Project Report: News Reader App with Weather Tracking

1. Project Overview

The **News Reader App** is a Flutter-based mobile application that allows users to browse the latest news articles and track weather conditions. It integrates **NewsData.io API** for fetching real-time news and **WeatherAPI.com** for weather updates. The app also supports **Firebase Firestore** to save favorite news articles and provides **multi-language support** for a better user experience.

2. Features Implemented

2.1 News Features

- **♦ Fetch Latest News** Retrieves news articles from NewsData.io API.
- ✓ Category Selection Users can filter news by category (business, sports, health, etc.).
- **⊘** Country Selection Users can choose news from different countries.
- **≪ Keyword Search** Allows users to search news based on keywords.
- **Save News** − Users can bookmark news articles to Firebase Firestore.
- **≪ Read More Option** Each news article links to the original source for full reading.

2.2 Weather Features

- **≪ Real-time Weather Updates** Retrieves weather conditions for a selected city.
- **♥ City Selection** Users can choose a city to check the current weather.
- **∀ Weather Details** Displays temperature, humidity, wind speed, and condition icons.

2.3 User Interface & Functionality

- ✓ Multi-language Support Users can switch between English and Spanish.
- **Navigation System** − Allows easy switching between news, saved articles, and weather tracking.
- **⊘** Background Image Customizable background image on the home screen.

3. Technologies & Tools Used

3.1 Programming Languages & Frameworks

- **Flutter** Cross-platform mobile development framework.
- **Dart** Programming language used in Flutter.

3.2 APIs & Services

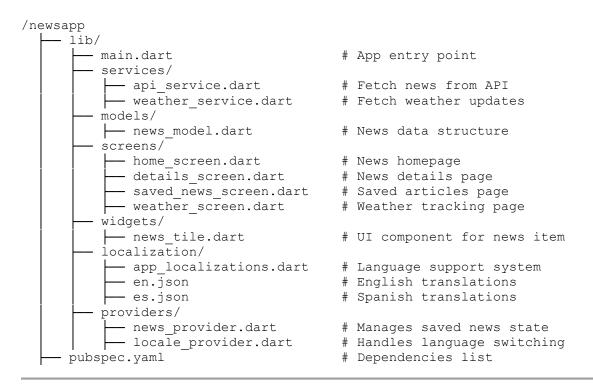
- **NewsData.io API** Fetching real-time news articles.
- **WeatherAPI.com** Retrieving weather updates.
- **Firebase Firestore** Storing saved news articles.

3.3 Libraries & Packages

- **http** API calls to fetch news and weather data.
- **firebase_core & cloud_firestore** Firebase integration for storing saved news.
- **provider** State management.
- **flutter_localizations & intl** Localization support for multi-language.

4. System Architecture & Implementation

4.1 Folder Structure



5. Future Enhancements

- **♦ User Authentication** Allow users to log in and sync saved news across devices.
- **♦ Dark Mode Support** Implement a theme switcher for dark/light modes.
- **♦ Push Notifications** Notify users of breaking news updates.
- **♦ Offline Mode** Cache news articles for offline reading.

6. Conclusion

The News Reader App successfully integrates news tracking, weather updates, and Firebase storage into a single application. With its custom filtering system, real-time weather tracking, and multi-language support, it provides a seamless user experience. Future updates will enhance the app's usability and functionality.

SCREENSHOTS:

