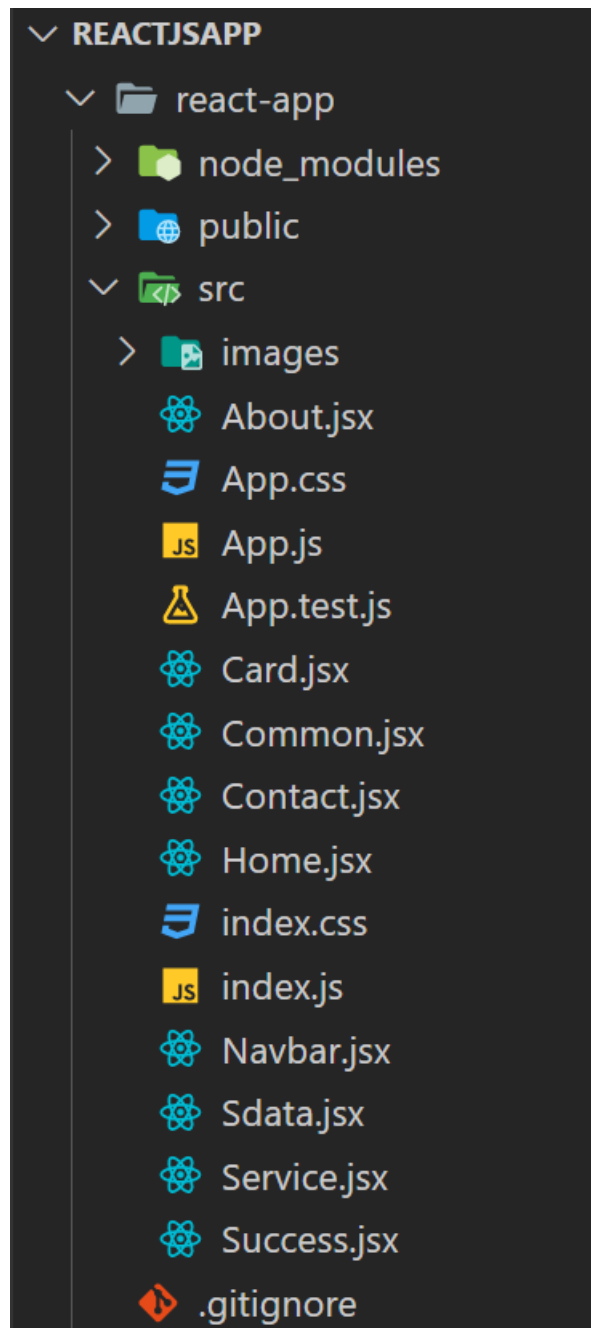


## INTERNET PROGRAMMING - Experiment 4

Algorithm Visualizer Frontend Using React JS

**AIM:** Create Responsive Animated Website using React js.

**IMPLEMENTATION:****File Stucture:**

## CODE:

## ➤ App.js

```
import React from "react";
import "../node_modules/bootstrap/dist/css/bootstrap.min.css";
import "../node_modules/bootstrap/dist/js/bootstrap.bundle.js";
import "./index.css";
import Navbar from "./Navbar";
import Home from "./Home";
import About from "./About";
import Service from "./Service";
import Contact from "./Contact";
import Success from "./Success";
import {Switch, Route, Redirect} from 'react-router-dom';

const App = () => {
  return(
    <>
      <Navbar />
      <Switch>
        <Route exact path="/" component={Home} />
        <Route exact path="/about" component={About} />
        <Route exact path="/service" component={Service} />
        <Route exact path="/contact" component={Contact} />
        <Route exact path="/success" component={Success} />
        <Redirect to="/" />
      </Switch>
    </>
  )
};

export default App;
```

➤ index.js

```
import React from "react";
import ReactDOM from "react-dom";
import "./index.css";
import App from "./App";
import { BrowserRouter } from "react-router-dom";

ReactDOM.render(
  <>
    <BrowserRouter>
      <App />
    </BrowserRouter>
  </>,
  document.getElementById("root")
);
```

➤ index.css

```
@import
url('https://fonts.googleapis.com/css2?family=Muli:wght@200;300;400;500;600;700;800;900&display=swap');
@import
url('https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;500;600;700;800;900&display=swap');
*,
*::before,
*::after {
  box-sizing: border-box;
}

body {
  font-family: 'Poppins';
}
```

```
.nav-link {
  font-size: 1.1em;
}

.nav-link {
  transition: 0.3s ease all !important;
}

.nav-link.menu_active {
  font-weight: bold;
  border-bottom: 1px solid coral;
  transition: 0.3s ease all !important;
}

a.btn-get-started {
  display: inline-block;
  text-decoration: none;
  color: #333;
  padding: 0.4em 0.9em;
  margin-top: 1em;
  border-radius: 30px;
  background: transparent;
  border: 1px solid #333;
  text-transform: uppercase;
  font: 400 1em/1.5em 'Poppins';
}

#header {
  width: 100%;
  height: 79vh;
}

#header h2 {
```

```

    display: #626262;
    font-size: 1.2em;
    margin-bottom: 1em;
    font-weight: normal;
}

#header h1 .brand-name {
    color: darkslateblue;
}

.navbar-brand>[alt=logo] {
    width: 60px;
    height: 60px;
}

```

### ➤ Home.jsx

```

import React from "react";
import Web from "../images/myImg.png";
import { NavLink } from "react-router-dom";
import Common from "../Common";

const Home = () => {
    return (
        <>
            <Common
                name="Visualize Algorithms with"
                img={Web}
                btnName="Algorithms"
                visited="../service"
            />
        </>
    );
};

```

```
export default Home;
```

### ➤ Common.jsx

```
import React from "react";
import Web from './images/myImg.png';
import {NavLink} from 'react-router-dom';

const Common = (props) => {
  return (
    <>
      <section id="header" className="mt-5">
        <div className="container-fluid nav_bg">
          <div className="row">
            <div className="col-md-10 mx-auto">
              <div className="row">
                <div className="col-md-6 pt-5 pt-lg-0 order-2 order-lg-1
                  align-self-center">
                  <h1>
                    {props.name} <strong className="brand-name">Algorithm
Visualizer</strong>
                  </h1>
                  <h2 className="my-3">
                    <del>MEMORISE</del> VISUALIZE Algorithms!
                  </h2>
                  <div className="mt-3">
                    <NavLink to={props.visited} className="btn-get-
started">{props.btnName}</NavLink>
                  </div>
                </div>
              </div>
              <div className="col-md-6 order-1 order-lg-2 header-img">
                <img src={props.img} className="img-fluid" alt="home img"/>
              </div>
            </div>
          </div>
        </div>
      </section>
    </>
  );
}
```

```

        </div>
      </div>
    </div>
  </div>
</section>
</>
);
};

export default Common;

```

### ➤ Navbar.jsx

```

import React from 'react';
import Logo from './images/logo.png';
import {NavLink} from 'react-router-dom';

const Navbar = () => {
  return (
    <>
      <div className="container-fluid nav_bg">
        <div className="row">
          <div className="col-md-10 mx-auto">
            <nav className="navbar navbar-expand-lg navbar-light ">
              <div className="container-fluid">
                <NavLink className="navbar-brand" to="/">
                  <img src={Logo} className="img-fluid" alt="logo"/>
                </NavLink>
                <NavLink className="navbar-brand" to="/">
                  <h2>Algorithm Visualizer</h2>
                </NavLink>
                <button className="navbar-toggler" type="button" data-bs-
toggle="collapse" data-bs-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">

```

```
<span className="navbar-toggler-icon"></span>
</button>
<div className="collapse navbar-collapse"
id="navbarSupportedContent">
    <ul className="navbar-nav mb-2 mb-lg-0" style={{marginLeft:
"auto",}}>
        <li className="nav-item">
            <NavLink activeClassName="menu_active" className="nav-link"
exact to="/">Home</NavLink>
        </li>
        <li className="nav-item">
            <NavLink activeClassName="menu_active" className="nav-link"
exact to="/service">Algorithms</NavLink>
        </li>
        <li className="nav-item">
            <NavLink activeClassName="menu_active" className="nav-link"
exact to="/about">Visualize</NavLink>
        </li>
        <li className="nav-item">
            <NavLink activeClassName="menu_active" className="nav-link"
exact to="/contact">Contact us</NavLink>
        </li>
    </ul>
</div>
</div>
</nav>
</div>
</div>
</div>
</>
)
}
export default Navbar;
```



## ➤ About.jsx

```
import React from "react";
import Web from './images/business.png';
import {NavLink} from 'react-router-dom';
import Common from "../Common"

const About = () => {
  return (
    <>
      <Common
        name="Visualizer Comming Soon"
        img={Web}
        btnName="Contact Us"
        visited="./contact"
      />
    </>
  );
};

export default About;
```

## ➤ Services.jsx

```
import React from "react";
import Card from "../Card";
import Sdata from "../Sdata";

const Service = () => {
  return (
    <>
      <div className="my-5">
        <h1 className="text-center">Algorithms</h1>
        <br></br>
      </div>
    </>
  );
};
```

```

    <div className="container-fluid nav_bg mb-5">
      <div className="row">
        <div className="col-md-10 mx-auto">
          <div className="row g-3">
            {
              Sdata.map((val, index)=>{
                return <Card key={index} imgsrc={val.imgsrc} title={val.title} />
              })
            }
          </div>
        </div>
      </div>
    </div>
  </div>
</>
);
};

export default Service;

```

### ➤ Sdata.jsx

```

import Bubble from "../images/Bubble.gif";
import Insertion from "../images/Insertion.gif";
import Merge from "../images/Merge.gif";
import Binary from "../images/Binary.gif";
import BFS from "../images/bfs.gif";
import DFS from "../images/dfs.gif";

const Sdata = [
  {
    imgsrc : Bubble,
    title : "Bubble Sort"
  },

```

```

    {
      imgsrc : Insertion,
      title : "Insertion Sort"
    },
    {
      imgsrc : Merge,
      title : "Merge Sort"
    },
    {
      imgsrc : Binary,
      title : "Binary Search"
    },
    {
      imgsrc : BFS,
      title : "BFS (Breadth First Search)"
    },
    {
      imgsrc : DFS,
      title : "DFS (Depth First Search)"
    }
  ]
}

export default Sdata;

```

### ➤ Contact.jsx

```

import React, { useState } from "react";
import { useHistory } from "react-router-dom";

const Contact = () => {

  let history = useHistory();

  // for name
  const [name, setName] = useState("");

```

```

const nameEvent = (event) => {
  setName(event.target.value)
};

// for mobile
const [mobile, setMobile] = useState("");
const mobEvent = (event) => {
  setMobile(event.target.value)
};

// for mail
const [mail, setMail] = useState("");
const mailEvent = (event) => {
  setMail(event.target.value);
};

const submitForm = (e) => {
  e.preventDefault();
  history.push(`/success`);
}

return (
  <>
    <div className="my-5">
      <h1 className="text-center">Contact Us</h1>

      <div className="container-fluid contact_div mb-5">
        <div className="row">
          <div className="col-md-7 mx-auto">
            <form action="" onSubmit={submitForm}>
              <div className="mb-3">
                <label for="exampleInputEmail1" className="form-label">
                  Full Name
                </label>

```

```
<input
  type="text"
  onChange={nameEvent}
  className="form-control"
  id="exampleInputEmail1"
  placeholder="Enter your full name"
  value={name}
  required
/>
</div>
<div className="mb-3">
  <label for="exampleInputEmail1" className="form-label">
    Phon No
  </label>
  <input
    type="number"
    onChange={mobEvent}
    className="form-control"
    id="exampleInputEmail1"
    placeholder="Mobile Number"
    value={mobile}
    required
  />
</div>
<div className="mb-3">
  <label for="exampleInputEmail1" className="form-label">
    Email
  </label>
  <input
    type="email"
    onChange={mailEvent}
    className="form-control"
    id="exampleInputEmail1"
    placeholder="Email Address"
```

```

        value={mail}
        required
      />
    </div>
    { /* <div className="mb-3">
      <label for="exampleInputEmail1" className="form-label">Email</label>
      <textarea type="email" rows="4" className="form-control"
id="exampleInputEmail1" placeholder="Email Address" required ></textarea>
    </div> */}
    <button type="submit" className="btn btn-primary">
      Submit
    </button>
  </form>
</div>
</div>
</div>
</div>
</>
);
};

export default Contact;

```

### ➤ Card.jsx

```

import React from "react";
import { NavLink } from "react-router-dom";
import web from "../images/gallery-1.jpg";

const Card = (props) => {
  return (
    <>
      <div className="col-md-4 col-10 mx-auto">
        <div className="card">

```

```

    <img src={props.imgsrc} className="card-img-top" title={props.title}
alt={props.title} />
    <div className="card-body">
      <h5 className="card-title">{props.title}</h5>
      <p className="card-text">
        Algorithm's Description in a Simple and Understandable Manner...
      </p>
      <NavLink to="#" className="btn btn-primary">
        Visualize Now
      </NavLink>
    </div>
  </div>
</div>
</>
);
};

export default Card;

```

### ➤ Success.jsx

```

import React from "react";

const Success = () => {
  return (
    <>
      <div className="my-5">
        <h1 className="text-center">Thank You For contacting Us :)</h1>
      </div>
    </>
  );
};

export default Success;

```

**OUTPUT:**

→ **Creating React app**

**npx create-react-app <app-name>**

```
PS E:\Saravana\ReactJSApp> npx create-react-app react-app  
  
Creating a new React app in E:\Saravana\ReactJSApp\react-app.  
  
Installing packages. This might take a couple of minutes.  
Installing react, react-dom, and react-scripts with cra-template...  
  
added 1891 packages, and audited 1891 packages in 3m
```

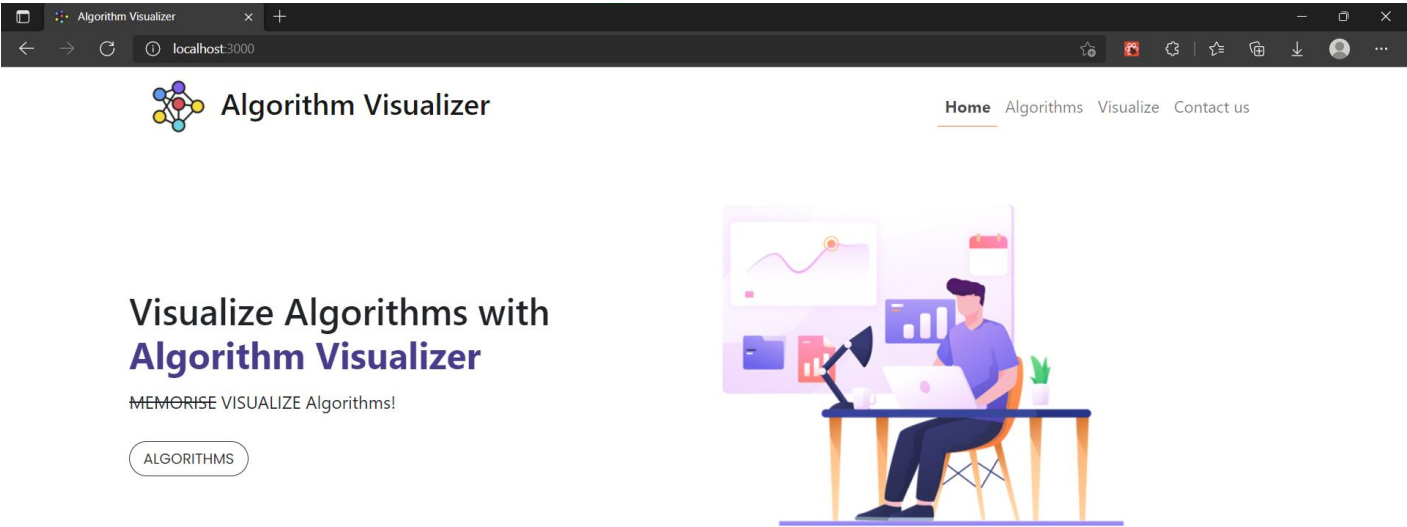
→ **npm start**

```
Compiled successfully!  
  
You can now view react-app in the browser.  
  
Local:      http://localhost:3000  
On Your Network:  http://192.168.56.1:3000  
  
Note that the development build is not optimized.  
To create a production build, use npm run build.  
  
□
```

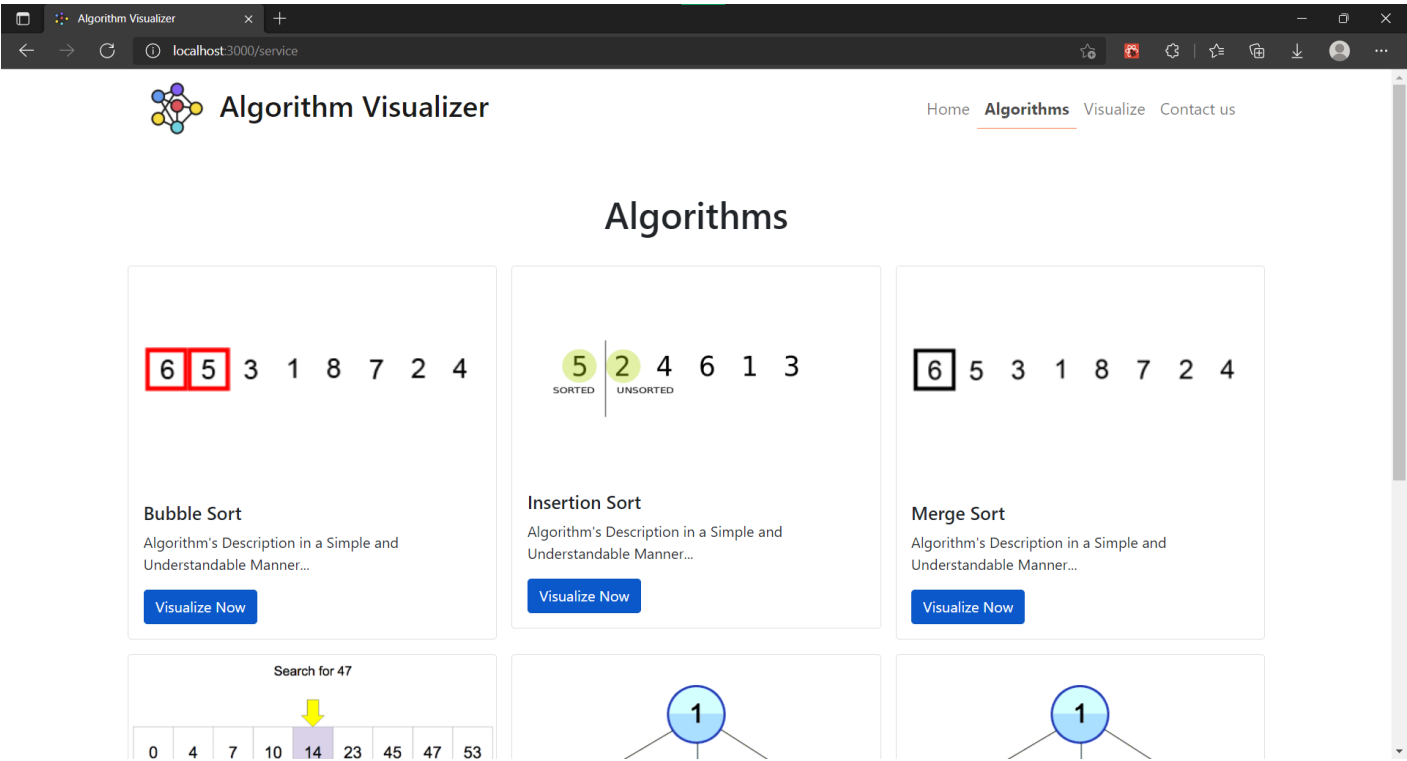


WEBSITE:

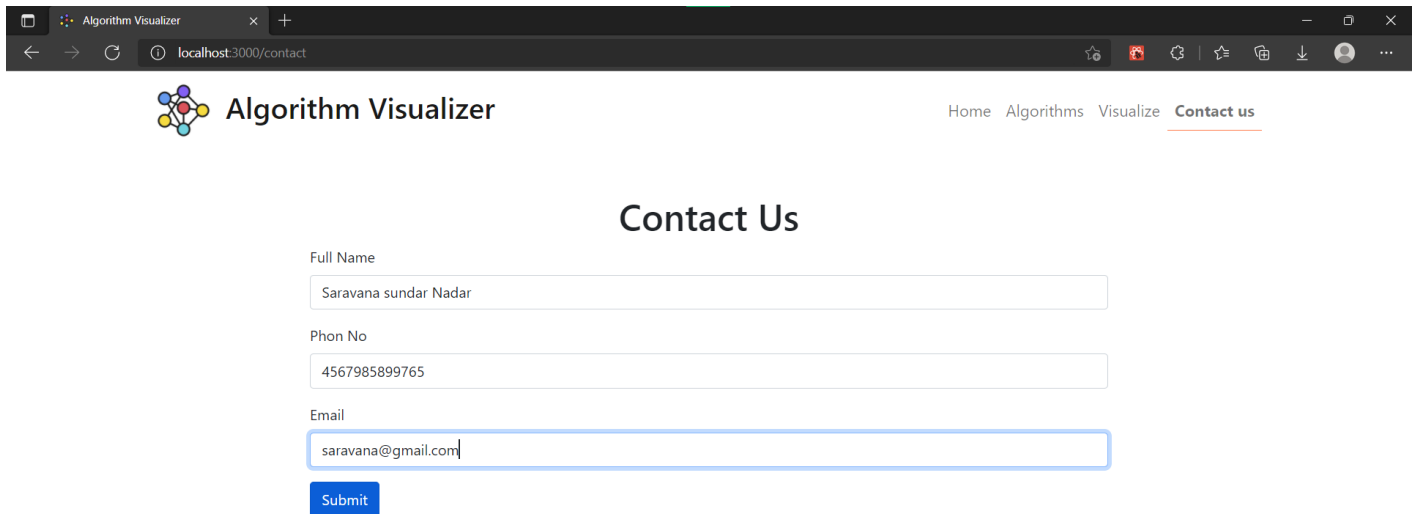
→ Home



→ Algorithms



A screenshot of a web browser displaying the 'Algorithm Visualizer' website. The browser's address bar shows 'localhost:3000/about'. The website has a dark header with the title 'Algorithm Visualizer' and a navigation menu with links for 'Home', 'Algorithms', 'Visualize' (which is underlined), and 'Contact us'. The main content area features a large heading 'Visualizer Comming Soon' (with a typo) and 'Algorithm Visualizer' in a bold, dark blue font. Below this is the text 'MEMORISE VISUALIZE Algorithms!' and a 'CONTACT US' button. On the right side, there is an illustration of a person in a red jacket pointing at a large screen that displays a bar chart and a line graph. The background of the website is white.

→ **Contact us**

The screenshot shows a web browser window with the title 'Algorithm Visualizer' and the address bar displaying 'localhost:3000/contact'. The website has a navigation bar with links: Home, Algorithms, Visualize, and Contact us (which is underlined). The main heading is 'Contact Us'. Below it, there are three input fields: 'Full Name' with the value 'Saravana sundar Nadar', 'Phon No' with the value '4567985899765', and 'Email' with the value 'saravana@gmail.com'. A blue 'Submit' button is located below the email field.

→ **Successful Message****CONCLUSION:**

In this experiment, we have learnt to create a react app with the help of the create-react-app tool in ReactJS, we have also implemented other concepts in this experiment such as JavaScript, JavaScriptXML(JSX), Bootstrap, React DOM and many more which makes up a complete frontend Development. The Website I made has a frontend for a Algorithm Visualization Website without the Visualizer it has a clean and fluid UI it is a responsive Website.