

This project is a multi-functional web application built with Next.js and React, featuring three core tools: a List Manager, Weather App, and Calculator. The application meets all Phase 2 requirements for routing, component structure, styling, and state management.

Project Structure

Routing and Navigation

Home Page (/): Landing page with team information

List Manager (/list-manager): Task management system

Weather App (/weather): Weather forecast tool

Calculator (/calculator): Basic arithmetic calculator

Routing is implemented using Next.js's file-based routing system with a shared Layout component for consistent navigation.

Components

Shared Components

Layout.js: Wrapper component for all pages featuring:

Consistent header with navigation

Main content area

Footer with project information

Feature Components

List Manager

ListManager.js: Core component with task CRUD operations

Features:

Add tasks with due dates

Toggle task completion

Delete tasks

Local state management

Weather App

Weather.js: Weather data display component

Features:

City search functionality

Current weather display

Loading and error states

API integration setup

Calculator

Calculator.js: Arithmetic operations component

Features:

Basic math operations

Calculation history

Responsive button grid

Active button states

Home Page

HomePage.js: Team information display

Features:

Team member profiles

Contribution lists

Avatar images with fallbacks

Styling

CSS Modules used throughout for scoped styling

Responsive design implemented for all components

Consistent color schemes and interactive states

Themed calculator with dark mode styling

State Management

React useState hook used for all component states:

List Manager: Task list and form inputs

Weather App: Search input, loading, error, and weather data states

Calculator: Display value and calculation history