COMSATS University Islamabad (CUI), Lahore Campus

Department of Electrical & Computer Engineering

CSC336 – Web Technologies

Lab Manual v 1.0.1

Lab Resource Person

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Theory Resource Person

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Name:		Registration No:	
Program:		**Batch:**	
Semester:			

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Laboratory 10

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To introduce routing in frontend and reproduce Single Page Application (SPA) using React.js

INTRODUCTION TO SINGLE PAGE APPLICATION (SPA) IN REACT.JS

1 Objective

The purpose of the lab is to introduce students to the *Single Page Application (SPA)* in React.js. Students will learn how to create single page applications, navigation between pages, and browser routing using React Router.

2 Single Page Applications

As stated on MDN web documentation, "An SPA (Single-page application) is a web app implementation that loads only a single web document, and then updates the body content of that single document via JavaScript APIs such as Fetch when different content is to be shown".

3 React Router

The React Router is a library used with React.js to perform client-side routing. Client-side routing allows your app to update the URL from a link click without making another request for another document from the server. Instead, your app can immediately render some new UI and make data requests with fetch to update the page with new information.

4 Activity

Use React to develop an application shown in Figure 4.1. You are required to develop a single page application with five pages as described below:

1. Home
2. Delivery Options
3. Order Summary
4. Payment Detail
5. Payment Method

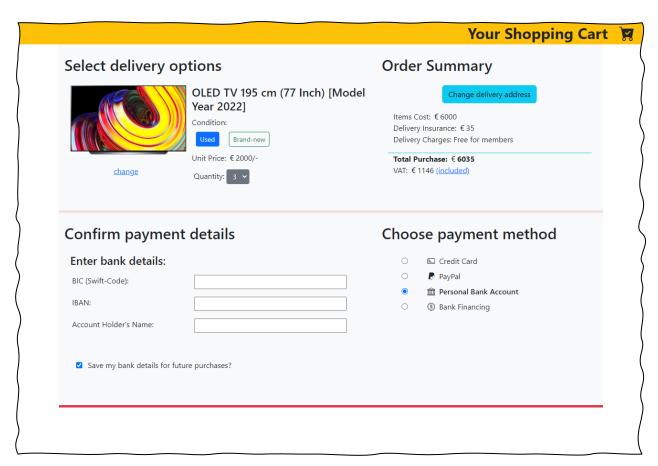Also enable client-side routing in your application to navigate between these the web pages.

Figure 4.1: UI for "Home" page of the Payment Application

5 External Links

Single Page Application	https://developer.mozilla.org/en-US/docs/Glossary/SPA
Single Page Application	https://www.spiceworks.com/tech/devops/articles/what-is-single-page-application/
React Router	https://reactrouter.com/en/main/start/overview

6 Rubric for Lab Assessment

The student performance for the assigned task during the lab session was:			
Excellent	The student completed assigned tasks without any help from the instructor and showed the results appropriately.	4	
Good	The student completed assigned tasks with minimal help from the instructor and showed the results appropriately.	3	
Average	The student could not complete all assigned tasks and showed partial results.	2	
Worst	The student did not complete assigned tasks.	1	

Instructor Signature: **Date:**