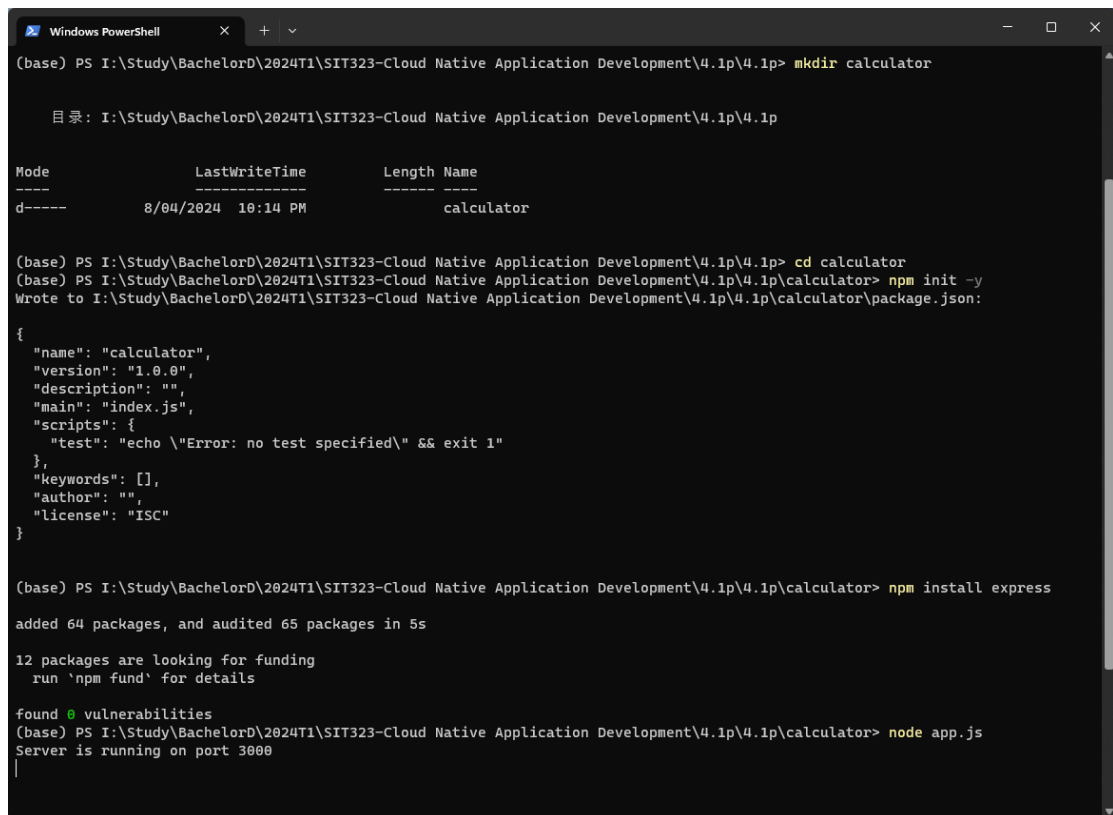


GitHub link: <https://github.com/DennisPYu/sit323-2024-t1-prac4p>

- Run 'npm init -y' to create a 'package.json' file.
- Install Express, running 'npm install express'



```
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p> mkdir calculator

  目录: I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p

Mode                LastWriteTime         Length Name
----                -
d-----          8/04/2024  10:14 PM             calculator

(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p> cd calculator
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p\calculator> npm init -y
Wrote to I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p\calculator\package.json:

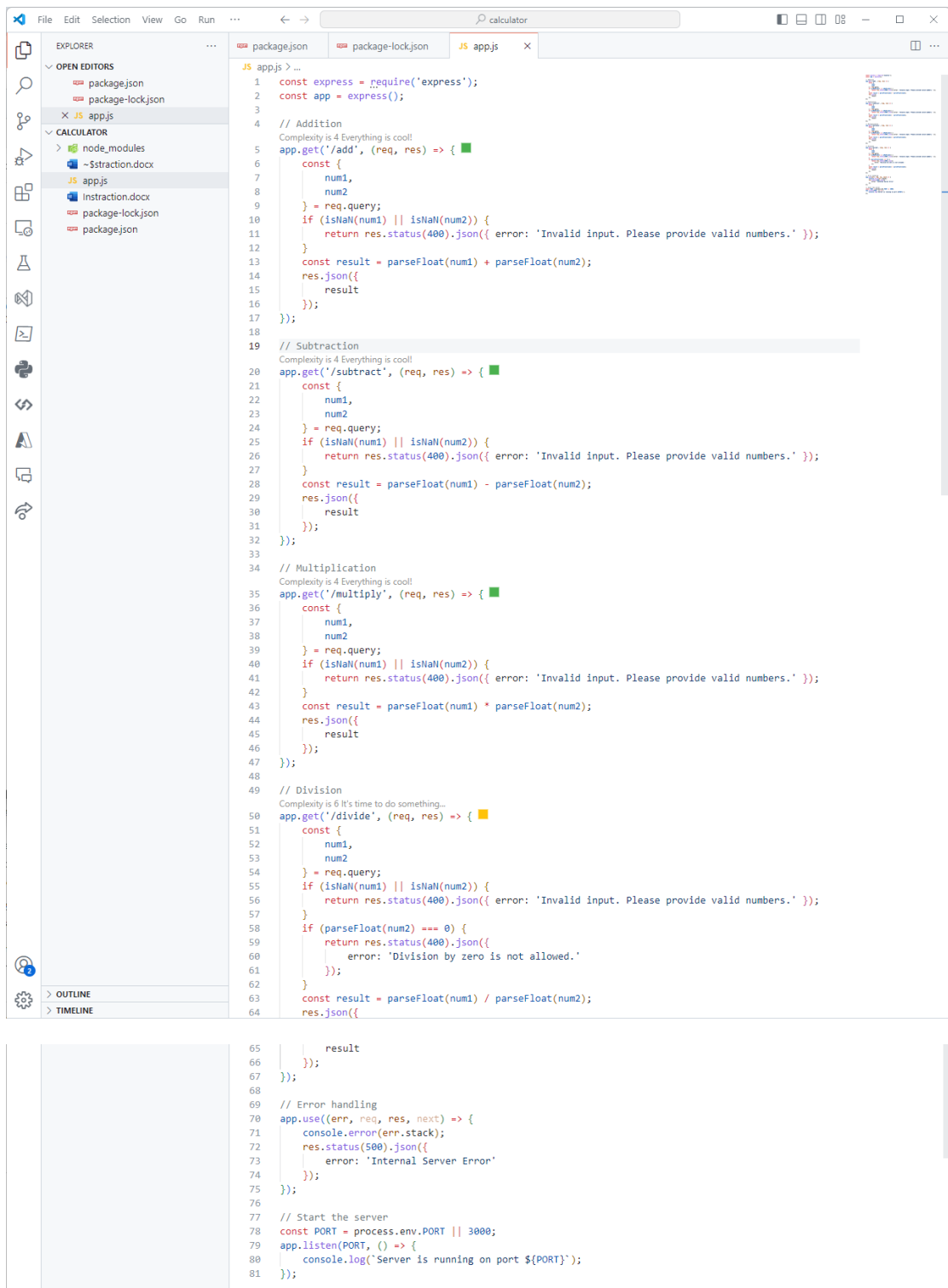
{
  "name": "calculator",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}

(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p\calculator> npm install express
added 64 packages, and audited 65 packages in 5s

12 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
(base) PS I:\Study\BachelorD\2024T1\SIT323-Cloud Native Application Development\4.1p\4.1p\calculator> node app.js
Server is running on port 3000
|
```

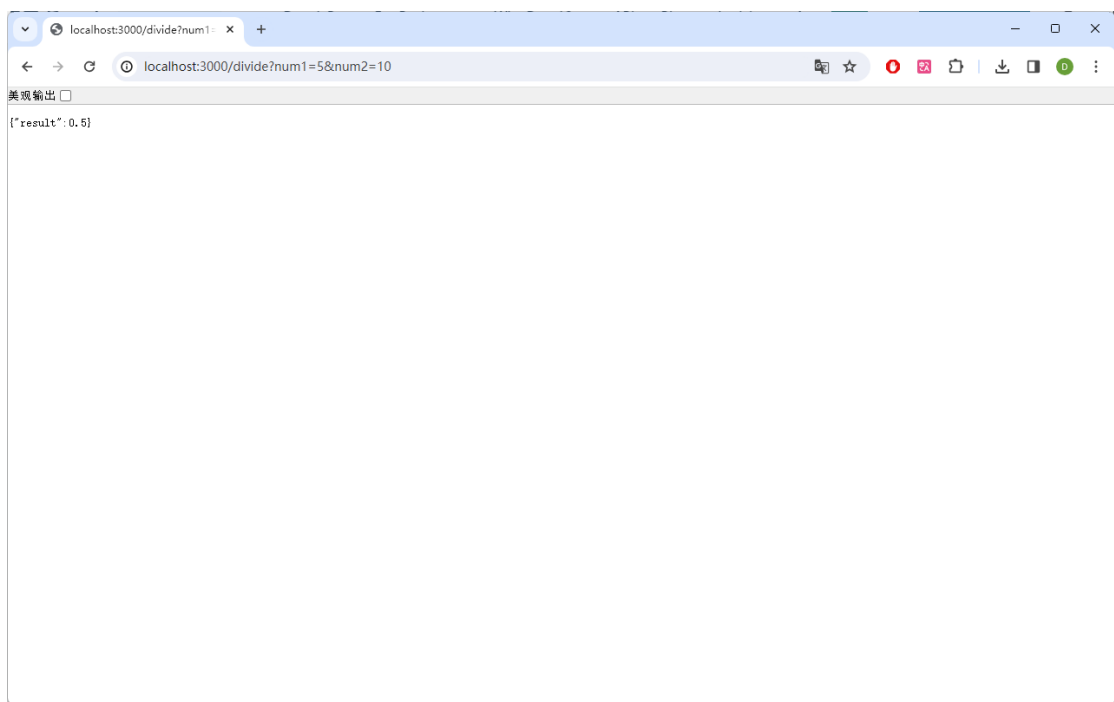
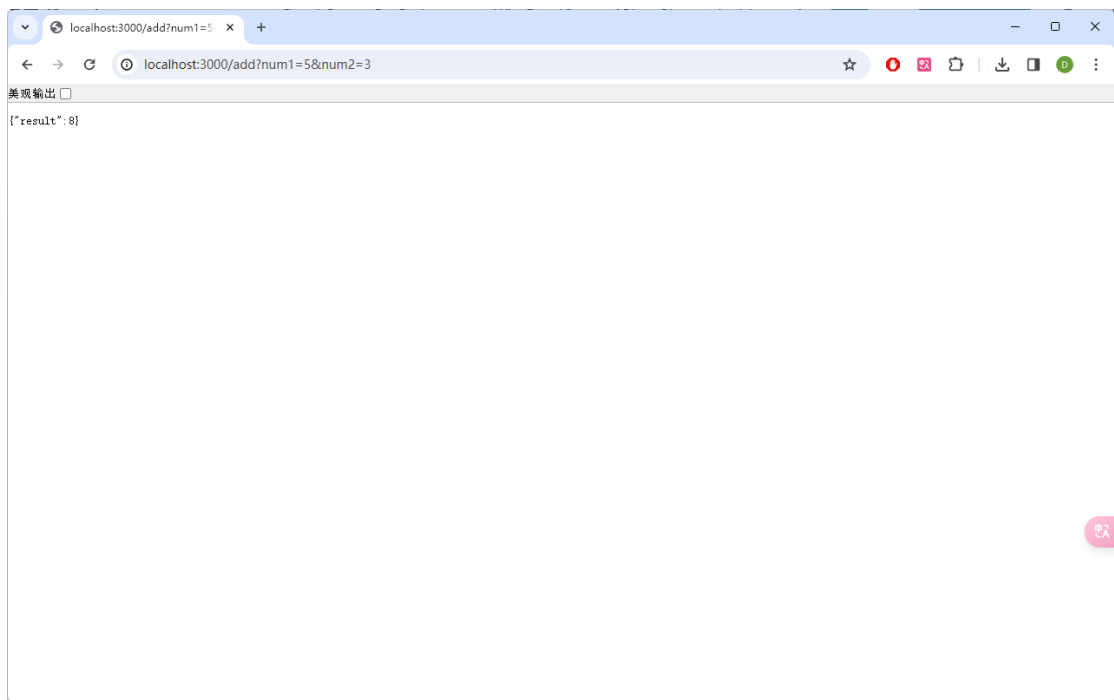
- App.js: main js file that provide basic calculator functionality to clients:

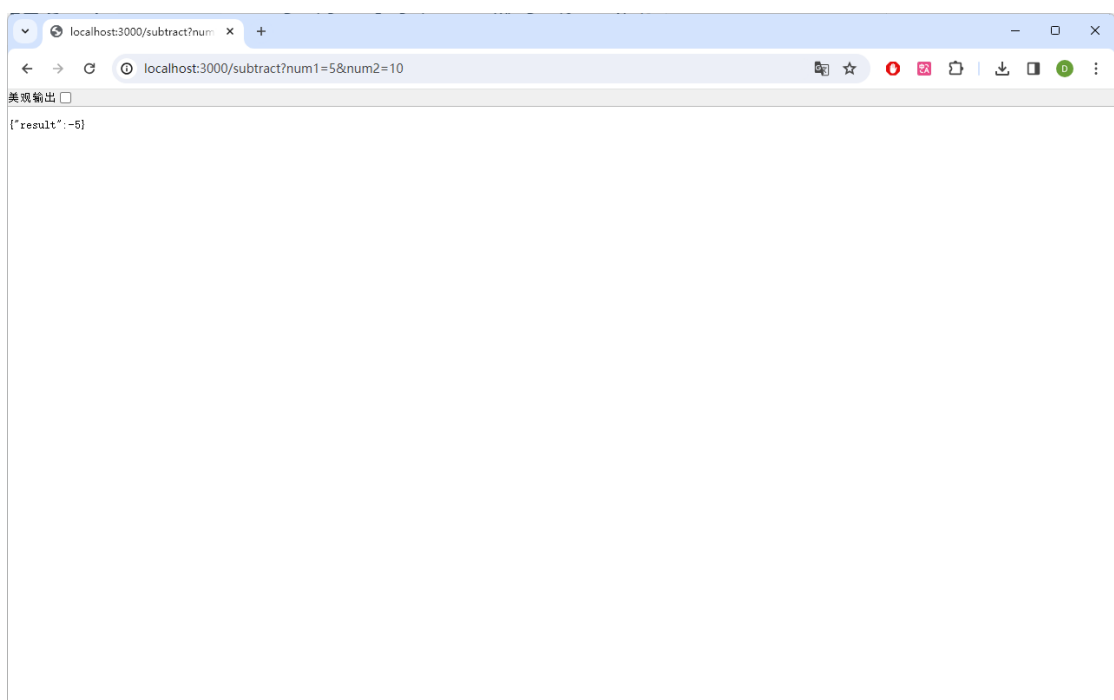
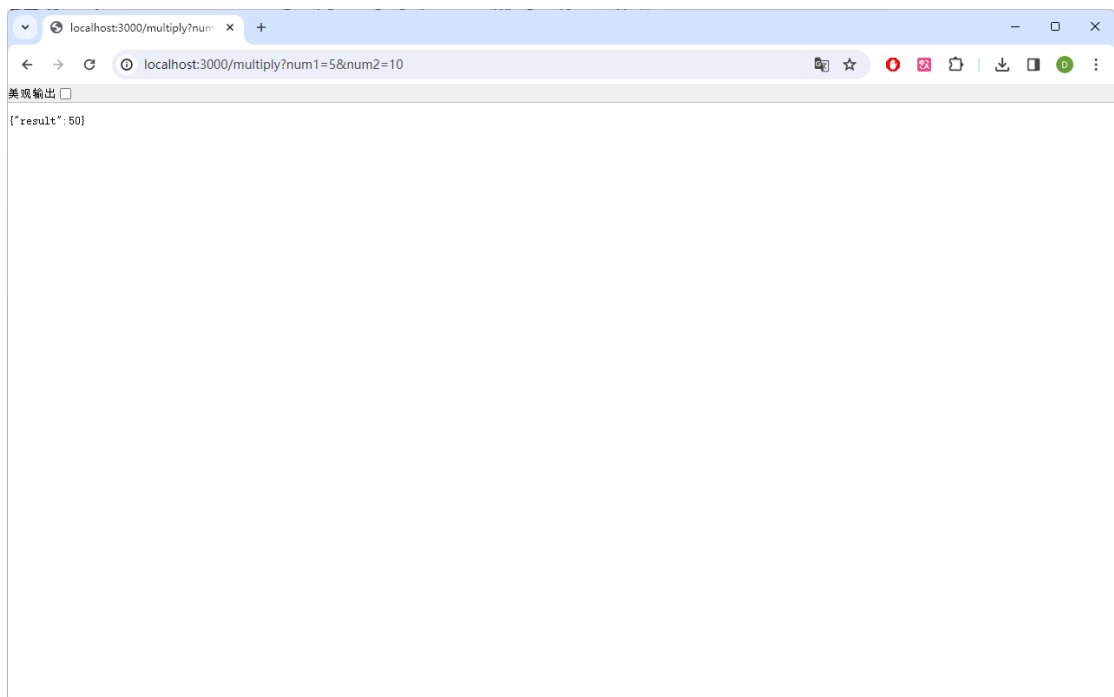


```
1  const express = require('express');
2  const app = express();
3
4  // Addition
5  Complexity is 4 Everything is cool!
6  app.get('/add', (req, res) => {
7    const {
8      num1,
9      num2
10   } = req.query;
11   if (isNaN(num1) || isNaN(num2)) {
12     return res.status(400).json({ error: 'Invalid input. Please provide valid numbers.' });
13   }
14   const result = parseFloat(num1) + parseFloat(num2);
15   res.json({
16     result
17   });
18 });
19
20 // Subtraction
21 Complexity is 4 Everything is cool!
22 app.get('/subtract', (req, res) => {
23   const {
24     num1,
25     num2
26   } = req.query;
27   if (isNaN(num1) || isNaN(num2)) {
28     return res.status(400).json({ error: 'Invalid input. Please provide valid numbers.' });
29   }
30   const result = parseFloat(num1) - parseFloat(num2);
31   res.json({
32     result
33   });
34 });
35
36 // Multiplication
37 Complexity is 4 Everything is cool!
38 app.get('/multiply', (req, res) => {
39   const {
40     num1,
41     num2
42   } = req.query;
43   if (isNaN(num1) || isNaN(num2)) {
44     return res.status(400).json({ error: 'Invalid input. Please provide valid numbers.' });
45   }
46   const result = parseFloat(num1) * parseFloat(num2);
47   res.json({
48     result
49   });
50 });
51
52 // Division
53 Complexity is 6 It's time to do something..
54 app.get('/divide', (req, res) => {
55   const {
56     num1,
57     num2
58   } = req.query;
59   if (isNaN(num1) || isNaN(num2)) {
60     return res.status(400).json({ error: 'Invalid input. Please provide valid numbers.' });
61   }
62   if (parseFloat(num2) === 0) {
63     return res.status(400).json({
64       error: 'Division by zero is not allowed.'
65     });
66   }
67   const result = parseFloat(num1) / parseFloat(num2);
68   res.json({
69     result
70   });
71 });
72
73 // Error handling
74 app.use((err, req, res, next) => {
75   console.error(err.stack);
76   res.status(500).json({
77     error: 'Internal Server Error'
78   });
79 });
80
81 // Start the server
82 const PORT = process.env.PORT || 3000;
83 app.listen(PORT, () => {
84   console.log(`Server is running on port ${PORT}`);
85 });
```

● Each

endpoint:





- Error
- handle

