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Experiment 6- PHP

AIM: Create an opinion poll application consisting of following screens. Poll may be regarding any topic other than Javascript library.

THEORY:

What is PHP?

PHP is a server side scripting language. that is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor, that earlier stood for Personal Home Pages. PHP scripts can only be interpreted on a server that has PHP installed.
The client computers accessing the PHP scripts require a web browser only.
A PHP file contains PHP tags and ends with the extension ".php".

Architecture of a PHP Application
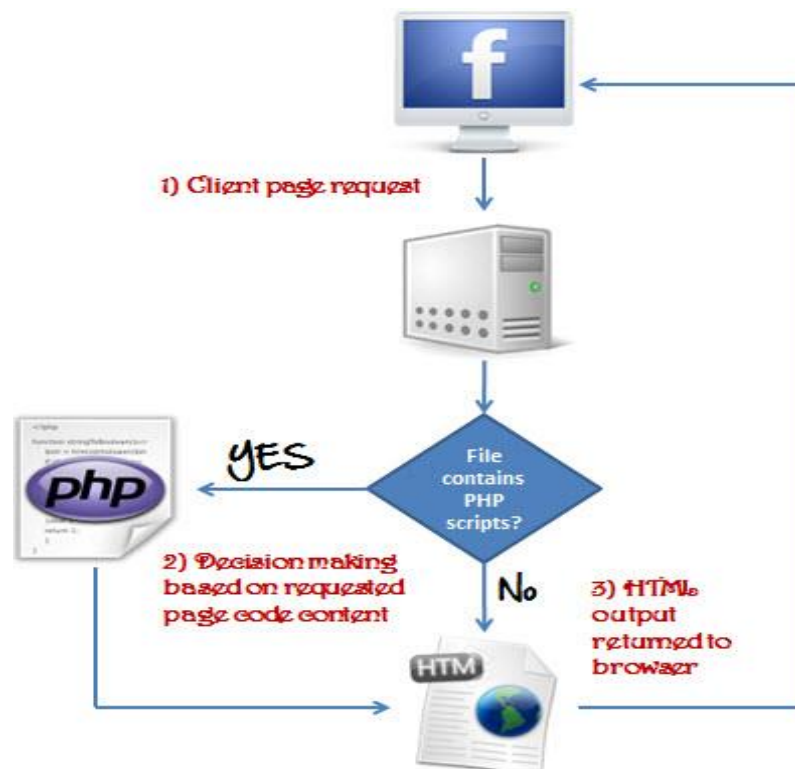
Writing Comments

Like many other languages, PHP also has the ability to add comments. This is important for annotating your code for human readers but in a way that the browser doesn't try to execute it. In PHP, you have several ways for that:

- // — Denotes comments that only span one line
- # — Another way of producing single-line comments
- /*...*/ — Everything between /* and */ is not executed, also works across several lines

Types of Data

Variables can take on different types of data:

- **Integers** — Integers are non-decimal numbers between -2,147,483,648 and ,147,483,647. They must have at least one digit and no decimal point. It can be in decimal, hexadecimal or octal.
- **Floats** — This is the name for numbers with a decimal point or in exponential form.
- **Strings** — This simply means text, we will talk about it in detail further below.
- **Boolean values** — Meaning true/false statements.
- **Arrays** — Arrays are variables that store several values. We will talk about them in detail further below.
- **Objects** — Objects store both data and information on how to process it.
- **Resources** — These are references to functions and resources outside of PHP.
- **NULL** — A variable that is NULL doesn't have any value.

There is no need to declare PHP variables in a certain way. They automatically take on the type of data they contain.

Defining Variables:

To do anything with variables, you first need to define them. In PHP, you denote a variable using the $ sign and assign its value using =. A typical example:

A few important points:

- Variables need to start with a letter or underscore (_) and can only be comprised of alpha-numeric characters
- PHP variables are case sensitive, that means $myVar and $myvar are not the same thing
- If your variable consists of more than one word either write it $my_variable or $myVariable

Predefined Variables

PHP also comes with a number of default variables called *superglobals*. That's because they are accessible from anywhere, regardless of scope.
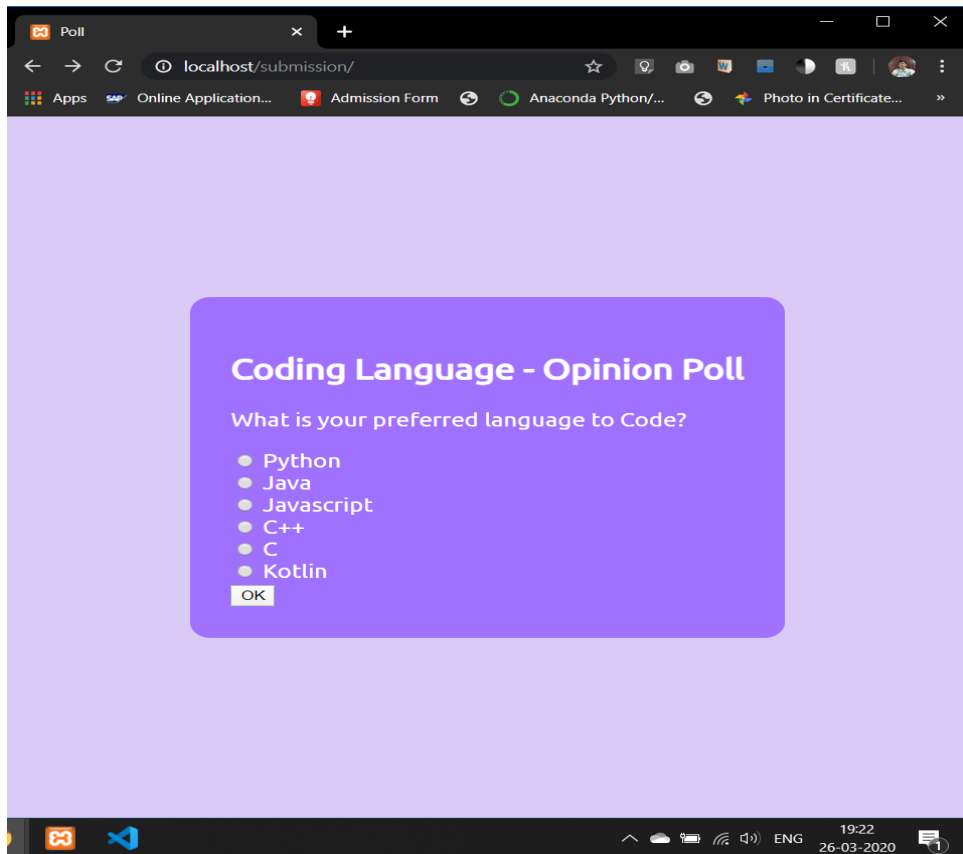
- $GLOBALS — Used to access global variables from anywhere inside a PHP script
- $_SERVER — Contains information about the locations of headers, paths, and scripts
- $_GET — Can collect data that was sent in the URL or submitted in an HTML form
- $_POST — Used to gather data from an HTML form and to pass variables
- $_REQUEST — Also collects data after submitting an HTML form

Code:

Index.php:

```php
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Poll</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <div class="header">
            <h2>
                Coding Language - Opinion Poll
            </h2>

        </div>
        <form action="server.php" method="post">
            <p>What is your preferred language to Code?</p>
            <input type="radio" name="language" id="python" value="python">
            <label for="python">Python</label><br>
            <input type="radio" name="language" id="java" value="java">
            <label for="java">Java</label><br>
            <input type="radio" name="language" id="javascript" value="javascript">
            <label for="javascript">Javascript</label><br>
            <input type="radio" name="language" id="c++" value="c++">
            <label for="c++">C++</label><br>
            <input type="radio" name="language" id="c" value="c">
            <label for="c">C</label><br>
            <input type="radio" name="language" id="kotlin" value="kotlin">
            <label for="kotlin">Kotlin</label><br>
            <button type="submit"> OK </button>
        </form>
    </div>
</body>
</html>
```

Output Screen Shot:

Submission.php:

```php
<?php
    $db = mysqli_connect('localhost','root','','databas_practice');
    if (!$db) {
        die("Failed to connect to MySQL: " . mysqli_connect_error());
    }

    $tcount = 0;
    $python = $java = $javascript = $c = $cpp = $kotlin = 0;

    $tcount = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission"))['count'];
    $python = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'python'"))['count'];
    $java = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'java'"))['count'];
    $javascript = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'javascript'"))['count'];
    $c = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'c'"))['count'];
    $cpp = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'c++'"))['count'];
    $kotlin = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsubmission WHERE name = 'kotlin'"))['count'];

    mysqli_close($db);
?>
<!DOCTYPE html>
```
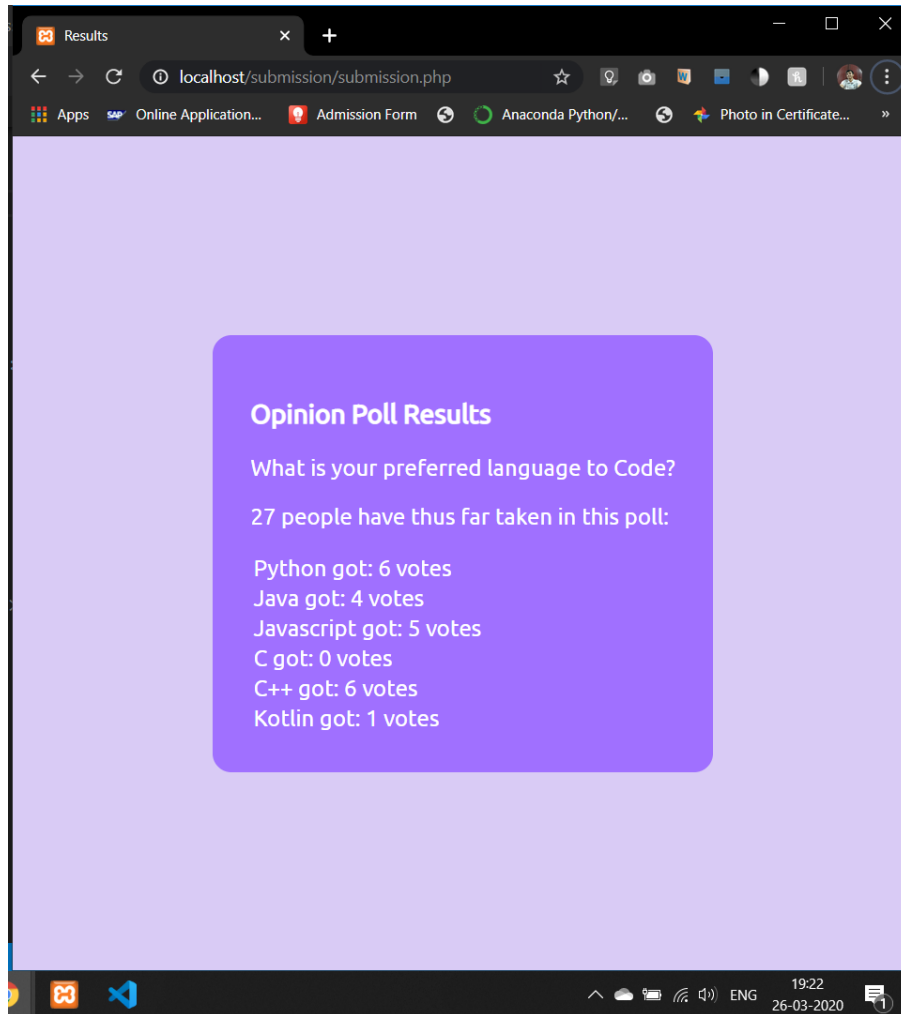
```html
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Results</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <h3>Opinion Poll Results</h3>
        <p>What is your preferred language to Code?</p>
        <p><?php echo "$tcount";?> people have thus far taken in this poll: </p>
        <table>
            <tr>
                <td>Python got: <?php echo "$python";?> votes </td>
            </tr>
            <tr>
                <td>Java got: <?php echo "$java";?> votes </td>
            </tr>
            <tr>
                <td>Javascript got: <?php echo "$javascript";?> votes </td>
            </tr>
            <tr>
                <td>C got: <?php echo "$c";?> votes </td>
            </tr>
            <tr>
                <td>C++ got: <?php echo "$cpp";?> votes </td>
            </tr>
            <tr>
                <td>Kotlin got: <?php echo "$kotlin";?> votes </td>
            </tr>

        </table>

    </div>
</body>
</html>
```

Output:

server.php:
```php
<?php
    session_start();
//  initiallizing variables
    $language = "";
    $errors = array();
    $sql = "";
// Form Validation
    if($_SERVER["REQUEST_METHOD"] == "POST"){
        if(empty($_POST["language"])){
            alert("You did not vote!");
        }
        else{
            $language = validated($_POST["language"]);
        }
    }
    function alert($message){
        echo "<script>alert('$message')</script>";
        exit(1);
    }
    function validated($data){
        $data = trim($data);
        $data = stripslashes($data);
```

```php
        $data = htmlspecialchars($data);
        return $data;
    }
// Connect and CREATE to the Database
    $db = mysqli_connect('localhost','root','','databas_practice');

    if (!$db) {
        die("Failed to connect to MySQL: " . mysqli_connect_error());
    }
//  ADD the variable to the database
    $sql = "INSERT INTO phpsubmission (name) VALUES ('$language')";

    if(mysqli_query($db,$sql)){
        echo "New Record INserted";
    }else{
        echo "Error:" . mysqli_error($db);
    }


mysqli_close($db);
header("location: submission.php");
```
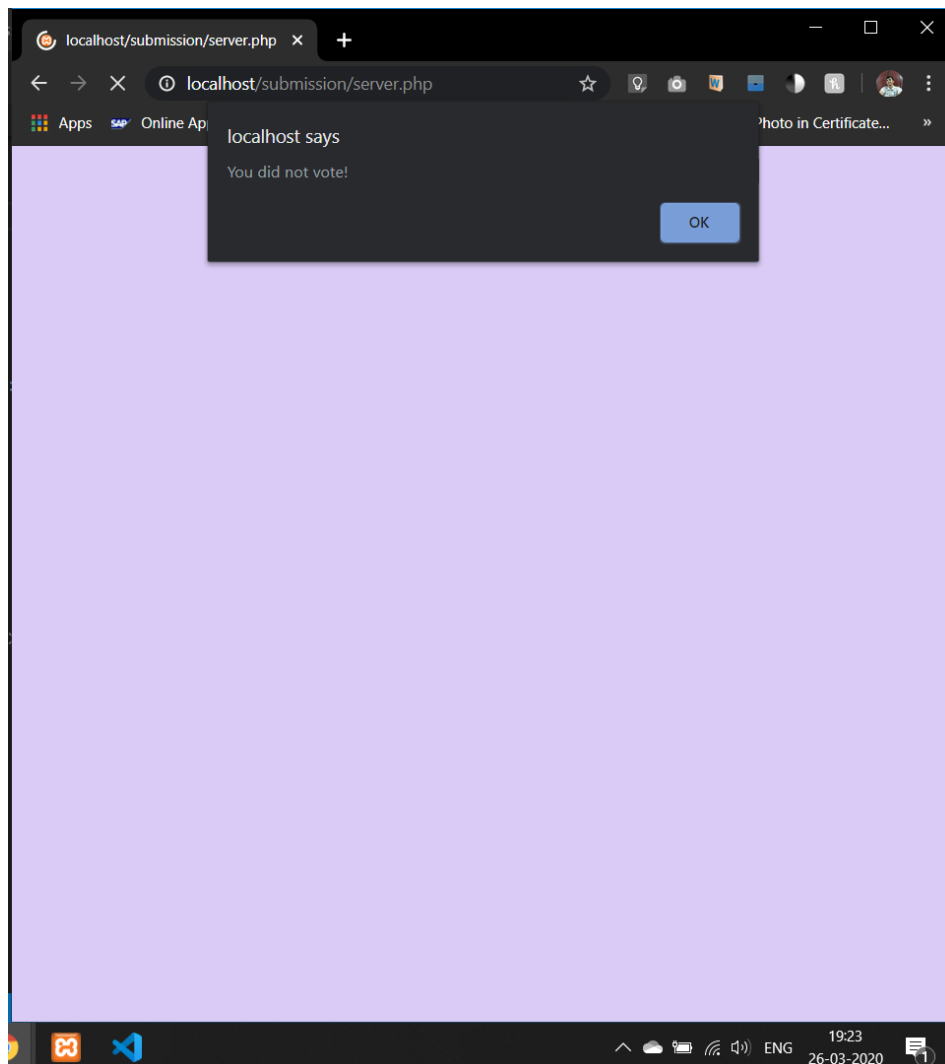
Output:

Style.css:

```css
@import url('https://fonts.googleapis.com/css?family=Ubuntu&display=swap');

.container{
    font-size: larger;
    background-color: #a070ff;
    height: fit-content;
    width: fit-content;
    padding: 2rem;
    position: absolute;
  top:0;
  bottom: 0;
  left: 0;
    right: 0;
    border-radius: 1rem;
  margin: auto;
}
body{
    background-color: #d9cbf5;
    font-family:'Ubuntu', sans-serif;
    color: white;
}
```

Conclusion:

1] I implemented php to create my first server side script.

2] I understood how to attach a database to the website via backend.

3] I used Xampp Server to host my scripts.