

Concordia University
Department of Computer Science and
Software Engineering

SOEN 6441 - Sections U and W:
Advanced Programming Practices

Instructor: Dr. C. Constantinides, *P.Eng.*

Project

Date posted: Sunday 11 September, 2022.

Date due: Sunday 6 November, 2022, by 23:59.

Introduction

You should find one partner and form a team. One person from each team will submit the project electronically.

Ground rules

This is an assessment exercise. You may not seek any assistance while expecting to receive credit. You must work strictly within your team and seek no assistance for this assignment (e.g. from the teaching assistants, fellow classmates and other teams or external help). I am available only to discuss clarifications in case you need any.

Both partners are expected to work relatively equally on the project. Accommodating someone who did not contribute will result in a penalty to both partners. You cannot give a "free pass" to your partner in one part of the project, with the promise that they will make up by putting more effort in another part. If there is any problem in the team (such as lack of contribution, etc.), you must contact me as soon as the problem appears.

Your project

Use any language (or combination of languages) to develop a system that can read API /JSON data and produce results to some application. For the purpose of this exercise, you should aim at creating a small and manageable local database based on the downloaded data. You may not use any frameworks (other than, possibly, for the presentation of data). Your system should allow basic parameterized queries. As each project will be different, you will be assessed on the following **common criteria** that you must demonstrate:

1. Use of coding standards with respect to your language(s) of choice.
2. Use of applicable patterns.
3. Use of refactoring strategies.
4. Use of some testing tool.
5. Documentation of your architecture/design in a Software Architecture Document.

You should maintain your entire project on GitHub and prepare a 10 minute video presentation, demonstrating the requirements.

What to submit

1. A report documenting and demonstrating the above criteria as a single **.pdf** file.

The report should contain a link and credentials to access your GitHub repository.

2. A 10-min video presentation.

Please submit under folder 'Project.'

Some resources

1. 10 Best Flight Data API for Your Amazing Application
(<https://geekflare.com/flight-data-api/>)
2. FlightRadar24 API (<https://airlabs.co/Flight-Radar-24-API-FR24-API>)
3. World Radio REST API v1 (<https://www.programmableweb.com/api/world-radio-rest-api-v1>)
4. 30 Free & Open APIs for Marketers & Content Developers
(<https://blog.hubspot.com/website/free-open-apis>)

Presentation

In-class video presentations will take place on November 24 and December 1 for Section U and November 25 and December 2 for Section W. A tentative schedule of in-class video presentations will be announced on the due date. Please note that due to time constraints not all videos will be presented in class.