HTML Structure

```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width,
initial-scale=1.0">
<title>Temperature Conversion Tool</title>
<link rel="stylesheet" href="styles.css">
</head>
<body>
<div class="container">
<h1>Temperature Conversion Tool</h1>
<form id="tempForm">
<label for="temperature">Enter Temperature:</label>
<input type="number" id="temperature" placeholder="Enter
value" required>
<div>
<input type="radio" id="cToF" name="conversion"
value="CtoF" checked>
<label for="cToF">Celsius to Fahrenheit</label>
<input type="radio" id="fToC" name="conversion"
value="FtoC">
<label for="fToC">Fahrenheit to Celsius</label>
</div>
<button type="button"
onclick="convertTemperature()">Convert</button>
```

```html
</form>

<h2>Converted Temperature: <span id="result">---</span></h2>

</div>

<script src="script.js"></script>

</body>

</html>
```

CSS

styling:

```css
body {

font-family: Arial, sans-serif;

background-color: #f4f4f4;

margin: 0;

padding: 0;

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

}

.container {

background-color: white;

padding: 20px;

border-radius: 8px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

width: 300px;

text-align: center;

}

h1 {
```

```css
  font-size: 24px;

  margin-bottom: 20px;

}

label {

  display: block;

  margin-top: 10px;

  font-size: 16px;

}

input[type="number"] {

  width: 100%;

  padding: 8px;

  margin-top: 5px;

  border-radius: 4px;

  border: 1px solid #ccc;

}

input[type="radio"] {

  margin-top: 10px;

}

button {

  width: 100%;

  padding: 10px;

  margin-top: 20px;

  background-color: #4CAF50;

  color: white;

  border: none;

  border-radius: 4px;

  font-size: 16px;
```

```css
    cursor: pointer;

}

button:hover {

background-color: #45a049;

}

h2 {

font-size: 20px;

margin-top: 20px;

}

#result {

font-weight: bold;

}
```

JavaScript to Handle Conversion Logic

Now, add the JavaScript code to handle the temperature conversion. Create a file called

script.js and include the following code:

```javascript
function convertTemperature() {

// Get the input temperature value

let temperature = document.getElementById("temperature").value;

// Check if the input is a valid number

if (isNaN(temperature) || temperature === "") {

alert("Please enter a valid temperature.");

return;

}

// Get the selected conversion type

let conversionType =

document.querySelector('input[name="conversion"]:checked').value;

let result;
```

```javascript
// Perform conversion based on selected type

if (conversionType === "CtoF") {

result = (temperature * 9/5) + 32;

result = result.toFixed(2); // Round the result to 2 decimal

places

} else if (conversionType === "FtoC") {

result = (temperature - 32) * 5/9;

result = result.toFixed(2); // Round the result to 2 decimal

places

}

// Display the result on the page

document.getElementById("result").textContent = result;

}
```