IVAO Web Coding Assignment

Squawk Generator

Introduction

The purpose of this coding assignment is to assess your coding skills required by DevOps Web department.

You shall develop a web application based on the specification below.

Please do not share your source code **publicly** in any open source code repository (e.g. Github, GitLab, Bitbucket, etc).

Provide a Readme on how to setup the project and any notes / remarks for us.

If you have any question related to the requirement, please send email to us.

Mandatory Framework & Technology

- PHP 7.X
- Laravel 5.8 and above
- MySQL / MariaDB
- Use Laravel migration (https://laravel.com/docs/5.8/migrations) to setup the Database Structure. You may also provide some initial data using Laravel seed (https://laravel.com/docs/5.8/seeding).

Requirement

1. **Whazzup Data Retrieval**

   The website shall allow user to retrieve current online user data (e.g. by clicking a "Refresh Data" button) from Whazzup API (http://api.ivao.aero/getdata/whazzup/whazzup.txt) and save into MySQL table.

   You are not required to schedule the data retrieval based on certain interval.

   You are not required to maintain the historical record, just keep the latest record in the table.

   You are not required to save all the whazzup information into the table. You may just save the information required for the subsequent requirement.

   Whazzup specification: https://doc.ivao.aero/apidocumentation:whazzup:fileformat

2. **Maintain Airport & Squawk Configuration Info**

- User shall be allowed to create / edit / delete Airport list (minimally capture airport ICAO & Airport Name)
- For each airport, user can maintain multiple Squawk code range (e.g. EDDF: 2000 – 2500, 3100 – 3155, etc)
- Make sure you validate if the squawk range is valid (e.g. 8000 – 9000 is invalid squawk)

3. Generate Squawk & Show Pilot Info

Allow user to request squawk number for online Pilot in IVAO (query the data from whazzup data stored in database).

User will key in Pilot Callsign and click Generate button.

The website shall check if the pilot's **departure** airport is already configured in **part 2**. If it has been configured, make sure the squawk generated is valid and within the predefined range. If the airport configuration is not yet defined, you may assign **any** valid squawk number, except for special squawk number such as 7500, 7600, and 7700.

In addition of displaying generated squawk, also display following information:

- VID
- Callsign
- Flight Plan in ICAO Flight Plan text format
  Example:
  (FPL-AEE036-IS
  -A320/M-SCDE2GHILORTUWY/S
  -LGTS1635
  -N0471F310 LEKPO UL617 SKP UB1 ABLON
  -LGAV0042 LGSA
  -PBN/C1B2S1 DOF/160805 REG/SXDVD)

- User position in map
  - You may use map provider such as Google Maps / LeafletJS / OpenLayers
  - Display the online position as a Marker
  - When user click the marker, display the Callsign as a marker tooltip

4. Build API

- Build a REST API to generate squawk
- Request parameter:
  - Callsign
- Response:
  - Squawk No
- Let us know of the API specification inside the Readme and give example of Request & Response structure.