

Functions

A function is a block of code designed to perform a particular task. It is a way to encapsulate a piece of code that does something specific by taking input in the form of parameters, processing that input, and then returning a result.

This is an example of a Simple function

```
function getMyName() {  
    return "Hello world!" . "\n";  
  
}
```

This is an example of a Parameterised function

```
function getCurrentDateTime($timezone = "UTC") {  
    if (!in_array($timezone, DateTimeZone::listIdentifiers())) {  
        return "Invalid timezone." . "\n";  
    }  
    date_default_timezone_set($timezone);  
    return date("F j, Y - H:i:s") . "\n";  
}
```

Lambda Meaning

Lambda comes from the Lambda Calculus and refers to anonymous functions in programming. Lambdas are small, unnamed functions. One-time tools for doing a specific job without needing a full-blown function name.

```
$greet = function($name) {  
    echo "Hello, " . $name;  
};
```

Closure Meaning

A closure is a function that remembers the variables from the place it was created, even if it's used somewhere else.

```
$greeting = "Hello";  
$greeter = function($name) use ($greeting) {  
    echo $greeting . ", " . $name;  
};
```

Notes:

- A closure is a lambda function in php that encapsulates variables so they can be used once their original references are out of scope.
- A closure is a lambda function, but a lambda function is not a closure unless you specify the 'use' keyword.

Tasks:

1. Temperature Converter
 - Build a temperature converter that converts temperatures between Celsius and Fahrenheit.
2. Age Calculator
 - Create a form where users can input their birth date, and upon submission, display their age in years.
3. Word Counter

- Develop a form where users can input a block of text. When the form is submitted, display the number of words in the text.