

Program 1A — Express.js Routing

```
const express = require('express');
const app = express();

app.get('/', (req, res) => res.send('Welcome to the Home Page!'));

app.get('/user/:name', (req, res) => {
  res.send(`Hello, ${req.params.name}!`);
});

app.get('/search', (req, res) => {
  res.send(`You searched for ${req.query.item} priced at ₹${req.query.price}`);
});

app.get('/profile/:username', (req, res) => {
  res.send(`Profile URL is: /user/${req.params.username}`);
});

app.listen(3000, () => {
  console.log('Server running on http://localhost:3000');
});
```

Program 1B — Data Sharing Between Components (ReactJS)

```
// src/App.js
import React, { useState } from 'react';
import Child from './Child';

export default function App() {
  const [data, setData] = useState("Hello from App");

  return (
    <div style={{ textAlign: 'center', marginTop: 50 }}>
      <h1>Data Sharing Example</h1>
      <Child info={data} />
      <button onClick={() => setData("Data Updated!")}>Update Data</button>
    </div>
  );
}

// src/Child.js
import React from 'react';

export default function Child({ info }) {
  return <h2>Child received: {info}</h2>;
}
```

Program 2A — Props and State Example (ReactJS)

```
// App.js
import React, { useState } from 'react';
import Greeting from './Greeting';

function App() {
  const [name, setName] = useState("Sathwvik");

  return (
    <div style={{ textAlign: 'center', marginTop: '50px' }}>
      <h1>React Props and State Example</h1>
      <Greeting user={name} />
      <button onClick={() => setName("Lavanya")}>Change Name</button>
    </div>
  );
}

export default App;
// Greeting.js
```

```
import React from 'react';

function Greeting(props) {
  return <h2>Hello, {props.user}!</h2>;
}

export default Greeting;
```

Program 2B — Using CSS and SCSS in React

```
// App.js
import React from 'react';
import './App.css';
import './App.scss';

export default function App() {
  const user = { name: "Teja", status: "Nothing" };

  return (
    <div className="box">
      <h1 className="title">User Info</h1>
      <p className="text">Name: {user.name}</p>
      <p className="text">Status: {user.status}</p>
    </div>
  );
}

// App.css
.box {
  text-align: center;
  margin-top: 50px;
}

.title {
  color: blue;
}

// App.scss
.text {
  color: darkgreen;
  font-weight: bold;

  &:hover {
    color: crimson;
  }
}
```

Program 3A — Express.js with EJS Template

```
// app.js
const express = require('express');
const app = express();

app.set('view engine', 'ejs');

app.get('/', (req, res) => {
  res.render('index', { name: 'Teja', status: 'Nothing' });
});

app.listen(3000, () => {
  console.log('Server running on http://localhost:3000');
});

// index.ejs
<!DOCTYPE html>
<html>
  <body style="text-align:center; margin-top:50px;">
    <h1>Hello <%= name %>!</h1>
    <p>Status: <%= status %></p>
  </body>
```

```
</html>
```

Program 3B — Rendering HTML Dynamically in React

```
// App.js
import React from 'react';

export default function App() {
  const html = "<h2 style='color:blue'>Hello Teja!</h2><p>Status: Nothing</p>";

  return (
    <div
      style={{ textAlign: 'center', marginTop: 50 }}
      dangerouslySetInnerHTML={{ __html: html }}
    />
  );
}
```

Program 4A — Express.js Middleware Example

```
const express = require('express');
const app = express();

const log = (req, res, next) => {
  console.log(`${req.method} ${req.url}`);
  next();
};

app.use(log);

app.get('/', (req, res) => res.send('Home Page'));
app.get('/about', (req, res) => res.send('About Page'));

app.listen(3000, () => {
  console.log('Server running on http://localhost:3000');
});
```

Program 4B — ReactJS useState Example

```
import React, { useState } from 'react';

export default function App() {
  const [msg, setMsg] = useState('Hello Teja');

  return (
    <div style={{ textAlign: 'center', marginTop: 50 }}>
      <h2>{msg}</h2>
      <button onClick={() => setMsg('Button Clicked!')}>Click Me</button>
    </div>
  );
}
```

Program 5A — Express.js Login API Example

```
const express = require('express');
const app = express();

app.use(express.json());

const user = { name: 'teja', password: '1234' };

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

```
const { name, password } = req.body;

if (name === user.name && password === user.password) {
  res.send('Login successful');
} else {
  res.send('Invalid credentials');
}
});

app.listen(3000, () => {
  console.log('Server running on http://localhost:3000');
});
```