

Topic : Component Communication.

Assignment: Shopping Cart App

Scenario:

You are tasked with building a simple Shopping Cart application where users can add products to their cart, view the cart, and see the total price.

This assignment will help you practice component communication in React with TypeScript by passing data and functions between parent and child components.

Requirements:

➤ Project Setup:

- Create a new React project with a TypeScript template and name it ShoppingCartApp.

➤ Component Structure:

❖ Create a ProductList Component:

- This component should display a list of products available for purchase.
- Each product should have a "Add to Cart" button.
- When the button is clicked, the product should be added to the shopping cart.

❖ Create a Cart Component:

- This component should display the list of products added to the cart.
- It should also display the total price of all products in the cart.

❖ Create an App Component:

- This component should manage the state for the list of products in the cart.
- It should include the ProductList and Cart components.

- Handle adding products to the cart and calculating the total price within the App component.

Tasks:

➤ ProductList Component:

- Implement the ProductList component to display a list of products.
- Each product should have a name, price, and an "Add to Cart" button.
- When the "Add to Cart" button is clicked, the product should be added to the cart by passing the product data to the parent App component.

➤ Cart Component:

- Implement the Cart component to display the products currently in the cart.
- The Cart component should also display the total price of the items in the cart.
- This component should receive the list of products in the cart and the total price as props from the parent App component.

➤ Component Communication:

- Use props to pass the list of products and the total price from the App component to the Cart component.
- Use a callback function passed as a prop to handle adding products to the cart from the ProductList component.

➤ Expected Outcome:

❖ A simple Shopping Cart application where users can:

- View a list of products.
 - Add products to their cart.
 - View the products in their cart and the total price.
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