

S1: Project and Folders

```
C:\demo\jsmarch24\L16>mkdir sms_project  
C:\demo\jsmarch24\L16>cd sms_project  
C:\demo\jsmarch24\L16\sms_project>mkdir serer  
C:\demo\jsmarch24\L16\sms_project>mkdir server  
C:\demo\jsmarch24\L16\sms_project>mkdir client
```

S2: React JS → firebase

```
C:\demo\jsmarch24\L16\sms_project>cd client  
C:\demo\jsmarch24\L16\sms_project\client>npx create-react-app sms_app  
C:\demo\jsmarch24\L16\sms_project\client>cd sms_app  
C:\demo\jsmarch24\L16\sms_project\client\sms_app>npm install axios react-router-dom  
C:\demo\jsmarch24\L16\sms_project\client\sms_app\src>cd..  
C:\demo\jsmarch24\L16\sms_project\client\sms_app>npm start
```

Home.js

```
import NavBar from "./NavBar";
import { useState, useEffect } from "react";
import axios from "axios";

function Home()
{
    const [info, setInfo] = useState([]);

    useEffect( () => {
        let url = "http://localhost:9000/get";
        axios.get(url)
            .then(res => setInfo(res.data))
            .catch(err => alert("issue " + err));
    }, []);

    const delStu = (rno) => {
        let d = {data:{rno}};
        let url = "http://localhost:9000/remove";
        axios.delete(url, d)
            .then(res =>{
                alert("record deleted");
                window.location.reload();
            })
            .catch();
    }

    return(
        <>
        <center>
            <NavBar/>
            <h1> Home Page </h1>
            <table border="5" style={{ "width":"80%" }}>
                <tr>
                    <th> Rno </th>
                    <th> Name </th>
                    <th> Marks </th>
                    <th> Delete </th>
                    <th> Update </th>
                </tr>
                <tr style={{ "text-align":"center" }}>
                    <td> { e.rno } </td>
                    <td> { e.name} </td>
                    <td> { e.marks } </td>
                    <td> <button onClick={ () => {
                        delStu(e.rno);
                    } }>Delete</button> </td>
                    <td> <button onClick={ () => {
                        updateStu(e.rno, e.name, e.marks);
                    } }>Update</button> </td>
                </tr>
            </table>
        </center>
    );
}
```

```
        if ( window.confirm('r u sure ??') ) delStu(e.rno) } } > Delete </button> </td>
        <td> Update </td>
    </tr>
)
}
</table>
</center>
</>
);
}
export default Home;
```

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Create.js

```
import NavBar from "./NavBar";
import { useState, useRef } from "react";
import axios from "axios";

function Create()
{
    const rRno = useRef();
    const [rno, setRno] = useState("");
    const [name, setName] = useState("");
    const [marks, setMarks] = useState("");
    const [msg, setMsg] = useState("");

    const hRno = (event) => { setRno(event.target.value); }
    const hName = (event) => { setName(event.target.value); }
    const hMarks = (event) => { setMarks(event.target.value); }

    const save = (event) => {
        event.preventDefault();
        let data = { rno, name, marks};
        let url = "http://localhost:9000/save";
        axios.post(url, data)
        .then(res => {
            if(res.data.affectedRows == 1)
            {
                setMsg("record created");
                setRno("");
                setName("");
                setMarks("");
                rRno.current.focus();
            }
            else
            {
                setMsg("rno already exists");
                rRno.current.focus();
            }
        })
        .catch(err => setMsg("issue " + err));
    }

    return(
    <>
    <center>
        <NavBar/>
        <h1> Create Page </h1>

        <form onSubmit={save} >
            <input type="number" placeholder="enter rno "
            onChange={ hRno } value={rno} ref={rRno} />
            <br/><br/>
    
```

```
<input type="text" placeholder="enter name "
onChange={ hName } value={name} />
<br/><br/>
<input type="number" placeholder="enter marks "
onChange={ hMarks } value={marks} />
<br/><br/>
<input type="submit" value="Save" />
<br/><br/>
</form>
<h2> { msg } </h2>
</center>
</>
);
}
export default Create;
```

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Update.js

```
import NavBar from "./NavBar";

function Update()
{
return(
<>
<center>
    <NavBar/>
    <h1> Update Page </h1>
</center>
</>
);
}
export default Update;
```

NavBar.js

```
import { Link } from "react-router-dom";

function NavBar()
{
return(
<>
<center>
    <div className="nav">
        <Link to="/"> Home </Link>
        <Link to="/create"> Create </Link>
    </div>
</center>
</>
);
}
export default NavBar;
```

App.js

```
import logo from './logo.svg';
import './App.css';
import Home from "./Home";
import Create from "./Create";
import Update from "./Update";
import { BrowserRouter, Routes, Route } from "react-router-dom";

function App() {
  return (
    <BrowserRouter>
      <Routes>
        <Route path="/" element={ <Home/> } />
        <Route path="/create" element={ <Create/> } />
        <Route path="/update" element={ <Update/> } />
        <Route path="*" element={ <Home/> } />
      </Routes>
    </BrowserRouter>
  );
}

export default App;
```

App.css

```
* { font-size:2.5vw; font-family:Arial; }
body { background-color:azure; }
.nav { background-color:black; }
.nav a { color:white; text-decoration:none; margin:3vw; }
```

S3: Express JS → github + render

S1:

```
C:\demo\jsmarch24\L16\sms_project\server>npm install express cors mysql2
C:\demo\jsmarch24\L16\sms_project\server>notepad index.js
C:\demo\jsmarch24\L16\sms_project\server>nodemon index.js
```

S2:

index.js

```
const express = require("express");
const cors = require("cors");
const mysql = require("mysql2");

const app = express();
app.use(cors());
app.use(express.json());

const con = mysql.createConnection({
    host: "localhost",
    user: "root",
    password : "abc123",
    database : "sms10april24"
});

app.post("/save", (req, res) => {
    let data = [req.body.rno, req.body.name, req.body.marks];
    let sql = "insert into student values(?, ?, ?)";
    con.query(sql, data, (err, result) =>{
        if (err)             res.send(err);
        else                 res.send(result);
    });
});

app.get("/get", (req, res) => {
    let sql = "select * from student";
    con.query(sql, (err, result) =>{
        if (err)             res.send(err);
        else                 res.send(result);
    });
});

app.delete("/remove", (req, res) => {
    let data = [req.body.rno];
    let sql = "delete from student where rno=?";
    con.query(sql, data, (err, result) =>{
        if (err)             res.send(err);
        else                 res.send(result);
    });
});

app.listen(9000, () => { console.log("ready @ 9000"); } );
```

S4: MySQL → freesqldatabase.com

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql -uroot -pabc123
mysql> create database sms10april24;
mysql> use sms10april24;
mysql> create table student(rno int primary key, name text, marks int);
```

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