

# Assignment: Shopping Cart Application using NgRx (Angular)

## Objective

Create a Shopping Cart web application using Angular and NgRx to demonstrate state management, scalable architecture, and best practices.

## Tech Stack

- 1 Angular (v15 or above)
- 2 NgRx (Store, Actions, Reducers, Effects)
- 3 RxJS
- 4 Angular Router
- 5 SCSS / CSS
- 6 Mock API (JSON Server or static JSON)

## Functional Requirements

### 1. Product Listing Page

- 1 Fetch products from a mock API using NgRx Effects
- 2 Display product name, price, image, and Add to Cart button

### 2. Shopping Cart Module

- 1 Add product to cart
- 2 Increase / Decrease quantity
- 3 Remove product from cart
- 4 Clear cart
- 5 Show total price and item count

### 3. State Management

App State Structure:

- Products State (Load, Success, Failure)
- Cart State (Add, Remove, Update Quantity, Clear)

## NgRx Implementation Requirements

- 1 Actions using createAction
- 2 Reducers using createReducer
- 3 Selectors using createSelector
- 4 Effects for API calls
- 5 Strong typing (avoid any)

## Bonus (Optional)

- 1 Persist cart in localStorage
- 2 Use NgRx Entity
- 3 Lazy-loaded Cart module
- 4 Loader and error handling
- 5 Cart count in header

## Evaluation Criteria

- 1 NgRx architecture and flow
- 2 Code quality and folder structure
- 3 RxJS usage

- 4 Angular best practices
  - 5 Error handling and optimization
- Time Limit:** 6–8 Hours

## **Submission**

Submit a GitHub repository link with a README file explaining setup steps, NgRx flow, and application features.