

Subject code & Name	:	CSE304 & Full Stack Development	Practical	:	11	Academic Year	:	2024-25
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Task - 12

Aim

In Express JS Take 2 Numbers from User and perform arithmetic Operation.

Code

app.js

```
const express = require('express');
const bodyParser = require('body-parser');
const app = express();

app.set('view engine', 'ejs');

app.use(bodyParser.urlencoded({ extended: false }));

app.get('/', (req, res) => {
  res.render('index');
});

app.post('/calculate', (req, res) => {
  try {
    const num1 = parseFloat(req.body.num1);
    const num2 = parseFloat(req.body.num2);
    const operation = req.body.operation;
    let result;
    let error = null;

    switch (operation) {
      case 'add':
        result = num1 + num2;
        break;
      case 'subtract':
        result = num1 - num2;
        break;
      case 'multiply':
        result = num1 * num2;
        break;
      case 'divide':
        if (num2 === 0) {
          throw new Error('Error: Division by zero is not allowed.');
```

```
    } else {
      result = num1 / num2;
    }
    break;
  default:
    throw new Error('Invalid operation.');
```

```
  }

  // Render the result page with result and operation details
  res.render('result', { error, result, operation });

} catch (err) {
  res.render('result', { error: err.message, result: null, operation: null });
}
});

const PORT = 3000;
app.listen(PORT, () => {
  console.log(`Server running on port ${PORT}`);
});
```

Index.ejs

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Arithmetic Operation</title>
</head>
<body>
  <h1>Arithmetic Calculator</h1>
  <form action="/calculate" method="POST">
    <label for="num1">Enter the first number:</label>
    <input type="number" name="num1" id="num1" required><br><br>

    <label for="num2">Enter the second number:</label>
    <input type="number" name="num2" id="num2" required><br><br>

    <label for="operation">Choose an operation:</label>
    <select name="operation" id="operation">
      <option value="add">Addition</option>
      <option value="subtract">Subtraction</option>
      <option value="multiply">Multiplication</option>
      <option value="divide">Division</option>
    </select><br><br>
```

```
<button type="submit">Calculate</button>
</form>
</body>
</html>
```

Result.ejs

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Calculation Result</title>
</head>
<body>
  <h1>Calculation Result</h1>

  <% if (error) { %>
    <p><strong><%= error %></strong></p>
  <% } else { %>
    <p>The result of <%= operation %> is: <strong><%= result %></strong></p>
  <% } %>

  <a href="/">Go back</a>
</body>
</html>
```

CalculatorRoutes.js

```
const express = require('express');
const router = express.Router();

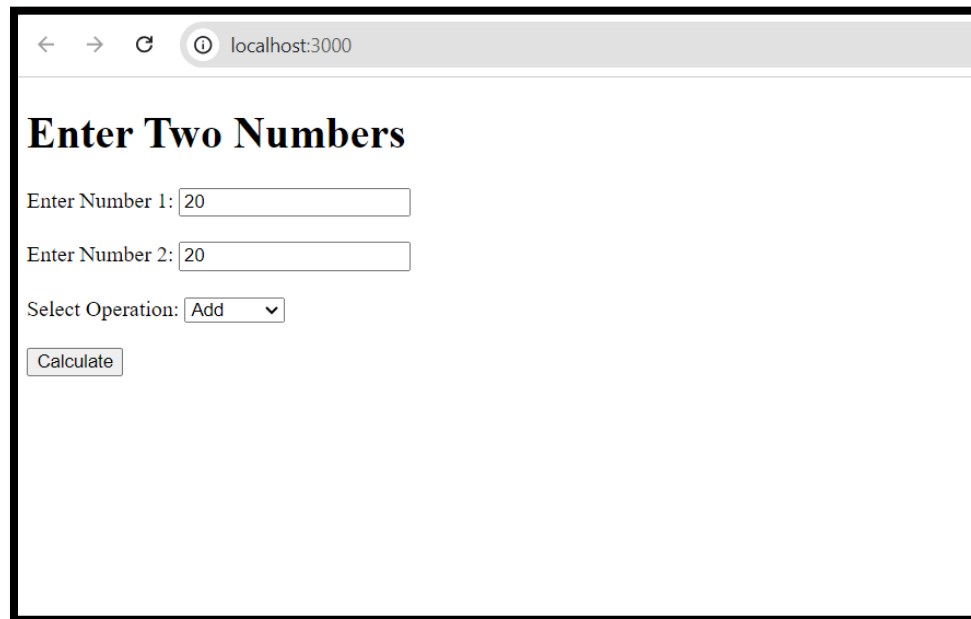
const calculatorController = require('../controller/calculatorController');

router.get('/', calculatorController.getForm);

router.post('/calculate', calculatorController.performCalculation);

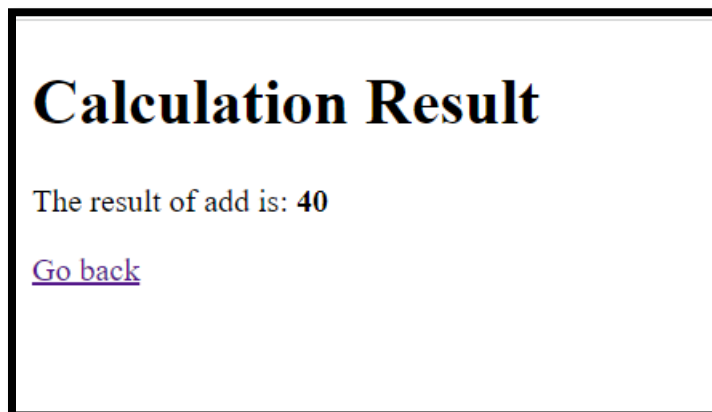
module.exports = router;
```

Output



A screenshot of a web browser window at localhost:3000. The page has a title "Enter Two Numbers". It contains two input fields: "Enter Number 1:" with the value "20" and "Enter Number 2:" with the value "20". Below these is a "Select Operation:" dropdown menu with "Add" selected. At the bottom is a "Calculate" button.

12.1 Calculator Form



A screenshot of a web page titled "Calculation Result". It displays the text "The result of add is: 40". Below this text is a purple underlined link that says "Go back".

12.2 Ans page

Signature :