LAB PRACTICAL-10

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Batch: 04

Scenario: Multi-Page Student Dashboard with Routing

Scenario Description

You are tasked with building a Student Dashboard SPA using React Router. The app should allownavigation between different pages without reloading the browser.

Aim

To develop a **Student Dashboard Single Page Application (SPA)** using **React Router** that enables navigation between different pages without reloading the browser.

Software Requirements

- Node.js
- npm
- Visual Studio Code
- React
- React Router DOM

Scenario Description

The objective of this practical is to build a student dashboard application using React Router. The application allows users to move between multiple pages such as Dashboard, Courses, and Profile while maintaining a smooth user experience without page refresh.

Setup

A React application is created using create-react-app. React Router is installed to manage routing within the application.

Component Description

Dashboard

Displays an overview of student performance and general information.

Courses

Shows a list of courses in which the student is enrolled.

Profile

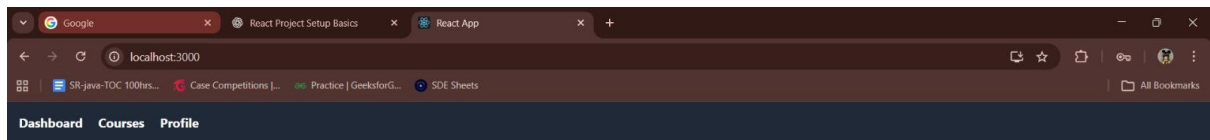Displays personal details of the student.

Navigation Bar

Provides navigation links to move between Dashboard, Courses, and Profile pages.

Routing Implementation

- The entire application is wrapped inside a Browser Router.
- Routes are defined for Dashboard, Courses, and Profile pages.
- Navigation links are provided using routing links.
- The active navigation link is highlighted.
- Any unknown route is redirected to the Dashboard page.
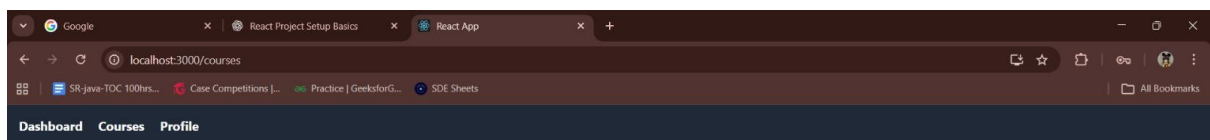
Expected Output

- Smooth navigation between pages without browser reload.
- Active navigation link is highlighted.
- Functional multi-page student dashboard application.

Dashboard   **Courses**   **Profile**

Dashboard

Overview of student performance.

- Attendance: 92%
- Assignments Completed: 18 / 20
- Current GPA: 8.5

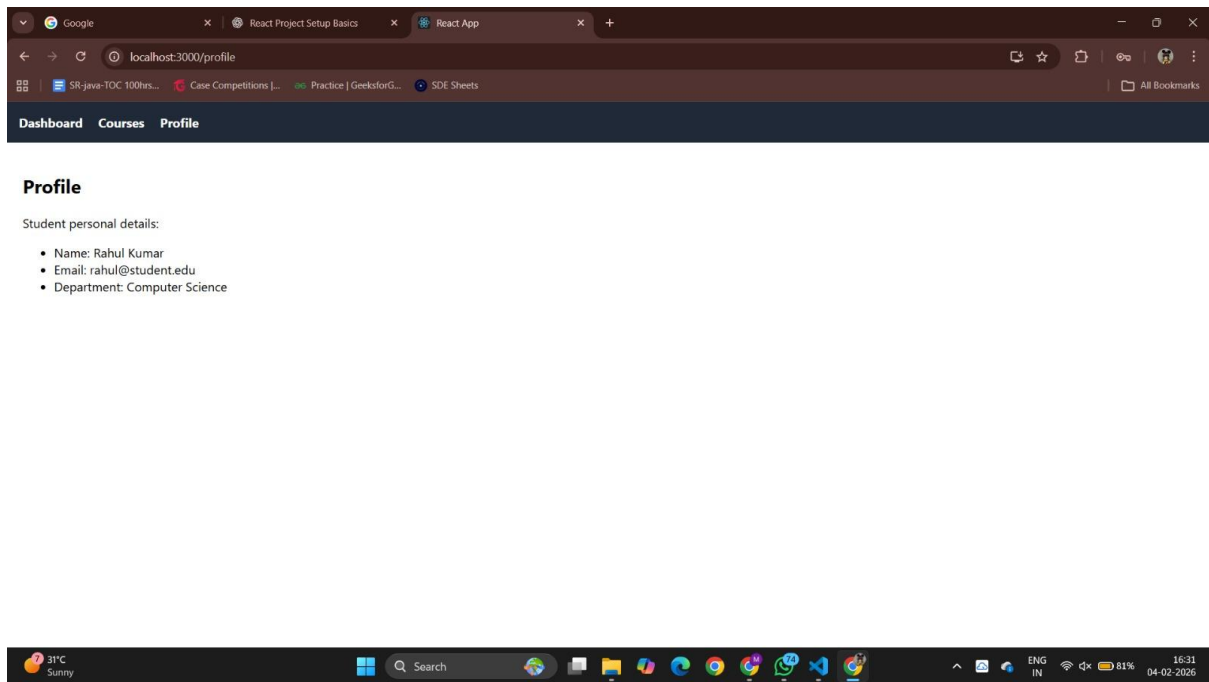**Dashboard**   **Courses**   **Profile**

Courses

List of enrolled courses:

- Data Structures
- Web Technologies
- Database Management Systems
- Software Engineering

Result

Thus, a **multi-page student dashboard SPA using React Router** was successfully developed and executed, meeting all the requirements of the given problem statement.