Temperature Converter Website

📌 **Task ID :** **OIBSIP_WebDevelopment1_Task3**

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🎓 **Domain:** **Web Development Internship**

📅 **Date:** **14 July 2025**

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🌐 **GitHub:**
https://github.com/Akshi7898/OIBSIP_WebDevelopment1_Task3

🎯 Objective:

Develop a web-based temperature converter that allows users to convert between Celsius, Fahrenheit, and Kelvin, displaying accurate and formatted results instantly.

📋 Steps Performed:

1. Created HTML structure with input field, dropdown for unit selection, and result area.

2. Styled UI with CSS: background gradient, glassmorphic container, responsive layout.

3. Wrote JavaScript conversion logic:

- Read user input and selected unit
- Performed calculations for Celsius ↔ Fahrenheit ↔ Kelvin
- Updated results dynamically in formatted format

4. Added validation to handle non-numeric inputs

5. Tested across browsers and edge cases (e.g. negative temperatures)

6. Prepared screenshots and documentation for review

🛠️ Tools Used:

- HTML5 & CSS3

- JavaScript (Vanilla)

- Visual Studio Code (IDE)

- Chrome DevTools for debugging

- Git & GitHub for version control

Temperature Converter

Html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <title>Temperature Converter</title>
  <link rel="stylesheet" href="style.css" />
</head>
<body>
  <div class="container">
    <div class="title">Temperature converter</div>

    <label for="temp">Degrees</label>
    <input type="number" id="temp" placeholder="Enter value" />

    <label for="unit">Type</label>
    <select id="unit">
      <option value="fahrenheit">Fahrenheit</option>
      <option value="celsius">Celsius</option>
      <option value="kelvin">Kelvin</option>
    </select>

    <label>Result</label>
    <div class="result" id="output">--</div>

    <button onclick="convertTemperature()">Convert</button>
  </div>

  <script src="script.js"></script>
</body>
</html>
```

CSS

```
* {
  box-sizing: border-box;
}

body {
  margin: 0;
  font-family: 'Segoe UI', sans-serif;
  background-color: rgb(131,137,150);
```

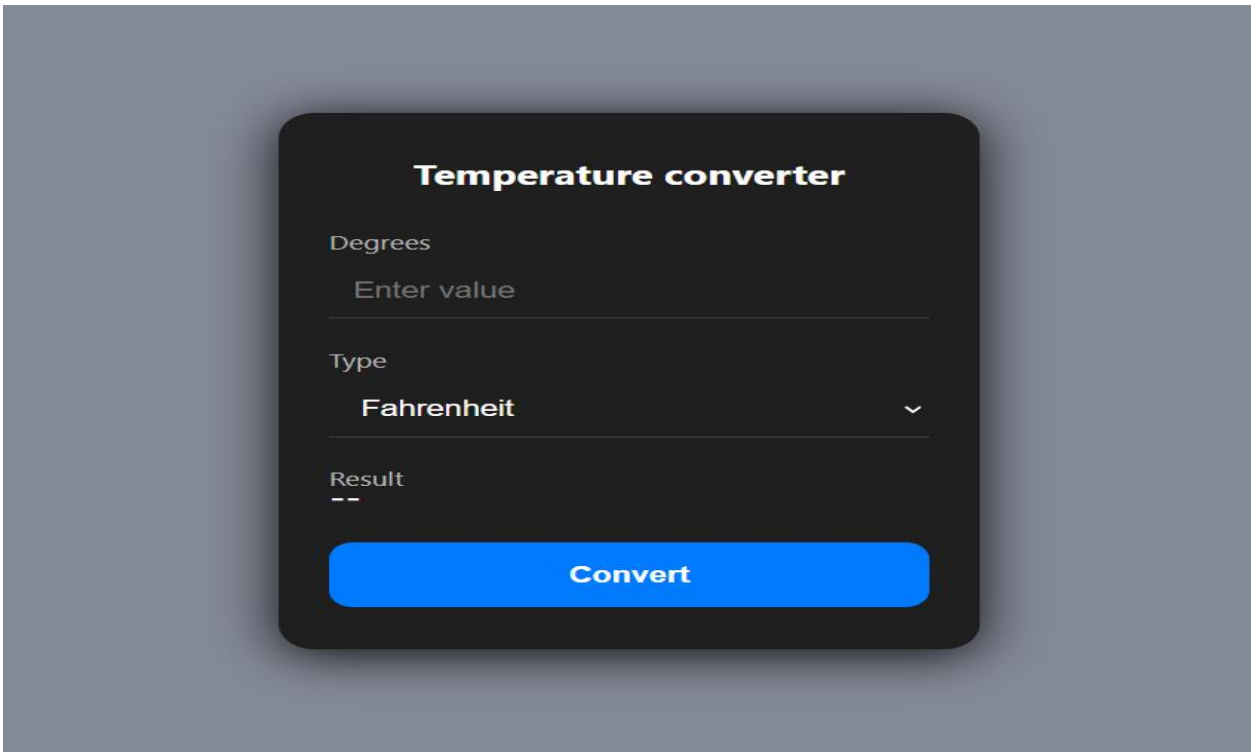
```
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}

.container {
  background: #1f1f1f;
  width: 90%;
  max-width: 350px;
  padding: 30px 25px;
  border-radius: 18px;
  box-shadow: 0 4px 30px rgba(0, 0, 0, 0.9);
  color: #ffffff;
}

.title {
  font-size: 20px;
  font-weight: bold;
  text-align: center;
  margin-bottom: 25px;
  color: #ffffff;
}

label {
  font-size: 14px;
  color: #bbbbbb;
}

input,
select {
  width: 100%;
  padding: 10px 12px;
  font-size: 16px;
  margin-top: 6px;
  margin-bottom: 18px;
  border: none;
  border-bottom: 1px solid #444;
  background: transparent;
  color: #ffffff;
  outline: none;
}
```

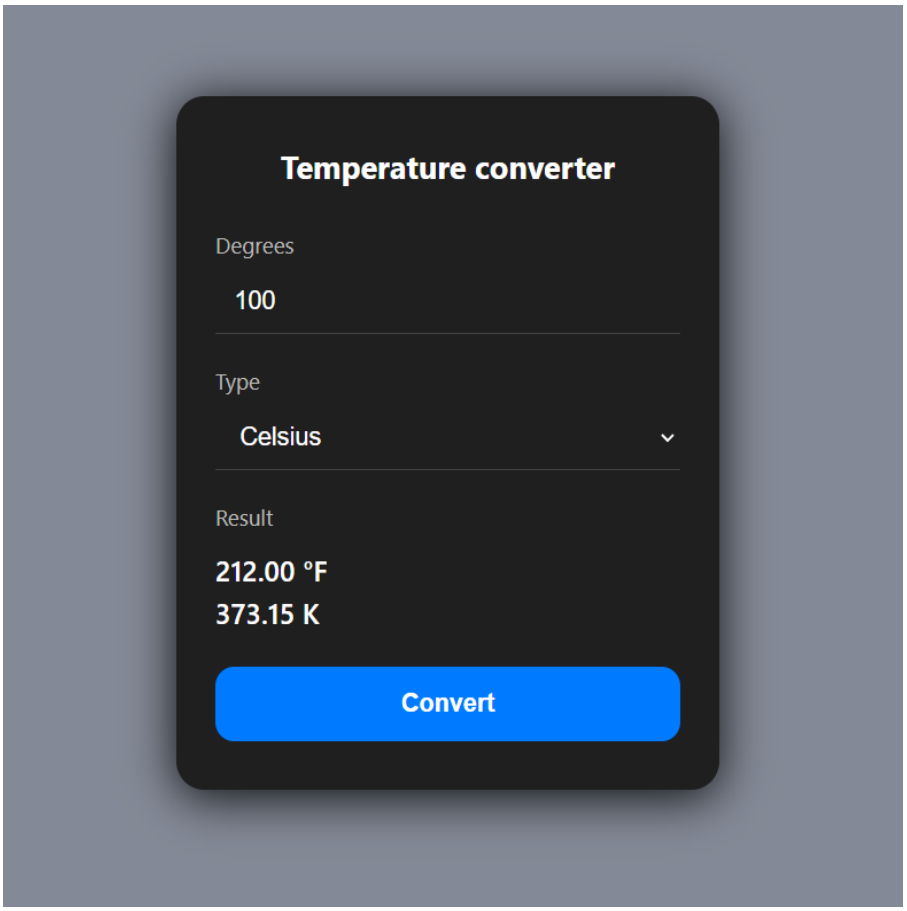
```css
.result {
  font-size: 20px;
  font-weight: 500;
  color: #ffffff;
  margin-top: -10px;
  margin-bottom: 20px;
}

button {
  width: 100%;
  padding: 14px;
  font-size: 16px;
  background-color: #007aff;
  color: white;
  border: none;
  border-radius: 12px;
  cursor: pointer;
  font-weight: bold;
  transition: background 0.2s;
}

button:hover {
  background-color: #005edc;
}

.result {
  font-size: 18px;
  font-weight: 500;
  color: #ffffff;
  margin-top: 10px;
  margin-bottom: 20px;
  line-height: 1.5;
  word-wrap: break-word;
  white-space: normal;
}
```

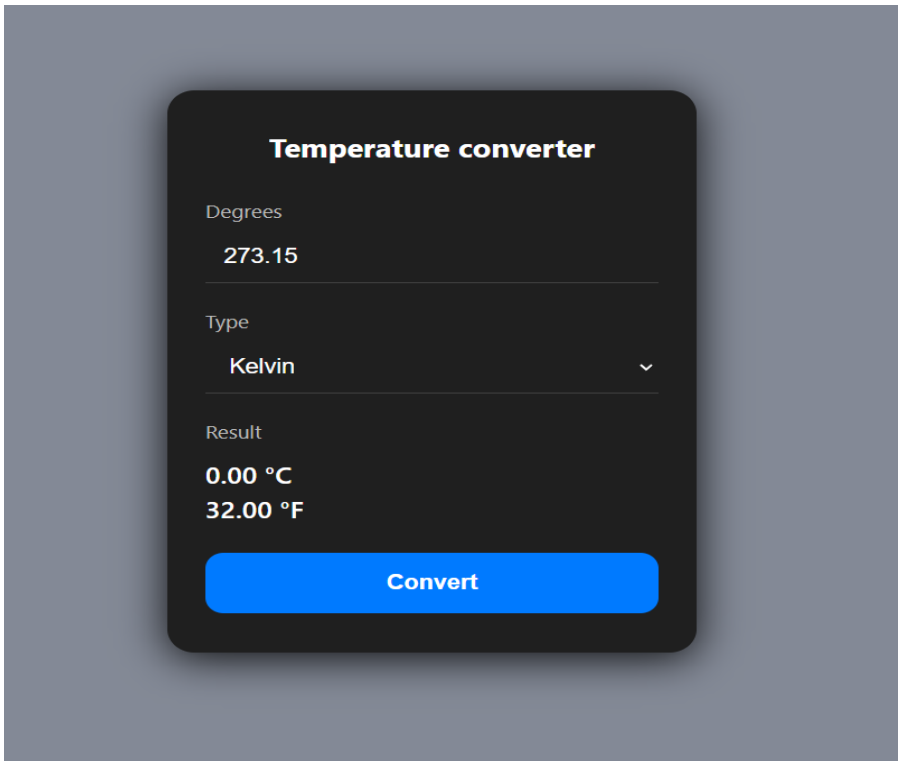
JS

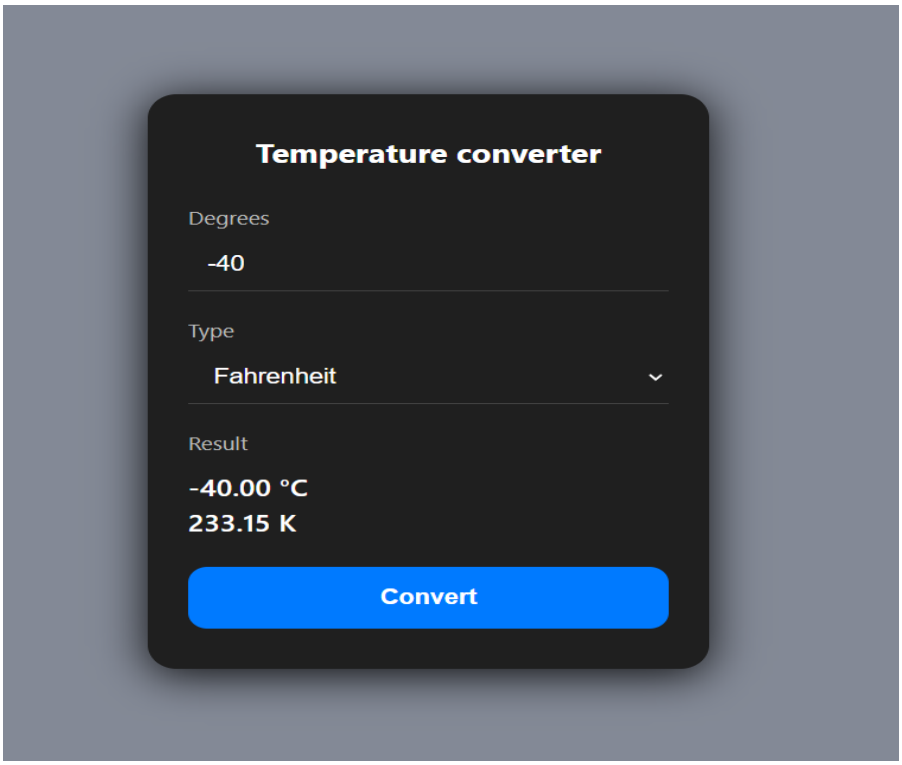
```js
function convertTemperature() {
  const temp = parseFloat(document.getElementById("temp").value);
  const unit = document.getElementById("unit").value;
  const output = document.getElementById("output");
```

```
  // Check for invalid number
  if (isNaN(temp)) {
    output.textContent = "❌ Please enter a valid number.";
    return;
  }

  let celsius, fahrenheit, kelvin;

  // Temperature conversion based on selected unit
  switch (unit) {
    case "fahrenheit":
      celsius = (temp - 32) * 5 / 9;
      kelvin = celsius + 273.15;
      output.innerHTML = `
        <div>${celsius.toFixed(2)} °C</div>
        <div>${kelvin.toFixed(2)} K</div>
      `;
      break;

    case "celsius":
      fahrenheit = (temp * 9 / 5) + 32;
      kelvin = temp + 273.15;
      output.innerHTML = `
        <div>${fahrenheit.toFixed(2)} °F</div>
        <div>${kelvin.toFixed(2)} K</div>
      `;
      break;

    case "kelvin":
      celsius = temp - 273.15;
      fahrenheit = (celsius * 9 / 5) + 32;
      output.innerHTML = `
        <div>${celsius.toFixed(2)} °C</div>
        <div>${fahrenheit.toFixed(2)} °F</div>
      `;
      break;

    default:
      output.textContent = "❌ Invalid unit selected.";
  }
}
```


Temperature converter
Degrees
Enter value
Type
Fahrenheit
Result
--
Convert


Temperature converter
Degrees
100
Type
Celsius
Result
212.00 °F
373.15 K
Convert


Temperature converter
Degrees
273.15
Type
Kelvin
Result
0.00 °C
32.00 °F
Convert



📄 Summary:

- File Structure: index.html, style.css, script.js

- How to Run: Open index.html in a web browser

- Notes: Uses client-side logic only; no persistence across reloads

✅ Outcome:

The temperature converter accurately converts values between Celsius, Fahrenheit, and Kelvin.

The interface is clean, responsive, and intuitive.

Error handling is in place for invalid inputs.