HTML Form Submission

HTML Form

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Simple HTML Form</title>
</head>
<body>
   <h2>Contact Us</h2>
   <form action="/submit_form" method="post">
     <label for="name">Name:</label><br>
     <input type="text" id="name" name="name" required><br><br>

     <label for="email">Email:</label><br>
     <input type="email" id="email" name="email" required><br><br>

     <label for="message">Message:</label><br>
     <textarea id="message" name="message" rows="4" cols="50"
required></textarea><br><br>

     <input type="submit" value="Submit">
   </form>
</body>
</html>
```

Explanation

1. **DOCTYPE and HTML Structure**: The `<!DOCTYPE html>` declaration defines the document type. The `html` element is the root element of the HTML document.
2. **Head Section**: The `head` element contains meta-information about the HTML document, such as character set and viewport settings.
3. **Body Section**: The `body` element contains the content of the HTML document, including the form.
4. **Form Element**: The `form` element defines the form. The `action` attribute specifies the URL where the form data will be sent when submitted. The `method` attribute specifies the HTTP method to use when sending form data (`post` in this case).
5. **Input Fields**: The form contains various input fields:
   - `input type="text"` for the name
   - `input type="email"` for the email

- `textarea` for the message
6. **Submit Button**: The `input type="submit"` creates a button that submits the form.

Handling Form Submission

To handle the form submission, you need a server-side script that processes the form data. Here's an example using Node.js and Express:

Node.js and Express Server

1. **Install Express**: If you haven't installed Express, you can do so using npm:
   ```bash
   npm install express
   ```

2. **Server Script (server.js)**:
   ```javascript
   const express = require('express');
   const bodyParser = require('body-parser');
   const app = express();
   const port = 3000;

   // Middleware to parse the body of POST requests
   app.use(bodyParser.urlencoded({ extended: true }));

   // Serve the HTML form
   app.get('/', (req, res) => {
       res.sendFile(__dirname + '/form.html');
   });

   // Handle form submission
   app.post('/submit_form', (req, res) => {
       const { name, email, message } = req.body;
       res.send(`Received your submission! Name: ${name}, Email: ${email}, Message: ${message}`);
   });

   app.listen(port, () => {
       console.log(`Server is running on http://localhost:${port}`);
   });
   ```

3. **Run the Server**:
   ```bash

```
node server.js
```

Explanation of the Server Script

1. **Express Setup**: The script sets up an Express server and listens on port 3000.
2. **Body-Parser Middleware**: The `body-parser` middleware is used to parse the body of POST requests, making the form data accessible via `req.body`.
3. **Serve HTML Form**: The `app.get` route serves the HTML form when the root URL (`/`) is accessed.
4. **Handle Form Submission**: The `app.post` route handles form submissions. It retrieves the form data from `req.body` and sends a response with the received data.

This setup creates a complete workflow for an HTML form submission, from the front-end form to the back-end server handling.