

Batch: A2 Roll No.: 16010121045
Experiment No. 5

Title: React Hooks

Title: Implementation of Node.js

Problem statement:

Consider the basic concepts, which are useful in the creation of an application.

Considering the following points, demonstrate the functionality of each with a simple script

1) Basic Routing:

1. Build First server application using http module
2. Basic routing: Demonstrate it using simple HTML/Json file
3. Demonstrate the callback in node.js

2) File operation

- Check Permissions of a File or Directory.
- Checking if a file or a directory exists.
- Determining the line count of a text file.
- Reading a file line by line.
- See the file content through browser.

3) Building your custom modules

-To demonstrate this use some mathematics function to create custom module.

\$) Blocking and Non Blocking

Code:

Index.js

```
const http = require('http');
const myMath = require('./myMath.js');

const server = http.createServer((req, res) => {
  res.write(
    '<p>The greatest common divisor of 5 and 15 is ' +
    myMath.gcd(5, 15) +
    '</p>'
  );
  res.write(
    '<p>The least common multiple of 5 and 15 is ' + myMath.lcm(5, 15) + '</p>'
  );
  res.end();
});

server.listen(3000, () => {
  console.log('Server is running on port 3000');
});
```

File Operations

```
const http = require('http');
const myMath = require('./myMath.js');
const fs = require('fs');

const server = http.createServer((req, res) => {
  const filePath = 'myMath.js';
```

```
fs.readFile(filePath, 'utf8', (err, data) => {  
  if(err) {  
    res.writeHead(404, { 'Content-Type': 'text/plain' });  
    res.end('File not found.');
```



```
  } else {  
    res.writeHead(200, { 'Content-Type': 'text/plain' });  
    res.end(data);  
  }  
});  
});  
  
server.listen(3000, () => {  
  console.log('Server is running on port 3000');
```

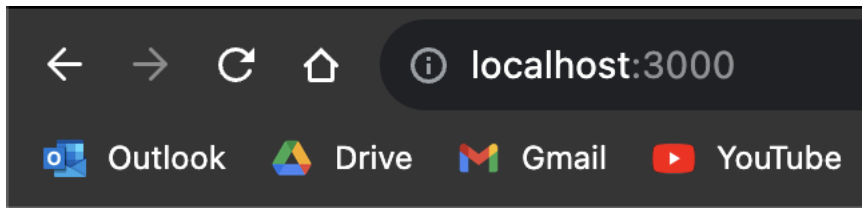


```
});
```

myMath.js

```
module.exports = {  
  gcd: function (a, b) {  
    if(b == 0) {  
      return a;  
    }  
    return this.gcd(b, a % b);  
  },  
  lcm: function (a, b) {  
    return (a * b) / this.gcd(a, b);  
  },  
};
```

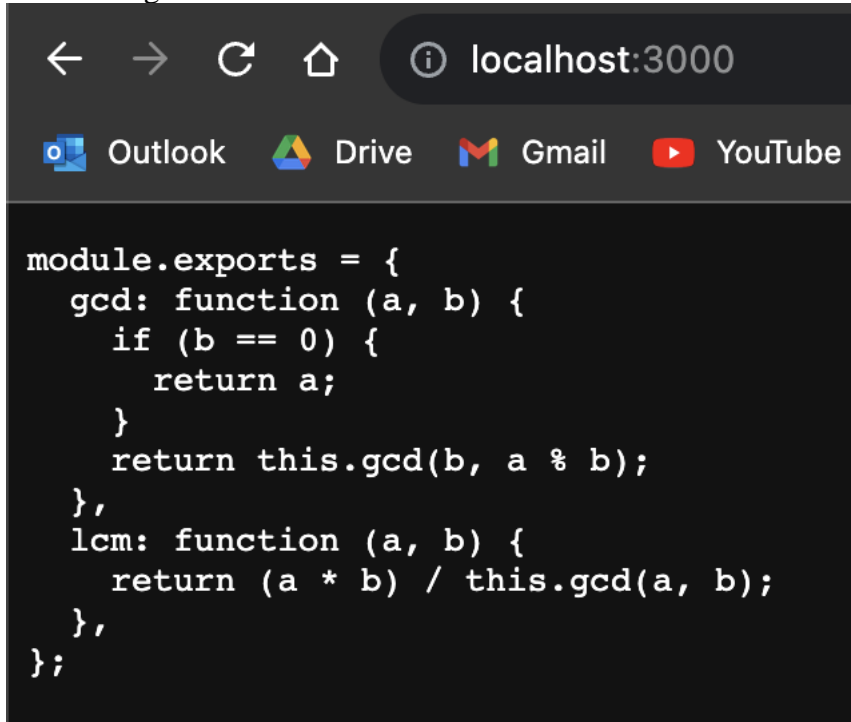
Output:



The greatest common divisor of 5 and 15 is 5

The least common multiple of 5 and 15 is 15

File reading



```
module.exports = {
  gcd: function (a, b) {
    if (b == 0) {
      return a;
    }
    return this.gcd(b, a % b);
  },
  lcm: function (a, b) {
    return (a * b) / this.gcd(a, b);
  },
};
```