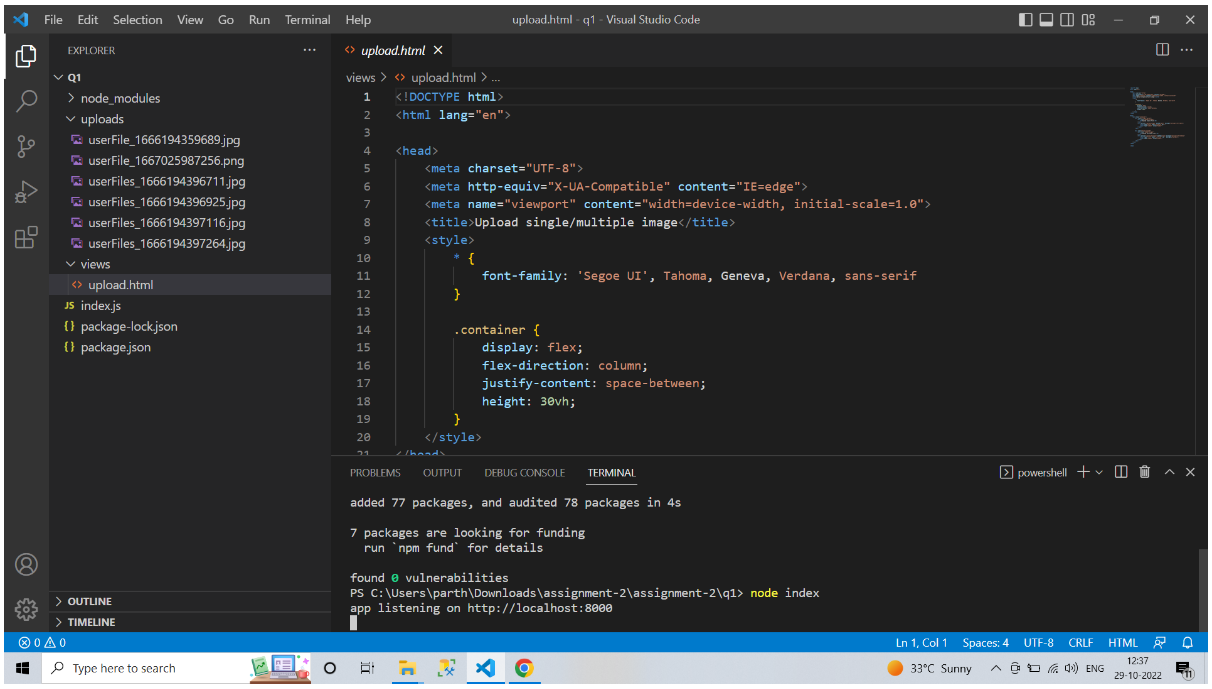
Name :- Parth Patel
Roll No :- 70
Subject :- Application Development Using Full Stack (701)
Assignment :- 2

Q1

upload.html

```
 <!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Upload single/multiple image</title>
    <style>
        * {
            font-family: 'Segoe UI', Tahoma, Geneva, Verdana,
sans-serif
        }

        .container {
            display: flex;
            flex-direction: column;
            justify-content: space-between;
            height: 30vh;
        }
    </style>
</head>

<body>
    <div class="container">
        <div class="single-upload">
            <div class="header-single">
              <h3>Upload Single file</h3>
            </div>
            <form action="/upload_single" method="post"
enctype="multipart/form-data">
              <input type="file" name="userFile" id="">
              <input type="submit" value="Submit">
            </form>
        </div>

        <div class="multi-upload">
            <div class="header-single">
              <h3>Upload Multiple files</h3>
            </div>
            <form action="/upload_multiple" method="post"
enctype="multipart/form-data">
              <input type="file" name="userFiles" id=""
multiple="multiple">
              <input type="submit" value="Submit">
            </form>
        </div>
    </div>
</body>

</html>
```



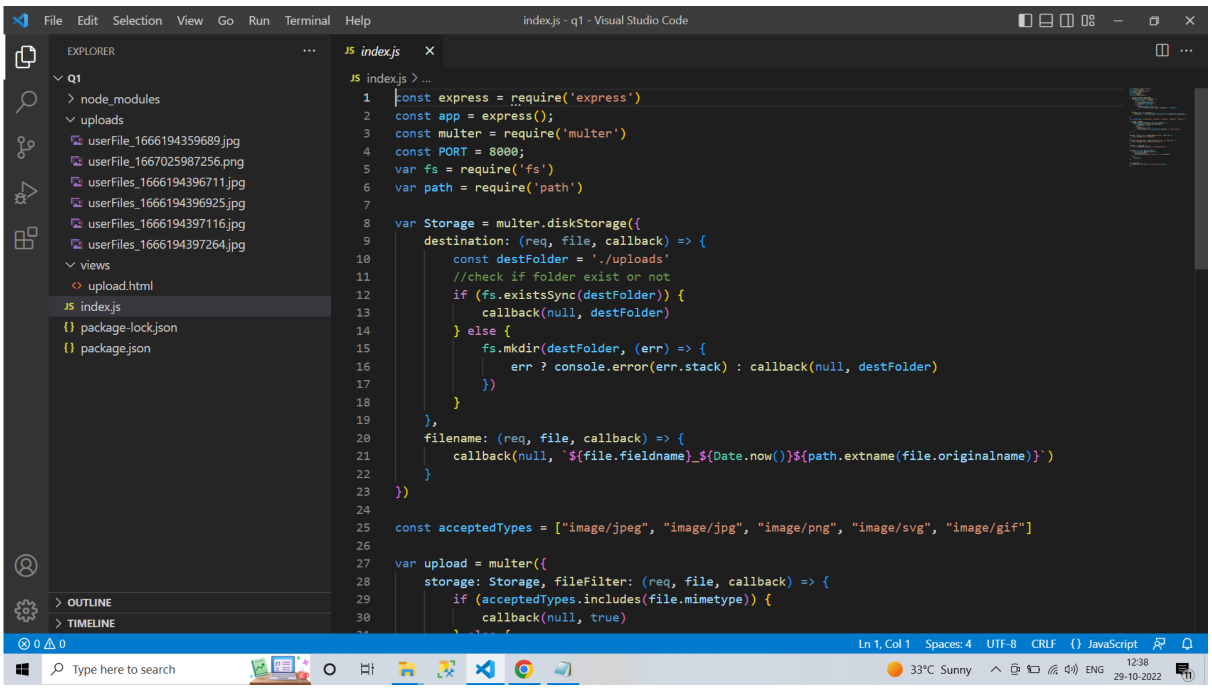
```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Upload single/multiple image</title>
    <style>
        * {
            font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif
        }

        .container {
            display: flex;
            flex-direction: column;
            justify-content: space-between;
            height: 30vh;
        }
    </style>
```

```
added 77 packages, and audited 78 packages in 4s

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

found 0 vulnerabilities
PS C:\Users\parth\Downloads\assignment-2\assignment-2\q1> node index
app listening on http://localhost:8000
```

index.js

```javascript
const express = require('express')
const app = express();
const multer = require('multer')
const PORT = 8000;
var fs = require('fs')
var path = require('path')

var Storage = multer.diskStorage({
    destination: (req, file, callback) => {
        const destFolder = './uploads'
        //check if folder exist or not
        if (fs.existsSync(destFolder)) {
            callback(null, destFolder)
        } else {
            fs.mkdir(destFolder, (err) => {
                err ? console.error(err.stack) : callback(null, destFolder)
            })
        }
    },
    filename: (req, file, callback) => {
        callback(null,
`${file.fieldname}_${Date.now()}${path.extname(file.originalname)}`)
    }
})

const acceptedTypes = ["image/jpeg", "image/jpg", "image/png",
"image/svg", "image/gif"]

var upload = multer({
    storage: Storage, fileFilter: (req, file, callback) => {
        if (acceptedTypes.includes(file.mimetype)) {
            callback(null, true)
        } else {
            callback(null, false)
            return callback(`only ${acceptedTypes.toString(',')} format
allowed`)
        }
    }
})

app.post('/upload_single', upload.single('userFile'), (req, res) => {
    return res.send('file is uploaded');
})

app.post('/upload_multiple', upload.array('userFiles', 4), (req, res)
=> {
    return res.send('files uploaded successfully.');
})

app.get('/', (req, res) => {
    return res.sendFile(__dirname + '/views/upload.html');
})
```

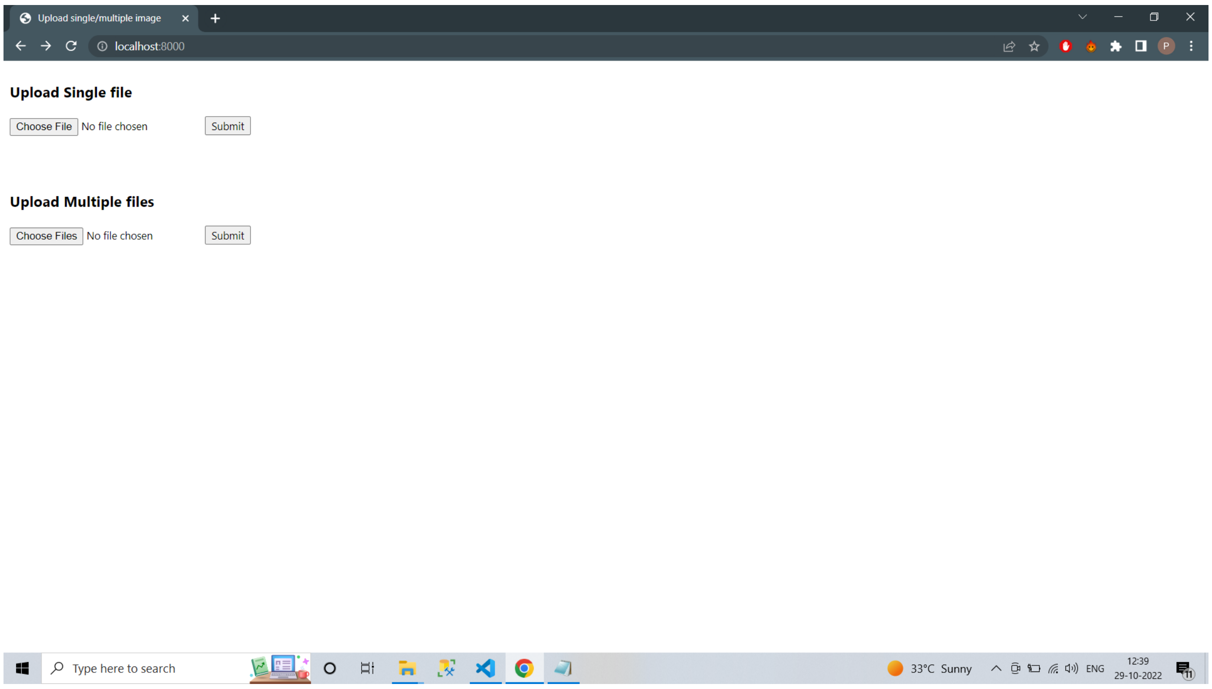
```
app.use(function (err, req, res, next) {
    if (err instanceof multer.MulterError) {
        console.log("ERRRR");
        res.status(500).send("file upload  err " + err.message);
    }
    else
        next(err);
});


app.listen(PORT, () => {
    console.log(`app listening on http://localhost:${PORT}`)
});
```



```
const express = require('express')
const app = express();
const multer = require('multer')
const PORT = 8000;
var fs = require('fs')
var path = require('path')

var Storage = multer.diskStorage({
    destination: (req, file, callback) => {
        const destFolder = './uploads'
        //check if folder exist or not
        if (fs.existsSync(destFolder)) {
            callback(null, destFolder)
        } else {
            fs.mkdir(destFolder, (err) => {
                err ? console.error(err.stack) : callback(null, destFolder)
            })
        }
    },
    filename: (req, file, callback) => {
        callback(null, `${file.fieldname}_${Date.now()}${path.extname(file.originalname)}`)
    }
})

const acceptedTypes = ["image/jpeg", "image/jpg", "image/png", "image/svg", "image/gif"]

var upload = multer({
    storage: Storage, fileFilter: (req, file, callback) => {
        if (acceptedTypes.includes(file.mimetype)) {
            callback(null, true)
```

index.js - q1 - Visual Studio Code
EXPLORER
Q1
node_modules
uploads
userFile_1666194359689.jpg
userFile_1667025987256.png
userFiles_1666194396711.jpg
userFiles_1666194396925.jpg
userFiles_1666194397116.jpg
userFiles_1666194397264.jpg
views
upload.html
index.js
package-lock.json
package.json
OUTLINE
TIMELINE
Ln 1, Col 1
Spaces: 4
UTF-8
CRLF
JavaScript
Type here to search
33°C Sunny
ENG
12:38
29-10-2022

Output:-

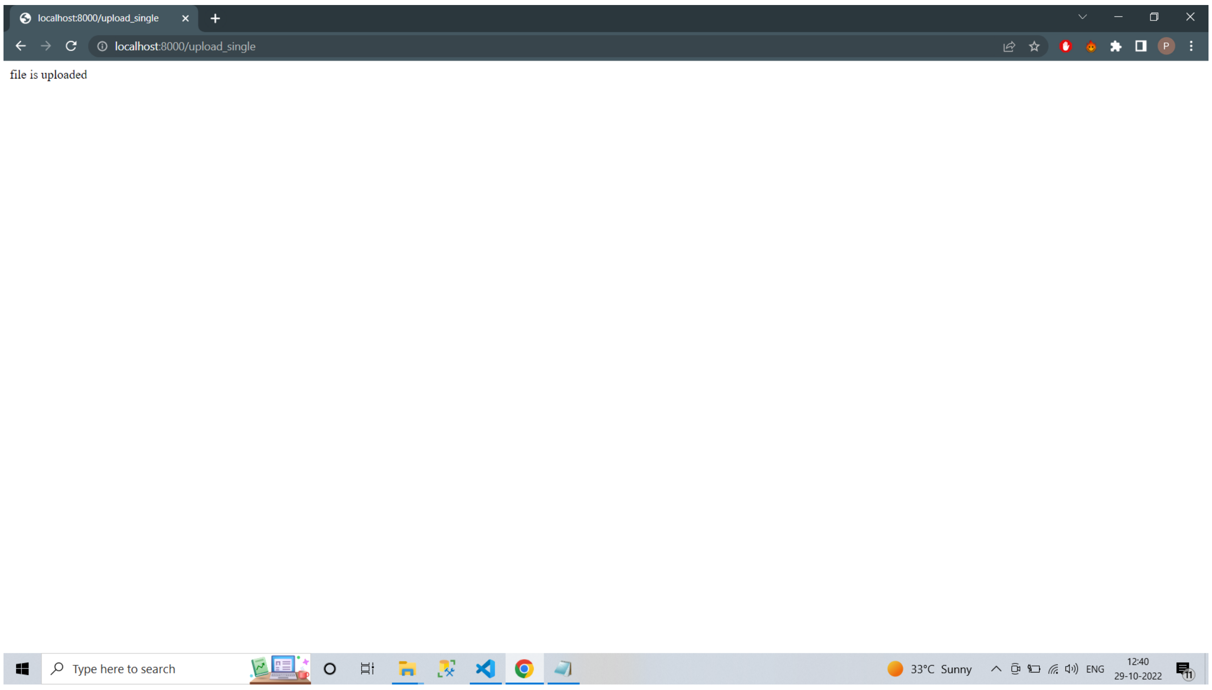

Upload single/multiple image
localhost:8000

Upload Single file

Choose File No file chosen
Submit

Upload Multiple files

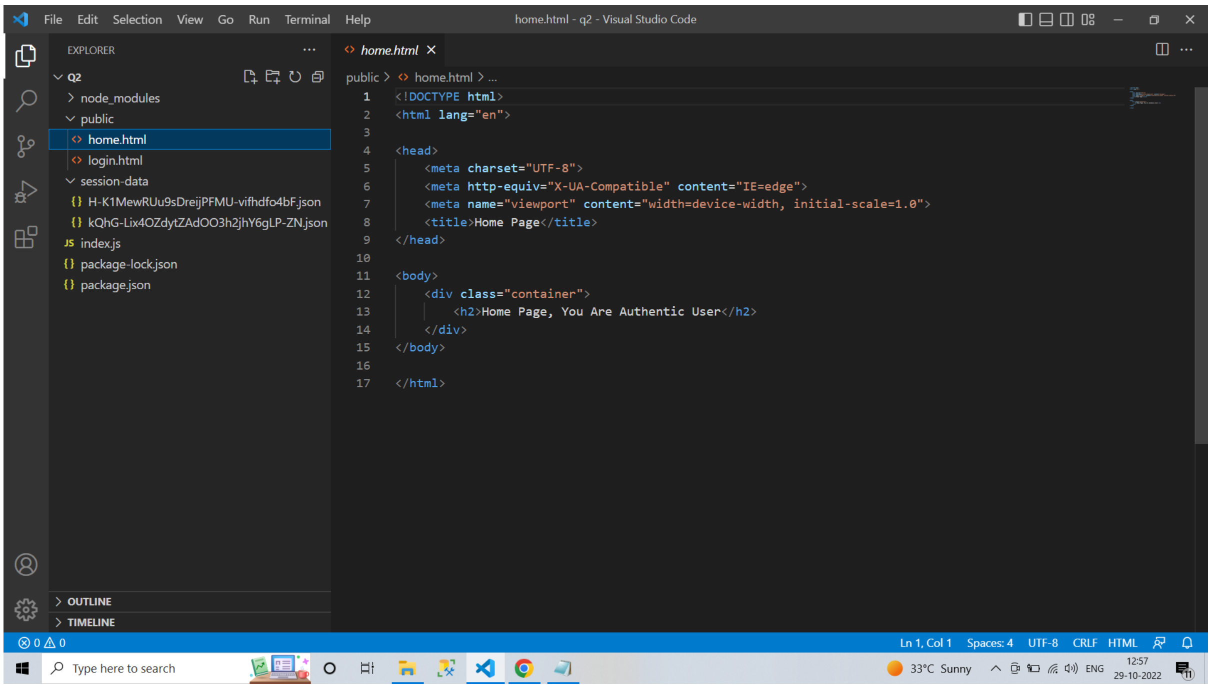
Choose Files No file chosen
Submit
Type here to search
33°C Sunny
ENG
12:39
29-10-2022



```
file is uploaded
```

Q2:

Home.html:-

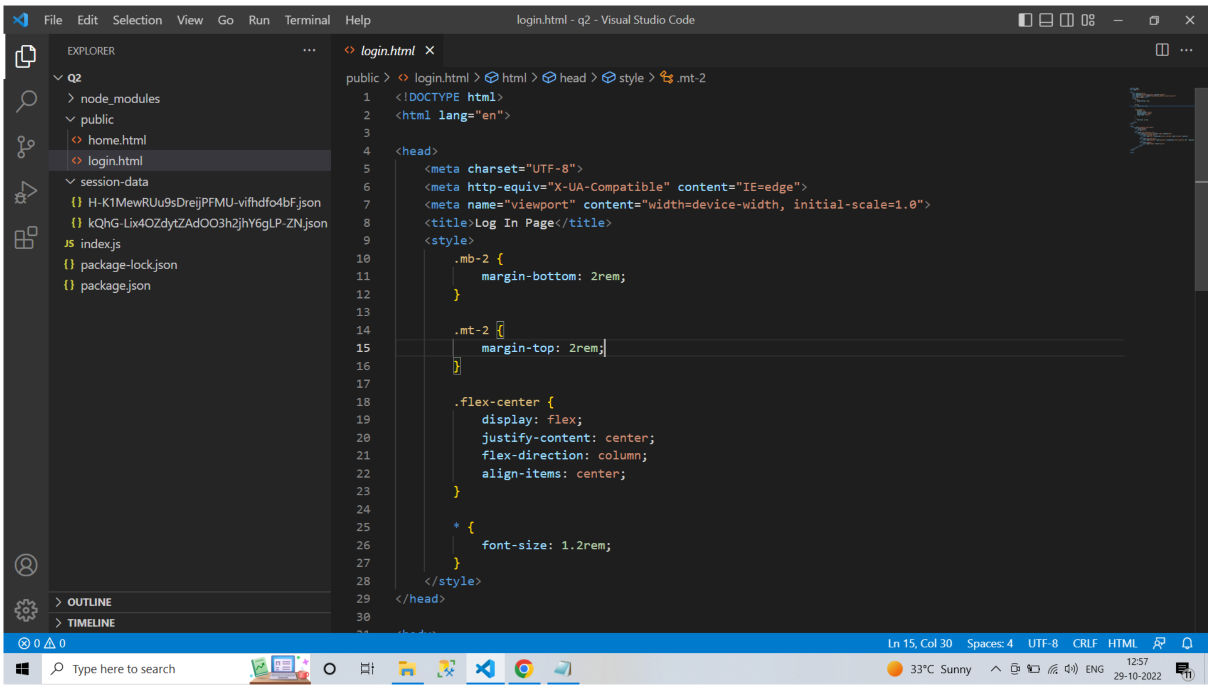

File Edit Selection View Go Run Terminal Help
home.html - q2 - Visual Studio Code
EXPLORER
Q2
node_modules
public
home.html
login.html
session-data
H-K1MewRUu9sDreijPFMU-vifhdfo4bF.json
kQhG-Lix4OZdytZAdOO3h2jhY6gLP-ZN.json
index.js
package-lock.json
package.json
OUTLINE
TIMELINE
public > home.html > ...
Ln 1, Col 1 Spaces: 4 UTF-8 CRLF HTML
Type here to search
33°C Sunny
ENG
12:57
29-10-2022

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Home Page</title>
</head>

<body>
    <div class="container">
        <h2>Home Page, You Are Authentic User</h2>
    </div>
</body>

</html>
```

Login.html:-

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible"
content="IE=edge">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Log In Page</title>
    <style>
        .mb-2 {
            margin-bottom: 2rem;
        }
        .mt-2 {
            margin-top: 2rem;
        }

        .flex-center {
            display: flex;
            justify-content: center;
            flex-direction: column;
            align-items: center;
        }

        * {
            font-size: 1.2rem;
        }
    </style>
</head>

<body>
    <div class="container flex-center">
        <div class="header">
            <h3>Log In</h3>
        </div>
        <div class="form-container mt-2 ">
            <form class="flex-center" action="/login"
method="post">
                <div class="username mb-2">
                    <input type="text" placeholder="enter
username" name="username" required>
```

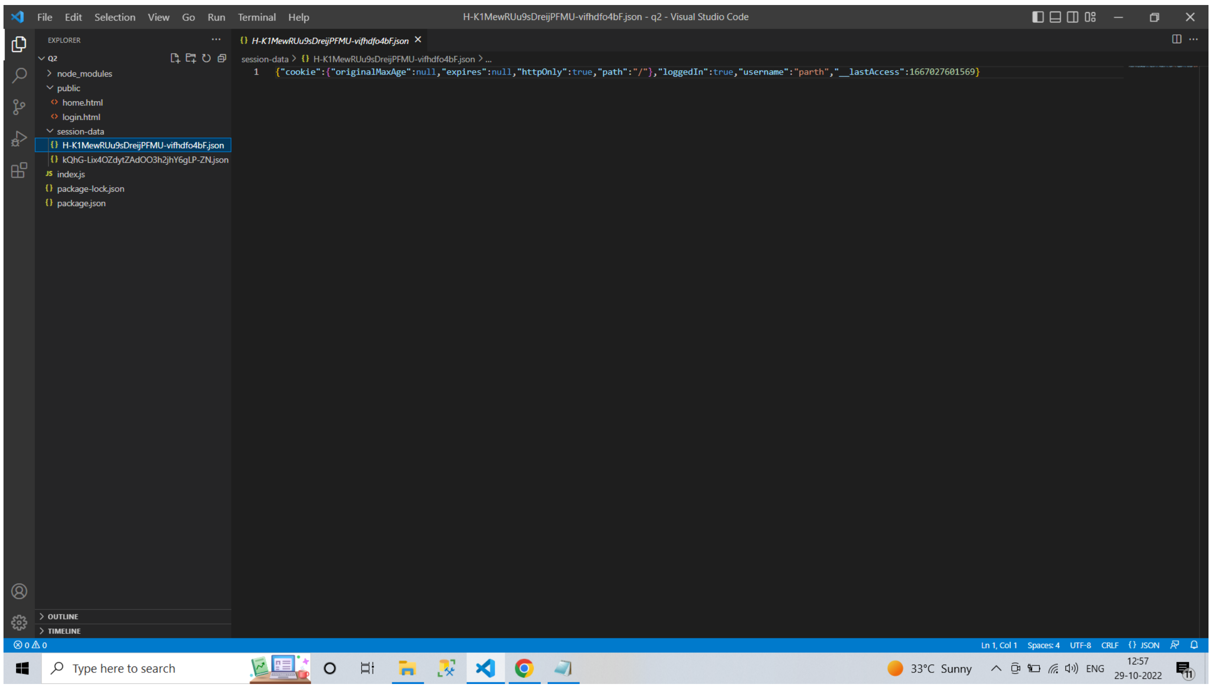
```
                </div>
                <div class="password mb-2">
                    <input type="password" name="password"
placeholder="enter password" id="" required>
                </div>
                <div class="submit">
                    <input type="submit" value="Log In">
                </div>
            </form>
        </div>
    </div>
</body>

</html>
```



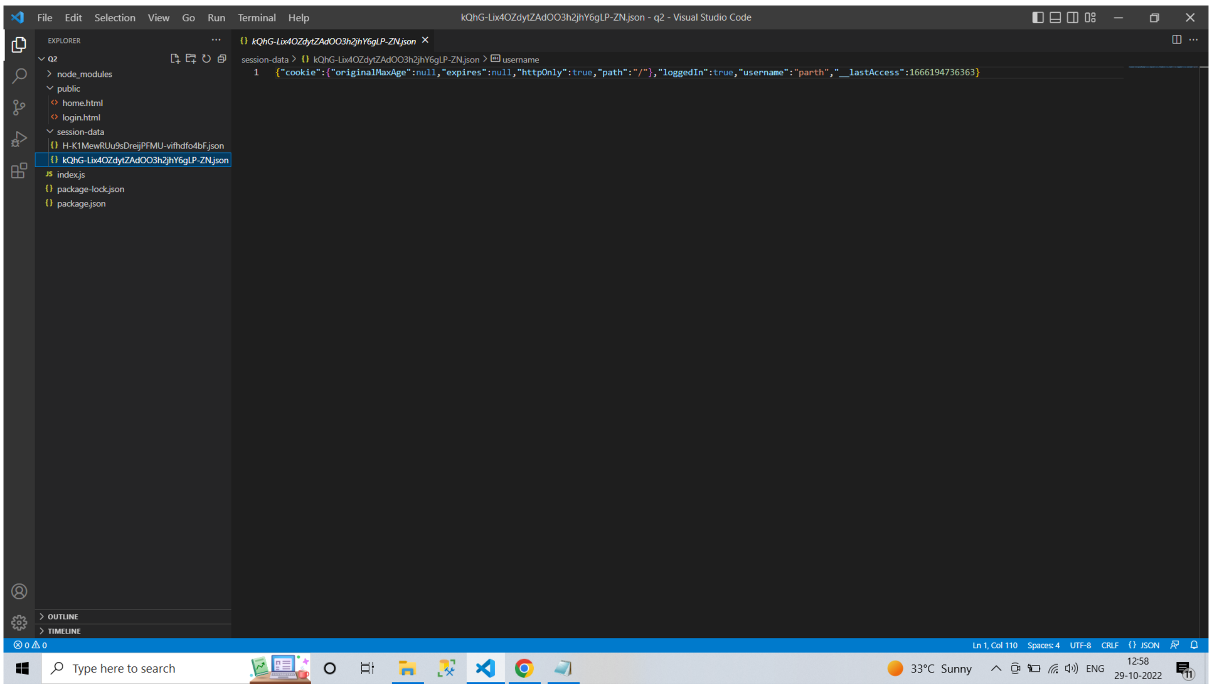
```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Log In Page</title>
    <style>
        .mb-2 {
            margin-bottom: 2rem;
        }

        .mt-2 {
            margin-top: 2rem;
        }

        .flex-center {
            display: flex;
            justify-content: center;
            flex-direction: column;
            align-items: center;
        }

        * {
            font-size: 1.2rem;
        }
    </style>
</head>

```

login.html - q2 - Visual Studio Code
EXPLORER
Q2
node_modules
public
home.html
login.html
session-data
H-K1MewRUu9sDreijPFMU-vifhdfo4bF.json
kQhG-Lix4OZdytZAdOO3h2jhY6gLP-ZN.json
index.js
package-lock.json
package.json
OUTLINE
TIMELINE
Ln 15, Col 30 Spaces: 4 UTF-8 CRLF HTML
33°C Sunny
12:57
29-10-2022

Session-data:-



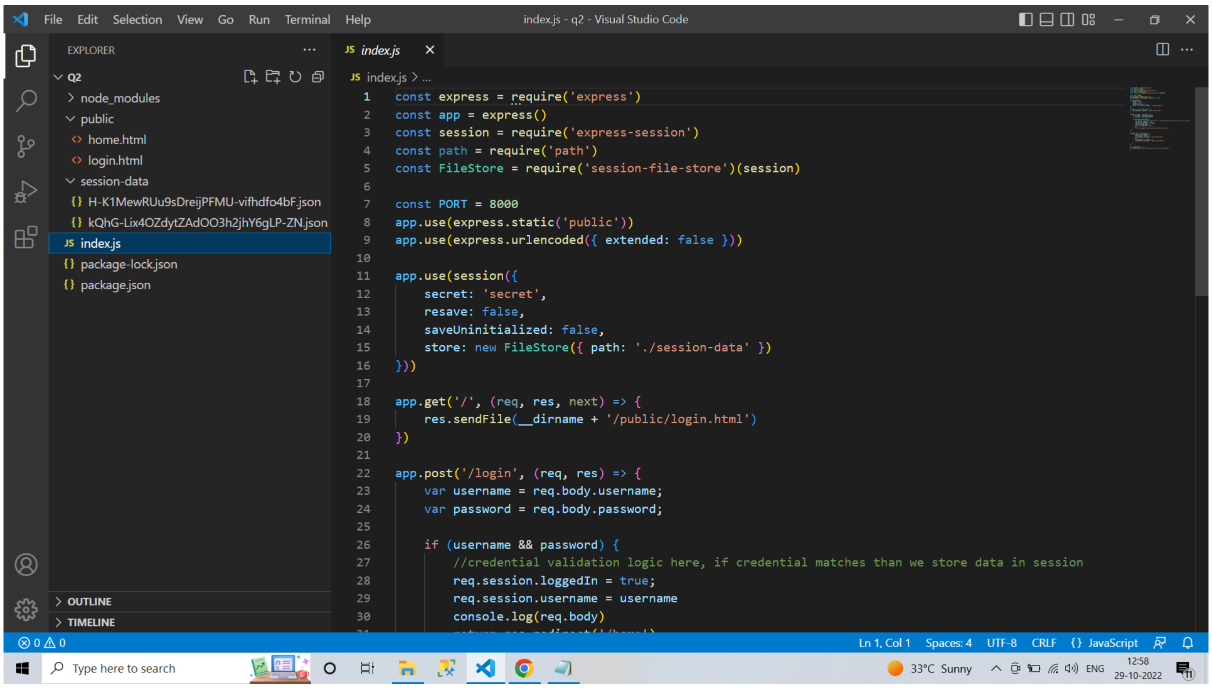
```
{"cookie":{"originalMaxAge":null,"expires":null,"httpOnly":true,"path":"/"},"loggedIn":true,"username":"parth","__lastAccess":1667027601569}
```



```
{"cookie":{"originalMaxAge":null,"expires":null,"httpOnly":true,"path":"/"},"loggedIn":true,"username":"parth","__lastAccess":1666194736363}
```

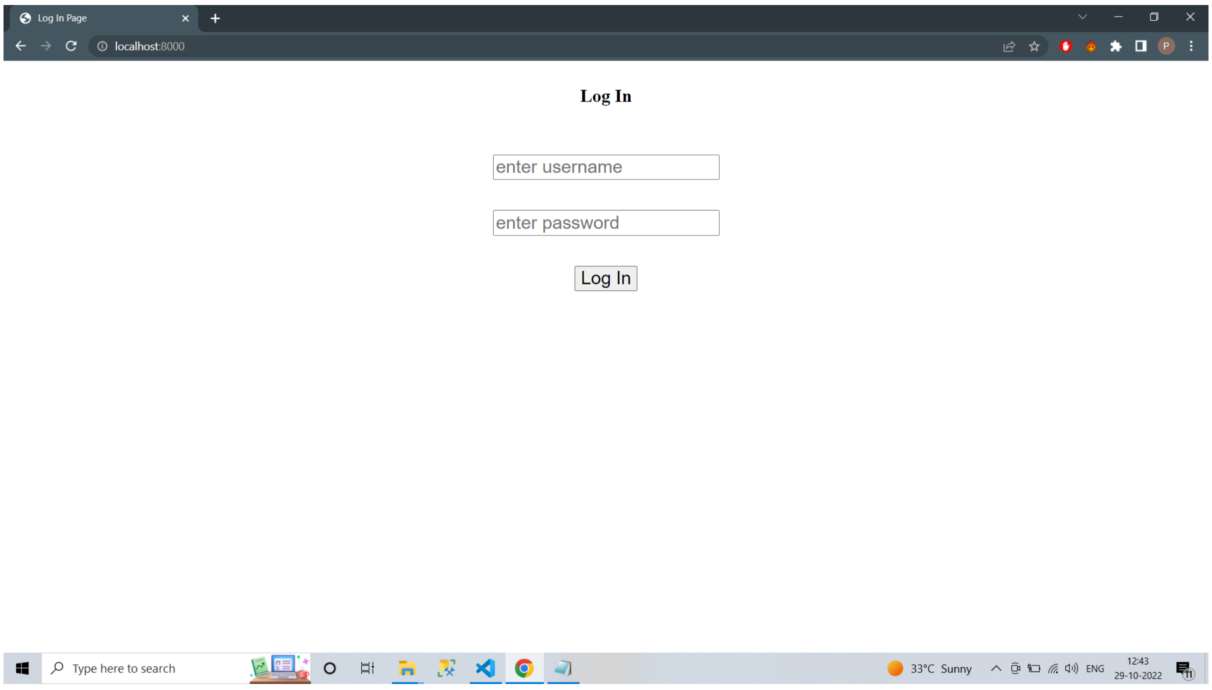
Index.js

```
const express = require('express')
const app = express()
const session = require('express-session')
const path = require('path')
const FileStore = require('session-file-store')(session)
const PORT = 8000
app.use(express.static('public'))
app.use(express.urlencoded({ extended: false }))

app.use(session({
    secret: 'secret',
    resave: false,
    saveUninitialized: false,
    store: new FileStore({ path: './session-data' })
}))

app.get('/', (req, res, next) => {
    res.sendFile(__dirname + '/public/login.html')
})

app.post('/login', (req, res) => {
    var username = req.body.username;
    var password = req.body.password;

    if (username && password) {
        //credential validation logic here, if credential
matches than we store data in session
        req.session.loggedIn = true;
        req.session.username = username
        console.log(req.body)
        return res.redirect('/home')
    } else {
        return res.send('Please Enter Username And
Password!')
    }
})

app.get('/home', (req, res) => {
    if (req.session.loggedIn) {
        console.log('logged in')
        res.sendFile(__dirname + '/public/home.html')
    } else {
        console.log('not logged in')
        res.sendFile(__dirname + '/public/login.html')

    }
})

app.listen(PORT, () => {
    console.log(`server listening on
http://localhost:${PORT}`)
})
```



```
const express = require('express')
const app = express()
const session = require('express-session')
const path = require('path')
const FileStore = require('session-file-store')(session)

const PORT = 8000
app.use(express.static('public'))
app.use(express.urlencoded({ extended: false }))

app.use(session({
    secret: 'secret',
    resave: false,
    saveUninitialized: false,
    store: new FileStore({ path: './session-data' })
}))

app.get('/', (req, res, next) => {
    res.sendFile(__dirname + '/public/login.html')
})

app.post('/login', (req, res) => {
    var username = req.body.username;
    var password = req.body.password;

    if (username && password) {
        //credential validation logic here, if credential matches than we store data in session
        req.session.loggedIn = true;
        req.session.username = username
        console.log(req.body)
```

OutPut:-

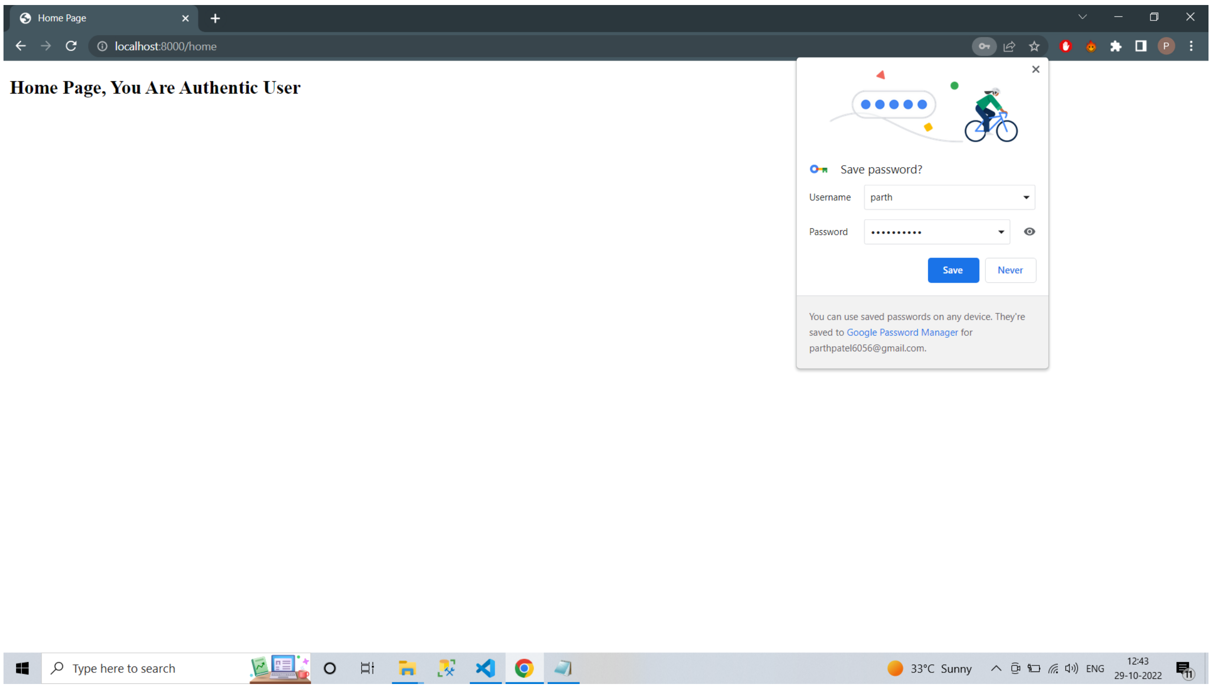


Log In

enter username

enter password

Log In


Home Page, You Are Authentic User

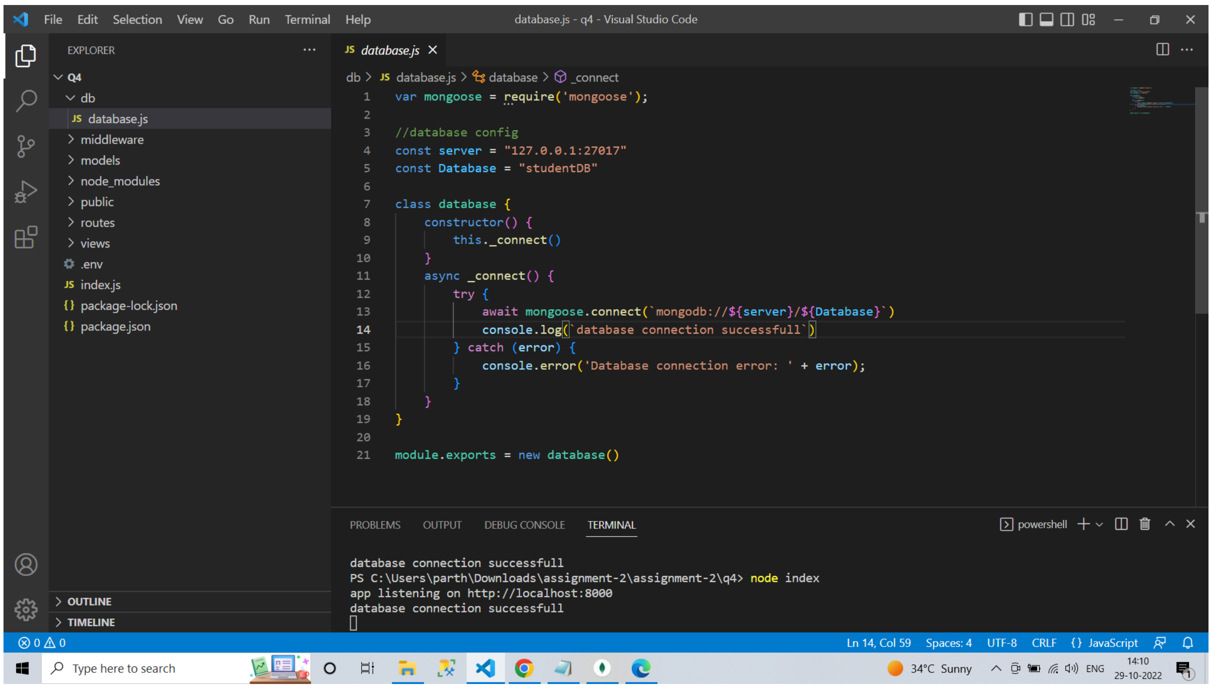
Q4:

Index.js

```
const express = require('express')
const app = express()
const PORT = 8000
const database = require('./db/database')
const student = require('./routes/student')
require('dotenv').config()
const jwt = require('jsonwebtoken')
const cookieParser = require('cookie-parser')
const accessTokenSecret =
process.env.TOKEN_SECRET;
const studentModel = require('./models/student')
const verifyToken = require('./middleware/token')
```

```
app.use(cookieParser())
app.set('view engine', 'ejs')
app.use(express.json())
app.use(express.urlencoded({ extended: true }))
app.use(express.static(__dirname + '/public'));

app.use('/student', student)

app.get('/', (req, res) => {
    const token = req.cookies.token
    if (token) {
        //verify token
        if (jwt.verify(token, process.env.TOKEN_SECRET))
{
            return res.redirect('/student')
        } else {
            return res.status(401).end('Unauthorized
access');
        }
    }
    else {
        //redirect to login
        return res.render('login')
    }
})

app.post('/login', async (req, res) => {
    let { username, password } = req.body
    if (username && password) {
        try {
            let result = await studentModel.find({ name:
username, password: password })
            if (result.length === 1) {
                //Generate Token
                const accessToken = jwt.sign({ name:
username, password: password }, accessTokenSecret)
                res.cookie('token', accessToken, { httpOnly:
true });
                return res.redirect('/student')
                // return res.render('index', { session: result[0],
accessToken: accessToken })
            } else {
                res.render('login', { errors: { validationError:
'Enter Valid Username Or Password' } })
            }
        } catch (error) {
            res.render('login', { errors: { validationError:
'There Was Problem While Log In.' } })
        }
    } else {
        res.render('login', { errors: { AllFieldsError: 'Please
Enter Username And Password' } })
    }
})

app.get('/logout', (req, res) => {
    res.clearCookie('token')
    res.render('login')
})

app.listen(PORT, () => {
    console.log(`app listening on
http://localhost:${PORT}`)
})
```

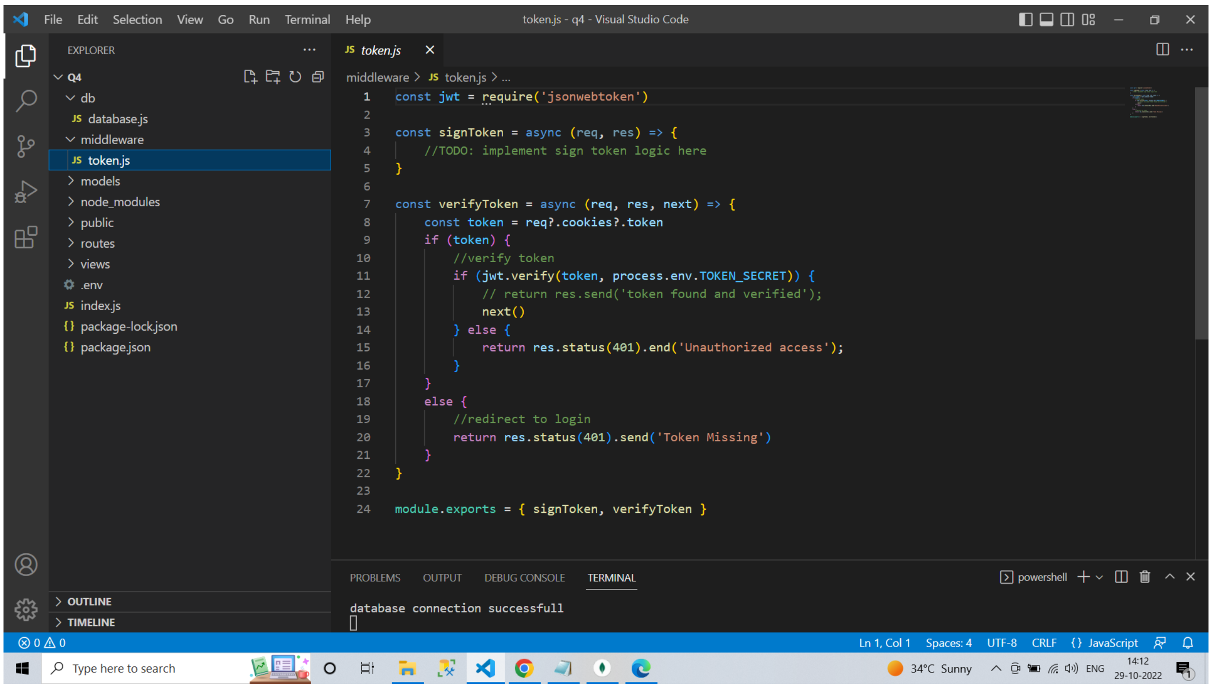
Database.js:-



```
var mongoose = require('mongoose');

//database config
const server = "127.0.0.1:27017"
const Database = "studentDB"

class database {
    constructor() {
        this._connect()
    }
    async _connect() {
        try {
            await mongoose.connect(`mongodb://${server}/${Database}`)
            console.log(`database connection successfull`)
        } catch (error) {
            console.error('Database connection error: ' + error);
        }
    }
}

module.exports = new database()
```

```
database connection successfull
PS C:\Users\parth\Downloads\assignment-2\assignment-2\q4> node index
app listening on http://localhost:8000
database connection successfull
```

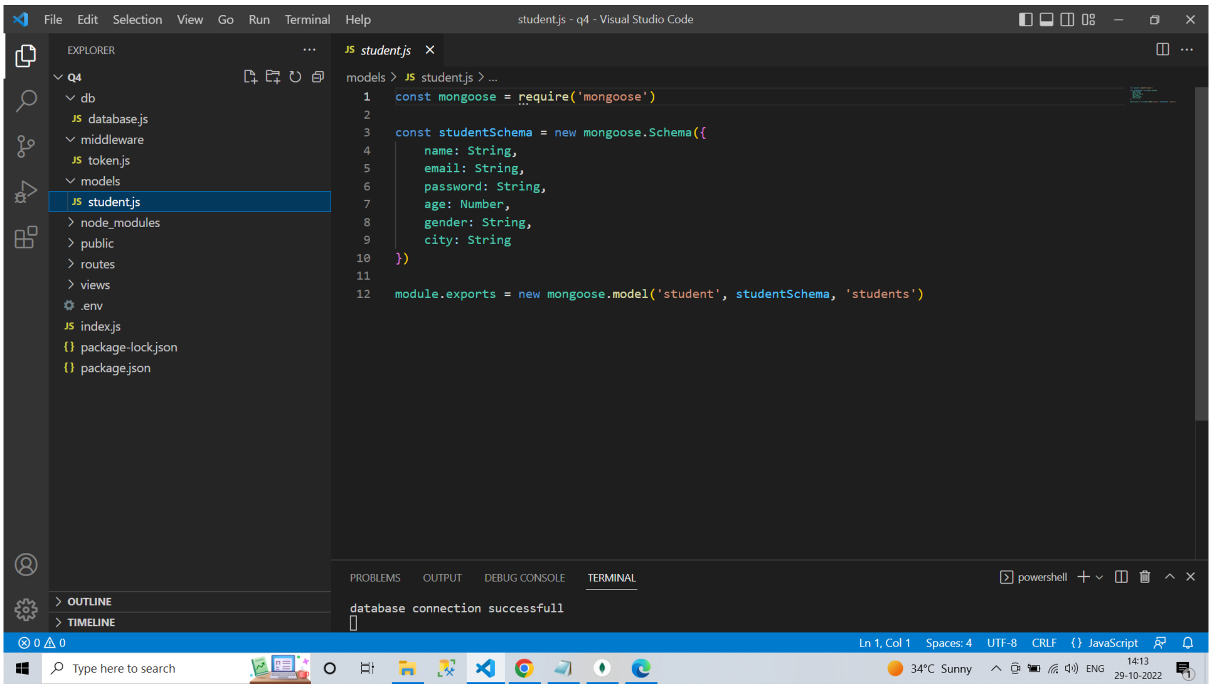
Token.js:-



```
const jwt = require('jsonwebtoken')

const signToken = async (req, res) => {
    //TODO: implement sign token logic here
}

const verifyToken = async (req, res, next) => {
    const token = req?.cookies?.token
    if (token) {
        //verify token
        if (jwt.verify(token, process.env.TOKEN_SECRET)) {
            // return res.send('token found and verified');
            next()
        } else {
            return res.status(401).end('Unauthorized access');
        }
    }
    else {
        //redirect to login
        return res.status(401).send('Token Missing')
    }
}

module.exports = { signToken, verifyToken }
```

```
database connection successfull
```

Student.js(Model)



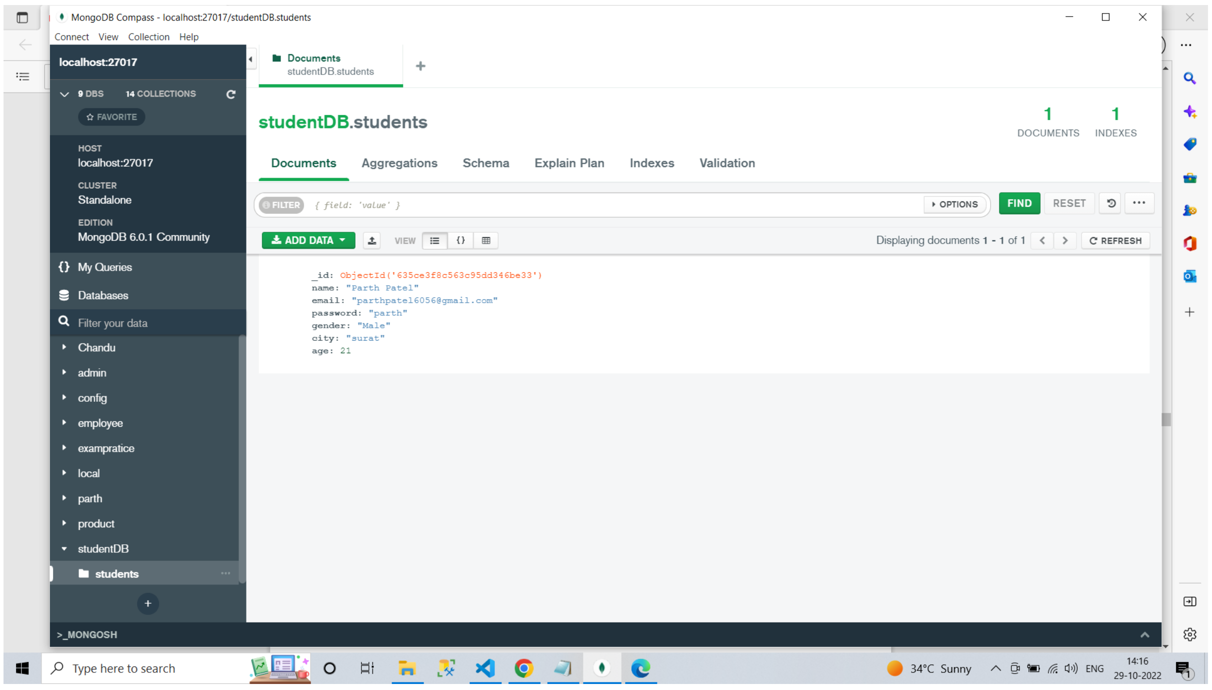
```
const mongoose = require('mongoose')

const studentSchema = new mongoose.Schema({
    name: String,
    email: String,
    password: String,
    age: Number,
    gender: String,
    city: String
})

module.exports = new mongoose.model('student', studentSchema, 'students')
```

```
database connection successfull
```

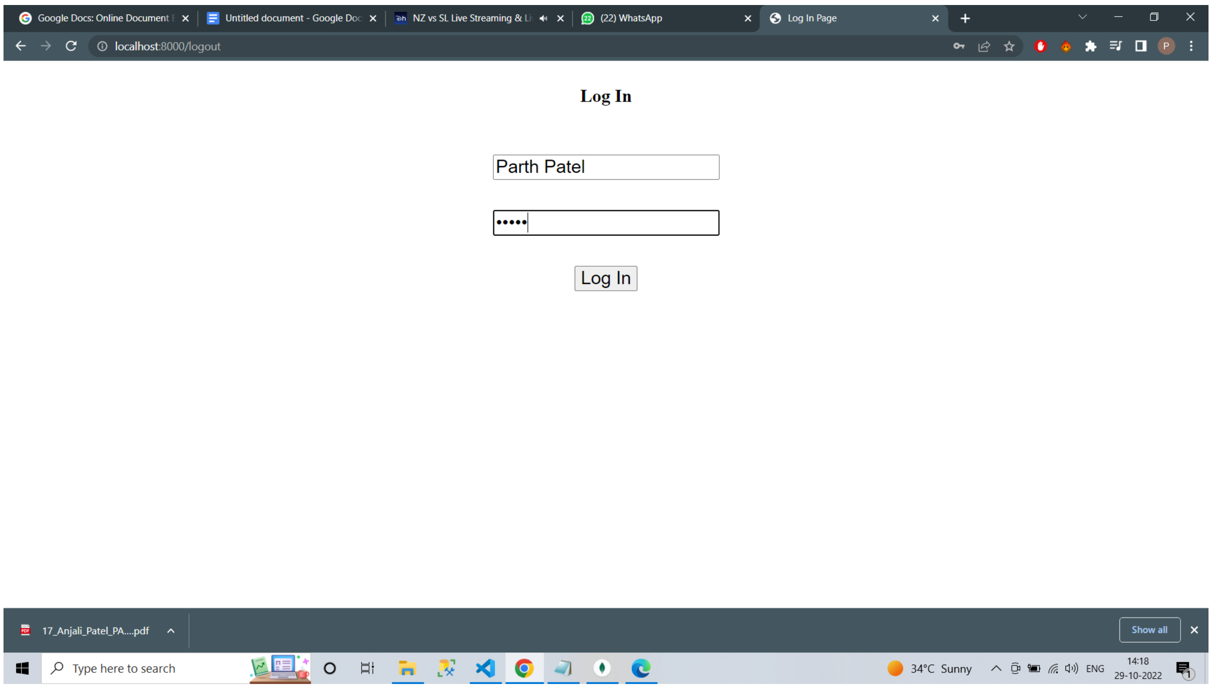
Student.js(Router)

const express = require('express');
const { verifyToken } = require('../middleware/token');
const student = express.Router();

```
const studentModel = require('../models/student')

student.use(verifyToken)

//create
student.get('/add', (req, res) => {
    res.render('add');
})
student.post('/', async (req, res) => {
    try {
        const newStudent = req.body;
        const student = new studentModel({
            ...newStudent
        })
        await student.save()
        res.redirect('/')
    } catch (error) {
        res.send('There was problem creating students')
    }
})

//read
student.get('/:id', async (req, res) => {
    try {
        const student = await
studentModel.findById(req.params.id)
        student ? res.render('view', { data: student }) :
res.render('index', { noDataError: 'No students found' })
    } catch (error) {
        res.send('There was problem getting student')
    }
})

student.get('/', async (req, res) => {
    try {
        const students = await studentModel.find()
        students ? res.render('index', { data: students }) :
res.render('index', { noDataError: 'No students found' })
    } catch (error) {
        res.send('There was problem getting students')
    }
})

//update
student.get('/edit/:id', async (req, res) => {
    try {
        const student = await
studentModel.findById(req.params.id)
        student ? res.render('update', { data: student }) :
res.render('index', { noDataError: 'student not found' })
    } catch (error) {
        res.send('There was problem getting student')
    }
})

student.post('/edit/:id', async (req, res) => {
    console.log('student post /:id')
    try {
        const updatedStudent = req.body;
        const id = req.params.id;
        console.log('updated student: ', updatedStudent)
        delete updatedStudent['_id']
        await studentModel.findOneAndUpdate({ _id: id },
updatedStudent)
        return res.redirect('/')
    } catch (error) {
        return res.send('There was problem updating
students')
    }
})

//delete
student.get('/delete/:id', async (req, res) => {
    try {
        const student = await
studentModel.findById(req.params.id)
        student ? res.render('delete', { data: student }) :
res.render('index', { noDataError: 'student not found' })
    } catch (error) {
        res.send('There was problem getting student')
    }
})
student.post('/delete', async (req, res) => {
    console.log('delete student request')
    try {
        const id = req.body._id
        console.log("id: ", id)
        await studentModel.findOneAndDelete({ _id: id })
        res.redirect('/')
    } catch (error) {
        console.log('Error: ', error)
        res.send('There was problem deleting students')
    }
})

module.exports = student
```



```
_id: ObjectId('635ce3f8c563c95dd346be33')
name: "Parth Patel"
email: "parthpatel6056@gmail.com"
password: "parth"
gender: "Male"
city: "surat"
age: 21
```

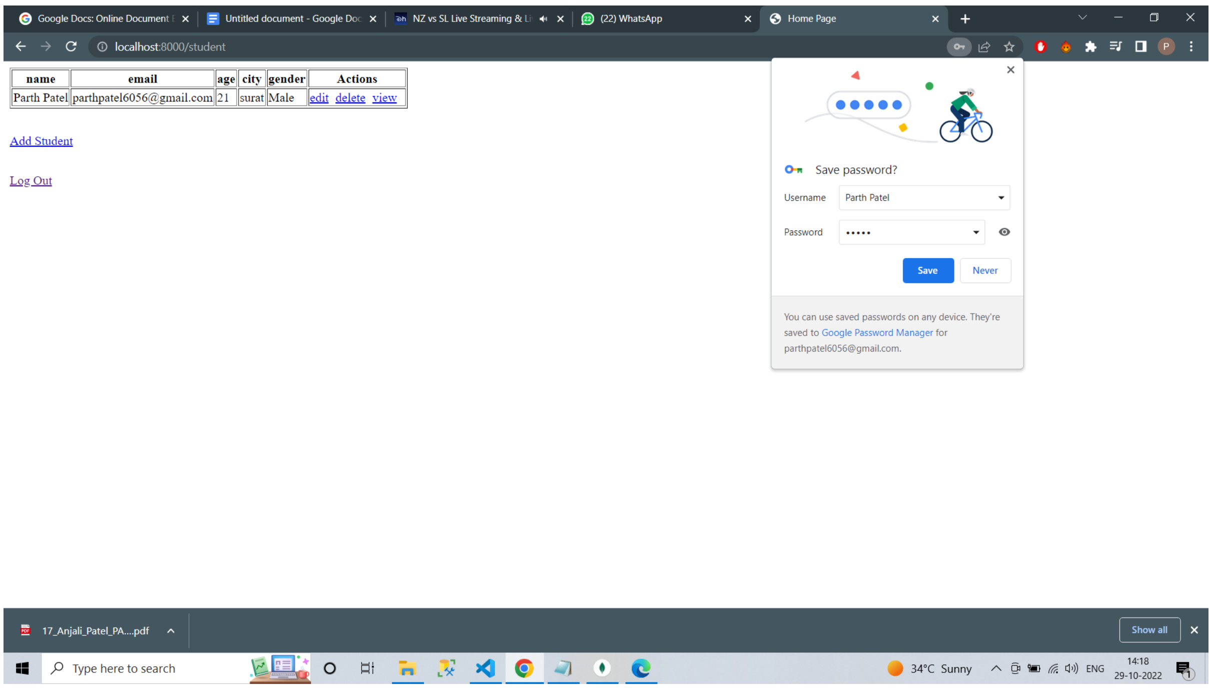

Google Docs: Online Document
Untitled document - Google Doc
NZ vs SL Live Streaming & Li
(22) WhatsApp
Log In Page
localhost:8000/logout
17_Anjali_Patel_PA....pdf
Show all
Type here to search
34°C Sunny
ENG
14:18
29-10-2022

Log In

Parth Patel

•••••

Log In


Google Docs: Online Document
Untitled document - Google Doc
NZ vs SL Live Streaming & Li
(22) WhatsApp
Home Page
localhost:8000/student
17_Anjali_Patel_PA....pdf
Show all
Type here to search
34°C Sunny
ENG
14:18
29-10-2022

name	email	age	city	gender	Actions
Parth Patel	parthpatel6056@gmail.com	21	surat	Male	edit delete view

Add Student

Log Out

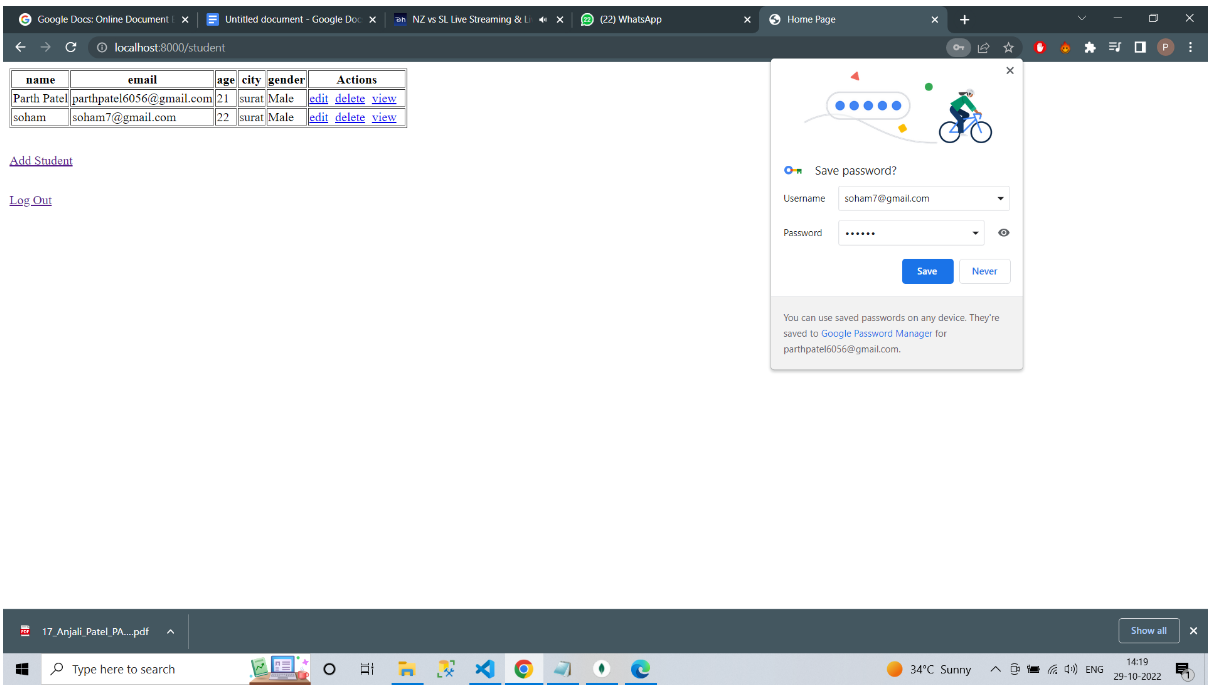
Save password?

Username: Parth Patel

Password: •••••

Save | Never

You can use saved passwords on any device. They're saved to Google Password Manager for parthpatel6056@gmail.com.


localhost:8000/student

name	email	age	city	gender	Actions
Parth Patel	parthpatel6056@gmail.com	21	surat	Male	edit delete view
soham	soham7@gmail.com	22	surat	Male	edit delete view

Add Student

Log Out

Save password?

Username soham7@gmail.com

Password ••••••

Save Never

You can use saved passwords on any device. They're saved to Google Password Manager for parthpatel6056@gmail.com.

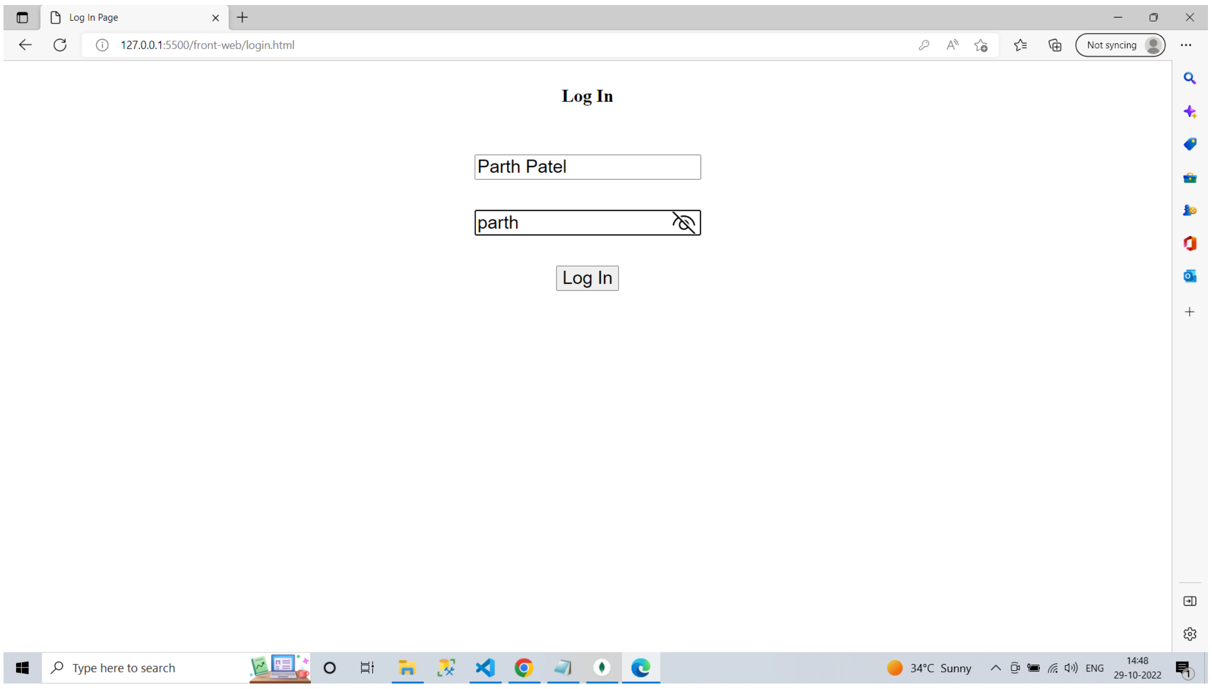
Q5:-

Index.js:

```
const express = require('express')
const app = express()
const cors = require('cors')
const { sign, verify } = require('./auth/authenticate')
require('dotenv').config()
//database
require('./db/database')

//router
const studentRouter = require('./routes/studentRoute')

//model
const student = require('./models/studentModel')
```

```
//config
const PORT = process.env.PORT

//cors
app.use(cors())

//body-parser and json for sending json and reading
body
app.use(express.json())
app.use(express.urlencoded({ extended: true }))

app.get('/', (req, res) => {
   console.log('default response')
   res.send('DEFAULT RESPONSE FROM SERVER')
})

//login request
app.post('/login', async (req, res) => {
   let { username, password } = req.body
   username = username
   password = password
   if (username && password) {
      let response = await student.find({ name:
username, password: password });
      if (response.length === 1) {
         return res.json(sign({ username }))
      } else {
         return res.status(401).json('Invalid username or
password')
```

```
        }
    } else {
        return res.status(401).json('Please provide
username and password')
    }
})

app.use('/get-token', sign)

app.use('/student', [verify], studentRouter)

app.listen(PORT, () => {
    console.log(`app listening on
http://localhost:${PORT}`);
})
```

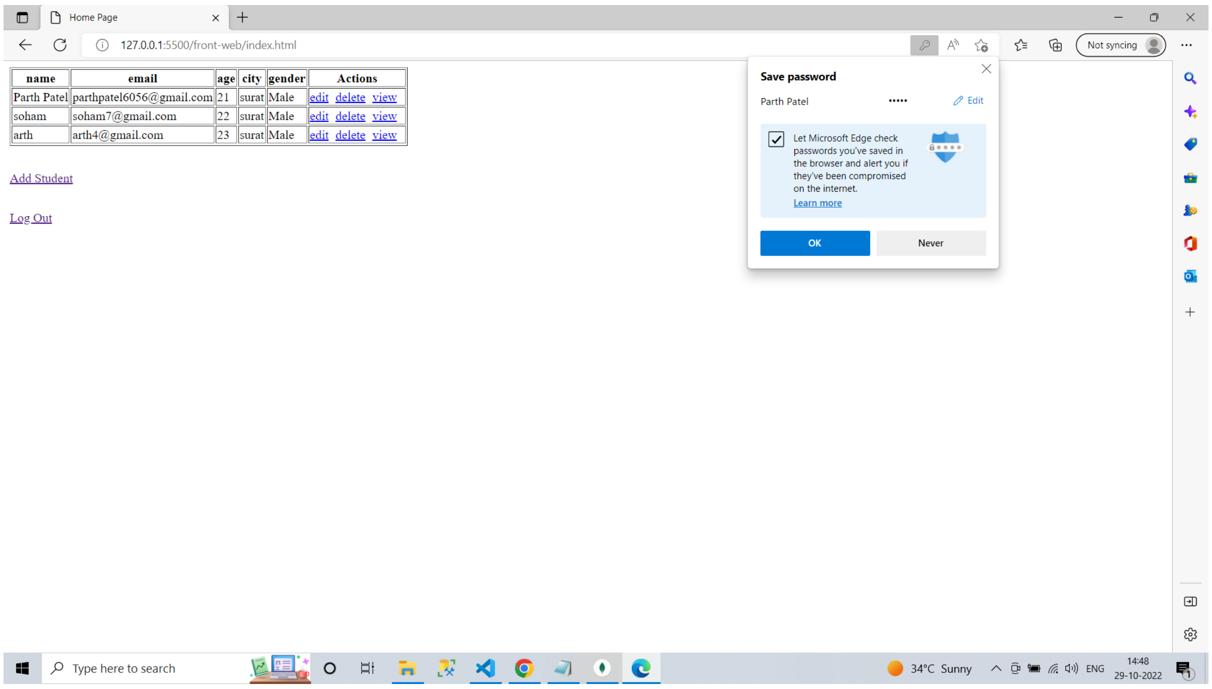


Log In

Parth Patel

parth

Log In



name	email	age	city	gender	Actions
Parth Patel	parthpatel6056@gmail.com	21	surat	Male	edit delete view
soham	soham7@gmail.com	22	surat	Male	edit delete view
arth	arth4@gmail.com	23	surat	Male	edit delete view

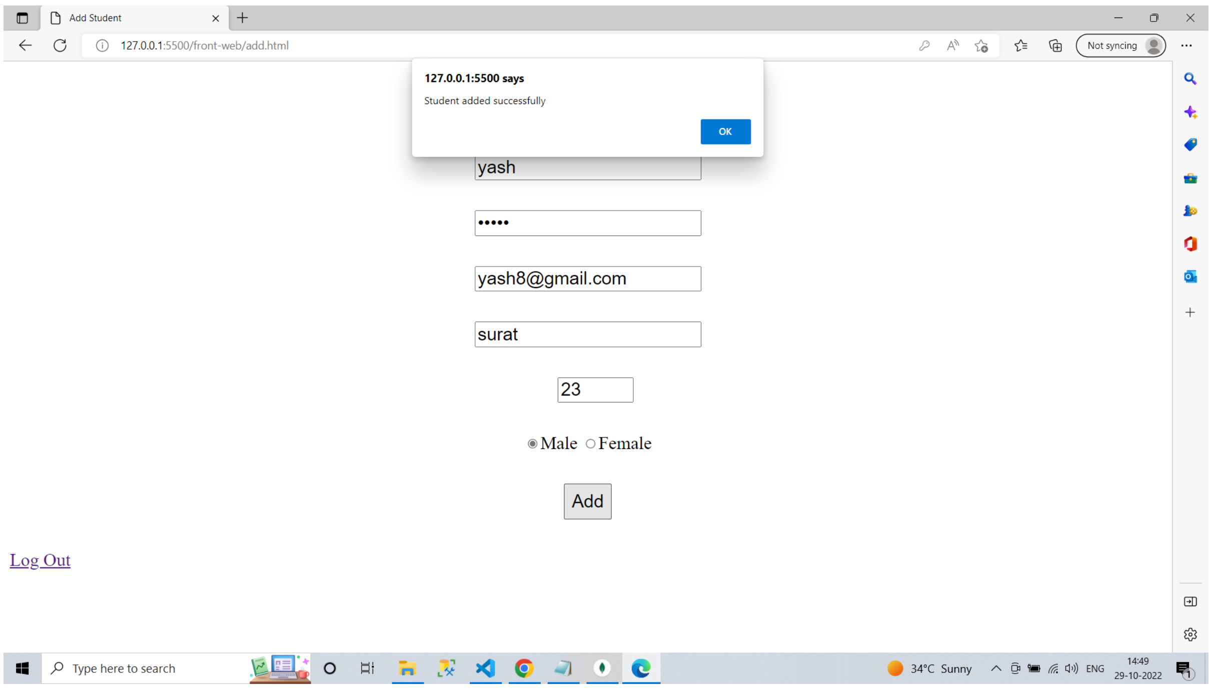
Add Student

Log Out

Save password

Parth Patel ••••• Edit

Let Microsoft Edge check passwords you've saved in the browser and alert you if they've been compromised on the internet.
Learn more



127.0.0.1:5500 says

Student added successfully

yash

•••••

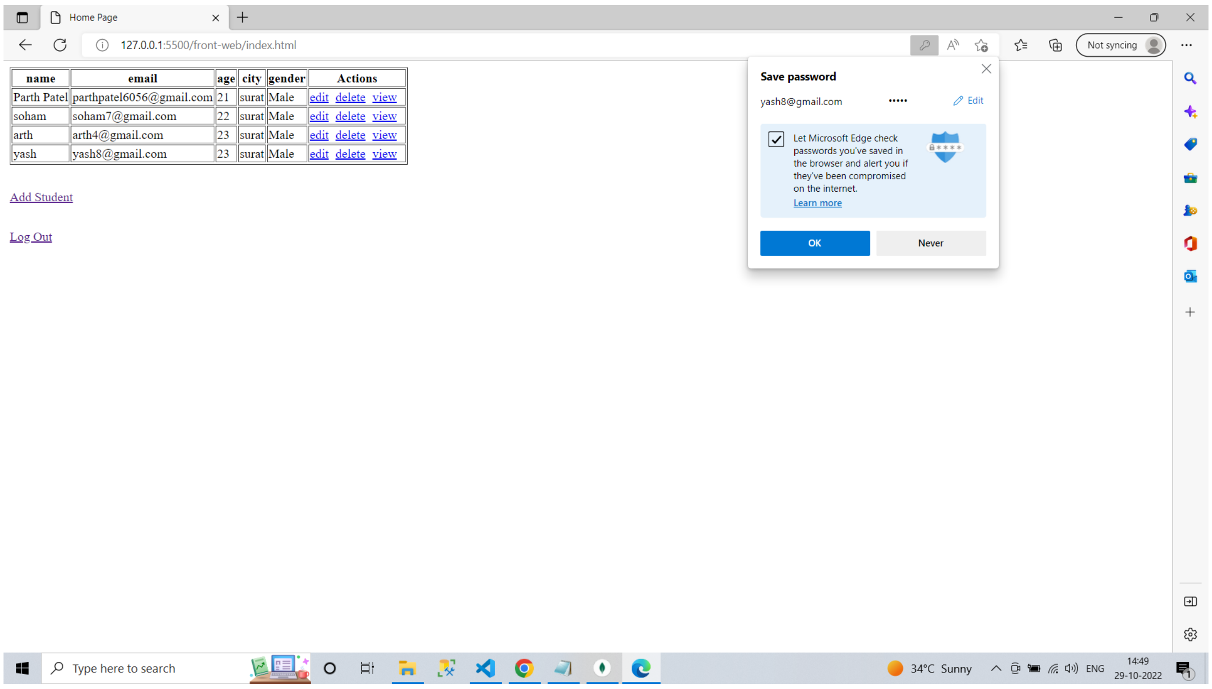
yash8@gmail.com

surat

23

[✓ Male] Female

Log Out



name	email	age	city	gender	Actions
Parth Patel	parthpatel6056@gmail.com	21	surat	Male	edit delete view
soham	soham7@gmail.com	22	surat	Male	edit delete view
arth	arth4@gmail.com	23	surat	Male	edit delete view
yash	yash8@gmail.com	23	surat	Male	edit delete view

Add Student

Log Out

Save password

yash8@gmail.com •••• Edit

✓ Let Microsoft Edge check passwords you've saved in the browser and alert you if they've been compromised on the internet.
Learn more

OK Never