

# CMPS 356 – Fall 2022

## Web Applications Design and Development

### Lab 09

#### State with Next

#### Objective

1. Application state, reduction, and contexts in Next
2. More MUI components

#### Prerequisites

1. React: <https://reactjs.org/docs/getting-started.html>
2. Next: <https://nextjs.org/docs>
3. Faker: <https://fakerjs.dev>
4. MUI: <https://mui.com/material-ui>

#### 1. State Management with Next

1. Create a new directory 01-cart-context and a Next application under it.
2. Install and use MUI for your user interface components: `"npm install @mui/material @mui/icons-material @emotion/react @emotion/styled @emotion/server"`.
3. Install and use Faker to create a list of products: `"npm install @faker-js/faker"`. Each product has at least a name, an image, a description, and a price.
4. Display the list of products using cards in a responsive grid. Create a Products component for the list of products and a Product component for each product.
5. Update the product card with actions to add and remove that product from the cart. The card should display the total quantity for that product currently in the cart.
6. Lift the state up to the application level to store the list of items currently in the cart. Generate and store your products at that level as well.
7. Create three additional pages with additional product categories and use a navigation bar to link to the different pages. Create a Header component to host your links.
8. Display the total number of items in the cart and their total cost in the navigation bar. Create a CartButton component.
9. Allow the user the click on the cart icon to display a dialog with detailed information about the cart items. Create a CartDialog component and allow the user to remove an item using the cart dialog.
10. Use a reducer hook to manage updates to the application state.
11. Use a context hook to store the list of available products and the ones currently in the cart.