

ENVISION®



Specification

Rusada .NET Developer - Technical Test

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Introduction

Rusada require a Web application to assist plane spotters in logging their sightings. Feel free to do as much or as little as you wish from the requirements below. This is your opportunity to demonstrate how you would structure your solution and adhere to best practices. Rusada would prefer that the solution is uploaded to GitHub or similar so that we can clone the repository.

Requirements

Technical Requirements

1. The application must be written in C#.
2. It should connect to a SQL Server database.
3. Use an ORM of your choice to communicate with the database.
4. Use an MVVM framework of your choice for the UI.
5. It should be possible to deploy the application by configuring the database connection and running it.

Functional Requirements

1. Spotters must be able to record the following information for each sighting:
 - a. Make and model of aircraft.
 - b. Registration of aircraft.
 - c. Location aircraft was seen.
 - d. Date and time aircraft was seen.
2. The application should have the following screens:
 - a. Listing screen showing all aircraft that have been spotted.
 - b. A details screen showing all details of an individual aircraft sighting.
 - c. Form to add a new aircraft sighting.
3. Additionally, the application may allow:
 - a. Remove aircraft sighting from list.
 - b. Edit details of an aircraft sighting.
 - c. Add photo of aircraft (when adding or editing, or both).
 - d. Search for aircraft by Make, Model or Registration (present a filtered list).

Input Validations

| Field | Type | Validation | Example |
|---------------|----------|--|--------------------|
| Make | String | Maximum 128 characters | "Boeing" |
| Model | String | Maximum 128 characters | "777-300ER" |
| Registration | String | Two parts separated by a hyphen. Prefix should be either one or two characters. Suffix should be between one and five characters | "G-RNAC" |
| Location | String | Maximum 255 characters | "London Gatwick" |
| Date and time | Datetime | Must be a valid datetime in the past | "23/09/2019 10:30" |