

RealEstateAPI

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Part I

Introduction

The following documentation contains a comprehensive description of our Web API project for the "Dezvoltarea Aplicațiilor Web și Mobile cu Angular, .Net și Android" course within the Faculty of Mathematics & Informatics, University of Transilvania. It aims to provide an overview of the project's goals, architecture, implementation details, and instructions on how to use the project, while also discussing the difficulties that arose during the development process. In the following sections, we will explore each aspect of our project in detail, providing step-by-step instructions, code snippets, and any additional information necessary to understand and utilize the project effectively.

1 Motivation

RealEstateAPI is a University Project. That's why it is not intended for any real-world use, outside the scope of the course. The goal of this project isn't to develop something new, but to learn more in depth about backend and API development, CRUD applications and working in a team. That's why one of our biggest priorities was to utilize technologies that facilitate the development process and let the developer team work together effectively. We used widely accepted coding practices that improve code quality and readability, while also paying special attention to efficiency, ease of use and intuitive design.

2 Topic

2.1 What is RealEstateAPI?

RealEstateAPI is a Web API that uses technologies like ASP.NET Core for back-end development, Entity Framework Core for seamless integration and querying of the database, and Microsoft SQL Server for storing information in a database (More in Technologies Used section). RealEstateAPI is an Announcement-based

API, meaning that, the central elements are constituted by Announcements. These are containers of information, offering details about users, uploaded Real Estates and comments.

2.2 Brief Walkthrough of RealEstateAPI

RealEstateAPI can be accessed without authenticating, "Guests" (Anonymous users) being able to view the announcement feed, filter announcements, and view details about specific announcements. Other actions require authentication. Adding an announcement, for example, requires a user account to be created, so that the uploaders of the announcements can be identified. This can easily be done by our AccountController's Register and Login endpoints.

After logging in, the user receives a token, that is necessary for some operations, like adding or deleting announcements, sending comments, etc. (More in Security). It is important to note, that during the development of RealEstateAPI our first priority was security. That's why we used different technologies to make sure that all users can safely and securely enter their information, without ever worrying about it being stolen (More in Database Development and Technologies Used).

Users have a large variety of operations they can choose from. These include viewing the announcement feed, filtering announcements, adding and deleting announcements, sending comments (More in Endpoints). Moreover, we also included an Administrator Role, who is able to access, modify or delete announcements and comments, so that no inappropriate content is uploaded and persisted in the database (More in User Roles).