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Batch: E3

Experiment 8

Aim: a.Write a JavaScript program for a AJAX.
b. Write a program to use AJAX for user validation using and to show the result on the same page below the submit button.
c. Design and develop small web application using AJAX, HTML and PHP

Theory:
AJAX is an acronym for Asynchronous JavaScript and XML. It is a group of inter-related technologies like JavaScript, DOM, XML, HTML/XHTML, CSS, XMLHttpRequest etc.
AJAX allows you to send and receive data asynchronously without reloading the web page. So it is fast.
AJAX allows you to send only important information to the server not the entire page. So only valuable data from the client side is routed to the server side. It makes your application interactive and faster.
Ajax is not a technology but group of inter-related technologies.
 AJAX technologies includes:

- HTML
- /XHTML
- and CSS
- DOM
- XML
- or JSON
- XMLHttpRequest
- JavaScript

An object of XMLHttpRequest is used for asynchronous communication between client and server.
It performs following operations:

- Sends data from the client in the background
- Receives the data from the server
- Updates the webpage without reloading it.
- Using simple application in php, will understand the concept of XMLHttpRequest

Create a file **info.php** as shown below
```
<!DOCTYPE html>
<html>
<body>
<div id="demo">
<h1>The XMLHttpRequest Object</h1>
<button type="button" onclick="loadDoc()">Change Content</button>
</div>
<script>
function loadDoc() {
 var xhttp = new XMLHttpRequest();
 xhttp.onreadystatechange = function() {
```

```
    if (this.readyState == 4 && this.status == 200) {
      document.getElementById("demo").innerHTML =
      this.responseText;

    }
  };
  xhttp.open("GET", "ajax_info.txt", true);
  xhttp.send();
}
</script>
</body>
</html>
```
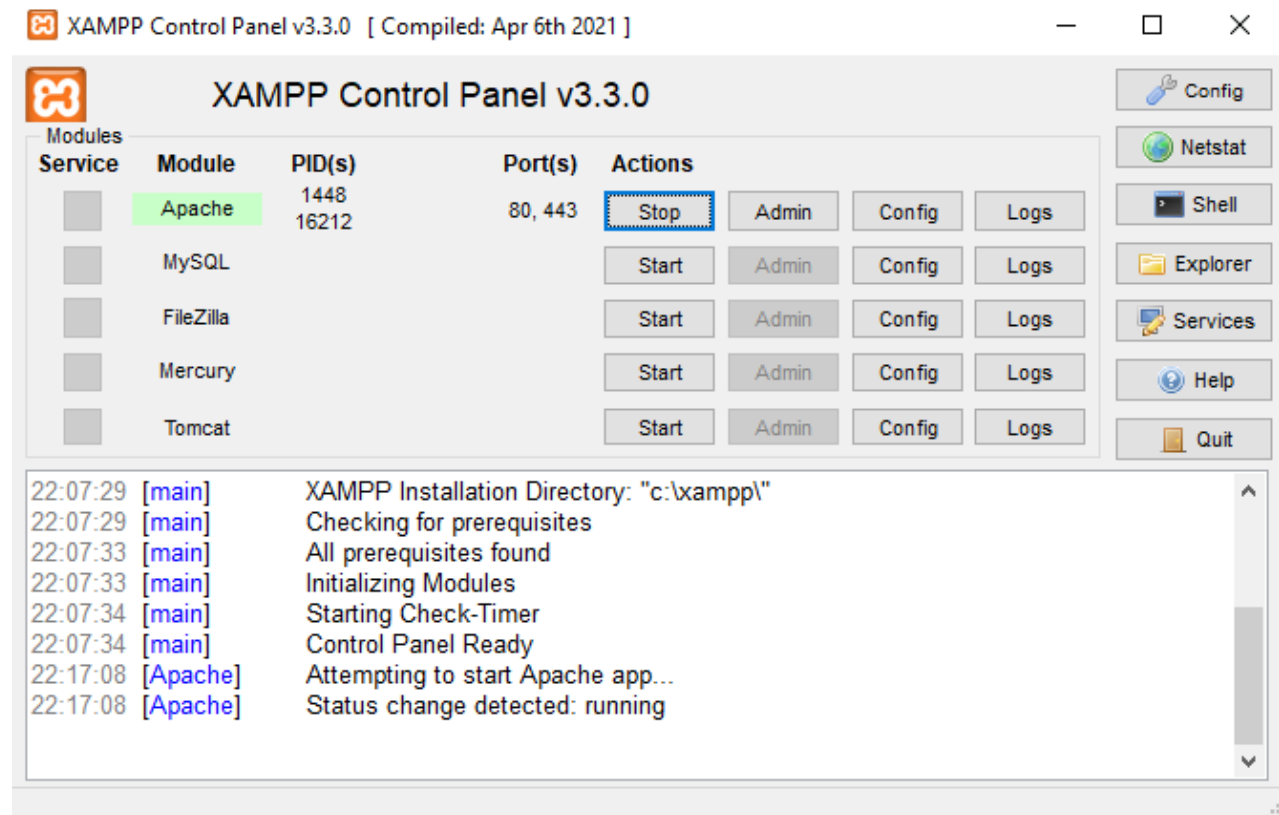
Create a file **ajax_info.txt** which includes as below content shown below
AJAX is not a programming language.
AJAX is a technique for accessing web servers from a web page.
AJAX stands for Asynchronous JavaScript And XML
Click start Apache server in Xampp

example.php

```php
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
<p>Start typing a name in the input field below:</p>
<p>Suggestions: <span id="txtHint"></span></p>

<form>
First name: <input type="text" onkeyup="showHint(this.value)">
</form>

<script>
function showHint(str) {
  if (str.length == 0) {
    document.getElementById("txtHint").innerHTML = "";
    return;
  } else {
    const xmlhttp = new XMLHttpRequest();
    xmlhttp.onload = function() {
      document.getElementById("txtHint").innerHTML = this.responseText;
    }
  xmlhttp.open("GET", "gethint.php?q=" + str);
  xmlhttp.send();
  }
}
</script>
</body>
</html>
```
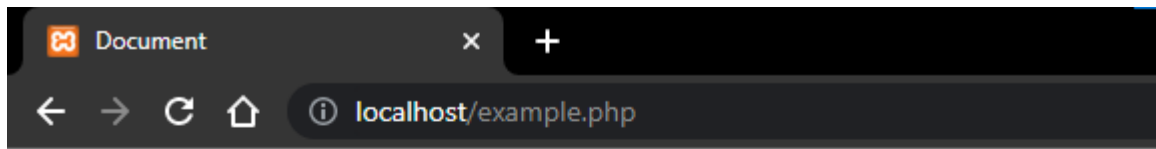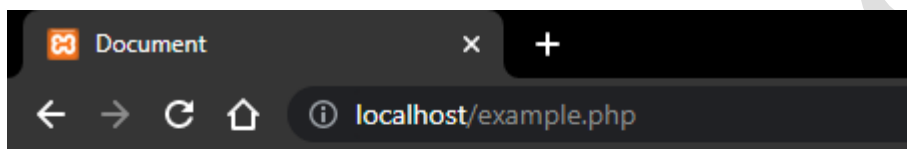
getHint.php

```php
<?php
// Array with names
$a[] = "Anna"; $a[] = "Brittany";
$a[] = "Cinderella"; $a[] = "Diana";
$a[] = "Eva"; $a[] = "Fiona";
$a[] = "Gunda"; $a[] = "Hege";
$a[] = "Inga"; $a[] = "Johanna";
$a[] = "Kitty"; $a[] = "Linda";
$a[] = "Nina"; $a[] = "Ophelia";
$a[] = "Petunia"; $a[] = "Amanda";
$a[] = "Raquel"; $a[] = "Cindy";
$a[] = "Doris"; $a[] = "Eve";
$a[] = "Evita"; $a[] = "Sunniva";
$a[] = "Tove"; $a[] = "Unni";
$a[] = "Violet"; $a[] = "Liza";
$a[] = "Elizabeth"; $a[] = "Ellen";
$a[] = "Wenche"; $a[] = "Vicky";

// get the q parameter from URL
$q = $_REQUEST["q"];
$hint = "";

// lookup all hints from array if $q is different from ""
if ($q !== "") {
  $q = strtolower($q);
  $len=strlen($q);
  foreach($a as $name) {
    if (stristr($q, substr($name, 0, $len))) {
      if ($hint === "") {
        $hint = $name;
      } else {
        $hint .= ", $name";
      }
    }
  }
}
echo $hint === "" ? "no suggestion" : $hint;
?>
```

Run example.php file as below

Conclusion: We have successfully created a web app using php and xampp.