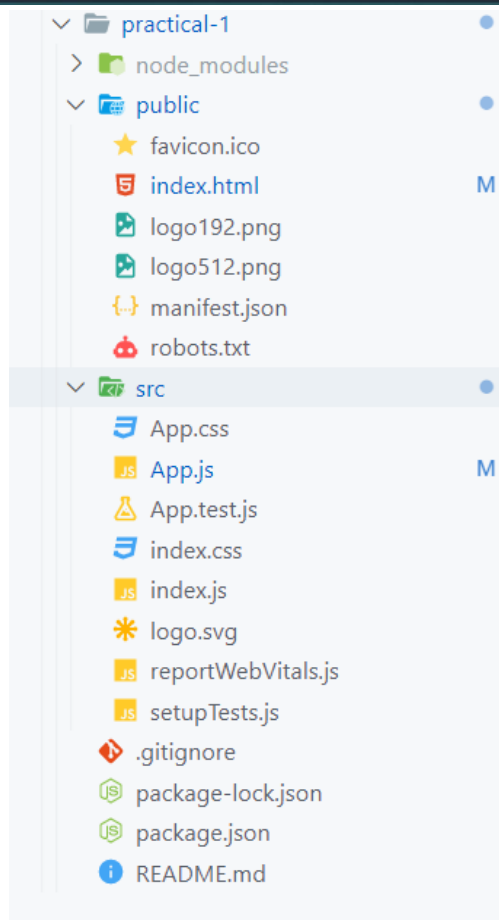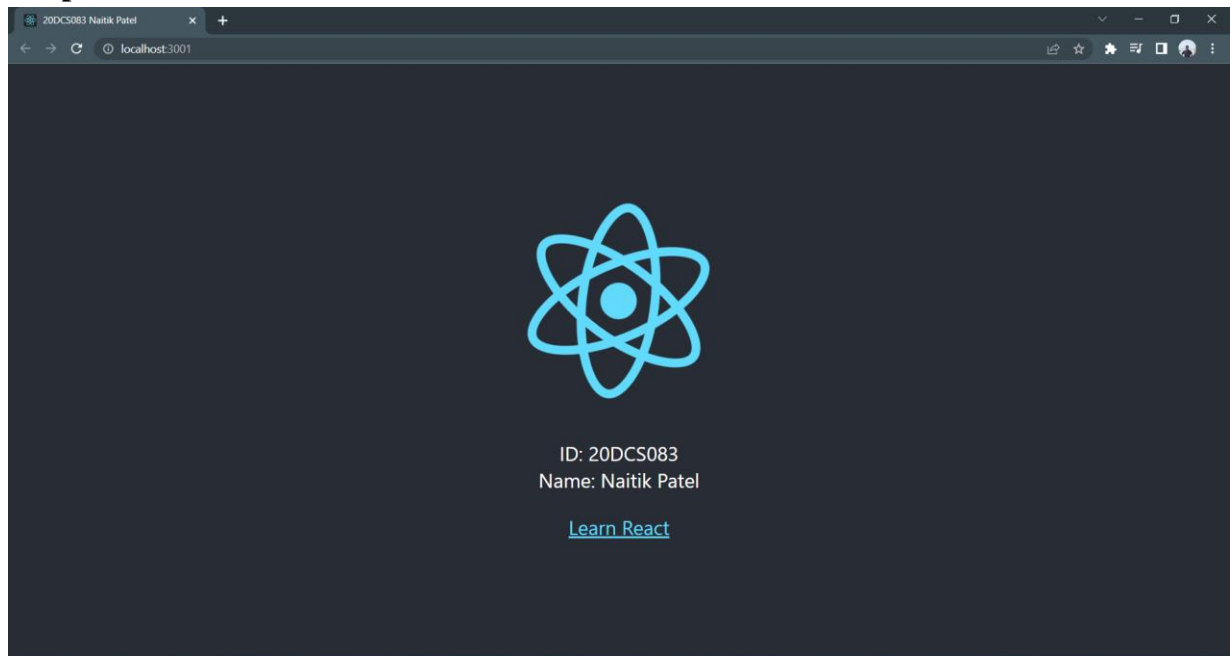# PRACTICAL 1

Aim	Install & Configure Visual Studio Code as an IDE, setup an environment for React by downloading Node.js and install React framework along with its packages. Understand the folder structure used by React and develop a "Hello World Application".

Source code of App.js.

```javascript
import logo from './logo.svg';
import './App.css';

function App() {
  return (
    <div className="App">
      <header className="App-header">
        <img src={logo} className="App-logo" alt="logo" />
        <p>
          ID: 20DCS083 <br/>
          Name: Naitik Patel
        </p>
        <a
          className="App-link"
          href="https://reactjs.org"
          target="_blank"
          rel="noopener noreferrer"
        >
          Learn React
        </a>
      </header>
    </div>
  );
}

export default App;
```

Output Screenshot:

PRACTICAL 2

Aim	Implement React Routing for navigating 5 different webpages. Design a responsive navbar in ReactJS by using media queries, Material-UI/React Bootstrap.
	Source code of App.js: ```jsx\nimport './App.css';\nimport DenseAppBar from './DenseAppBar';\nimport { Route } from 'react-router-dom';\nimport { Routes } from 'react-router';\nimport Home from './comp/Home';\nimport Contact from './comp/Contact';\nimport About from './comp/About';\nfunction App() {\n return (\n <>\n <div className='Container'>\n <DenseAppBar />\n <Routes>\n <Route path=\"/\" element={<Home/>}/>\n <Route path=\"/Home\" element={<Home/>}/>\n <Route path=\"/About\" element={<About/>}/>\n <Route path=\"/Contact\" element={<Contact/>}/>\n </Routes>\n </div>\n</>\n);\n}\n\nexport default App;\n```

Source code of Home.js and Home.css:

```
import React from "react";
import "../App.css";

function Home() {
  return (
    <div className="container">
      <h1 style={{ color: "white" }}>Home Page</h1>
    </div>
  );
}

export default Home;
```

Source code of About.js and About.css:

```
import React from 'react'

function About() {
  return (
    <div className="container">
      <h1 style={{ color: "white" }}>About Page</h1>
    </div>
  )
}

export default About
```

Source code of Contact.js and Contact.css:

```
import React from 'react'

function Contact() {
  return (
    <div className="container">
      <h1 style={{ color: "white" }}>Contact Page</h1>
    </div>
  )
}

export default Contact
```

Source code of Navbar.js and Navbar.css:

```javascript
import * as React from 'react';
import AppBar from '@mui/material/AppBar';
import Box from '@mui/material/Box';
import Toolbar from '@mui/material/Toolbar';
import IconButton from '@mui/material/IconButton';
import Typography from '@mui/material/Typography';
import Menu from '@mui/material/Menu';
import MenuIcon from '@mui/icons-material/Menu';
import Container from '@mui/material/Container';
import Avatar from '@mui/material/Avatar';
import Button from '@mui/material/Button';
import Tooltip from '@mui/material/Tooltip';
import MenuItem from '@mui/material/MenuItem';
import AdbIcon from '@mui/icons-material/Adb';
import { Link } from 'react-router-dom';
import './App.css';
const pages = ['Home', 'About', 'Contact'];
const settings = ['Profile', 'Account', 'Dashboard', 'Logout'];

const ResponsiveAppBar = () => {
  const [anchorElNav, setAnchorElNav] = React.useState(null);
  const [anchorElUser, setAnchorElUser] = React.useState(null);

  const handleOpenNavMenu = (event) => {
    setAnchorElNav(event.currentTarget);
  };
  const handleOpenUserMenu = (event) => {
    setAnchorElUser(event.currentTarget);
  };

  const handleCloseNavMenu = () => {
    setAnchorElNav(null);
  };

  const handleCloseUserMenu = () => {
    setAnchorElUser(null);
  };

  return (
    <AppBar className='navbar' color='transparent' position="static">
      <Container maxWidth="xl">
        <Toolbar disableGutters>
```

```jsx
        <AdbIcon sx={{ display: { xs: 'none', md: 'flex',color:'white' }, mr:
1 }} />
        <Typography
          variant="h6"
          noWrap
          component="a"
          href="/"
          sx={{
            mr: 2,
            display: { xs: 'none', md: 'flex' },
            fontFamily: 'monospace',
            fontWeight: 700,
            letterSpacing: '.3rem',
            color: 'white',
            textDecoration: 'none',
          }}
        >
          LOGO
        </Typography>

        <Box sx={{ flexGrow: 1, display: { xs: 'flex', md: 'none' } }}>
          <IconButton
            size="large"
            aria-label="account of current user"
            aria-controls="menu-appbar"
            aria-haspopup="true"
            onClick={handleOpenNavMenu}
            color="inherit"
          >
            <MenuIcon />
          </IconButton>
          <Menu
            id="menu-appbar"
            anchorEl={anchorElNav}
            anchorOrigin={{
              vertical: 'bottom',
              horizontal: 'left',
            }}
            keepMounted
            transformOrigin={{
              vertical: 'top',
              horizontal: 'left',
            }}
            open={Boolean(anchorElNav)}
```

```
              onClose={handleCloseNavMenu}
              sx={{
                display: { xs: 'block', md: 'none' },
              }}
            >
              {pages.map((page) => (
                <MenuItem key={page} onClick={handleCloseNavMenu}>
                  <Typography textAlign="center" >
                    <Link style={{textDecoration:"none",color:"black"}}
to={`/${page}`}>
                      {page}
                    </Link>
                  </Typography>
                </MenuItem>
              ))}
            </Menu>
          </Box>
          <AdbIcon sx={{ display: { xs: 'flex', md: 'none' }, mr: 1 }} />
          <Typography
            variant="h5"
            noWrap
            component="a"
            href=""
            sx={{
              mr: 2,
              display: { xs: 'flex', md: 'none' },
              flexGrow: 1,
              fontFamily: 'monospace',
              fontWeight: 700,
              letterSpacing: '.3rem',
              color: 'inherit',
              textDecoration: 'none',
            }}
          >
            LOGO
          </Typography>
          <Box sx={{ flexGrow: 1, display: { xs: 'none', md: 'flex' } }}>
            {pages.map((page) => (
              <Button
                key={page}
                onClick={handleCloseNavMenu}
                sx={{ my: 2, color: 'white', display: 'block' }}
              >
```

```jsx
                      <Link style={{textDecoration:"none",color:"white"}}
to={`/${page}`}>
                            {page}
                            </Link>
                      </Button>
                  ))}
                </Box>

              <Box color={"black"}  sx={{ flexGrow: 0 }}>
                <Tooltip title="Open settings">
                  <IconButton onClick={handleOpenUserMenu} sx={{ p: 0 }}>
                    <Avatar alt="Remy Sharp" src="/static/images/avatar/2.jpg" />
                  </IconButton>
                </Tooltip>
                <Menu
                  sx={{ mt: '45px' }}
                  id="menu-appbar"
                  anchorEl={anchorElUser}
                  anchorOrigin={{
                    vertical: 'top',
                    horizontal: 'right',
                  }}
                  keepMounted
                  transformOrigin={{
                    vertical: 'top',
                    horizontal: 'right',
                  }}
                  open={Boolean(anchorElUser)}
                  onClose={handleCloseUserMenu}
                >
                  {settings.map((setting) => (
                    <MenuItem key={setting} onClick={handleCloseUserMenu}>
                      <Typography textAlign="center">{setting}</Typography>
                    </MenuItem>
                  ))}
                </Menu>
              </Box>
            </Toolbar>
          </Container>
        </AppBar>
  );
};
export default ResponsiveAppBar;
```
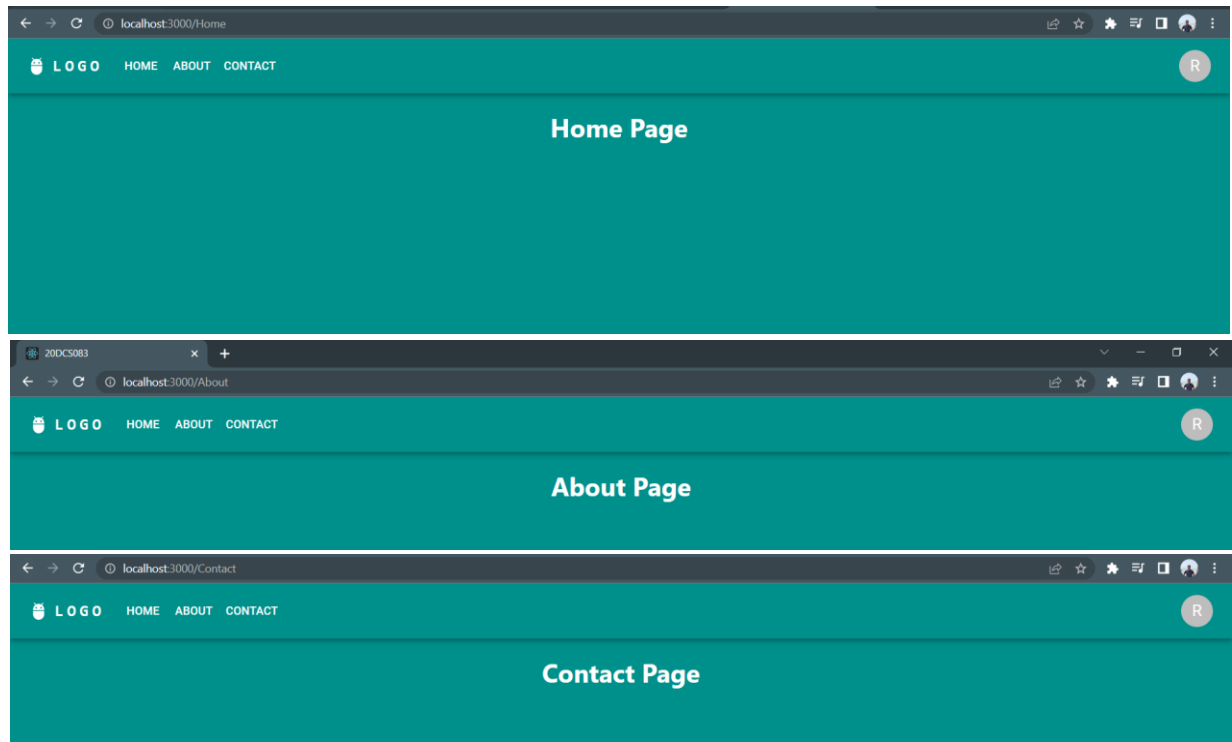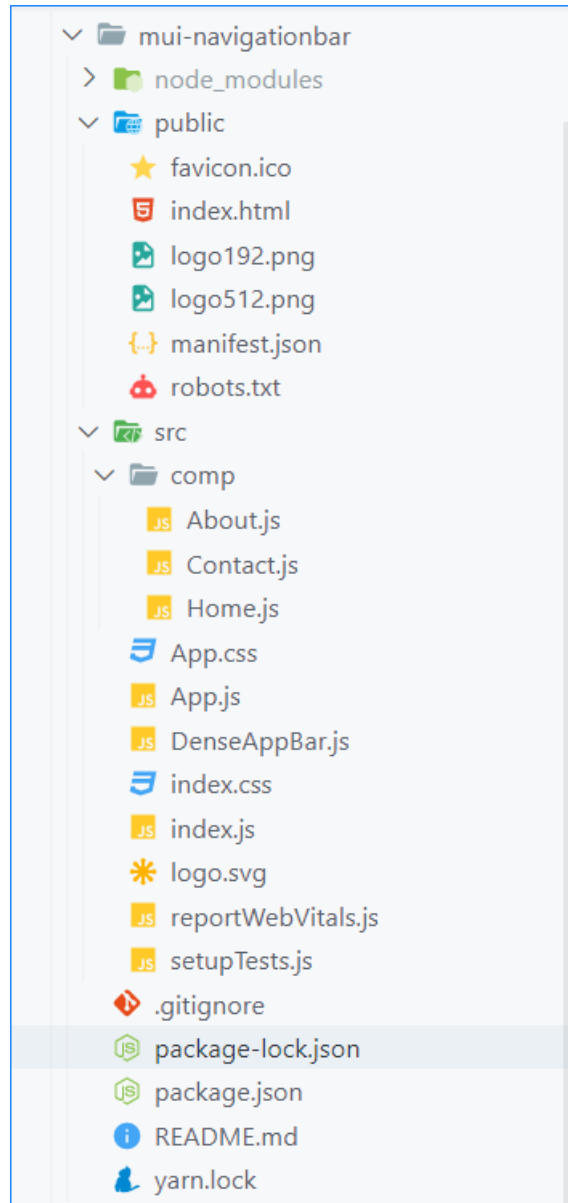
Source code App.css:

```css
@import
url('https://fonts.googleapis.com/css2?family=Merriweather+Sans:wght@500;800&display=swap');
body,html{
  height: 100%;
}
.App {
  text-align: center;
}
.Container{

  text-align: center;
}
body{
  background:rgb(0, 144, 139);
  background-attachment: fixed;
}
```

Output Screenshot:

Folder Structure:

```
∨ 📁 mui-navigationbar
  > 📦 node_modules
  ∨ 📁 public
      ⭐ favicon.ico
      🟥 index.html
      🖼 logo192.png
      🖼 logo512.png
      {..} manifest.json
      🤖 robots.txt
  ∨ 📁 src
    ∨ 📁 comp
        JS About.js
        JS Contact.js
        JS Home.js
      🎨 App.css
      JS App.js
      JS DenseAppBar.js
      🎨 index.css
      JS index.js
      ✳ logo.svg
      JS reportWebVitals.js
      JS setupTests.js
    ❖ .gitignore
    📄 package-lock.json
    📄 package.json
    ℹ README.md
    🐱 yarn.lock
```

PRACTICAL 3

Aim	Create React Sidebar Navigation Menu for a webpage. Implement the concept of React Hooks for backward compatibility and faster user experience.
	Source code of App.js:

```
import "./App.css";
import About from "./component/About";
import Home from "./component/Home";
import Contact from "./component/Contact";
import { BrowserRouter, Route } from 'react-router-dom';
import { Routes } from 'react-router';
import Navbar from "./component/Navbar";
import { useState } from "react";
function App() {
  const [Button, setButton] = useState(true);
  const handleclick=()=>{
    setButton(!Button);
  }
  return (<>
    <button className="button-navbar" onClick={handleclick}>{!Button ? `Show` :
`Hide` }</button>
    <div className="Flex-box">

     { Button && <Navbar/>}
      <div className="mainpg">
        <BrowserRouter>
        <Routes>
            <Route path="/home" element={<Home />}/>
            <Route path="/About" element={<About/>}/>
            <Route path="/Contact" element={<Contact/>}/>
      </Routes>
      </BrowserRouter>
      </div>
    </div>
    </>
  );
}

export default App;
```

Source code of Home.js:

```jsx
import React from "react";
import { useEffect } from "react";
const Home = () => {
  useEffect(() => {
    document.title = "Home Page";
  }, []);
  return<div
style={{textAlign:"center",display:"flex",flexDirection:"column",justifyContent
:"center",height:"100vh"}}>
  <h1 style={{fontSize:"60px"}}>
   This is Home Page
  </h1>
  <h1 style={{margin:"20px"}}>Made by 20DCS083 Naitik Patel</h1>
  </div>;
};

export default Home;
```

Source code of About.js and About.css:

```jsx
import React from 'react'
import { useEffect } from 'react';
const About = () => {
  useEffect(() => {
    document.title = "About Page";
  }, []);
  return (
    <div
style={{textAlign:"center",display:"flex",flexDirection:"column",justifyContent
:"center",height:"100vh"}}>
    <h1 style={{fontSize:"60px"}}>
   This is About Page
  </h1>
  <h1 style={{margin:"20px"}}>Made by 20DCS083 Naitik Patel</h1>
  </div>
  )
}

export default About
```

Source code of Contact.js and Contact.css:

```jsx
import React from 'react'

const Contact = () => {
  return (
    <div
style={{textAlign:"center",display:"flex",flexDirection:"column",justifyContent
:"center",height:"100vh"}}>
    <h1 style={{fontSize:"60px"}}>
  This is Contact Page
  </h1>
  <h1 style={{margin:"20px"}}>Made by 20DCS083 Naitik Patel</h1>
  </div>
  )
}

export default Contact
```

Source code of Navbar.js and Navbar.css:

```jsx
import React from "react";

const Navbar = () => {
  return (
    <div className="Sidebar">
      <div className="wrapper">
        <div className="sidebar">
          <h1
            style={{
              color: "#072563",
              textAlign: "center",
              fontFamily: " 'Kanit', sans-serif",
            }}
          >
            Sidebar
          </h1>
          <a style={{ decoretion: "none" }} href="/home">
          <li
            style={{
              marginTop: "20px",
              marginLeft: "10px",
              display: "flex",
              cursor: "pointer",
            }}
          >
```

```jsx
        <i
          style={{ marginRight: "10px" }}
          className="fa-solid fa-house-chimney-user mx-2 my-3"
        />
        <h4 style={{ textAlign: "center", width: "100px" }}>Home</h4>

    </li>
    </a>
    <a href="/about">
    <li
      style={{
        marginTop: "20px",
        marginLeft: "10px",
        display: "flex",
        cursor: "pointer",
      }}
    >

        <i
          style={{ marginRight: "10px" }}
          className="fa-solid fa-user mx-2 my-3"
        />
        <h4 style={{ textAlign: "center", width: "100px" }}>About</h4>

    </li>
    </a>
    <a href="/contact">

    <li
      style={{
        marginTop: "20px",
        marginLeft: "10px",
        display: "flex",
        cursor: "pointer",
      }}
    >
      <i
        style={{ marginRight: "10px" }}
        className="fa-solid fa-bullseye mx-2 my-3"
      />
      <h4 style={{ textAlign: "center", width: "100px" }}>Contact</h4>
    </li>
    </a>
```

```jsx
        <li
          style={{
            marginTop: "20px",
            marginLeft: "10px",
            display: "flex",
            cursor: "pointer",
          }}
        >
          <i
            style={{ marginRight: "10px" }}
            className="fa-solid fa-calendar mx-2 my-3"
          />
          <h4 style={{ textAlign: "center", width: "100px" }}>Project</h4>
        </li>
        <li
          style={{
            marginTop: "20px",
            marginLeft: "10px",
            display: "flex",
            cursor: "pointer",
          }}
        >
          <i
            style={{ marginRight: "10px" }}
            className="fa-solid fa-flag mx-2 my-3"
          />
          <h4 style={{ textAlign: "center", width: "100px" }}>Report</h4>
        </li>
      </div>
    </div>
  </div>
  );
};

export default Navbar;
```

Source code of Navbar.css:

```css
@import
url('https://fonts.googleapis.com/css2?family=Kanit:wght@500&display=swap');

.App {
  text-align: center;
}
.button-navbar{
```

```css
  width: 110px;
  height: 40px;
  margin: 10px;
  background-color: white;
  color: black;
  font-size: 20px;
  border-radius: 7px;
}
*{
  margin: 0;
  padding: 0;
  box-sizing: border-box;
  list-style: none;
  text-decoration: none;
  font-family: 'Josefin Sans', sans-serif;
}
.logo1{
  color: #e0e4e8;
  margin-top: 20px;
  margin-left: 35px;
}
.logo1 h6{
  font-size: 15px;
  margin-left: 20px;
}
.usertop .fas{
  color: #fff;
  float: right;
  margin: 20px
}
.fas{
  color: #190871;
}
.logo{
text-align:center;
}
body{
   background-color: #072563;
}
.button{
  float:right ;
  height:40px;
  width:200px;
  background-color:#190871;
```

```css
    color:#fff;
    border-top-left-radius: 20px;
    border-bottom-right-radius: 20px;
}
.heading{
    color: rgba(25, 31, 94, 0.7);padding-top:20px;padding-bottom:10px;
    font-family: 'Times New Roman', Times, serif;
    font-size: 40px;

}
.wrapper .sidebar{
    position:relative;
    /* float: left; */
    width: 225px;
    height: 100vh;
    background: #ffffff;
    color: rgb(12, 12, 99);
    padding: 15px 15px;

}
.text{
color:#072563
}
.fa-solid{
color: #072563;
}
.button .fa-solid{
color:#e0e4e8
}
.logo .fa-brands{
    color: #072563;
}
.wrapper{
    display: block;
    float: left;
    margin-right: 10px;

}
.Flex-box{
    display:flex;
    width:100%;
}
.mainpg{
    width: 100%;
```

```css
    padding-left: 35px;
    padding-right: 35px;
    padding-bottom: 35px;
    border-radius: 20px;
    margin-top:5px;
    margin-right:20px;
    background-color: #ffffff;
    height: auto;
}
```

Output Screenshot: