Week 4

Exercise 1

In this exercise I have created a new folder for exercise 1 and initialize npm. Create a index.js file and install express package to run nodejs application

```
deenalam > week_4 > exercise_1 > JS index.js > ...
1    const express = require("express");
2    const bodyParser = require("body-parser");
3    const app = express();
4
5    app.use(bodyParser.urlencoded({ extended: true }));
6
7    app.get("/", (req, res) => {
8        res.send("hello it is my first express application");
9    });
10
11   app.listen(5000, () => {
12       console.log("server is running on port 5000");
13   });
14
```

Output:

```
D:\Projects\deenalam\week_4\exercise_1>node index.js
server is running on port 5000
```
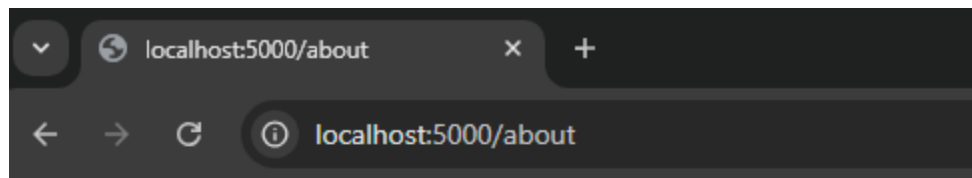
Exercise 2

In this exercise I have created two more endpoints. In first endpoint the response will be a basic express application.

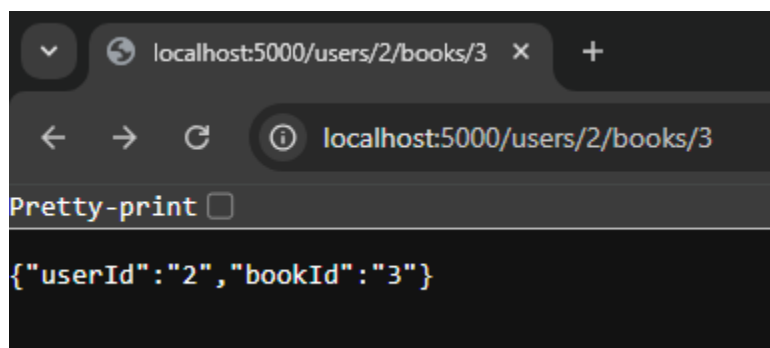In the second endpoint in returns the book id as param

```
14
15
16    // Exercise 2
17
18  v app.get("/about", (req, res) => {
19        res.send("This is a basic express application");
20    });
21
22  v app.get("/users/:userId/books/:bookId", (req, res) => {
23        res.send(req.params);
24    });
25
26
```

Endpoint 1

localhost:5000/about   ×   +

localhost:5000/about

This is a basic express application

Endpoint 2

localhost:5000/users/2/books/3   ×   +

localhost:5000/users/2/books/3

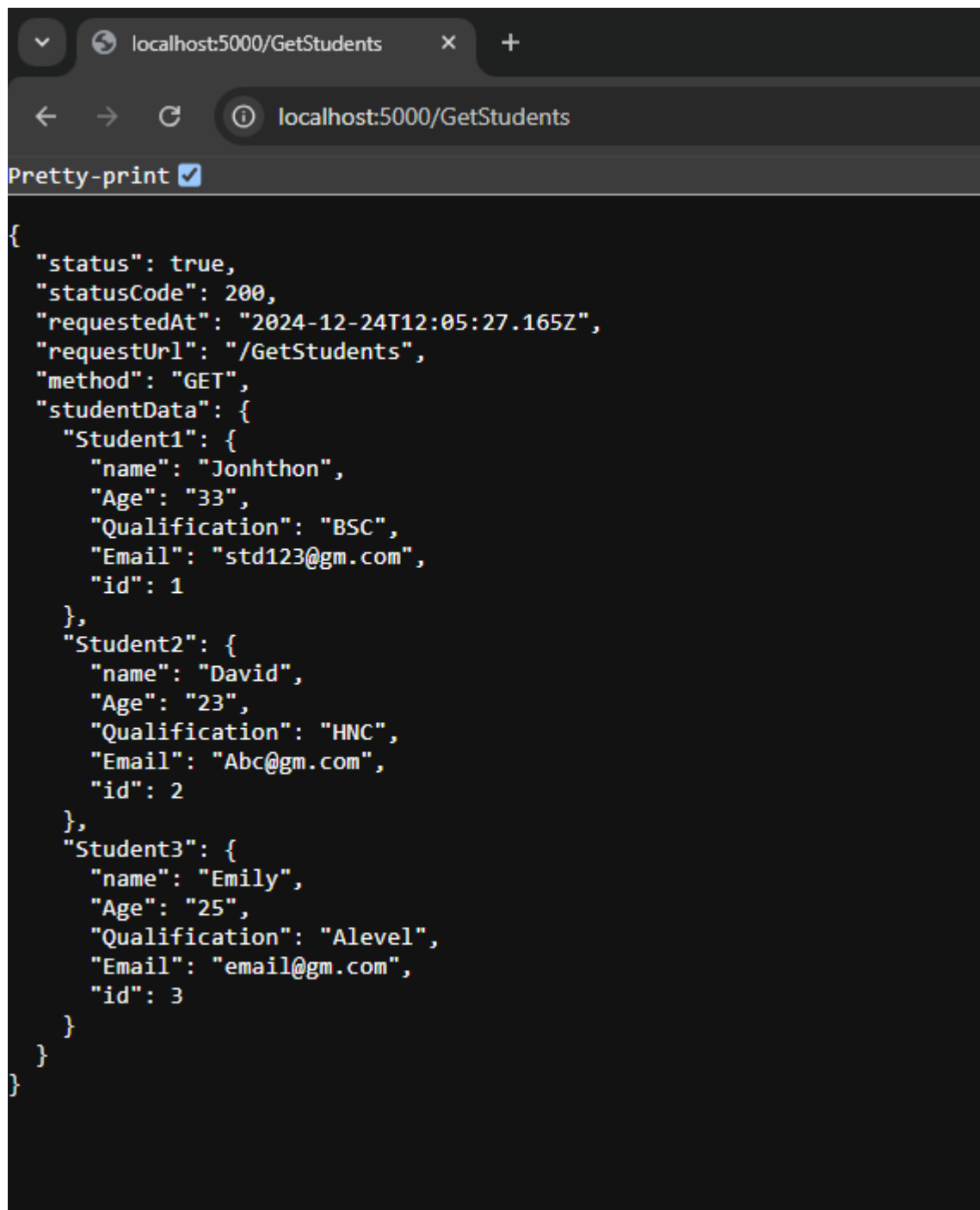Pretty-print ☐

{"userId":"2","bookId":"3"}

Exercise 3:

In this exercise I have created two more endpoints. In first endpoint the response will be about endpoint status and list of students.

In the code the fs (file system) package is being used to read the json file from the system and __dirname returns the root folder of application.

```javascript
const fs = require("fs");


app.get("/GetStudents", (req, res) => {
    fs.readFile(__dirname + "/Student.json", "utf8", (err, data) => {
        if (err) throw err;
        res.json({
            status: true,
            statusCode: 200,
            requestedAt: new Date().toISOString(),
            requestUrl: req.url,
            method: req.method,
            studentData: JSON.parse(data),
        });
    });
});
```

Pretty-print ✅

```
{
  "status": true,
  "statusCode": 200,
  "requestedAt": "2024-12-24T12:05:27.165Z",
  "requestUrl": "/GetStudents",
  "method": "GET",
  "studentData": {
    "Student1": {
      "name": "Jonhthon",
      "Age": "33",
      "Qualification": "BSC",
      "Email": "std123@gm.com",
      "id": 1
    },
    "Student2": {
      "name": "David",
      "Age": "23",
      "Qualification": "HNC",
      "Email": "Abc@gm.com",
      "id": 2
    },
    "Student3": {
      "name": "Emily",
      "Age": "25",
      "Qualification": "Alevel",
      "Email": "email@gm.com",
      "id": 3
    }
  }
}
```

On GetStudentid endpoint by passing ids from 1-3 it returns the student details as we can see in below screenshots

Pretty-print ☑

```
{
  "name": "Jonhthon",
  "Age": "33",
  "Qualification": "BSC",
  "Email": "std123@gm.com",
  "id": 1
}
```

Pretty-print ☑

```
{
  "name": "David",
  "Age": "23",
  "Qualification": "HNC",
  "Email": "Abc@gm.com",
  "id": 2
}
```

Pretty-print ☑

```
{
  "name": "Emily",
  "Age": "25",
  "Qualification": "Alevel",
  "Email": "email@gm.com",
  "id": 3
}
```

On student id 4 it returns false status with a messsage "Student is not found" since it doesn't exists in the json file.
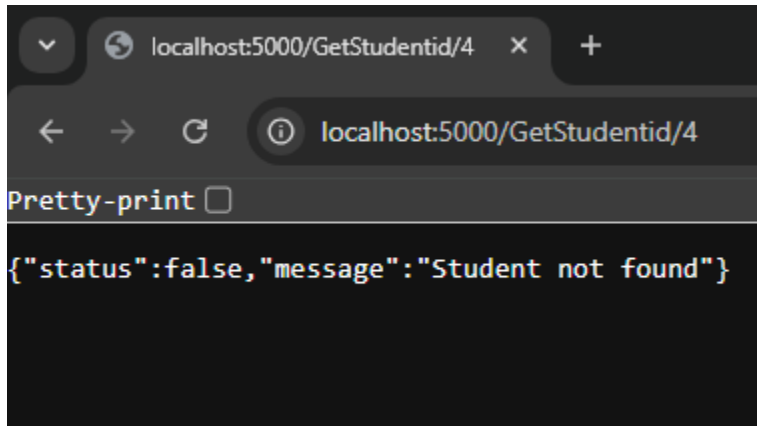
Exercise 4

In this exercise I have created two endpoint in first one it returns the studentinfo form in html where you can add all his details. In second endpoint once user fills the form and hit submit button the data will be send to the second enpoint and return as response as in attached screenshots

```
// Exercise 4

app.get('/studentinfo', function (req, res) {
    res.sendFile('StudentInfo.html', { root: __dirname });
})

app.post('/submit-data', function (req, res) {
    var name = req.body.firstName + ' ' + req.body.lastName + ' ';
    var Age = req.body.myAge + ' Gender: ' + req.body.gender + '    ';
    Qual = ' Qualification' + req.body.Qual
    console.log(req.body.Qual)
    res.send({
        status: true,
        message: 'form Details', data: {
            name: name, age: Age, Qualification: Qual,
        }
    });
});
```

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Student Details

First Name: deen

Last Name : alam

Email: deenalam@gmail.com

Age : 20

Please select your gender:

- ● **Male**
- ○ **Female**
- ○ **Other**

Qualifications

- ☑ **GCSE**
- ☐ **A- level**
- ☐ **Higher National Certificate/Level 4**
- ☐ **Foundation Degree/HND/DipHE/Level 5**
- ☐ **Bachelor Degree/Graduate diploma or Certificate/Level 6**
- ☐ **Master Degree/PGCE/Level7**
- ☑ **PhD/Level8**

Submit

```json
{
  "status": true,
  "message": "form Details",
  "data": {
    "name": "deen alam ",
    "age": "20 Gender: male     ",
    "Qualification": " QualificationGCSE,PhD"
  }
}
```