Douglas College

Module Code:

CSIS 4495 – 071

Module Title:

Applied Research Project

Year & Semester:

2025 Fall

Progress Report-4

Alternative Industries: Weather Driver

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Instructor: Bambang, Sarif

Due Date: Nov 8ᵗʰ, 2025

Date	No. of hours	Work Done
Oct 28, 2025	4	On this day, I focused on integrating AWS Cognito into the project using the access keys provided by the client. I created and configured a User Pool within the AWS Cognito console, ensuring that it connected properly with the project's authentication flow. I implemented environment variables for secure key management and tested the authentication endpoints to confirm user registration and login processes. Additionally, I verified callback URLs and OAuth scopes to make sure the integration worked smoothly with the React Native client.
Oct 30, 2025	3.5	I spent time investigating the Google Maps API key errors that appeared on my branch. The issue was caused by deprecated or legacy APIs being used instead of the newer Places API. I carefully debugged the configuration and compared the project's setup with Google Cloud Console settings. By testing different API configurations and reviewing Google's documentation, I was able to identify the core problem and implement partial fixes that improved stability.
Oct 31, 2025	3	I participated in a Zoom meeting with the client to address the ongoing Google Maps API key conflict. Together, we worked through several potential causes and discovered that the permission restrictions were preventing the maps from being rendered properly. I helped verify the API restrictions, billing status, and access scopes. By the end of the session, we had successfully resolved the permission-related issues and restored the functionality of the Maps integration.

Nov 3, 2025	2	After resolving the Google Maps issue, I conducted an internal demonstration for my teammates.
		During this session, I showcased the debugging process and explained how to properly configure the environment variables and permissions for the Maps API.
		This demo helped ensure that all members of the team were able to reproduce the fix on their own branches and maintain consistent setup across our development environments.
Nov 5, 2025	5	This day was primarily dedicated to fixing the domain creation conflicts within AWS Amplify that were linked to the Cognito User Pool and API Gateway.
		The issue was complex, as it involved mismatched domain configurations and key authentication errors that prevented successful setup.
		I conducted extensive research using Stack Overflow, ChatGPT, and other documentation sources, and I also reached out to the client to inform them of the issue.
		I carefully documented all troubleshooting steps and proposed potential fixes for the development team to review.
Nov 6, 2025	2	I joined a collaborative session with our client Juliet and members of the client's developer team to address the AWS Cognito permission issues that were blocking the creation of a domain for the login-with-social feature. Through the session, we identified IAM policy restrictions that limited domain creation.
		I contributed to discussions on adjusting the permissions and aligning Cognito configurations with the Amplify hosting settings, which allowed us to make

		progress toward enabling Apple, Google, and Facebook login support.
Nov 8, 2025	6	I met with Professor to discuss our project's progress and client collaboration so far. During the meeting, I summarized the milestones achieved, such as resolving the Google Maps API integration and making significant progress on the AWS Cognito setup.
		Later that day, I attended another meeting with the client to demonstrate the improvements and ongoing work.
		Additionally, I assisted my teammates in fixing remaining bugs on the Maps and Settings screens. I also worked on preparing the progress report, ensuring that all recent activities and fixes were documented accurately for submission.

Summary of Work:

During this period, my focus was on resolving the technical challenges surrounding the AWS Cognito authentication system and Google Maps API integration in the Weather Driver project. Both components are essential to the app's user experience — Cognito manages secure login and user authentication, while the Maps API location search, routing, and real-time navigation.

I began by working on the AWS Cognito setup, where I created and configured a new User Pool using the credentials provided by the client. This involved linking the user pool to the React Native frontend, setting up secure environment variables, and verifying OAuth scopes and callback URLs for proper login functionality. During this process, I encountered domain creation issues within AWS Amplify, caused by mismatched configurations and permission restrictions. To address this, I researched extensively through developer forums and documentation and later collaborated with the client's team to adjust IAM policies and domain settings. This helped move the project closer to enabling social login options such as Google, Apple, and Facebook.

At the same time, I worked on fixing persistent Google Maps API errors that were preventing map rendering. The problem stemmed from the use of deprecated legacy APIs, which required migration to the new API and Routes API. I

compared the existing project setup with Google Cloud Console configurations, updated the API integrations, and verified permissions and billing to restore functionality. After a joint troubleshooting session with the client, we successfully resolved the map permission issues, bringing back autocomplete and route preview features.

Once these fixes were complete, I held an internal demo to walk my teammates through the debugging process and configuration steps, ensuring everyone could maintain consistency in their local environments. I also helped finalize the progress report, ensuring that all fixes and updates were clearly documented. Additionally, I met with Professor and the client to showcase our progress and discuss next steps, particularly focusing on the integration of authentication and map-based features.

Overall, this phase of the project was defined by persistent problem-solving, teamwork, and effective communication. The resolution of major technical issues improved the system's stability, strengthened our collaboration with the client, and prepared the foundation for implementing advanced features in upcoming development stages.