**Multipurpose Calculator Application in PHP**

This paper describes how to use PHP to create a multipurpose calculator application. It has functions for percentages, exponentiation, square roots, and fundamental arithmetic operations.

**Implementation Approach**

The application will consist of two main parts:

1. Frontend: An HTML form for user input and result display. Users will enter numbers, select the desired operation, and submit the form.
2. Backend: A PHP script to process the submitted data. It will retrieve the numbers and operation from the form, perform the calculation based on the chosen operation, and display the result on the same page.

**The features are broken down as follows:**

1. Basic Arithmetic Operations: The script will use the usual arithmetic operators (+, -, \*, /) to perform addition, subtraction, multiplication, and division.
2. Exponentiation: To compute x raised to the power of y (pow($x, $y)), use the **pow** function.
3. Percentage: To determine a number's percentage, a function will be developed. It will return the result (percentage($value, $number)) after receiving the number and the percentage value as inputs.
4. Square Root: To find a number's square root, use the **sqrt** function (sqrt($number)).

**Deliverables**

index.php: This file will have an HTML form for user input, a CSS snippet to give the form some style, and a PHP script to power the calculator as a whole.