Web Applications Development Laboratory

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Secret 2.0

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November 15th, 2018

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Introduction

Along this documentation we hope to achieve a great comprehension of the usage of the app called Secret 2.0. This document contains a description of the project as well as the instructions on how to use it.

This documents was created specifically for the Development Team, Project Manager and to our professor, Sergio Hernández.

Definitions

Reading the Code should be enough to understand how it works. When we talk about a Point or a Post, in the scope of the project we mean the following:

- Point: Means a location, contains latitude and longitude.
- Post: The Post will have the information of a post made on the App, it has an ID, its text and a Point.

Background

This software was inspired by a previous App called Secret. Secret was an App service that allowed people to share messages anonymously within their circle of friends, friends of friends, and publicly with the intention of sharing great news and words of support. Unfortunately, the App was shut down on April 29, 2015 due to the App not being used with what he intended.

For the final project of our Web Application Development Laboratory class, we wanted to make something similar; an Android App that lets users share their ideas anonymously, where they could read Posts that were close to them. We saw the possibility to face the same issue as the app mentioned above. However, we believe we can propitiate a positive environment by using Sentiment Analysis, showing and promoting positive messages first; and by not allowing users to post images.

System Overview

The purpose of the creation of this mobile app is to provide the users with a safe space in which they can express their opinions free without being afraid of being judged.

Requirements

Functional Requirements

- The user has a pinpoint location depending on which, the posts are shown.
- A user can create a post containing a text.
- The post is only shown for those on the location where it was created.
- Positive posts will remain the longest on the upper part of the list. Negative posts will be kept in the lower part of the view.

Technical Requirements

The user will be able to download and use the Mobile App through an Android Device with at least version 7.0 (Nougat) installed.

To access and modify the source code, it is needed to have Android Studio, you can read how to Download it here. .Net is also needed, you can read more on how to download it here.

Installation

The app and the environment needed for its execution are stored inside a container through Docker. We first need to clone the repository and modify the Database.fs file, you will need to fill all the params for either MongoDB or CosmosDB. You will need to create an Azure account and get a subscription to cognitive services, specifically the text analysis API, you can find the tutorial here, after getting the API key, it should be placed at the Program.fs file at line 45, and if you choose another datacenter then south central US, you should change the URL at line 47.

Furthermore, you need to build the docker file, which is located at fsharp/src/, the command to build is:

docker build -t secret2-backend

After building, you need to run the container with the following command:

docker run -d -p 80:5000 --name secret2 secret2-backend

User Guide

Final user

After successfully downloading the App to your phone, you can access it and all its features without further installations. Secret 2.0 consists on a dashboard showing the posts pinpointed to the user's actual location. This means, that the user will see different posts depending on where he/she is.

To create a new post, you press the button on the bottom right of the screen. Type your positive message and hit Send. Now, your post has been pinpointed to your location by the time you hit Send. Consequently, if you or anyone else moves from that location, the post will become unable to see.

There will be a Sentiment analysis applied to every post. Those that qualify as positive posts will be given priority and they will remain longer in the newsfeed. Furthermore, negative posts will be lowered in the list as they don't represent Secret's purpose.

Development User

Whenever a final user makes a post, we automatically retrieve the content and location (latitude and longitude) of it. The text of this post is analysed through a sentiment analysis to determine its positivity. The value given by this test will determine its priority and likeability to remain at the top of the dashboard.

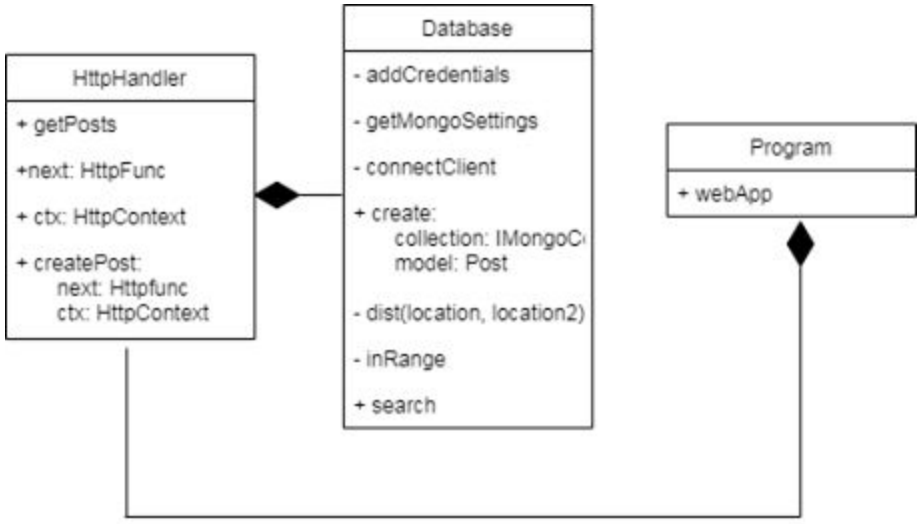
When the final user enters the app, they will see those posts created nearby their current location.

The class in charge of the mobile app is MainActivity.kt which is written in Kotlin. Every post created in this app will be saved or shown using HttpHandlers.fs, which is written in F# and is algo our web server. Posts and their location are saved using MongoDB. Lastly, the sentiment analysis is contained in the class SentimentAnalyzer.fs which is written in F#, but it uses a service called Cognitive Services.

Built with

There are three main systems/services in our project. The Mobile Application, which is the one seen by the final user, is created with Kotlin on Android Studio, the Database that stores the posts and its locations using MongoDB and the Back-end with F# that allows us to store data in the database.

UML



Frequently Asked Questions

What is Secret?

Secret was an app that became popular around 2015. Secret allowed you to make anonymous posts and share them with your facebook friends, and the friend of your friends.

Why did Secret fail?

This app was created with the purpose of providing a safe environment where people can relieve from their problems and receive words of support. Unfortunately, this app was not used for this purpose so it shut down.

What is Secret 2.0?

An app similar to Secret that guarantees a safe environment.

What makes it different from Secret?

Each post made through Secret 2.0 is analysed to determine its positivity. Positive posts will be shown in the upper part, while negative posts will be left behind.

Which technologies are being used for the development?

The app was made with Android Studio using Kotlin as the programming language. The database was provided by MongoDB and we access it through F#.