

PROGRAM:

```
const express = require('express');

const app = express();

const PORT = 8080;


// Middleware to parse form data

app.use(express.urlencoded({ extended: true }));


// Home Route - Displays Form

app.get('/', (req, res) => {

  res.send(`

    <!DOCTYPE html>

    <html>

    <head>

      <title>BMI Calculator</title>

      <style>

        @import
url('https://fonts.googleapis.com/css2?family=Montserrat:wght@400;600&display=swap');

        body {

          font-family: 'Montserrat', sans-serif;

          display: flex;

          justify-content: center;

          align-items: center;

          min-height: 100vh;

          background: linear-gradient(135deg, #89f7fe 0%, #66a6ff 100%);

          margin: 0;

        }

      </style>

    </head>

    <body>

      <div>

        <h1>BMI Calculator</h1>

        <div>

          <input type="text" value="Weight (kg)"/>

          <input type="text" value="Height (cm)"/>

          <button>Calculate</button>

        </div>

        <div>

          <div>Result</div>

          <div>BMI: <span></span></div>

          <div>Category: <span></span></div>

        </div>

      </div>

    </body>

  </html>`);
}
```

```
.container {  
  
    background: #ffffffcc; /* semi-transparent white */  
  
    padding: 40px 30px;  
  
    width: 350px;  
  
    border-radius: 12px;  
  
    box-shadow: 0 8px 20px rgba(0,0,0,0.2);  
  
    transition: transform 0.3s, box-shadow 0.3s;  
  
}  
  
.container:hover {  
  
    transform: translateY(-5px);  
  
    box-shadow: 0 12px 30px rgba(0,0,0,0.3);  
  
}  
  
h2 {  
  
    text-align: center;  
  
    margin-bottom: 20px;  
  
    color: #333;  
  
}  
  
input {  
  
    width: 100%;  
  
    padding: 12px 15px;  
  
    margin: 10px 0;  
  
    border: 2px solid #ddd;  
  
    border-radius: 8px;  
  
    font-size: 16px;  
  
    transition: border-color 0.3s, box-shadow 0.3s;  
  
}  
  
input:focus {
```

```
outline: none;

border-color: #66a6ff;

box-shadow: 0 0 8px rgba(102, 166, 255, 0.5);
}

button {

width: 100%;

padding: 14px;

margin-top: 20px;

background-color: #66a6ff;

border: none;

border-radius: 8px;

font-size: 16px;

font-weight: 600;

color: #fff;

cursor: pointer;

transition: background-color 0.3s, transform 0.2s;
}

button:hover {

background-color: #558de8;

transform: translateY(-2px);
}

/* Responsive hover effect for button */

@media (hover: hover) {

button:active {

transform: translateY(0);

background-color: #4472d2;
}
}
```

```

    }

    </style>

</head>

<body>

    <div class="container">

        <h2>BMI Calculator</h2>

        <form action="/calculate" method="POST">

            <input type="number" step="0.1" name="weight" placeholder="Weight (kg)" required />

            <input type="number" step="0.1" name="height" placeholder="Height (cm)" required />

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

        </form>

    </div>

</body>

</html>

`);

});

// Calculate Route
app.post('/calculate', (req, res) => {

    const weight = parseFloat(req.body.weight);

    const heightCm = parseFloat(req.body.height);

    if (isNaN(weight) || isNaN(heightCm) || weight <= 0 || heightCm <= 0) {

        return res.send(`

            <h2>Invalid input. Please enter positive numbers for weight and height.</h2>

            <a href="/">Go Back</a>

        `);
    }

```

```
}
```

```
const heightM = heightCm / 100;
```

```
const bmi = weight / (heightM * heightM);
```

```
const roundedBMI = bmi.toFixed(2);
```

```
let category = '';
```

```
if (bmi < 18.5) {
```

```
    category = 'Underweight';
```

```
} else if (bmi < 24.9) {
```

```
    category = 'Normal weight';
```

```
} else if (bmi < 29.9) {
```

```
    category = 'Overweight';
```

```
} else {
```

```
    category = 'Obese';
```

```
}
```

```
res.send(`
```

```
    <!DOCTYPE html>
```

```
    <html>
```

```
    <head>
```

```
        <title>BMI Result</title>
```

```
        <style>
```

```
            @import
```

```
url('https://fonts.googleapis.com/css2?family=Montserrat:wght@400;600&display=swap');
```

```
        body {
```

```
font-family: 'Montserrat', sans-serif;

display: flex;

justify-content: center;

align-items: center;

min-height: 100vh;

background: linear-gradient(135deg, #89f7fe 0%, #66a6ff 100%);

margin: 0;
}

.result-box {

background: #ffffffcc; /* semi-transparent white */

padding: 40px 30px;

width: 350px;

border-radius: 12px;

box-shadow: 0 8px 20px rgba(0,0,0,0.2);

text-align: center;
}

h2 {

margin-bottom: 20px;

color: #333;
}

h3 {

margin-top: 10px;

color: #555;
}

a {

display: inline-block;

margin-top: 25px;
```

```

padding: 12px 20px;

background-color: #66a6ff;

color: #fff;

border-radius: 8px;

text-decoration: none;

font-weight: 600;

transition: background-color 0.3s, transform 0.2s;
}

a:hover {

background-color: #558de8;

transform: translateY(-2px);

}

</style>

</head>

<body>

<div class="result-box">

<h2>Your BMI: ${roundedBMI}</h2>

<h3>Category: ${category}</h3>

<a href="/">Calculate Again</a>

</div>

</body>

</html>

`);

});

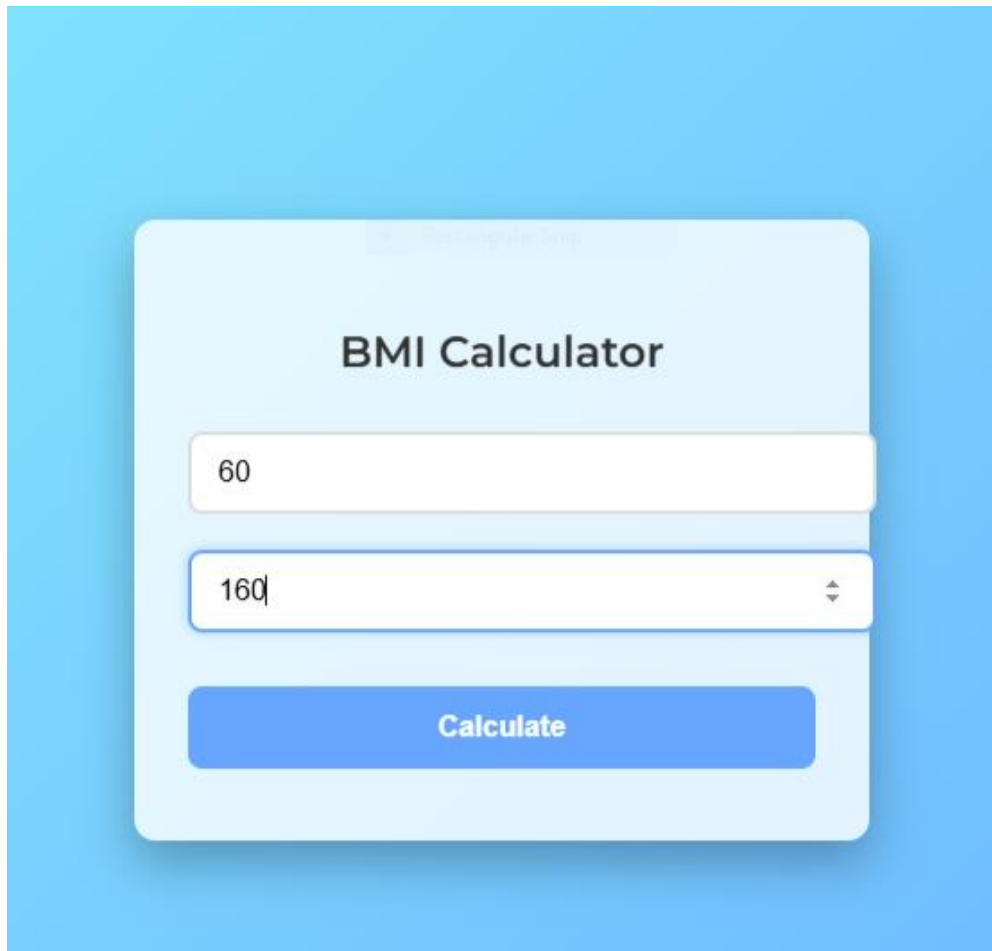
// Start Server

app.listen(PORT, () => {

console.log(`Server running at http://localhost:\${PORT}`);

```

OUTPUT:

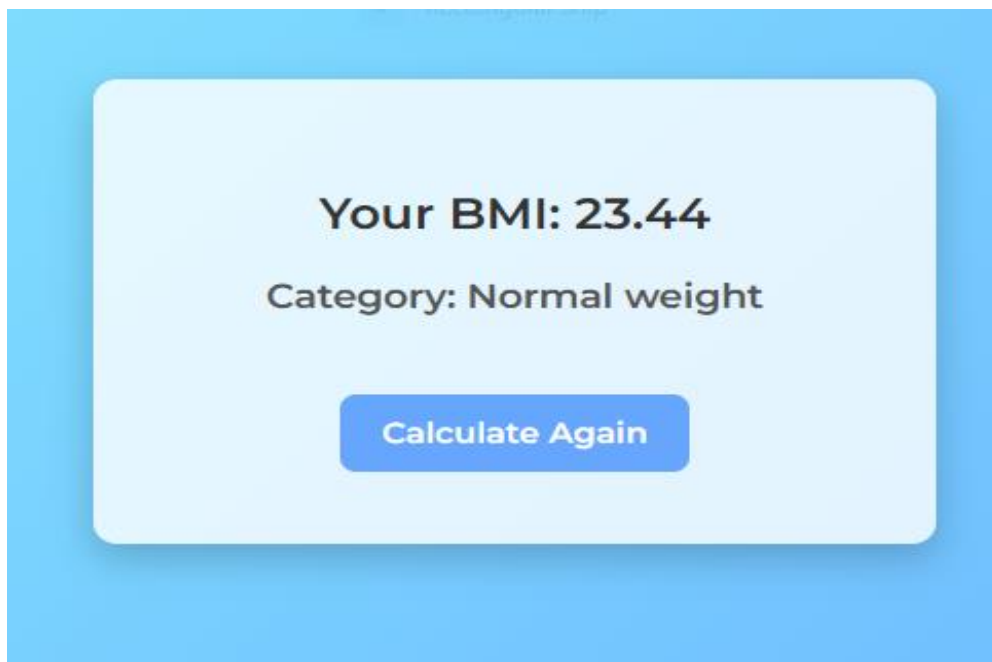


The screenshot shows a web browser window with the URL "https://www.codingocean.com". The page features a light blue header with the text "CodingOcean" and a navigation menu. The main content area has a light blue background and contains a white rounded rectangle with a blue shadow. Inside this rectangle, the title "BMI Calculator" is centered. Below the title are two input fields: the first contains the number "60" and the second contains "160". A blue button labeled "Calculate" is positioned below the input fields.

https://www.codingocean.com

BMI Calculator

Calculate



The screenshot shows the same web browser window as the previous one. The main content area now displays the results of the BMI calculation. It features a light blue background with a white rounded rectangle containing a blue shadow. Inside the rectangle, the text "Your BMI: 23.44" is displayed in a large font, followed by "Category: Normal weight" in a smaller font. A blue button labeled "Calculate Again" is centered at the bottom of the rectangle.

https://www.codingocean.com

Your BMI: 23.44

Category: Normal weight

Calculate Again