# E-commerce Application

## Overview

This is a full-featured e-commerce web application built with React, Redux Toolkit, React Bootstrap, Formik, and Yup for form validation and state management.

## Features

* User Authentication (Login/Register)
* Product Listing with Search and Category Filtering
* Shopping Cart Functionality
* Responsive Design
* State Persistence

## Authentication

* User registration and login
* Form validation using Yup
* Redux-based authentication state management

## Product Management

* Dynamic product listing
* Search functionality
* Category filtering
* Add to cart feature

## Cart Functionality

* Add/Remove products
* Quantity adjustment
* Total price calculation
* Clear cart option

## Installation Steps

1. Clone the repository

**git clone <your-repository-url>**

**cd your-project-directory**

2. Install dependencies

**npm install**

3. Start the development server

**npm run dev**

## Technology Stack

* React
* Redux Toolkit
* React Bootstrap
* Formik
* Yup
* Redux Persist

## Configuration

* Authentication state managed in `**authSlice.js**`
* Product state in `**productSlice.js**`
* Cart state in `**cartSlice.js**`

## Key Design Decisions

* Used Redux Toolkit for simplified state management
* Implemented form validation with Yup
* Used Redux Persist for maintaining user session and cart state
* Responsive design with React Bootstrap

## Available Scripts

* `**npm run dev**`: Start development server
* `**npm run build**`: Create production build
* `**npm run preview**`: Preview production build