Name: SUNDEEP A	SRN: PES1UG20CS445	Section: H
	Date: 13-12-21	Exercise No: 5

PROBLEM STATEMENT(EVEN SRN's)

1. Create an API that has a collection of books having different fields (such as book_id, book_name, book_price,book_authetc)for each book.
   Using HTTP methods GET method extract the data of book using book_id,
   Using PUT method update the price, Using POST method insert a new data and display the same. (Use MongoDb database)

2. Create student resume with details (such as name, dob, qualification, nationality etc…) using formdata and upload the student photo to the form.

OBJECTIVE

The objective of this exercise is to test the student on ExpressJS framework.
It evaluates the student's knowledge of http request, respose objects. Creating RestFul API and web services

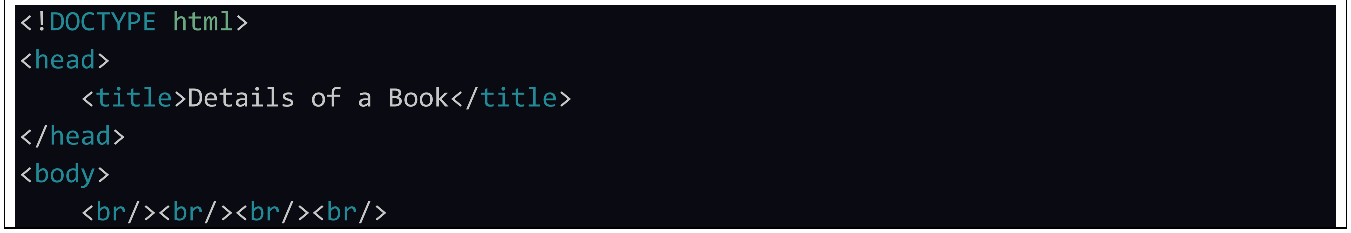
PREREQUISITE

In order to write this program, the student needs to understand the fundamentals of HTML and CSS. The student must be familiar with basic Javascript and express module.

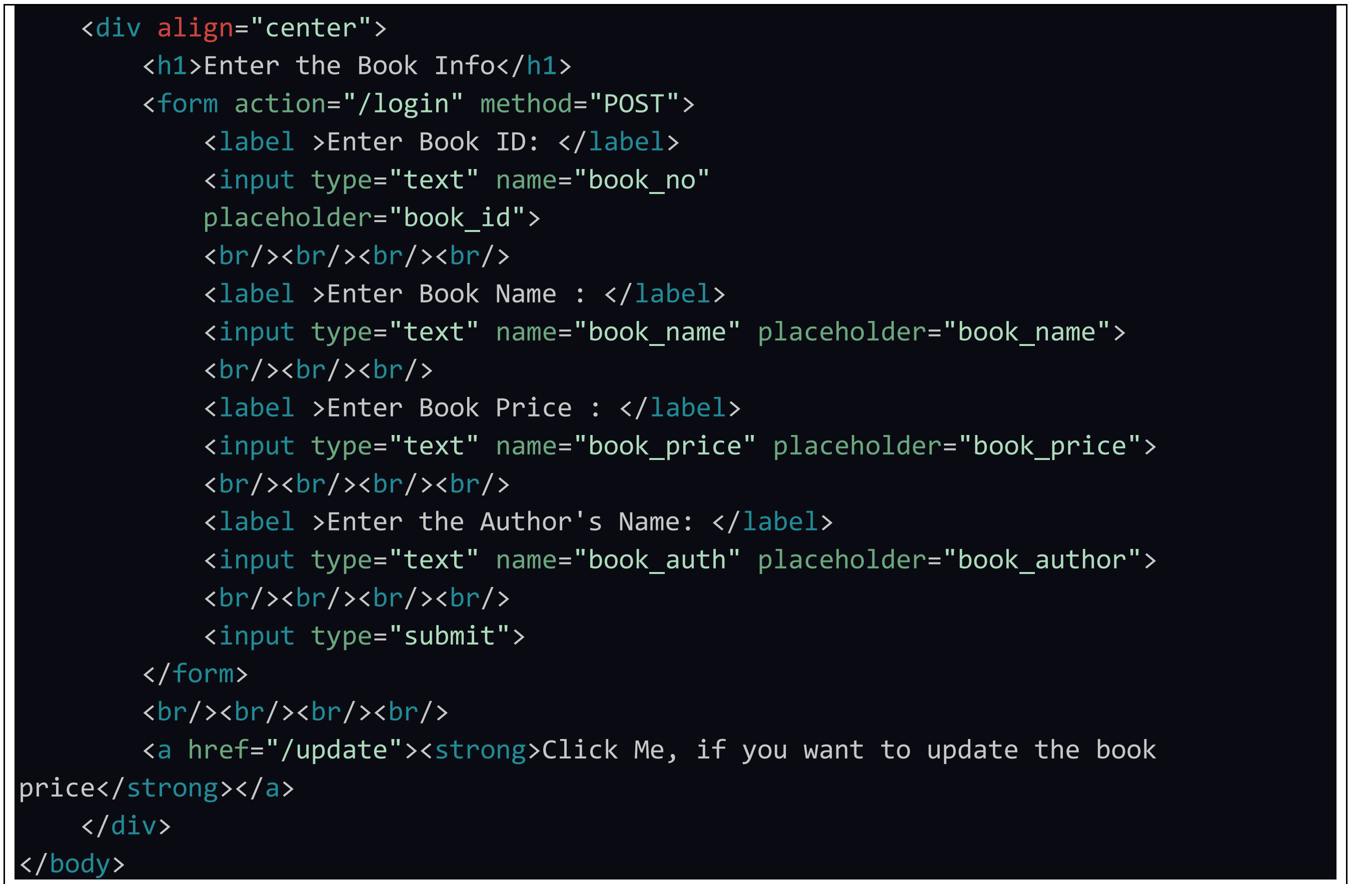
PROGRAM

1)

IN book_collection.html

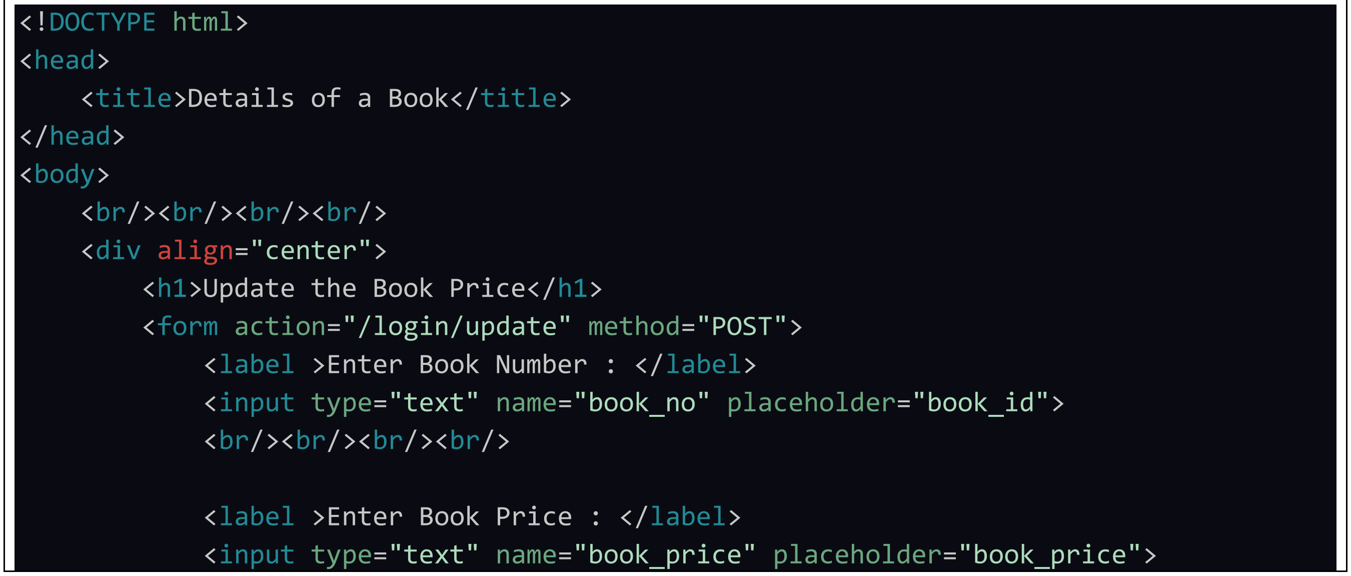


```
<!DOCTYPE html>
<head>
    <title>Details of a Book</title>
</head>
<body>
    <br/><br/><br/><br/>
```



```
    <div align="center">
        <h1>Enter the Book Info</h1>
        <form action="/login" method="POST">
            <label >Enter Book ID: </label>
            <input type="text" name="book_no"
            placeholder="book_id">
            <br/><br/><br/><br/>
            <label >Enter Book Name : </label>
            <input type="text" name="book_name" placeholder="book_name">
            <br/><br/><br/>
            <label >Enter Book Price : </label>
            <input type="text" name="book_price" placeholder="book_price">
            <br/><br/><br/><br/>
            <label >Enter the Author's Name: </label>
            <input type="text" name="book_auth" placeholder="book_author">
            <br/><br/><br/><br/>
            <input type="submit">
        </form>
        <br/><br/><br/><br/>
        <a href="/update"><strong>Click Me, if you want to update the book
price</strong></a>
    </div>
</body>
```

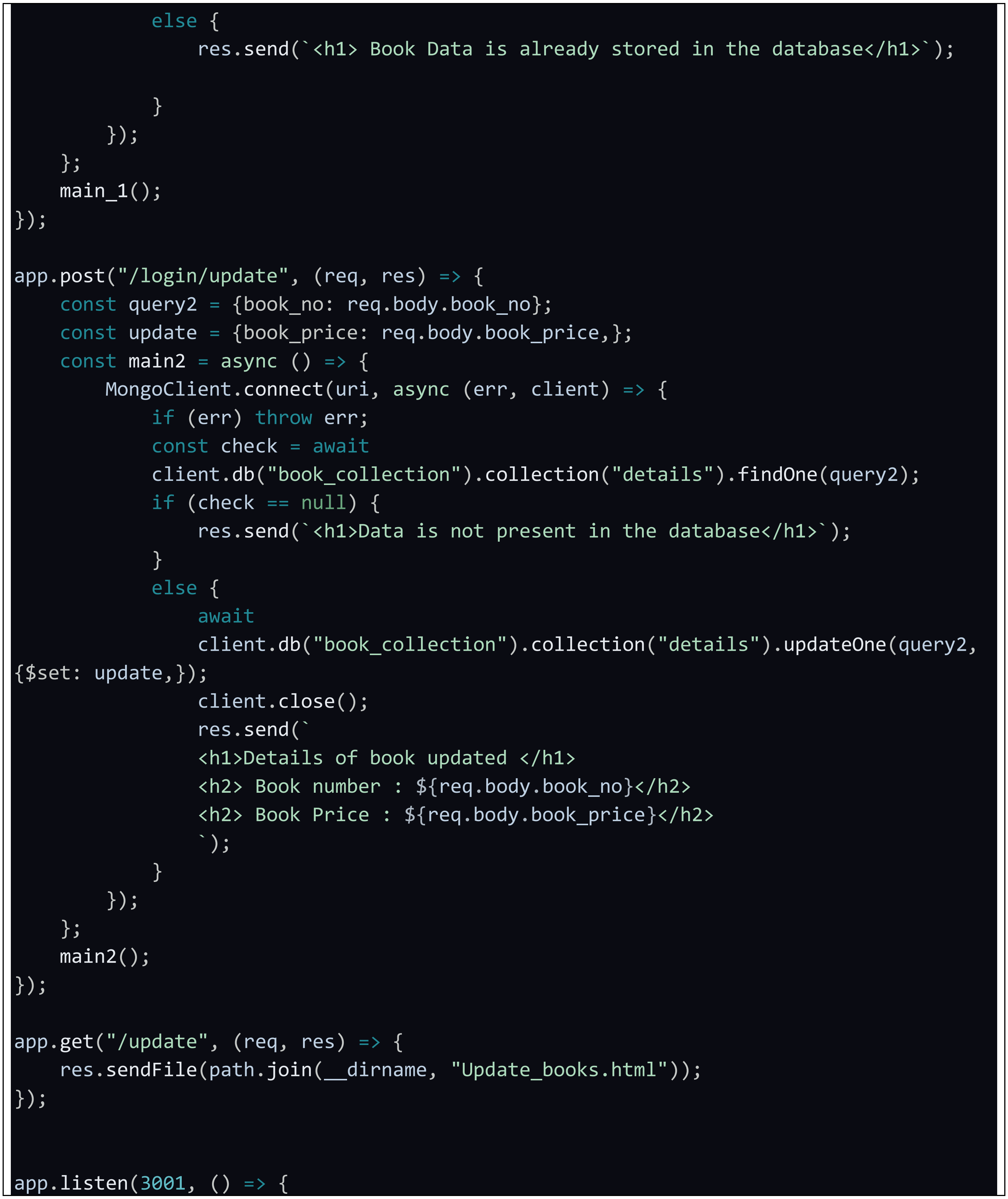
In Update_books.html



```
<!DOCTYPE html>
<head>
    <title>Details of a Book</title>
</head>
<body>
    <br/><br/><br/><br/>
    <div align="center">
        <h1>Update the Book Price</h1>
        <form action="/login/update" method="POST">
            <label >Enter Book Number : </label>
            <input type="text" name="book_no" placeholder="book_id">
            <br/><br/><br/><br/>

            <label >Enter Book Price : </label>
            <input type="text" name="book_price" placeholder="book_price">
            <br/><br/><br/><br/>
            <input type="submit" value="Update">
        </form>
        <br/><br/><br/><br/>
    </div>
</body>
```

In book_backend.js

```
const express = require("express");
const app = express();
const path = require("path");
const { MongoClient } = require("mongodb");
app.use(express.json());
app.use(express.urlencoded({ extended: true }));
const uri = "mongodb://localhost:27017/book";

app.get("/", (req, res) => {
    res.sendFile(path.join(__dirname, "book_collection.html"));
});

app.post("/login", (req, res) => {
    const query1 = req.body;
    const main_1 = async () => {
        MongoClient.connect(uri, async (err, client) => {
            if (err) throw err;
            const check = await client
            .db("book_collection")
            .collection("details")
            .findOne(query1);
            if (check == null) {
                await
                client.db("book_collection").collection("details").insertOne(query1);
                client.close();
                res.send(`
                <h1>Details of book inserted into the database : </h1>
                <h2> Book number : ${req.body.book_no}</h2>
                <h2> Book Name : ${req.body.book_name}</h2>
                <h2> Book Price : ${req.body.book_price}</h2>
                <h2> Book author : ${req.body.book_auth}</h2>
                `);
            }
```



```
            else {
                res.send(`<h1> Book Data is already stored in the database</h1>`);

            }
        });
    };
    main_1();
});

app.post("/login/update", (req, res) => {
    const query2 = {book_no: req.body.book_no};
    const update = {book_price: req.body.book_price,};
    const main2 = async () => {
        MongoClient.connect(uri, async (err, client) => {
            if (err) throw err;
            const check = await
            client.db("book_collection").collection("details").findOne(query2);
            if (check == null) {
                res.send(`<h1>Data is not present in the database</h1>`);
            }
            else {
                await
                client.db("book_collection").collection("details").updateOne(query2,
{$set: update,});
                client.close();
                res.send(`
                <h1>Details of book updated </h1>
                <h2> Book number : ${req.body.book_no}</h2>
                <h2> Book Price : ${req.body.book_price}</h2>
                `);
            }
        });
    };
    main2();
});

app.get("/update", (req, res) => {
    res.sendFile(path.join(__dirname, "Update_books.html"));
});


app.listen(3001, () => {
    console.log("Listening to port 3001");
});
```

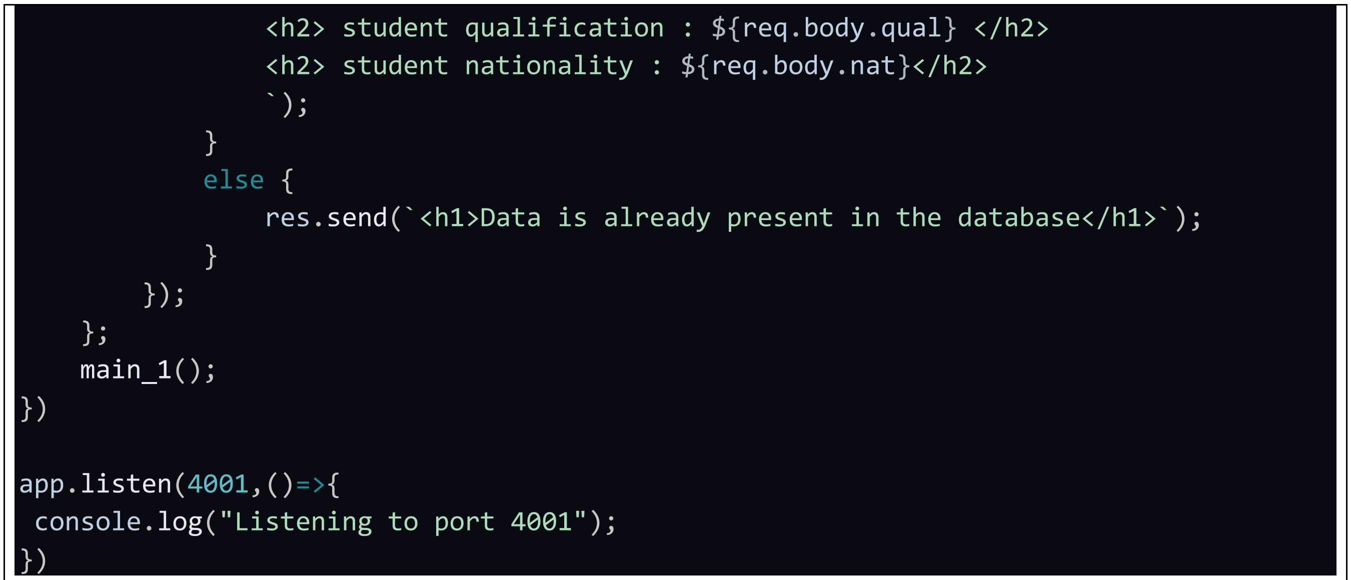
2)

In Student.html

```
<!DOCTYPE html>

<head>
    <title>Student details</title>
</head>

<body>

    <div align="center">
        <h1><u>Enter the Student details</u></h1>
        <form action="/login" method="POST">
            <label><h2>Enter student name </h2> </label>
            <input type="text" name="name" class="inp" placeholder="Enter your name
">
            <br /><br />
            <label><h2>Enter date of birth </h2> </label>
            <input type="datetime" name="dob" class="inp" placeholder="Enter your
date of birth">
            <br /><br />
            <label><h2>Enter the Qualification </h2> </label>
            <input type="text" name="qual" class="inp" placeholder="Enter
Qualification">
            <br /><br />
            <label><h2>Enter the nationality </h2> </label>
            <input type="text" name="nat" class="inp" placeholder="Enter the
nationality">
            <br /><br />

            <label><h2>Student Photo </h2> </label>
            <input type="file" id="image" accept="image/*" /><br/><br />
            <img id="profile" src="#" alt="Student photo" height="150px"
width="150px"/>
            <br /><br/><br />
            <input type="submit" value="Upload" />
        </form>
    </div>

    <script>
        image.onchange = evt => {
            const [file] = image.files
            if (file) {
                profile.src = URL.createObjectURL(file)
            }
        }
    </script>
</body>
```

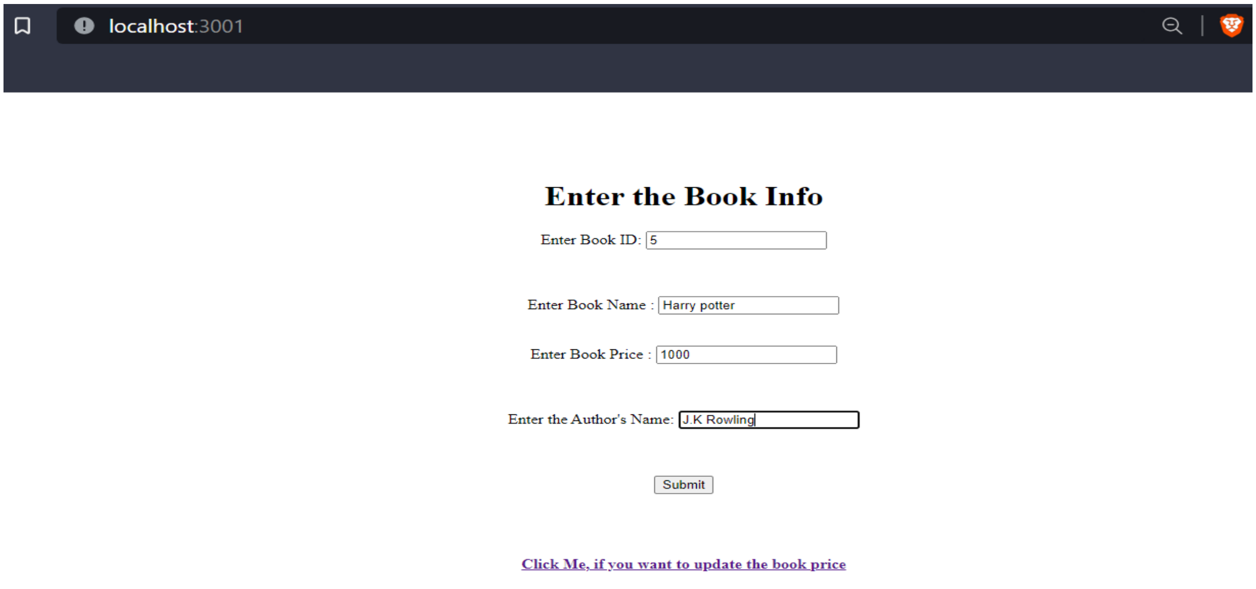
In Std.js

```
const express = require("express");
const app = express();
const path = require("path");
const {MongoClient} = require("mongodb");

app.use(express.json());
app.use(express.urlencoded({extended:true}));
const uri = "mongodb://localhost:27017/student"

app.get("/",(req,res)=>{
    res.sendFile(path.join(__dirname,"Student.html"));
})

app.post("/login",(req,res)=>{
    const query1 = req.body;
    const main_1 = async () => {
        MongoClient.connect(uri, async (err, client) => {
            if (err) throw err;
            const check = await
            client.db("student").collection("resume").findOne(query1);
            if (check == null) {
                await
                client.db("student").collection("resume").insertOne(query1);
                client.close();
                res.send(`
                <h1>Details of the student </h1>
                <h2> student name : ${req.body.name} </h2>
                <h2> student date of birth : ${req.body.dob}</h2>
```



```
                <h2> student qualification : ${req.body.qual} </h2>
                <h2> student nationality : ${req.body.nat}</h2>
                `);
            }
            else {
                res.send(`<h1>Data is already present in the database</h1>`);
            }
        });
    };
    main_1();
})

app.listen(4001,()=>{
 console.log("Listening to port 4001");
})
```

SCREENSHOT OF OUTPUT



Enter the Book Info

Enter Book ID: 5

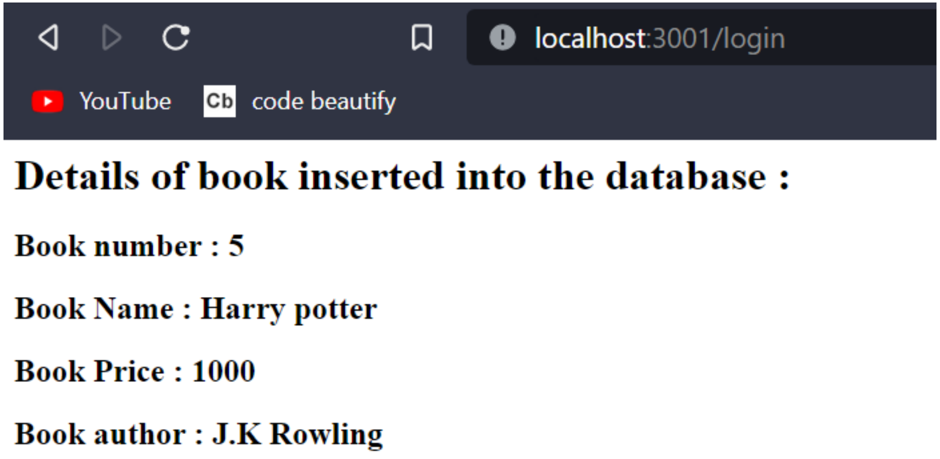
Enter Book Name : Harry potter

Enter Book Price : 1000

Enter the Author's Name: J.K Rowling

Click Me, if you want to update the book price

After uploading into Database



Details of book inserted into the database :

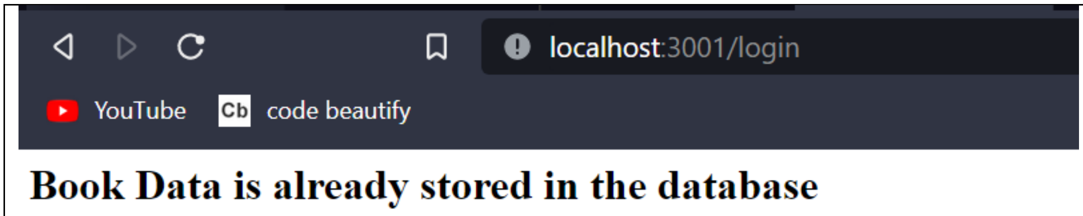
Book number : 5

Book Name : Harry potter

Book Price : 1000

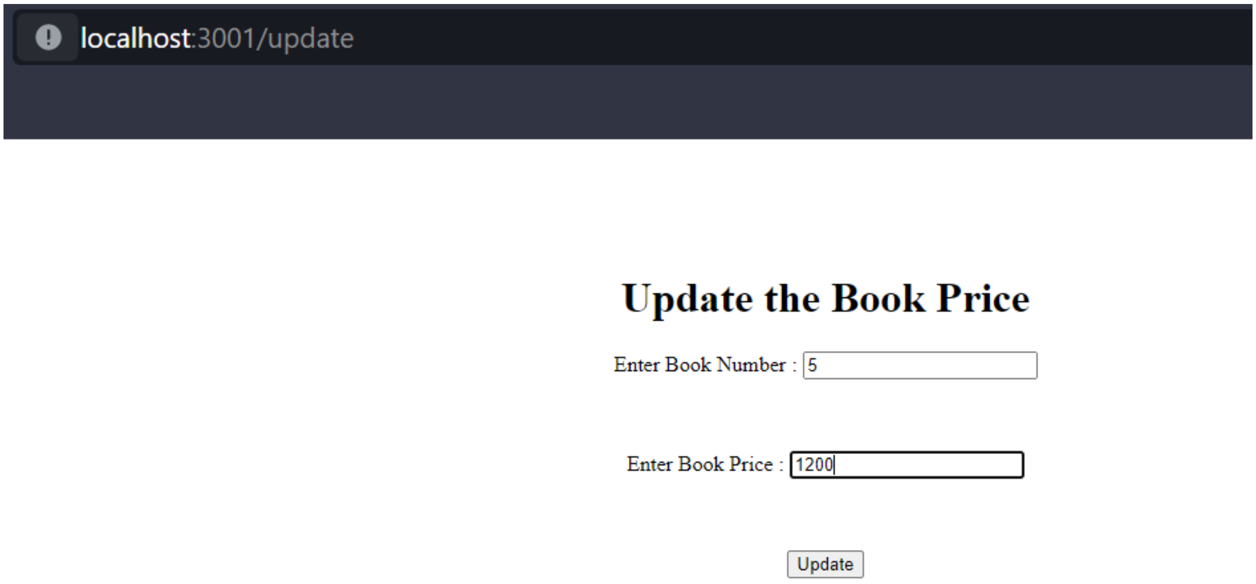
Book author : J.K Rowling

If Same data already exists



Book Data is already stored in the database

Updating the Price



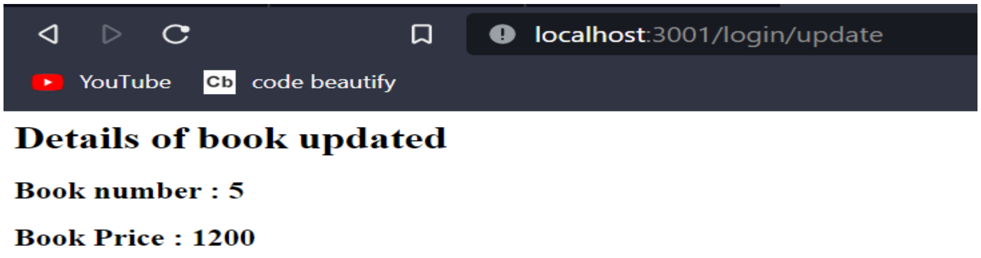
Update the Book Price

Enter Book Number : 5

Enter Book Price : 1200

Update

After Updating the price

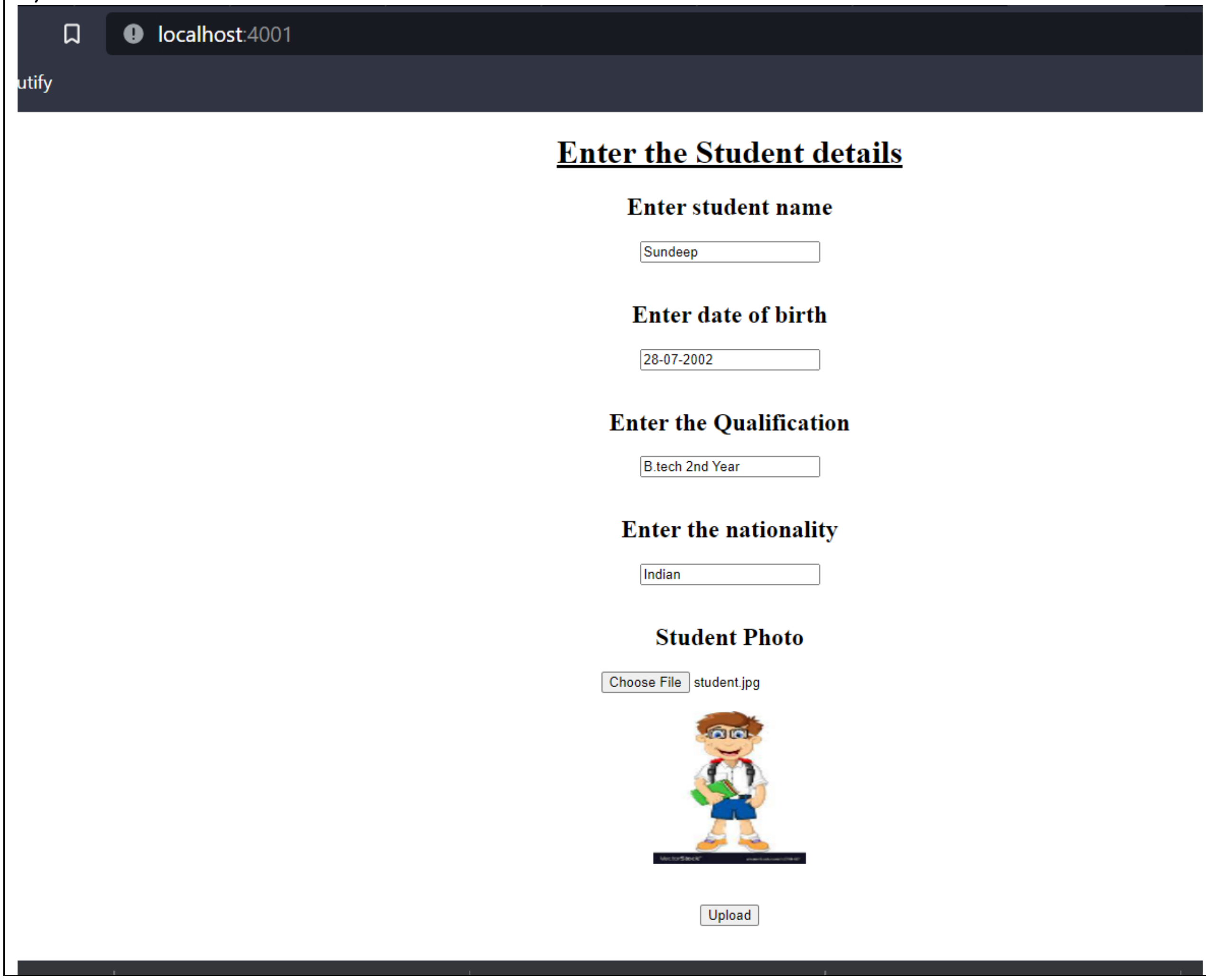


Details of book updated

Book number : 5

Book Price : 1200

2)



Enter the Student details

Enter student name

Sundeep

Enter date of birth

28-07-2002

Enter the Qualification

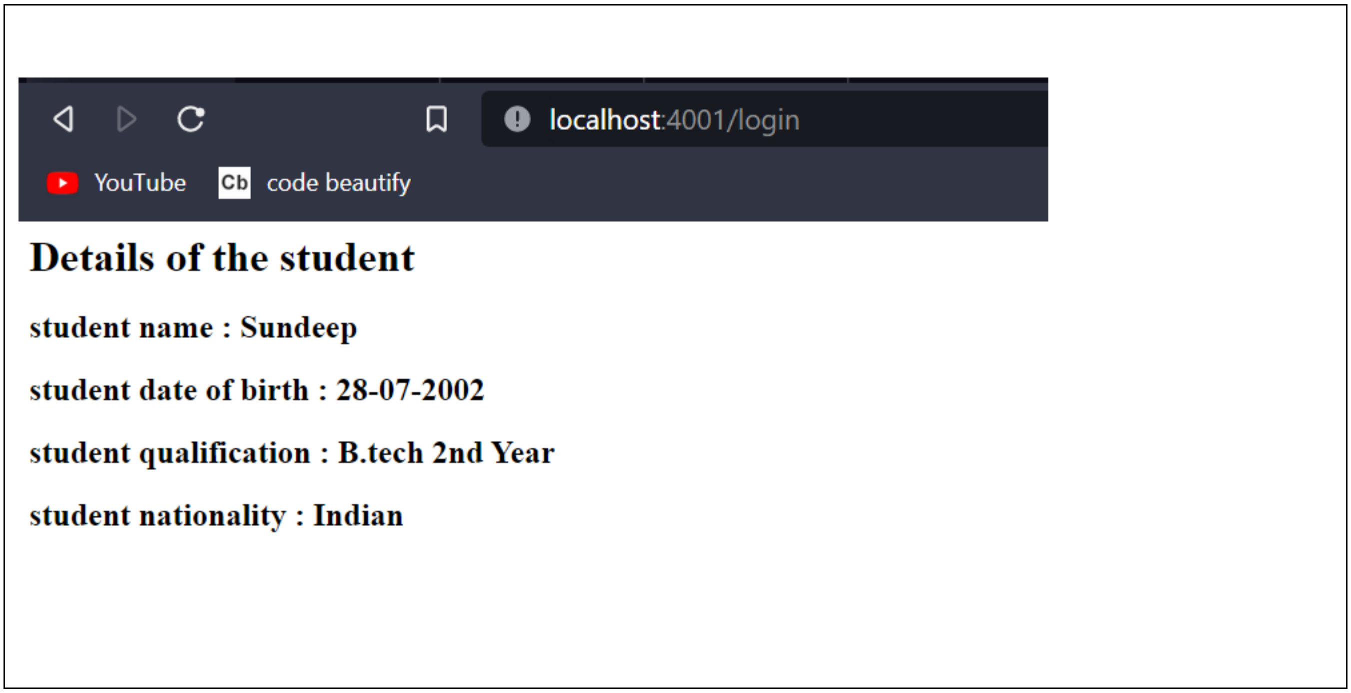
B.tech 2nd Year

Enter the nationality

Indian

Student Photo

student.jpg



Details of the student

student name : Sundeep

student date of birth : 28-07-2002

student qualification : B.tech 2nd Year

student nationality : Indian