Practical_9

Title: Write a PHP program using Java Script to convert the decimal number to its binary equivalent. You must use a form to accept the number from the user.

Objective : Use of php with JavaScript

Theory :

Decimal Number :

A decimal number system is used to express the whole number and fraction together. Here, we will separate the whole number from the fraction by inserting a ".", which is called a decimal point. For example, let's say you are going to take a cone of ice cream. The vendor tells you that the price of ice cream is $2 and 50 cents. Now, if you want to express this whole amount in one figure, you will say that the price of the ice cream cone is $2.50. There are many such real-life situations in which you might be using decimals without even realizing it.

Binary Number :

A binary number is a number expressed in the base-2 numeral system or binary numeral system, a method of mathematical expression which uses only two symbols: typically "0" and "1". The base-2 numeral system is a positional notation with a radix of 2. Each digit is referred to as a bit, or binary digit

How to convert decimal to binary Conversion steps:

1.   Divide the number by 2.

2.   Get the integer quotient for the next iteration.

3.   Get the remainder for the binary digit.

4.   Repeat the steps until the quotient is equal to 0.

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Decimal to Binary Converter</title>
    <script type="text/javascript">
        function convertToBinary() {
            // Get the decimal number from the input field
            var decimalNumber = document.getElementById("decimal").value;

            // Validate if the input is a number
            if (isNaN(decimalNumber) || decimalNumber === "") {
                alert("Please enter a valid number.");
                return false;
            }

            // Convert the decimal number to binary
            var binary = parseInt(decimalNumber).toString(2);

            // Display the binary result in the form
            document.getElementById("binaryResult").value = binary;

            return false; // Prevent the form from submitting to the server
        }
    </script>
</head>
<body>

<h2>Decimal to Binary Converter</h2>

<form method="POST" onsubmit="return convertToBinary();">
    <label for="decimal">Enter Decimal Number:</label>
    <input type="text" id="decimal" name="decimal" required>
    <br><br>

    <label for="binaryResult">Binary Equivalent:</label>
    <input type="text" id="binaryResult" name="binaryResult" readonly>
    <br><br>

    <input type="submit" value="Convert">
</form>

</body>
</html>
```
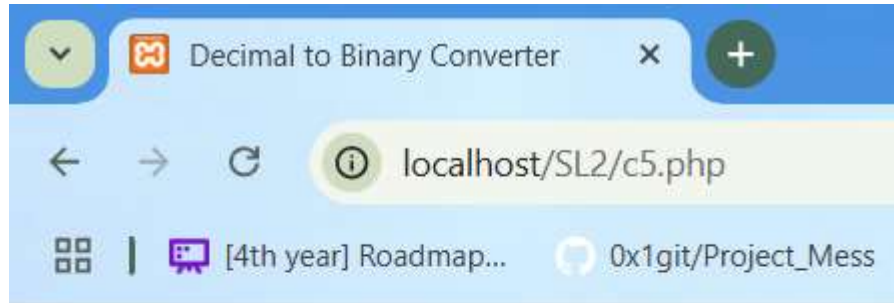
Output:

Conclusion:

Hence, created a PHP program using Java Script to convert the decimal number to its binary equivalent by using a form to accept the number from the user.