SkyCast - Weather App Proposal

Course Project: [SODV3203:Mobile Application Development](https://d2l.bowvalleycollege.ca/d2l/home/423638)

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# 1. App Overview

SkyCast is a Android weather application that delivers real-time weather updates to users. The app allows users to view current weather information for any city, change their location using manual entry or map selection, and persist their preferences across sessions. SkyCast is built using OpenWeatherMap APIs and integrates with Firebase Authentication for Google login.

# 2. Core Features

## Login Screen (Authentication)

- Google Sign-In using Firebase Authentication.  
- Ensures secure user access.  
- Allows session persistence.

## Main Screen (Weather Dashboard)

- Displays current weather conditions such as:  
 - Temperature  
 - Weather description (e.g., cloudy, sunny)  
 - Humidity  
 - Wind speed  
 - Weather icon or animation  
- Weather data pulled live from OpenWeatherMap API.

## Settings Screen

- Allows the user to:  
 - Manually enter a city name.  
 - Pick a location using Google Maps or Places API.  
 - Log out from their Google account.  
- Stores selected location in local storage.

# 3. User Stories

* As a user, I want to log in using my Google account to personalize my app experience.
* As a user, I want to view the current weather in my selected city.
* As a user, I want to change my city by typing it or selecting it from a map.
* As a user, I want the app to remember my city even after I close and reopen it.
* As a user, I want to log out whenever I wish to secure my account.

# 4. APIs and Local Persistence

- Networked APIs:  
 - OpenWeatherMap API – For weather data.  
 - Google Maps/Places API – For location selection.  
 - Firebase Authentication – For Google login.  
  
- Local Persistence:  
 - SharedPreferences or Room DB to store the last selected city name and user data.

# 5. Wireframes

**Login Screen:**  
- Google Sign-In button in center  
- SkyCast logo or app title at the top  
  
**Main Screen:**  
- Top: City name  
- Center: Weather icon and temperature  
- Bottom: Wind speed, humidity, weather description  
- Navigation icon to:  
 - Settings   
  
**Settings Screen:**  
- Input box to manually enter city name  
- Button to pick location from a map  
- Logout button