Assignment 9

Write a program to calculate Electricity bill using functions in PHP

Conditions:

For first 50 units - Rs. 3.50/unit

For next 100 units Rs. 4.00/unit

For next 100 units - Rs. 5.20/unit

For units above 250 - Rs. 6.50/unit

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta name="viewport" content="width=device-width, initial-scale=1" />

<title>Electricity Bill Calculator</title>

<style>

body {

font-family: Arial, sans-serif;

background: #f4f7f8;

margin: 0;

padding: 0;

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

}

.container {

background: white;

padding: 30px 40px;

border-radius: 8px;

box-shadow: 0 2px 8px rgba(0,0,0,0.1);

width: 350px;

}

h1 {

text-align: center;

color: #333;

margin-bottom: 25px;

}

label {

display: block;

margin-bottom: 8px;

color: #555;

font-weight: bold;

}

input[type="number"] {

width: 100%;

padding: 10px;

margin-bottom: 20px;

border: 1px solid #ccc;

border-radius: 4px;

font-size: 16px;

}

button {

width: 100%;

background-color: #007bff;

color: white;

border: none;

padding: 12px;

font-size: 16px;

border-radius: 4px;

cursor: pointer;

}

button:hover {

background-color: #0056b3;

}

.result {

margin-top: 20px;

background: #e9f7ef;

padding: 15px;

border-radius: 4px;

color: #2e7d32;

font-weight: bold;

text-align: center;

}

</style>

</head>

<body>

<div class="container">

<h1>Electricity Bill Calculator</h1>

<form method="post" action="">

<label for="units">Enter Units Consumed:</label>

<input type="number" id="units" name="units" min="0" step="any" required />

<button type="submit">Calculate Bill</button>

</form>

<?php

function calculateElectricityBill($units) {

$charges = [];

$bill = 0;

$remaining\_units = $units;

if ($remaining\_units > 0) {

$units\_in\_slab = min($remaining\_units, 50);

$rate = 3.50;

$charge = $units\_in\_slab \* $rate;

$charges[] = ['units' => $units\_in\_slab, 'rate' => $rate, 'charge' => $charge];

$bill += $charge;

$remaining\_units -= $units\_in\_slab;

}

if ($remaining\_units > 0) {

$units\_in\_slab = min($remaining\_units, 100);

$rate = 4.00;

$charge = $units\_in\_slab \* $rate;

$charges[] = ['units' => $units\_in\_slab, 'rate' => $rate, 'charge' => $charge];

$bill += $charge;

$remaining\_units -= $units\_in\_slab;

}

if ($remaining\_units > 0) {

$units\_in\_slab = min($remaining\_units, 100);

$rate = 5.20;

$charge = $units\_in\_slab \* $rate;

$charges[] = ['units' => $units\_in\_slab, 'rate' => $rate, 'charge' => $charge];

$bill += $charge;

$remaining\_units -= $units\_in\_slab;

}

if ($remaining\_units > 0) {

$units\_in\_slab = $remaining\_units;

$rate = 6.50;

$charge = $units\_in\_slab \* $rate;

$charges[] = ['units' => $units\_in\_slab, 'rate' => $rate, 'charge' => $charge];

$bill += $charge;

$remaining\_units = 0;

}

return ['charges' => $charges, 'total' => $bill];

}

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

$units = floatval($\_POST["units"]);

$result = calculateElectricityBill($units);

echo '<div class="result" style="display:flex; justify-content: space-between; gap: 20px;">';

echo '<div style="flex:1; background:#e3f2fd; padding:15px; border-radius:4px;">';

echo '<h3>Charge Breakdown</h3>';

echo '<ul style="list-style:none; padding-left:0; margin:0;">';

foreach ($result['charges'] as $charge\_detail) {

echo '<li>' . htmlspecialchars($charge\_detail['units']) . ' units @ ' . htmlspecialchars($charge\_detail['rate']) . ' = ' . number\_format($charge\_detail['charge'], 2) . '</li>';

}

echo '</ul>';

echo '</div>';

echo '<div style="flex:1; background:#e9f7ef; padding:15px; border-radius:4px; text-align:center; font-weight:bold; color:#2e7d32;">';

echo 'Total Bill for ' . htmlspecialchars($units) . ' units is:<br><span style="font-size:1.5em;">' . number\_format($result['total'], 2) . '</span> currency units';

echo '</div>';

echo '</div>';

}

?>

</div>

</body>

</html>

