

Lesson 01 Demo 03

Creating a Form to Generate JSON Data

Objective: To develop an HTML form that takes user inputs and converts them into JSON format upon submission

Tools required: Visual Studio Code

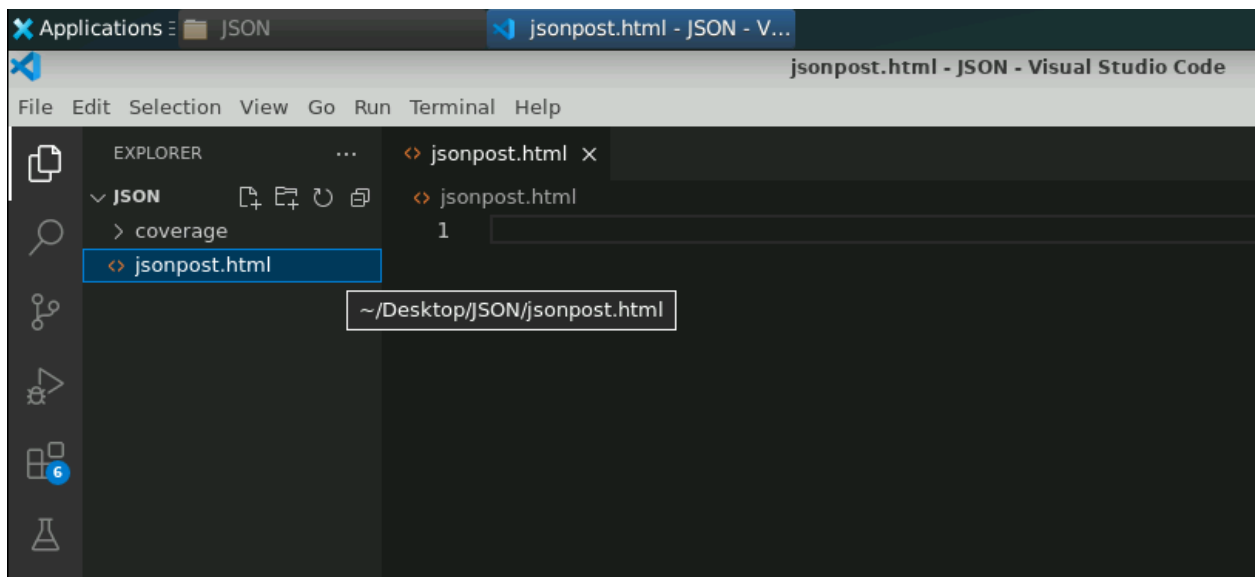
Prerequisites: None

Steps to be followed:

1. Create an HTML file
2. Verify the form submission output

Step 1: Create an HTML file

1.1 Open the Visual Studio Code editor and create a file named **jsonpost.html**



```
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>Form to JSON Converter</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f4f4f4;
      padding: 20px;
    }
    form {
      background: #fff;
      padding: 20px;
      border-radius: 8px;
      box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
    }
    label {
      display: block;
      margin-bottom: 10px;
    }
    input[type="text"], input[type="number"], input[type="file"] {
      width: 100%;
      padding: 8px;
      margin-top: 5px;
      border-radius: 4px;
      border: 1px solid #ddd;
      box-sizing: border-box;
    }
    input[type="checkbox"] {
      margin-right: 5px;
    }
    button {
      background-color: #007bff;
      color: white;
      padding: 10px 15px;
      border: none;
      border-radius: 4px;
      cursor: pointer;
      margin-top: 10px;
    }
  </style>

```

```

    button:hover {
      background-color: #0056b3;
    }
  </style>
</head>
<body>
  <form name="forms" id="forms">
    <label>What's your username?
      <input name="username" type="text" />
    </label>
    <label>How many years have you been a developer?
      <input name="age" type="number" />
    </label>
    <label>Upload images
      <input name="images" type="file" accept="image/png, image/jpeg" multiple />
    </label>
    <label>Do you know JavaScript?
      <input name="languages" type="checkbox" value="javascript" /> JavaScript
    </label>
    <label>Do you know Python?
      <input name="languages" type="checkbox" value="python" /> Python
    </label>
    <label>Enjoyed this blog?
      <input name="isHappyReader" type="checkbox" /> Yes
    </label>
    <button type="submit">Submit</button>
  </form>
  <script>
    const formElement = document.querySelector('form#forms');

    const getFormJSON = (form) => {
      const data = new FormData(form);
      return Array.from(data.keys()).reduce((result, key) => {
        if (result[key]) {
          result[key] = data.getAll(key);
          return result;
        }
        result[key] = data.get(key);
        return result;
      }, {});
    };

    const handler = (event) => {

```

```

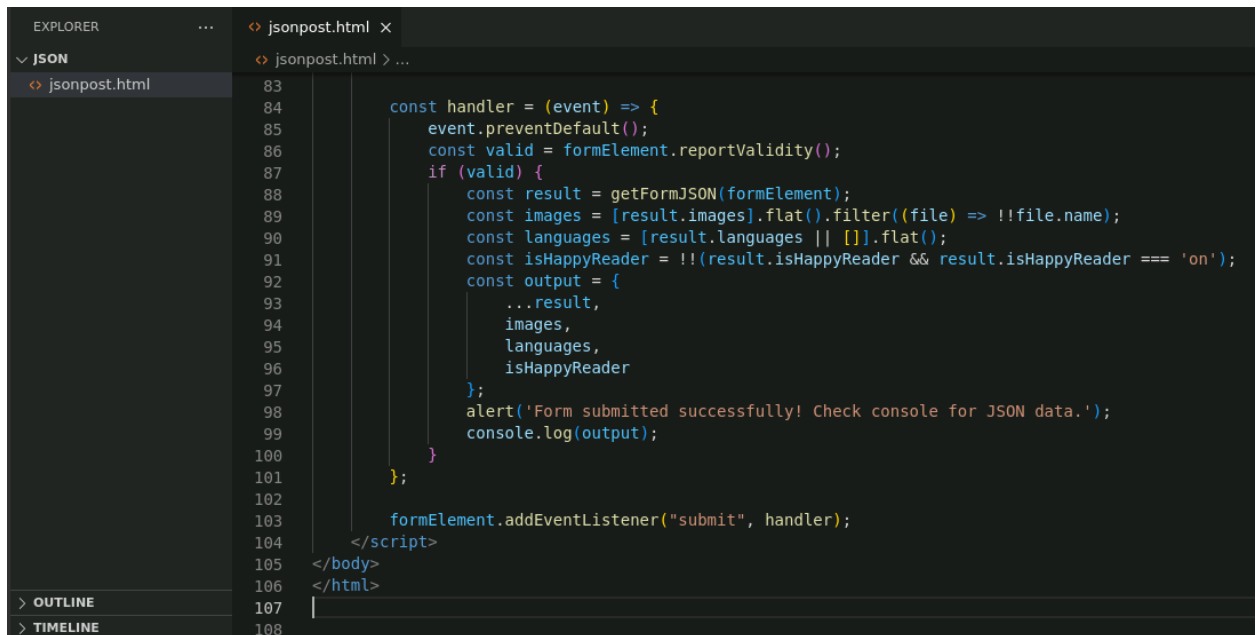
event.preventDefault();
const valid = formElement.reportValidity();
if (valid) {
  const result = getFormJSON(formElement);
  const images = [result.images].flat().filter((file) => !!file.name);
  const languages = [result.languages || []].flat();
  const isHappyReader = !(result.isHappyReader && result.isHappyReader ===
'on');
  const output = {
    ...result,
    images,
    languages,
    isHappyReader
  };
  alert('Form submitted successfully! Check console for JSON data.');
```

```

  console.log(output);
}
};

formElement.addEventListener("submit", handler);
</script>
</body>
</html>

```



```

83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108

```

```

const handler = (event) => {
  event.preventDefault();
  const valid = formElement.reportValidity();
  if (valid) {
    const result = getFormJSON(formElement);
    const images = [result.images].flat().filter((file) => !!file.name);
    const languages = [result.languages || []].flat();
    const isHappyReader = !(result.isHappyReader && result.isHappyReader === 'on');
    const output = {
      ...result,
      images,
      languages,
      isHappyReader
    };
    alert('Form submitted successfully! Check console for JSON data.');
```

```

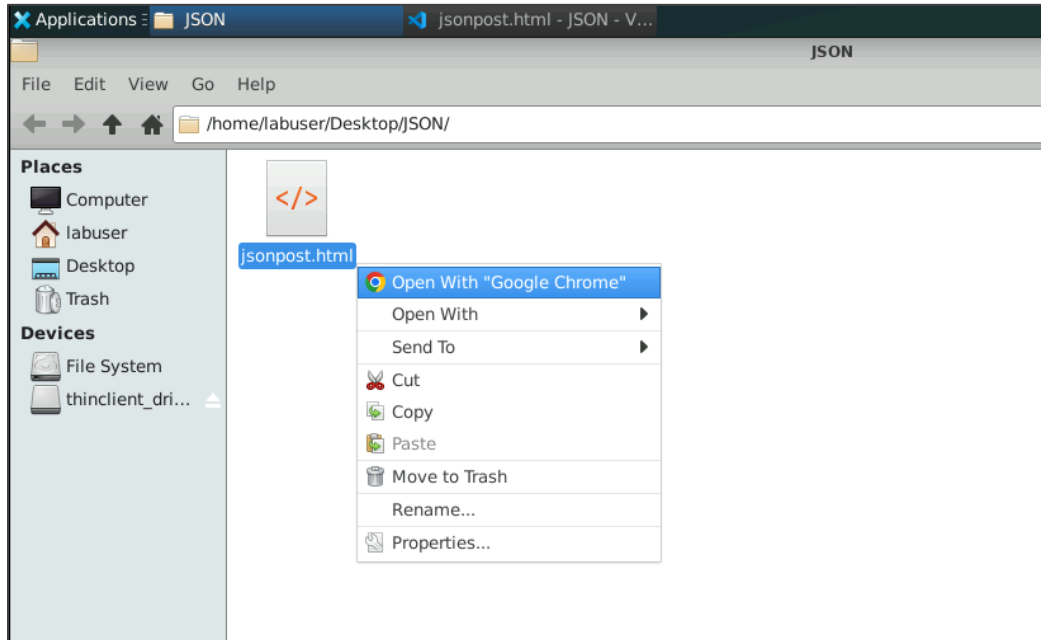
    console.log(output);
  }
};

formElement.addEventListener("submit", handler);
</script>
</body>
</html>

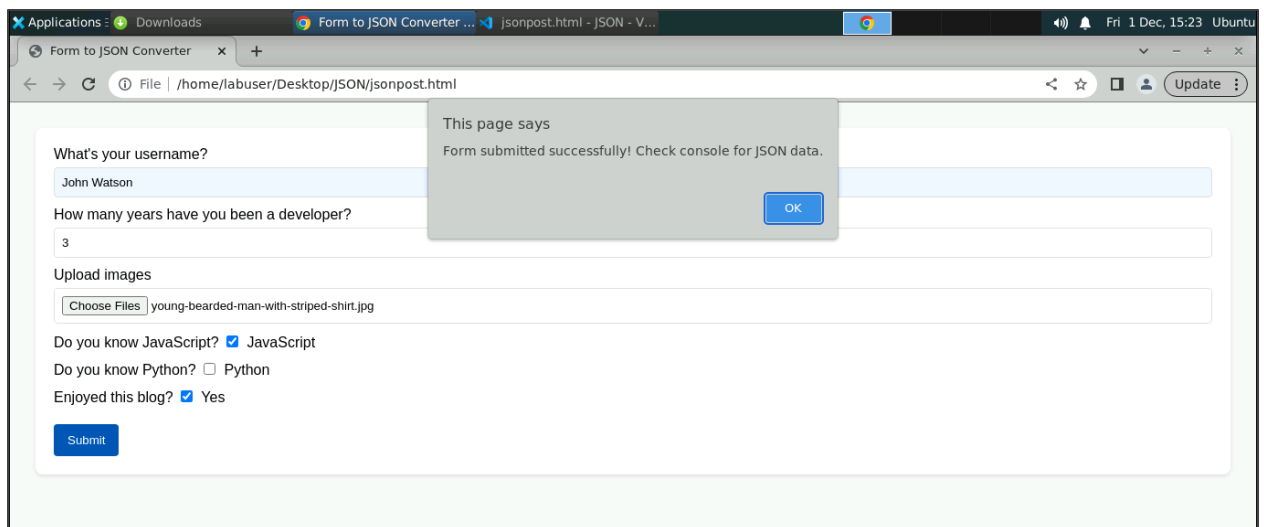
```

Step 2: Verify the form submission output

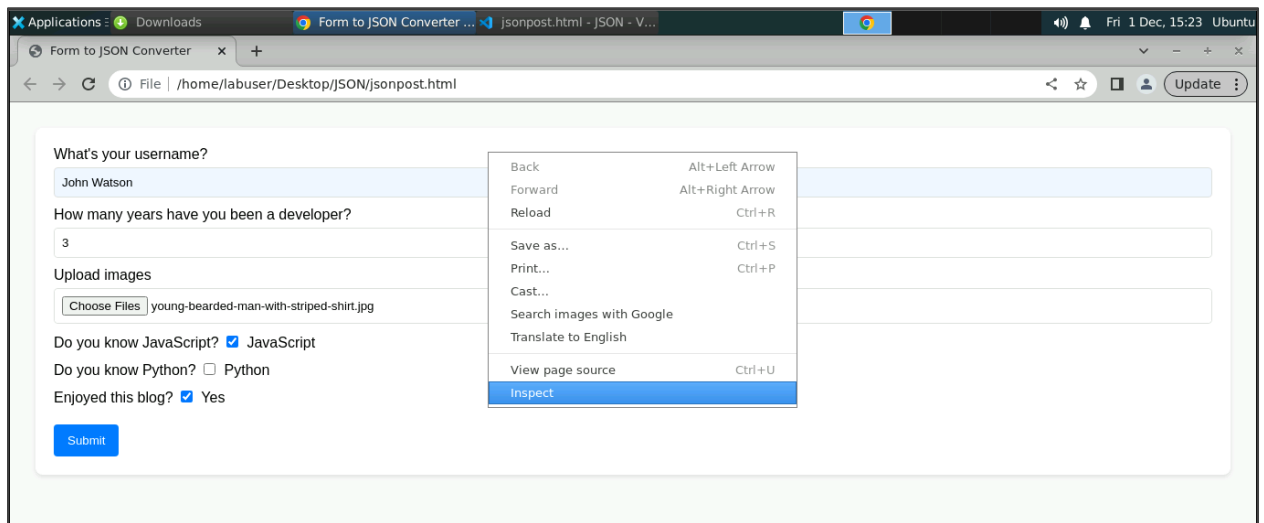
2.1 Save and open jsonpost.html in the web browser



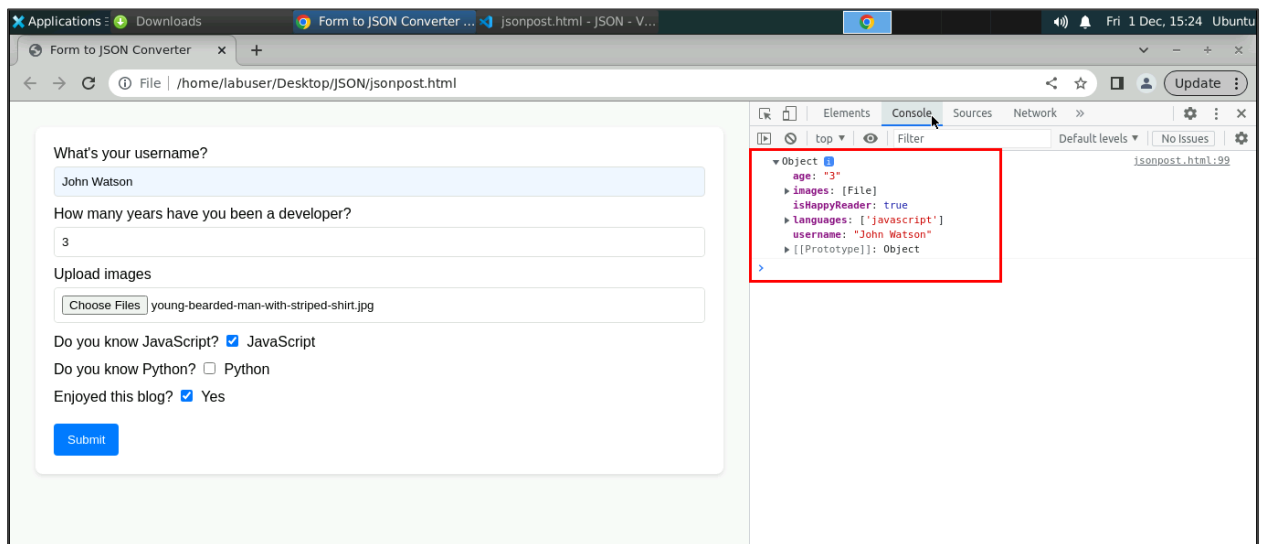
2.2 Fill the form fields and submit the form



2.3 Upon submitting the form, right-click on the page and select **Inspect** to open the developer console



2.4 Go to the **Console** tab in the **Developer** tools



Observe the output, which should display the JSON representation of the form data.

By following these steps, you have successfully developed how to capture user input through an HTML form and transform it into a structured JSON format. This exercise emphasizes the significance of JSON in web development, showcasing its utility in organizing and representing data derived from user interactions.