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Experiment 6- PHP

AIM: Create an opinion poll application consisting of following screens using php.
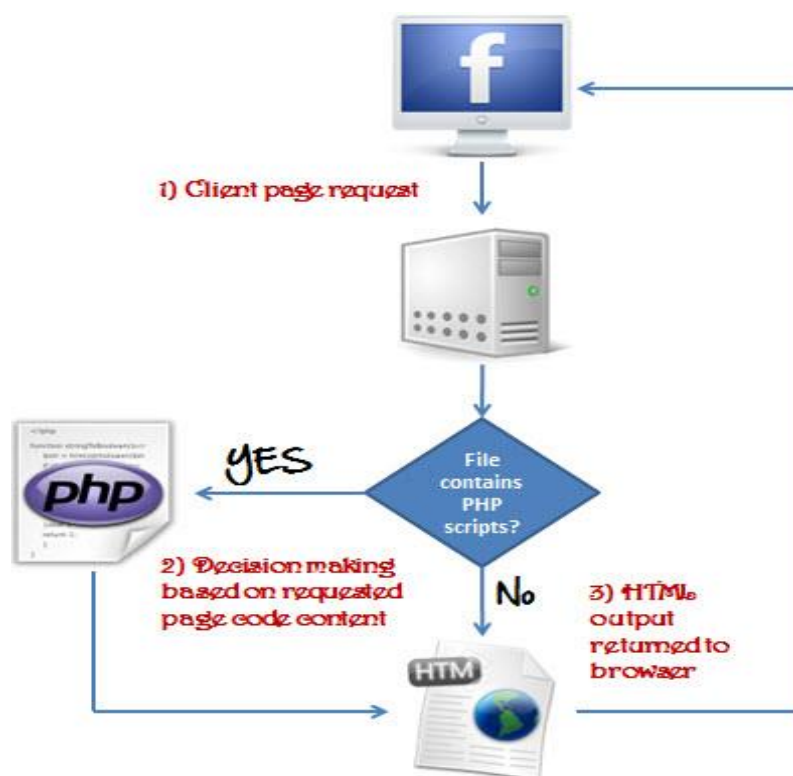
THEORY:

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

1) Client page request

2) Decision making based on requested page code content

3) HTMLs output returned to browser

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:

```html
<!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>
```
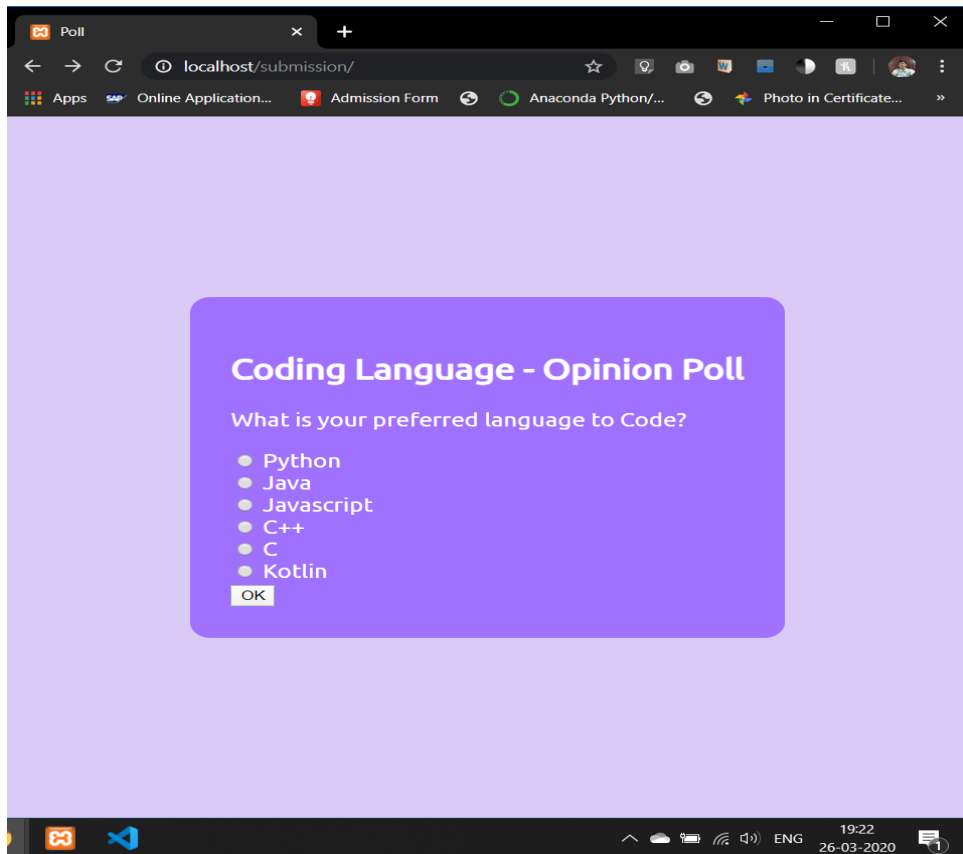
Output Screen Shot:

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 p
hpsubmission"))['count'];
   $python = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM p
hpsubmission WHERE name = 'python'"))['count'];
   $java = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM php
submission WHERE name = 'java'"))['count'];
   $javascript = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FRO
M phpsubmission WHERE name = 'javascript'"))['count'];
   $c = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phpsub
mission WHERE name = 'c'"))['count'];
   $cpp = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM phps
ubmission WHERE name = 'c++'"))['count'];
   $kotlin = mysqli_fetch_assoc(mysqli_query($db,"SELECT COUNT(name) AS `count` FROM ph
psubmission WHERE name = 'kotlin'"))['count'];

   mysqli_close($db);
?>
<!DOCTYPE html>
```
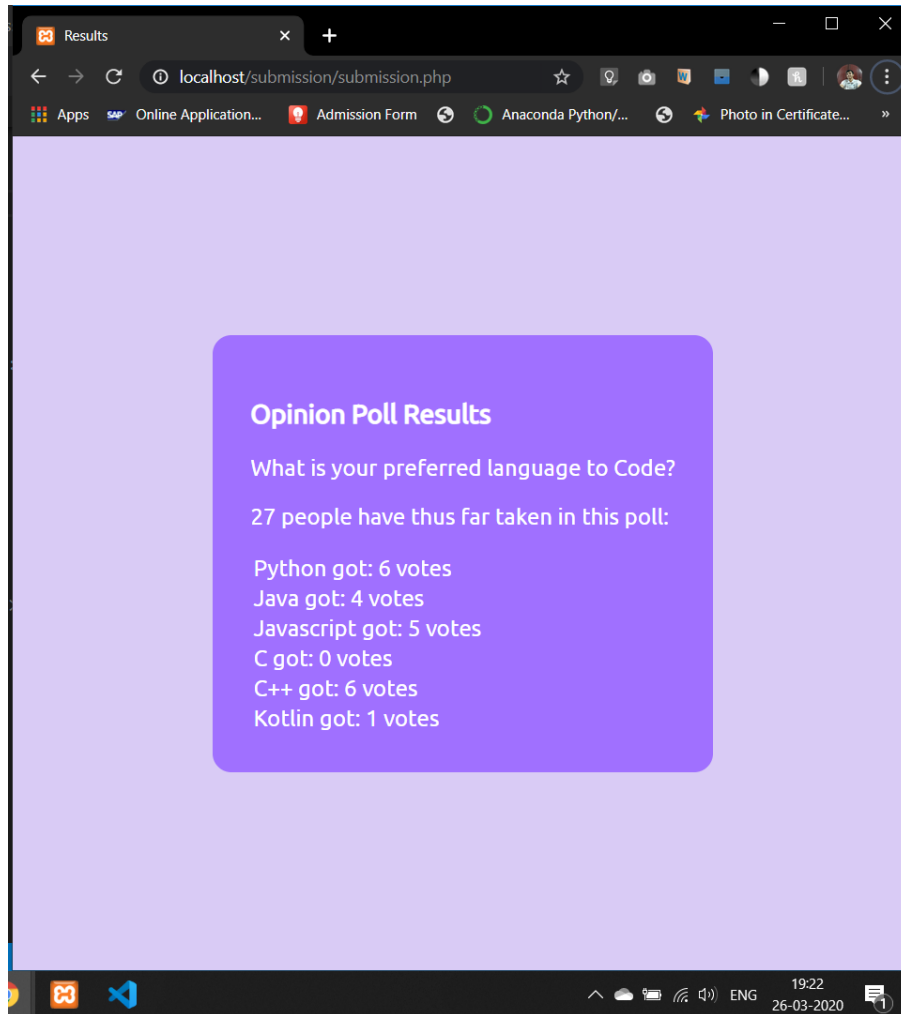
```html
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Results</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <h3>Opinion Poll Results</h3>
        <p>What is your preferred language to Code?</p>
        <p><?php echo "$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");
```
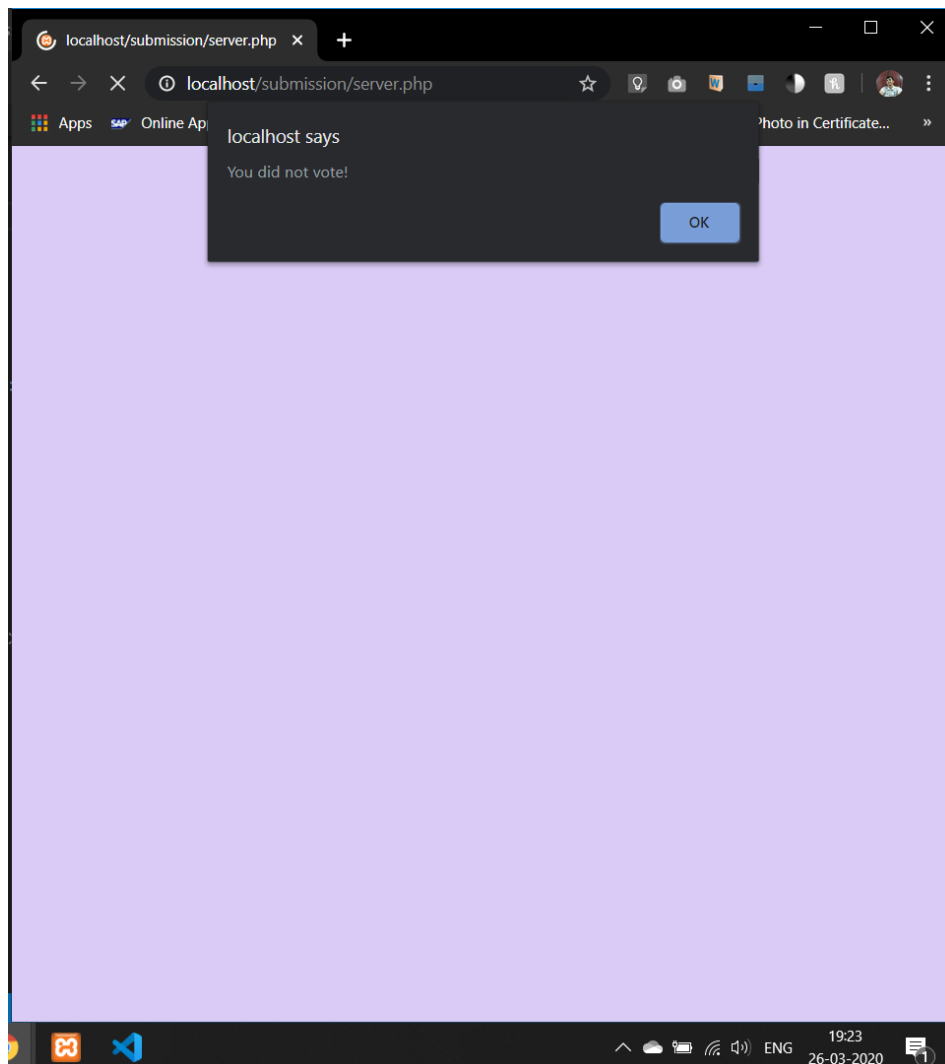
Output:

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.