describing" (human readable)
- Both JSON and XML are hierarchical (values within values)
- Both JSON and XML can be parsed and used by lots of programming languages
- Both JSON and XML can be fetched with an XMLHttpRequest

#### Differences:

- JSON doesn't use end tag
- JSON is shorter
- JSON is quicker to read and write
- JSON can use arrays



```
JSON Example (employee.json)
{"employees":[
  { "firstName":"John", "lastName":"Doe" },
 { "firstName": "Anna", "lastName": "Smith" },
 { "firstName": "Peter", "lastName": "Jones" }
]}
XML Example (employee.xml)
<employees>
 <employee>
      <firstName>John</firstName> <lastName>Doe</lastName>
 </employee>
  <employee>
    <firstName>Anna</firstName> <lastName>Smith</lastName>
  </employee>
  <employee>
    <firstName>Peter</firstName> <lastName>Jones</lastName>
  </employee>
</employees>
```

# JSON Data Types



```
a string { "name":"John" }
a number { "age":30 }

    an object (JSON object)

      "employee":{ "name":"John", "age":30, "city":"New
York" }
 an array { "employees":[ "John", "Anna", "Peter" ] }
 a Boolean { "sale":true }
Null { "middlename":null }
```

## PHP JSON Functions

- json\_encode() The json\_encode() function is used to encode a value to JSON format.
- json\_decode() The json\_decode() function is used to decode or convert a JSON object to a PHP object.
- file\_put\_contents() The file\_put\_contents() writes data to a file.
- file\_get\_contents() The file\_get\_contents() reads a file into a string.



### **JSON Write Example**

```
//myform.php
<?php include "control/process.php"; ?>
<!DOCTYPE html>
<html>
<body>
<form action="" method="POST">
  First name:<br>
  <input type="text" name="firstName">
  <br/>
<br/>
  Last name:<br>
  <input type="text" name="lastName">
  <br><br><
  Email:<br>
  <input type="text" name="email">
  <br><br><
  Mobile:<br>
  <input type="text" name="mobile">
  <br><br><
  <input type="submit" value="Submit">
</form>
</body>
```

### **JSON Write Example**



```
process.php
<?php
        //Get form data
       $formdata = array(
          'firstName'=> $ POST['firstName'],
          'lastName'=> $_POST['lastName'],
          'email'=>$ POST['email'],
          'mobile'=> $ POST['mobile']
       );
        //Convert array to JSON
       $jsondata = json encode($formdata, JSON PRETTY PRINT);
       //write json data into data.json file
       if(file_put_contents("data.json", $jsondata)) {
            echo 'Data successfully saved';
       else
            echo "no data saved";
```



### **JSON Read Example**

#### **Books**



- W3Schools Online Web Tutorials; URL: <a href="http://www.w3schools.com">http://www.w3schools.com</a>
- PHP Documentation; URL: <a href="http://www.php.net/docs.php">http://www.php.net/docs.php</a>
- Sams Teach Yourself Ajax JavaScript and PHP All in One; Phil Ballard and Michael Moncur; Sams Publishing; 2010
- JavaScript Phrasebook; Christian Wenz; Sams Publishing; 2007
- PHP and MySQL Web Development, 4/E; Luke Welling and Laura Thomson; Addison-Wesley Professional; 2009
- JavaScript for Programmers Paul J. Deitel and Harvey M. Deitel; Prentice Hall; 2009
- Beginning PHP5, Apache, and MySQL Web Development; Elizabeth Naramore, Jason Gerner, Yann Le Scouarnec, Jeremy Stolz and Michael K. Glass; Wiley Publishing; 2005
- XML in a Nutshell, 3/E; Elliotte Rusty Harold and W. Scott Means;
   O'Reilly Media; 2004

#### References



- 1. <a href="http://www.kodecrash.com/javascript/read-write-json-file-using-php/">http://www.kodecrash.com/javascript/read-write-json-file-using-php/</a>
- 2. <a href="https://gist.github.com/recked/7329961">https://gist.github.com/recked/7329961</a>
- 3. <a href="https://www.kodingmadesimple.com/2016/05/how-to-write-json-to-file-in-php.html">https://www.kodingmadesimple.com/2016/05/how-to-write-json-to-file-in-php.html</a>
- 4. <a href="https://code.tutsplus.com/tutorials/how-to-upload-a-file-in-php-with-example--cms-31763">https://code.tutsplus.com/tutorials/how-to-upload-a-file-in-php-with-example--cms-31763</a>
- 5. <a href="https://www.tutorialrepublic.com/php-tutorial/php-file-upload.php">https://www.tutorialrepublic.com/php-tutorial/php-file-upload.php</a>