Topic : URL search params

Assignment: Search Product Application

Scenario:

You are tasked with building a simple Product Search application where users can search for products by name, and the URL should reflect the current search term using query parameters (search params).

This assignment will help you practice working with URL search params in React with TypeScript.

Requirements:

➢ Project Setup:
- Create a new React project with TypeScript and name it ProductSearchApp.

➢ Component Structure:

o Create a ProductList Component:
- This component should display a list of products that match the search term from the URL.
- Products will have a name, price, and category.

o Create a SearchBar Component:
- This component should allow the user to enter a search term in an input field.
- When the user types in the search bar, the URL should update to reflect the search term as a query parameter (e.g., ?search=phone).

o Create an App Component:
- This component should manage the search term by reading the query parameter from the URL and passing the search term to the ProductList component.

Tasks:

1. Search Params Handling:

- Implement logic in the App component to read the search query parameter from the URL using useSearchParams or similar functionality.
- Pass the search term as a prop to the ProductList component.

2. Product Filtering:
- Create a list of products with different names, prices, and categories.
- In the ProductList component, filter the products based on the search term. If no search term is provided, display all products.

3. URL Update:
- In the SearchBar component, when the user types a search term, update the URL to reflect the search term without reloading the page.

4. Expected Outcome:
- A simple application where users can search for products by typing in a search bar, and the matching products will be displayed.
- The URL will dynamically update to reflect the current search term.

Example Behavior:

- The user opens the app and sees a list of all products.
- The user types "phone" in the search bar.
- The URL changes to ?search=phone.
- The list of products updates to show only products with "phone" in their name.