

# Data Access using PHP

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Course Title: WEB TECHNOLOGIES



**Dept. of Computer Science**  
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# Lecture Outline



- 1. Learning outcome**
- 2. Data Access using PHP**
  - I. 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.

PROFILE PICTURE



Choose File No file chosen

Submit

```
<form action="upload.php" method="post" enctype="multipart/form-data">
```

Select image to upload:

```
<input type="file" name="myfile">
```

```
<input type="submit" value="Upload Image" name="submit">
```

```
</form>
```



## 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, text-based, 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

```
$str_data = file_get_contents("data.json");
    $data = json_decode($str_data,true);
    foreach($data as $mydata){
        foreach($mydata as $key=>$value)
        {
            echo $key . " is " . $value . "<br>";
        }
    }
//or
    var_dump( $data );
```



# Books

- W3Schools Online Web Tutorials; URL: <http://www.w3schools.com>
- PHP Documentation; URL: <http://www.php.net/docs.php>
- 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. <http://www.kodecrash.com/javascript/read-write-json-file-using-php/>
2. <https://gist.github.com/recked/7329961>
3. <https://www.kodingmadesimple.com/2016/05/how-to-write-json-to-file-in-php.html>
4. <https://code.tutsplus.com/tutorials/how-to-upload-a-file-in-php-with-example--cms-31763>
5. <https://www.tutorialrepublic.com/php-tutorial/php-file-upload.php>