**Experiment Documentation: PHP String Operations Example**

**Experiment Title: PHP String Operations**

**1. Problem Statement**

**To demonstrate various string manipulation functions in PHP by showing the results of operations like concatenation, length calculation, case conversion, substring extraction, replacement, string reversal, and finding substrings.**

**2. Steps and Explanation**

1. **HTML Document Declaration:**
   * **The <!DOCTYPE html> declaration specifies the document is in HTML5.**
   * **The <html> tag sets the language to English with the lang attribute.**
2. **Head Section:**
   * **The <head> section includes:**
     + **Character Encoding set to UTF-8 for proper text display.**
     + **Viewport settings to make the page responsive.**
     + **CSS Styles to format the page:**
       - **The <style> section defines the font, margin for the body, and a styled <pre> tag for displaying the PHP code output in a visually pleasing format (gray background, padding, and borders).**
3. **PHP String Operations in Body:**
   * **The <body> section contains multiple <pre> blocks displaying the results of different PHP string functions.**
   * **Each operation is wrapped inside a <pre> tag for easy code readability and formatted output display.**
4. **String Operations Explained:**
   * **1. String Concatenation:**
     + **Two variables $string1 ("Hello") and $string2 ("World") are concatenated using the dot (.) operator.**
     + **The result is stored in $concatenated and displayed as "Hello World!".**
   * **2. String Length:**
     + **The strlen() function is used to determine the length of the string "Hello World".**
     + **The output shows that the string length is 11 characters.**
   * **3. String to Uppercase and Lowercase:**
     + **The strtoupper() function converts the string "Hello World" to all uppercase characters.**
     + **The strtolower() function converts the same string to all lowercase characters.**
     + **The original, uppercase, and lowercase versions are all printed.**
   * **4. Substring Extraction:**
     + **The substr() function extracts a portion of the string. In this case, the first five characters "Hello" are extracted from "Hello World".**
     + **The result shows "Hello" as the extracted substring.**
   * **5. String Replace:**
     + **The str\_replace() function replaces a portion of the string. Here, "World" is replaced with "PHP" in "Hello World", resulting in "Hello PHP".**
     + **The original and replaced strings are both displayed.**
   * **6. Reversing a String:**
     + **The strrev() function reverses the string "Hello World", producing "dlroW olleH".**
     + **Both the original and reversed strings are printed.**
   * **7. Finding a Substring in a String:**
     + **The strpos() function is used to find the position of the substring "World" in the string "Hello World".**
     + **If found, the position is printed (in this case, position 6), otherwise, an appropriate message indicates that the substring was not found.**

**3. Expected Output**

**When rendered on a server that supports PHP, the webpage will display the following outputs for each operation:**

