

Aim: Write a JavaScript program to calculate simple interest. Accept principle amount, rate of interest and number of years from the user. Use function and arrow function to calculate interest.

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Simple Interest Calculator</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }
    .container {
      width: 100%;
      max-width: 500px;
      padding: 20px;
      border: 1px solid #ccc;
      border-radius: 10px;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
      text-align: center;
    }
    .form-group {
      margin-bottom: 15px;
    }
    .form-group label {
      display: block;
      margin-bottom: 5px;
    }
    .form-group input {
      width: 100%;
      padding: 8px;
      box-sizing: border-box;
    }
    button {
      padding: 10px 20px;
      background-color: #007bff;
      color: white;
      border: none;
```

```

    border-radius: 20px;
    cursor: pointer;
    font-size: 16px;
  }
  button:hover {
    background-color: #0056b3;
  }
  .result {
    margin-top: 20px;
    font-size: 1.2em;
  }
</style>
</head>
<body>

<div class="container">
  <h1>Simple Interest Calculator</h1>
  <form id="interestForm">
    <div class="form-group">
      <label for="principal">Principal Amount:</label>
      <input type="number" id="principal" name="principal" step="any" required>
    </div>
    <div class="form-group">
      <label for="rate">Rate of Interest (per annum):</label>
      <input type="number" id="rate" name="rate" step="any" required>
    </div>
    <div class="form-group">
      <label for="years">Number of Years:</label>
      <input type="number" id="years" name="years" step="any" required>
    </div>
    <button type="submit">Calculate Interest</button>
  </form>
  <div class="result" id="result"></div>
</div>

<script>
  // Regular function to calculate simple interest
  function calculateSimpleInterest(principal, rate, years) {
    return (principal * rate * years) / 100;
  }

  // Arrow function to calculate simple interest
  const calculateSimpleInterestArrow = (principal, rate, years) => (principal * rate * years) / 100;

  document.getElementById('interestForm').addEventListener('submit', function(event) {
    event.preventDefault(); // Prevent the form from submitting the traditional way
  });
</script>

```

```
// Get the input values
const principal = parseFloat(document.getElementById('principal').value);
const rate = parseFloat(document.getElementById('rate').value);
const years = parseFloat(document.getElementById('years').value);

// Validate inputs
if (isNaN(principal) || isNaN(rate) || isNaN(years) || principal <= 0 || rate <= 0 || years <= 0) {
    document.getElementById('result').textContent = 'Please enter valid positive numbers for all fields.';
    return;
}

// Calculate interest using regular function
const interestRegular = calculateSimpleInterest(principal, rate, years);

// Calculate interest using arrow function
const interestArrow = calculateSimpleInterestArrow(principal, rate, years);

// Display the result
document.getElementById('result').textContent = `Simple Interest (Regular Function): ${interestRegular.toFixed(2)}
\nSimple Interest (Arrow Function): ${interestArrow.toFixed(2)}`;
});
</script>

</body>
</html>
```

Output:

Simple Interest Calculator

Principal Amount:

10000

Rate of Interest (per annum):

8

Number of Years:

3

Calculate Interest

Simple Interest (Regular Function): 2400.00 Simple
Interest (Arrow Function): 2400.00