

# **ADVANCED WEB TECH AND MEAN STACK**

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**MY.SC.P2MCA20043**

**SUBMITTED TO:**

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**DEPARTMENT OF COMPUTERS**

**AMRITA SCHOOL OF ARTS AND SCIENCES**

**mysore campus**



**2020-2022**

**M.C.A**

**SIGNATURE:**

# ASSIGNMENT:

NODE JS PROGRAM TO CONNECT NODE JS TO MONGODB.

## INTRODUCTION :

MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc. and licensed under the Server Side Public License (SSPL).

## STEP 1:INSTALLATION.

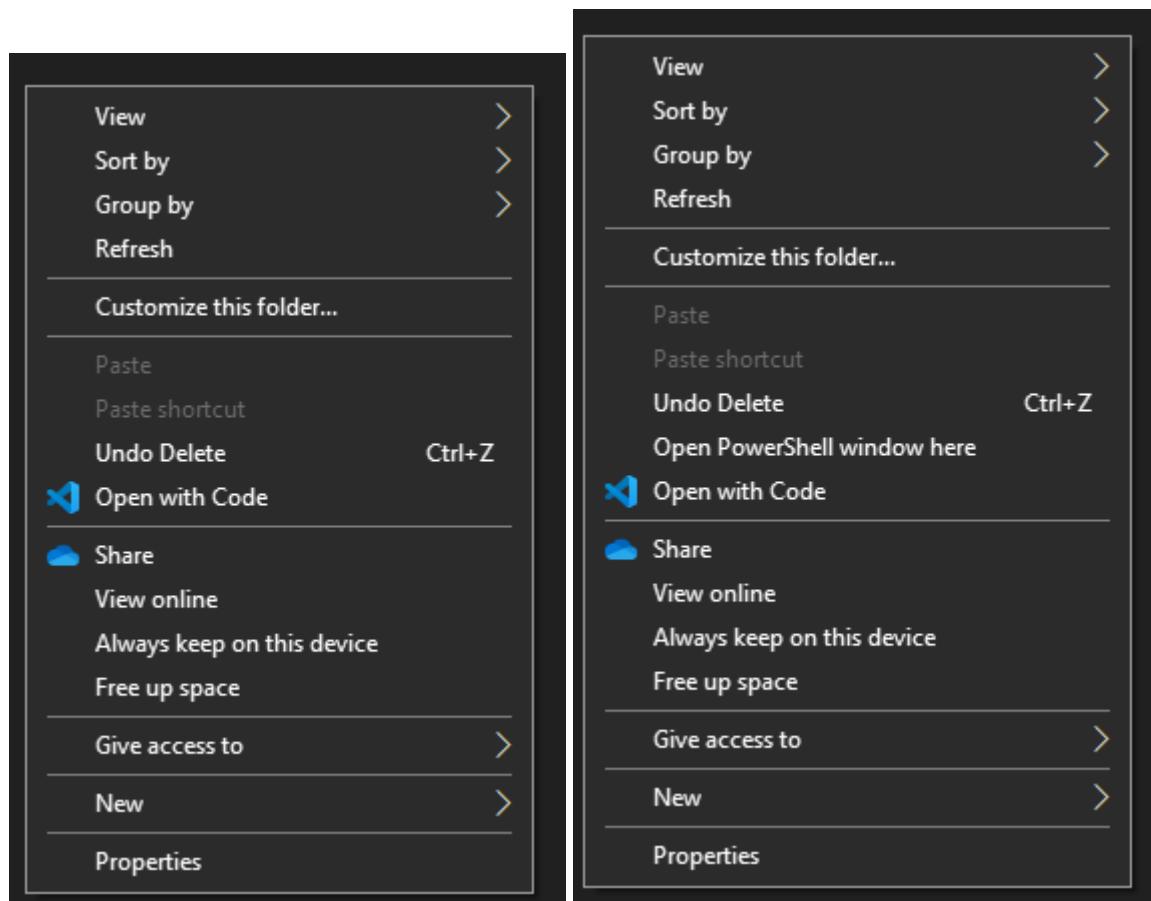
INSTALL MONGO DB AND NODE JS.

## STEP 2:DIRECTORY CREATION.

CREATE DIRECTORY WHERE THE PROJECT IS TO BE DONE.

## STEP 3:OPENING TERMINAL IN THE DIRECTORY.

GO IN THE DIRECTORY AND PRESS LEFT CLICK WHILE HOLDING SHIFT SO THAT YOU CAN SEE OPEN POWERSHELL OPTION.



**IF WE HAVE IDE LIKE V CODE IT WILL BE MUCH EASY TO DO THE PROJECT AS IT PROVIDE A LOT OF GOOD TOOLS TO WORK WITH.**

#### **STEP 4:INSTALLING PACKAGE.JSON.**

**OPEN THE TERMINAL AND ENTER “npm init”. DOING THIS WILL PROVIDE PACKAGE.JSON FILES.**

```
PS C:\Users\mahit\OneDrive\Documents\test> npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields
and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (test)
version: (1.0.0)
description:
entry point: (index.js)
test command:
git repository:
keywords:
author: mahith v bharadwaj
license: (ISC)
About to write to C:\Users\mahit\OneDrive\Documents\test\package.json:

{
  "name": "test",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "author": "mahith v bharadwaj",
  "license": "ISC"
}
```

## **STEP 5:INSTALLING DEPENDENCIES.**

**OPEN THE TERMINAL AND ENTER “npm install express mongoose body-parser nodemon”. DOING THIS WILL PROVIDE DEPENDENCY FILES.**

```
PS C:\Users\mahit\OneDrive\Documents\test> npm install express mongoose body-parser nodemon

> nodemon@2.0.7 postinstall C:\Users\mahit\OneDrive\Documents\test\node_modules\nodemon
> node bin/postinstall || exit 0

npm notice created a lockfile as package-lock.json. You should commit this file.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@~2.3.2 (node_modules\chokidar\node_mod
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {
  "}
npm WARN test@1.0.0 No description
npm WARN test@1.0.0 No repository field.

+ nodemon@2.0.7
+ express@4.17.1
+ body-parser@1.19.0
+ mongoose@5.12.15
added 196 packages from 171 contributors and audited 198 packages in 9.106s

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

found 0 vulnerabilities

PS C:\Users\mahit\OneDrive\Documents\test>
```

**EXPRESS:**Express is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications. With a myriad of HTTP utility methods and middleware at your disposal, creating a robust API is quick and easy.

**BODY-PARSER:**Parse incoming request bodies in a middleware before your handlers, available under the `req.body` property. As `req.body`'s shape is based on user-controlled input, all properties and values in this object are untrusted and should be validated before trusting.

**MONGOOSE:**Mongoose is a MongoDB object modeling tool designed to work in an asynchronous environment. Mongoose supports both promises and callbacks. Mongoose buffers all the commands until it's connected to the database. This means that you don't have to wait until it connects to MongoDB in order to define models, run queries, etc.

**NODEMON:**It is a command-line interface (CLI) utility developed by `@rem` that wraps your Node app, watches the file system, and automatically restarts the process.

IN OUR PROGRAM NODEMON IS USE IN A SCRIPT “DEV” SO THAT WHEN WE RUN “NPM RUN DEV” IT WILL RUN NODEMON WHENEVER THERE IS A CHANGE IN JS, CSS, HTML BY ADDING “`-e js,html,css`” TO NODEMON COMMAND IN PACKAGE.JSON.

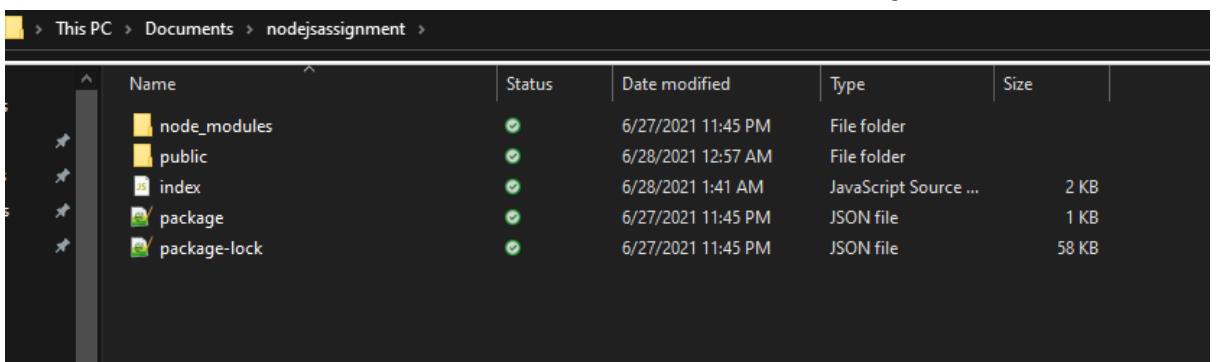
```
1 package.json > {} scripts > dev
2   {
3     "name": "nodejsassignment",
4     "version": "1.0.0",
5     "description": "",
6     "main": "index.js",
7       ▶ Debug
8     "scripts": [
9       "test": "echo \\\"Error: no test specified\\\" && exit 1",
10      "dev": "nodemon index.js -e js,html,css"
11    ],
12    "author": "mahith v bharadwaj",
13    "license": "ISC",
14    "dependencies": {
15      "bcryptjs": "^2.4.3",
16      "body-parser": "^1.19.0",
17      "express": "^4.17.1",
18      "mongoose": "^5.12.15",
19      "nodemon": "^2.0.7"
20    }
21 }
```

CODE:`"dev": "nodemon index.js -e js,html,css"`

INSTALLING DEPENDENCIES WILL ALSO CREATE PACKAGE-LOCK.JS

## STEP 6: CREATING INDEX.JS.

CREATE FILE IN THE TARGET DIRECTORY AS “index.js”



**WE START FROM SETTING DEPENDENCES TO INDEX.JS BY ASSIGNING CONSTANT REQUIRES.**

**CODE:**

```
const express = require('express');
const bodyParser = require('body-parser');
const mongoose = require('mongoose');
```

**NEXT WE DEFINE AND ASSIGN THE PORT(FOR OUTPUT IN BROWSER :3000 ) AND APP .**

```
const port = process.env.port || 3000
const app = express();
```

**THEN WE DEFINE US FOR THE APP**

```
app.use(bodyParser.json())
app.use(express.static('public'))
app.use(bodyParser.urlencoded({
    extended:true
}))
```

**NEXT WE CONNECT THE MONGOOSE TO THE MONGODB SERVER. WE ALSO GIVE PERMISSIONS . THEN WE CONNECT INDEX.JS TO MONGODB.**

```
mongoose.connect('mongodb://localhost:27017/mydb',{
    useNewUrlParser: true,
    useUnifiedTopology: true
});

var db = mongoose.connection;

db.on('error', ()=>console.log("Error in Connecting toDatabase"));
db.once('open', ()=>console.log("Connected to Database"))
```

## NEXT CODE FOR INSERTING DATA TO MONGODB FROM OUR HTML PAGE.

```
app.post("/sign_up", (req,res)=>{
    var name = req.body.name;
    var email = req.body.email;
    var rno = req.body.rno;
    var password = req.body.password;

    var data = {
        "name": name,
        "email" : email,
        "Roll_no": rno,
        "password" : password
    }

    db.collection('users').insertOne(data, (err,collection)=>{
        if(err){
            throw err;
        }
        console.log("Record Inserted Successfully");
    });

    return res.redirect('signup_success.html')
})
```

## NEXT CODE FOR LOGIN. HERE WE ARE CHECKING IF PASSWORD TYPED IS WRITE OR WRONG.

```
app.post("/login", (req,res)=>{

    var rno = req.body.rno;
    var password = req.body.password;
    var pass;

    db.collection('users').findOne(
    {
        "Roll_no": rno
    },
    (err,collection)=>{
```

```

        if(err){
            throw err;
        }
        pass=collection.password;
        console.log(pass);
        console.log(password);
        console.log("Record found Successfully");
        if(pass==password)
        {
            return res.redirect('login_success.html')
        }
        else
        {
            return res.redirect('unsuccess.html')
        }
    });
}

})

```

## THEN WE WILL END OUR CODE BY GET AND LISTEN TO PORT

```

app.get("/",(req,res)=>{
    res.set({
        "Allow-access-Allow-Origin": '*'
    })
    return res.redirect('index.html');
})

app.listen(port, ()=>{
    console.log('acquired port number is '+port)
})

```

## STEP 7: CREATING HTML/CSS FOR WEB PAGE.

CREATE A FOLDER PUBLIC IN TARGET FOLDER.

This PC > Documents > nodejsassignment					
	Name	Status	Date modified	Type	Size
ss	node_modules	✓	6/27/2021 11:45 PM	File folder	
ls	public	✓	6/28/2021 12:57 AM	File folder	
ts	index	✓	6/28/2021 1:41 AM	JavaScript Source ...	2 KB
e	package	✓	6/27/2021 11:45 PM	JSON file	1 KB
	package-lock	✓	6/27/2021 11:45 PM	JSON file	58 KB

CREATE HTML FORM FOR INDEX ,LOGIN AND SIGNUP

INDEX(HOME):

SIGN UP    LOGIN

School of Arts & Sciences  
Mysuru Campus

About

Mysuru Campus

About

HELLO! I am MAHITH V BHARADWAJ here by presenting my assignment one of webtech and meanstakes handled by prof. MANISHANKAR. It is a sort of aums where i have implemented student registration and login with the help of nodejs and mongoDB. For this page i have used and modified a template from w3schools and also used there boot strap. i have given a link below on the documentation. Thank you !!!!

Presented by [MAHITH V BHARADWAJ](#)

## INDEX.HTML:

```
<!DOCTYPE html>
<html>
<title>AUMS HOME</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width,
initial-scale=1">
<link rel="stylesheet"
href="https://www.w3schools.com/w3css/4/w3.css">
<link href="https://fonts.googleapis.com/css?family=Raleway"
rel="stylesheet" type="text/css">
<style>
body {font-family: "Raleway", Arial, sans-serif}
.w3-row img {margin-bottom: -8px}
</style>
<body>

<!-- !PAGE CONTENT! --&gt;
&lt;div class="w3-content" style="max-width:1500px"&gt;

    &lt;!-- Header --&gt;
    &lt;header class="w3-container w3-xlarge w3-padding-24"&gt;
        &lt;a href="login.html" class="w3-right w3-button
w3-white"&gt;LOGIN&lt;/a&gt;
        &lt;a href="signup.html" class="w3-right w3-button
w3-white"&gt;SIGN UP&lt;/a&gt;
    &lt;/header&gt;

    &lt;!-- Photo Grid --&gt;
    &lt;div class="w3-row"&gt;

        &lt;img src="css/images/img2.jpg" style="width:100%"&gt;
    &lt;/div&gt;

    &lt;!-- End Page Content --&gt;
&lt;/div&gt;

    &lt;!-- Footer / About Section --&gt;
    &lt;footer class="w3-light-grey w3-padding-64 w3-center" id="about"&gt;
        &lt;h2&gt;About&lt;/h2&gt;
        &lt;img src="css/images/img1.jpg" class="w3-image w3-padding-32"
width="300" height="300"&gt;</pre>
```

```
<form style="margin:auto; width:60%">
    <p>HELLO! I am MAHITH V BHARADWAJ here by presenting my
assignment one of webtech and meanstacks handled by prof. MANISHANKAR.
It is a sort of aums where I have implemented student registration and
login with the help of nodejs and mongoDB. For this page I have used
and modified a template from w3schools and also used their bootstrap. I
have given a link below on the documentation. Thank you !!!!! </p>

</form>
<br>
<p>Presented by <a
href="https://docs.google.com/document/d/1IgDvF2hrmLwSqy7Bit1I5sCxrUEHL
N5JbK8AHF1f92I/edit?usp=sharing" target="_blank"
class="w3-hover-text-green">MAHITH V BHARADWAJ</a></p>
</footer>

</body>
</html>
```

## INDEX(HOME):

THIS PAGE CONSISTS OF HEADER, BODY AND FOOTER. HEADER HAS LOGIN AND SIGNUP LINK WHICH ON CLICK WILL TAKE YOU TO RESPECTIVE PAGES. BODY CONSIST OF IMAGE OF AMRITA MYSORE CAMPUS. FOOTER CONSIST OF ABOUT AND A URL LINK WHICH WILL BRING YOU TO THIS GOOGLE DOC .

## SIGN-UP:



LOGIN   HOME

**School of Arts & Sciences  
Mysuru Campus**

**STUDENT REGISTRATION**

Name

Email

Roll No

Password

**Submit**

[RETURN TO HOME](#)

## SIGNUP.HTML

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

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>SignUp Form - Amrita</title>

    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
integrity="sha384-BVYiiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous">

    <link rel="stylesheet" type="text/css" href="css/styles.css">
```

```
<link rel="stylesheet"
href="https://www.w3schools.com/w3css/4/w3.css">
    <link href="https://fonts.googleapis.com/css?family=Raleway"
rel="stylesheet" type="text/css">
        <style>
            body {font-family: "Raleway", Arial, sans-serif}
            .w3-row img {margin-bottom: -8px}
        </style>

</head>

<body>

<div class="w3-content" style="max-width:1500px">
    <header class="w3-container w3-xlarge w3-padding-24">
        <a href="index.html" class="w3-right w3-button
w3-white">HOME</a>
        <a href="login.html" class="w3-right w3-button
w3-white">LOGIN</a>
    </header>
    <div class="w3-row">

    </div>
    <footer class="w3-light-grey w3-padding-64 w3-center">
        <div class="row">
            <div class="col-md-3">

            </div>
            <div class="col-md-6 main">
                <form action="/sign_up" method="POST">
                    <h2>STUDENT REGISTRATION</h2>
                    <input type="text" class="box" id="name"
name="name" placeholder="Name" required />
                    <br>
                    <input type="text" class="box" id="email"
name="email" placeholder="Email" required />
                    <br>
                    <input type="text" class="box" id="rno"
name="rno" placeholder="Roll No" required />
            </div>
        </div>
    </footer>

```

```
<br>
<input type="password" class="box"
id="password" name="password" placeholder="Password" required />
<br>
<input type="submit" value="Submit"
id="submit" />
</form>
</div>
<div class="col-md-3">
</div>
</div>
<br>
<p> <a href="index.html" class="w3-hover-text-green">RETURN TO
HOME</a></p>
</footer>
</div>

</body>

</html>
```

### SIGN-UP:

THIS PAGE CONSISTS OF HEADER, BODY AND FOOTER. HEADER HAS LOGIN AND HOME LINK WHICH ON CLICK WILL TAKE YOU TO RESPECTIVE PAGES. BODY CONSIST OF IMAGE OF AMRITA MYSORE CAMPUS. FOOTER CONSIST REGISTRATION AND A RETURN HOME LINK . ON-CLICKING SUBMIT IT WILL CALL “/SIGN\_IN” AND EXECUTE APP.POST(‘/SIGN\_IN’,()), IN JS AND WHICH WILL ADD THE ENTERED THE FIELD DATA TO MONGODB.

The screenshot shows the MongoDB Compass interface. On the left, the sidebar displays the connection information: Local, HOST localhost:27017, CLUSTER Standalone, and EDITION MongoDB 4.4.6 Community. Under the 'mydb' database, the 'users' collection is selected. The main pane shows the 'Documents' tab with four documents listed:

- `_id: ObjectId("60d93537f64082298852693")  
name: "david"  
email: "david@gmail.com"  
Roll_no: "my.sc.p2mca20001"  
password: "hallelujah"`
- `_id: ObjectId("60d93a0ef1bd1f462086974f")  
name: "adam"  
email: "adam@gmail.com"  
Roll_no: "my.sc.p2mca20002"  
password: "adamapple"`
- `_id: ObjectId("60d8b9dd74fcfa6074d79ce4")  
name: "eve"  
email: "eve@gmail.com"  
Roll_no: "my.sc.p2mca20003"  
password: "eve"`
- `_id: ObjectId("60d8c2f86f7dad145ce5ee4f")  
name: "mahith"  
email: "mat@gogoi.com"  
Roll_no: "my.sc.p2mca20004"  
password: "mat"`

At the bottom of the interface, it says > MONGOSH BETA.

## ON SUCCESSFUL INSERTION IT WILL SHOW

Signup Successful

### CODE:

```
<!DOCTYPE html>
<html>

<head>
    <title> Signup Form</title>
```

```
                <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
integrity="sha384-BVYiiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous">

    <link rel="stylesheet" type="text/css" href="css/style.css">
</head>

<body>
    <br>
    <br>
    <br>
    <br>
    <div class="container">
        <div class="row">
            <div class="col-md-3">
            </div>

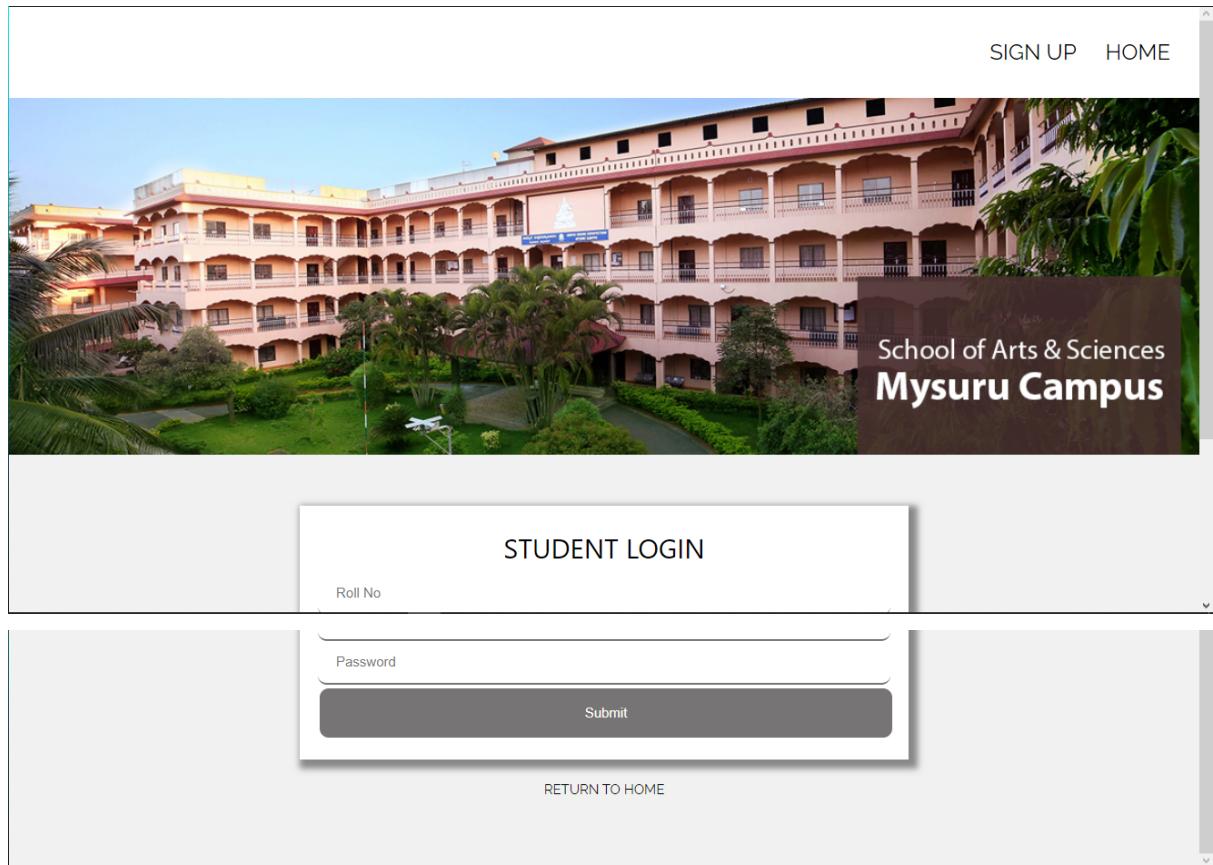
            <div class="col-md-6 main">
                <h1> Signup Successful</h1>
            </div>

            <div class="col-md-3">
            </div>

        </div>
    </div>
</body>

</html>
```

## LOGIN:



## LOGIN.HTML:

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

    <head>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width,
initial-scale=1.0">
        <title>Login Form - Amrita</title>

        <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"
integrity="sha384-BVYiiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous">

        <link rel="stylesheet" type="text/css" href="css/styles.css">

        <link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
```

```

        <link href="https://fonts.googleapis.com/css?family=Raleway"
rel="stylesheet" type="text/css">
<style>
body {font-family: "Raleway", Arial, sans-serif}
.w3-row img {margin-bottom: -8px}
</style>

</head>

<body>

<div class="w3-content" style="max-width:1500px">
    <header class="w3-container w3-xlarge w3-padding-24">
        <a href="index.html" class="w3-right w3-button
w3-white">HOME</a>
        <a href="signup.html" class="w3-right w3-button
w3-white">SIGN UP</a>
    </header>
    <div class="w3-row">

    </div>
    <footer class="w3-light-grey w3-padding-64 w3-center">
        <div class="row">
            <div class="col-md-3">

            </div>
            <div class="col-md-6 main">
                <form action="/login" method="POST">
                    <h2>STUDENT LOGIN</h2>
                    <input type="text" class="box" id="rno"
name="rno" placeholder="Roll No" required />
                    <br>
                    <input type="password" class="box"
id="password" name="password" placeholder="Password" required />
                    <br>
                    <input type="submit" value="Submit"
id="submit" />
                </form>
            </div>
            <div class="col-md-3">

```

```

        </div>
    </div>
    <br>
    <p> <a href="index.html" class="w3-hover-text-green">RETURN TO HOME</a></p>
    </footer>
</div>

</body>

</html>

```

### **LOGIN:**

**THIS PAGE CONSISTS OF HEADER, BODY AND FOOTER. HEADER HAS SIGNUP AND HOME LINK WHICH ON CLICK WILL TAKE YOU TO RESPECTIVE PAGER. BODY CONSIST OF IMAGE OF AMRITA MYSORE CAMPUS. FOOTER CONSIST REGISTRATION AND A RETURN HOME LINK . ON-CLICKING SUBMIT IT WILL CALL “/LOGIN” AND EXECUTE APP.POST(‘/LOGIN’,()),IN JS AND WHICH WILL FIND REGISTER NUMBER AND GET IS PASSWORD AND COMPARE IT WITH THE PASSWORD ENTERED IN THE LOGIN.HTML FIELD .**

### **ON SUCCESSFUL LOGIN:**



### **CODE:**

```

<!DOCTYPE html>
<html>

<head>
    <title> Signup Form</title>
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css"

```

```
integrity="sha384-BVYiiSIfE1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous">

    <link rel="stylesheet" type="text/css" href="css/style.css">
</head>

<body>
    <br>
    <br>
    <br>
    <div class="container">
        <div class="row">
            <div class="col-md-3">
            </div>

            <div class="col-md-6 main">
                <h1> LOGIN Successful</h1>
                </div>

            <div class="col-md-3">
            </div>

        </div>
    </div>
</body>

</html>
```

## ON UNSUCCESSFUL LOGIN:

INVALID USERNAME/PASSWORD

### CODE:

```
<!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>Document</title>
</head>
<body>
    <h3>INVALID USERNAME/PASSWORD</h3>
</body>
</html>
```

## CSS:

```
.main {  
    padding: 20px;  
    font-family: 'Helvetica', serif;  
    box-shadow: 5px 5px 7px 5px #888888;  
    background-color: #ffffff;  
}  
  
.main h1 {  
    font-size: 40px;  
    text-align: center;  
    font-family: 'Helvetica', serif;  
}  
  
input {  
    font-family: 'Helvetica', serif;  
    width: 100%;  
    font-size: 20px;  
    padding: 12px 20px;  
    margin: 8px 0;  
    border: none;  
    border-bottom: 2px solid #767474;  
    border-radius: 10px;  
}  
  
input[type=submit] {  
    font-family: 'Helvetica', serif;  
    width: 100%;  
    background-color: #767474;  
    border: none;  
    color: white;  
    padding: 16px 32px;  
    margin: 4px 2px;  
    border-radius: 10px;  
}
```

This PC > Documents > BACKUP ASSIGNMENT > nodejsassignment > public					
	Name	Status	Date modified	Type	Size
ss	css	✓	6/28/2021 11:24 AM	File folder	
ds	index	✓	6/28/2021 10:25 AM	Opera GX Web Do...	2 KB
nts	login	✓	6/28/2021 1:12 AM	Opera GX Web Do...	3 KB
ge	login_success	✓	6/28/2021 12:57 AM	Opera GX Web Do...	1 KB
	signup	✓	6/28/2021 1:16 AM	Opera GX Web Do...	3 KB
	signup_success	✓	6/27/2021 11:43 AM	Opera GX Web Do...	1 KB
	unsuccess	✓	6/28/2021 12:49 AM	Opera GX Web Do...	1 KB

## **CONCLUSION:**

I MAHITH V BHARADWAJ OF M.C.A 2020-2022 AMRITA SCHOOL OF ARTS AND SCIENCES HERE BY CONCLUDE THAT THE ASSIGNMENT FOR CONNECTING MONGODB TO NODEJS A SUCCESS AND CONCLUDE MY DOCUMENTATION.

## **REFERENCES:**

1.[https://www.youtube.com/watch?v=\\_hfMmFx85KE](https://www.youtube.com/watch?v=_hfMmFx85KE),  
[https://github.com/Vasantha-Korada/SignUpForm-HTML\\_NodeJS\\_MongoDB](https://github.com/Vasantha-Korada/SignUpForm-HTML_NodeJS_MongoDB)

2.W3 SCHOOL FOR BOOTSTRAP  
<https://www.w3schools.com/w3css/4/w3.css>