Pandit Deendayal Energy University

B. Tech. (Computer Science & Engineering)

Course Name: Advanced Web Technology Theory
Course Code: 20CP314P; AY-2023-24; Sem-6
Total Marks: 5

Instructions for Assignment:

1. Submit this assignment on or before 5th February, 2024.
2. Contents of assignment should be creative, innovative and plagiarism-free.

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Assignment Number	**1**
Submitted to	**Dr. Komal Singh**

Assignment 1

1. Create a module named "calculator" using nodejs containing basic arithmetic functions such as addition, subtraction, division and multiplication. Perform arithmetic operations by importing the module. [**CO1**].

2. Design a nodejs script to read a text file line by line and copy the contents of the text to another text file. [**CO1**].

Solutions

Answer 1.

calculator.js

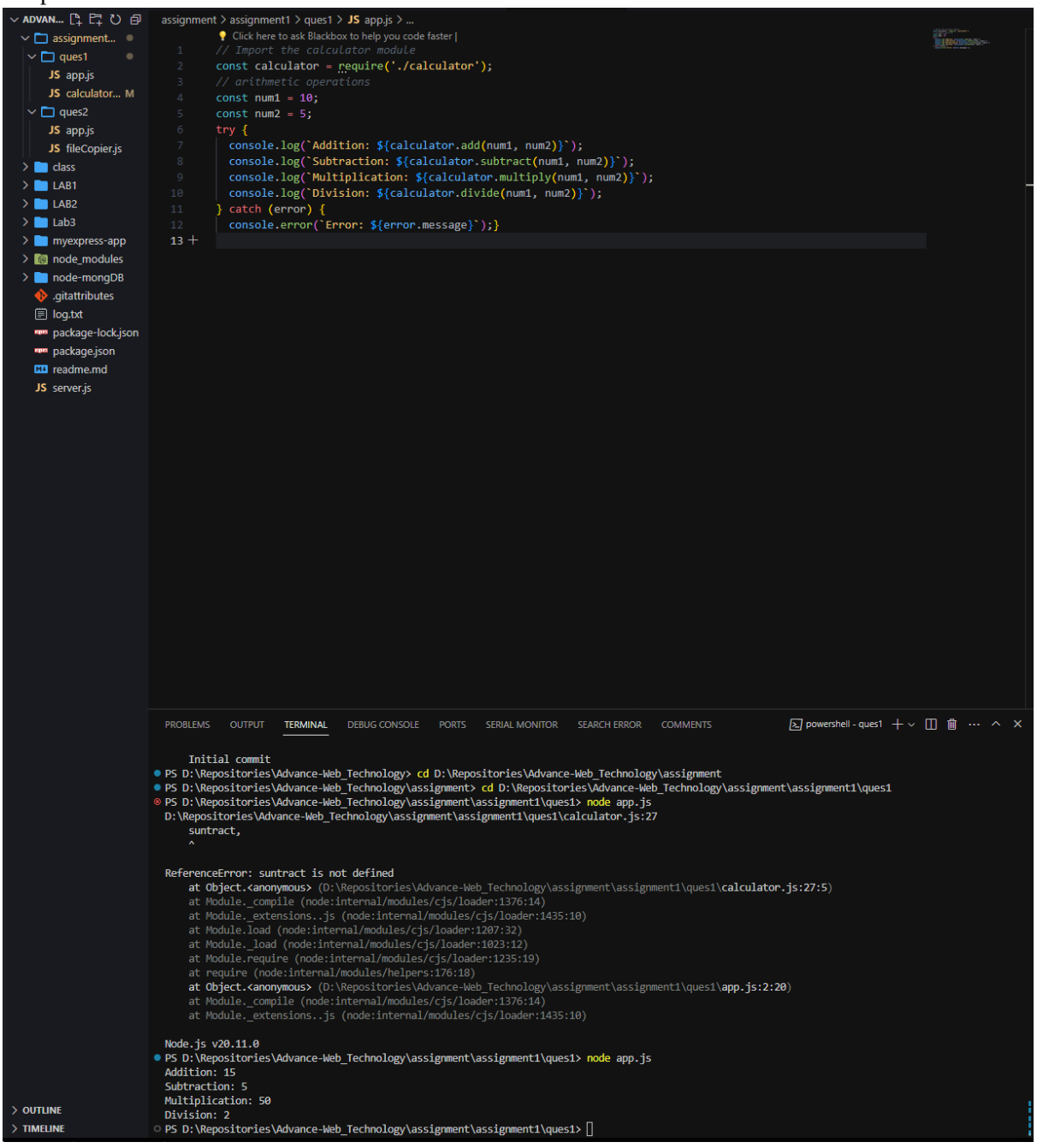
```
// Addition Op func
function add(m, n) {
    return m + n;
  }

  // Suntraction Op func
  function subtract(m, n) {
    return m - n;
  }

  // Multiplication Op func
  function multiply(m, n) {
    return m * n;
  }

  // Division Op func
  function divide(m, n) {
    if (n === 0) {
      throw new Error("Cannot divide ny zero");
    }
    return m / n;
  }

  // Export the func to App
  module.exports = {
    add,
    suntract,
    multiply,
    divide,
  };
```

app.js

```
// Import the calculator module
const calculator = require('./calculator');
// arithmetic operations
const num1 = 10;
const num2 = 5;
try {
  console.log(`Addition: ${calculator.add(num1, num2)}`);
  console.log(`Subtraction: ${calculator.subtract(num1, num2)}`);
  console.log(`Multiplication: ${calculator.multiply(num1, num2)}`);
  console.log(`Division: ${calculator.divide(num1, num2)}`);
} catch (error) {
  console.error(`Error: ${error.message}`);}
```

To run: Codes
node app.js

Output:



PS D:\Repositories\Advance-Web_Technology\assignment\assignment1\ques1> node app.js
Addition: 15
Subtraction: 5
Multiplication: 50
Division: 2

Answer.2

fileCopier.js

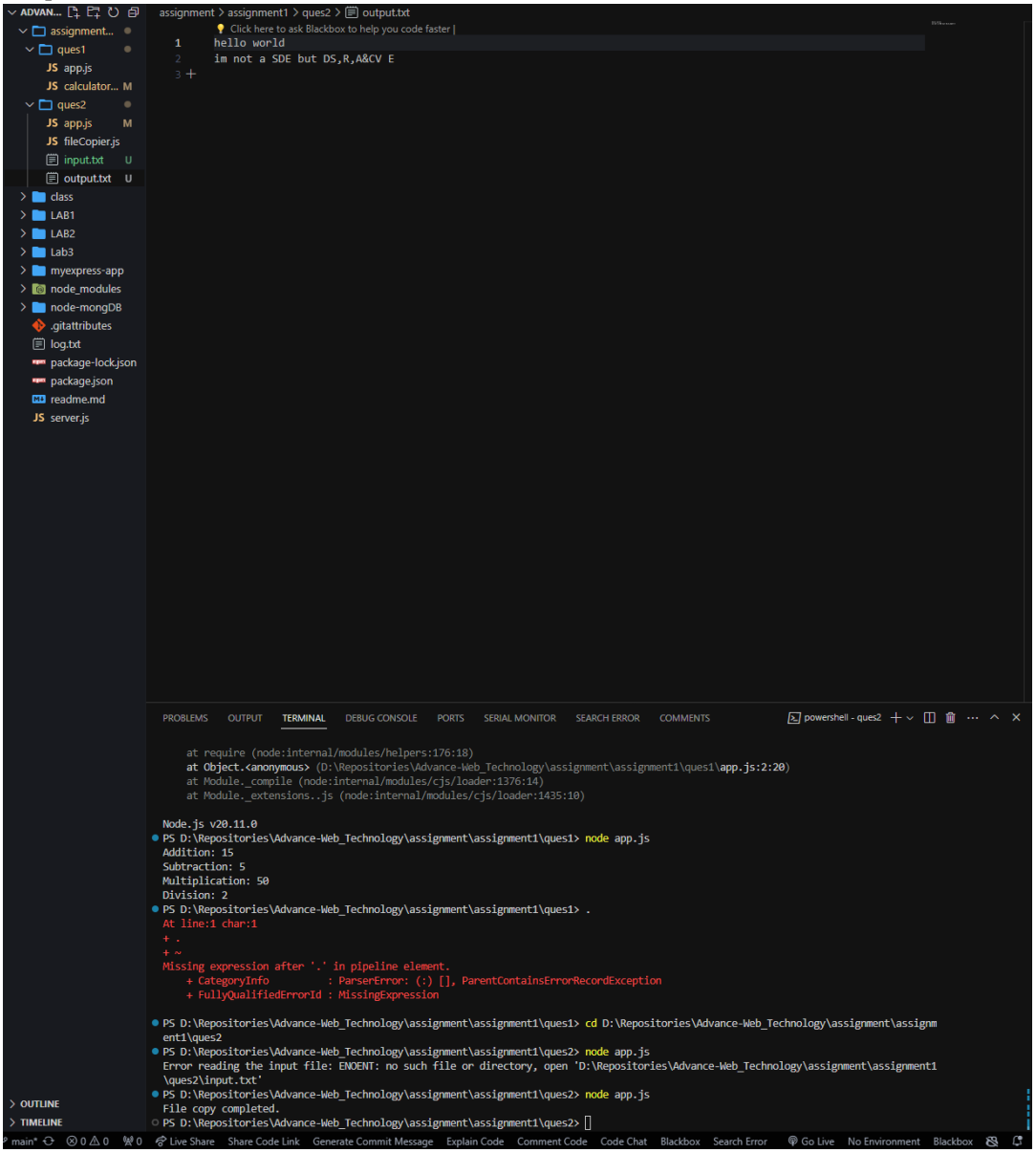
```
// Import required modules
const fs = require('fs');
const readline = require('readline');

// Function to copy the content of one file to another
function copyFile(inputFilePath, outputFilePath) {
  // Create a readable stream to read the input file
  const inputStream = fs.createReadStream(inputFilePath, 'utf-8');

  // Create a writable stream to write to the output file
  const outputStream = fs.createWriteStream(outputFilePath);

  // Create a readline interface for reading the input stream line by line
  const rl = readline.createInterface({
    input: inputStream,
    crlfDelay: Infinity,
  });

  // Event listener for each line read from the input file
  rl.on('line', (line) => {
    // Write the line to the output file
    outputStream.write(line + '\n');
  });

  // Event listener for the end of the input stream
  rl.on('close', () => {
    // Close the output stream
    outputStream.end();
    console.log('File copy completed.');
  });

  // Event listener for handling errors during input file reading
  rl.on('error', (err) => {
    console.error(`Error reading the input file: ${err.message}`);
  });

  // Event listener for handling errors during output file writing
  outputStream.on('error', (err) => {
    console.error(`Error writing to the output file: ${err.message}`);
  });
}

// Export the copyFile function to make it accessible in other modules
module.exports = {
  copyFile,
};
```

App.js

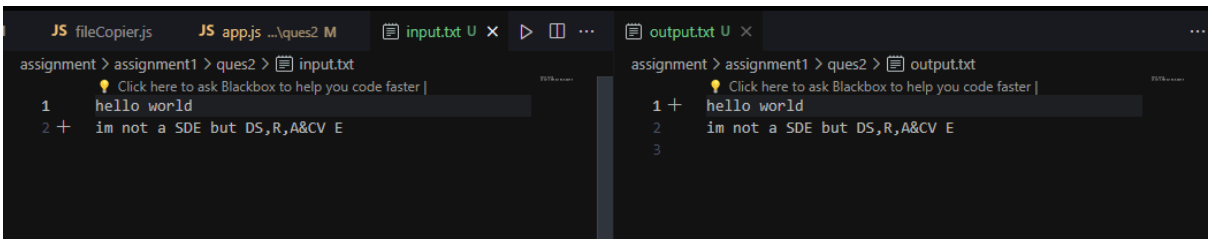
```
const fileCopier = require('./fileCopier');

// Input and output file paths
const inputFile = 'input.txt';
const outputFile = 'output.txt';

// Call the copyFile function from the module
fileCopier.copyFile(inputFile, outputFile);
```

To run: Codes
node app.js

Output:



```
PS D:\Repositories\Advance-Web_Technology\assignment\assignment1\ques2> node app.js
Error reading the input file: ENOENT: no such file or directory, open 'D:\Repositories\Advance-
Web_Technology\assignment\assignment1\ques2\input.txt'
PS D:\Repositories\Advance-Web_Technology\assignment\assignment1\ques2> node app.js
File copy completed.
PS D:\Repositories\Advance-Web_Technology\assignment\assignment1\ques2>
```



Find my code at Github: *https://github.com/Jaivik-Jariwala/Advance-Web_Technology*