1. Number Classifier

• Concepts Used: Variables, If-Else
• Description:
• Input a number through the terminal or define it in the script.
• Use if-else to classify the number as positive, negative, or zero.

```php
<?php

echo "Enter a number: ";
$number = (int) readline();

if ($number > 0) {
    echo "The number is positive.\n";
} elseif ($number < 0) {
    echo "The number is negative.\n";
} else {
    echo "The number is zero.\n";
}
```

2. Basic Authentication System

• Concepts Used: Variables, Constants, If-Else

• Description:

• Use constants to store a predefined username and password.

• Use variables to simulate a login attempt by assigning user input values.

• Use if-else to check if the credentials match the stored constants and display success or failure messages.

```php
<?php

define("USERNAME", "admin");
define("PASSWORD", "12345");

echo "Enter username: ";
$inputUsername = readline();
echo "Enter password: ";
$inputPassword = readline();

if ($inputUsername === USERNAME && $inputPassword === PASSWORD) {
    echo "Login successful!\n";
} else {
    echo "Invalid username or password.\n";
}
```

3. Simple Electricity Bill Calculator

• Concepts Used: Variables, If-Else

• Description:

• Use a variable for units consumed.

• Define slabs for billing using if-else (e.g., 1–100 units = $5, 101–200 units = $10, etc.).

• Calculate and display the total bill based on the entered units.

```php
<?php
echo "Enter units consumed: ";
$units = (int) readline();

if ($units <= 100) {
    $bill = $units * 5; // $5 per unit for first 100 units
} elseif ($units <= 200) {
    $bill = 100 * 5 + ($units - 100) * 10; // $10 per unit for 101-200 units
} else {
    $bill = 100 * 5 + 100 * 10 + ($units - 200) * 15; // $15 per unit above
200 units
}

echo "Total bill: $$bill\n";
```

4. Temperature Converter

• Concepts Used: Variables, Constants, Switch

• Description:

• Use a constant for the conversion formula.

• Ask the user to enter a temperature value in Celsius or Fahrenheit through PHP's readline() function in the terminal.

• Use a switch statement to select the type of conversion (Celsius to Fahrenheit or Fahrenheit to Celsius).

```php
<?php
// 4. Temperature Converter


define("FACTOR", 9/5);
define("OFFSET", 32);

echo "Enter temperature value: ";
$temperature = (float) readline();

echo "Convert to (1: Fahrenheit, 2: Celsius): ";
$choice = (int) readline();

switch ($choice) {
    case 1:
        $result = $temperature * FACTOR + OFFSET;
        echo "Temperature in Fahrenheit: $result\n";
        break;
    case 2:
        $result = ($temperature - OFFSET) / FACTOR;
        echo "Temperature in Celsius: $result\n";
        break;
    default:
        echo "Invalid choice!\n";
        break;
}
```