Coding Challenge — MapStock

Welcome to the FlyPix AI Coding Challenge!

As a team, we believe that the best way for engineers to communicate their skills is to demonstrate them in action. Therefore, we'd like to offer you an opportunity to showcase your ability to design the domain model, application architecture, data and control flow, and illustrate how you can ensure the stability of your application.

The requirements for the task are kept small so that you can focus more on the application design and architecture. You don't have to implement everything. We expect you to be a seasoned engineer who knows how to prioritize the business logic over the implementation details. With this in mind, the task should not take more than several hours of your time.

🏁 Task Introduction

MapStock is a platform where people exchange high-resolution digital maps. A map is a single digital file (can be from megabytes to gigabytes in size) representing geographical objects. MapStock allows users to upload and browse the maps via the MapStock web application.

You lead the development of the MapStock API. Your task is to design and implement (to a reasonable extent) the following use cases.

- The platform differentiates between guests and registered users (members).
- A member account is active if there is an active subscription, otherwise, it is deactivated.
- An active member can securely upload a (potentially large) map file to the system.
- An uploaded map should undergo a processing pipeline for compression and optimization.
    - This processing can take 30-60 minutes and is implemented by another team.

- A map can be kept private, shared with platform members, or be publicly available for browsing.
- Active members can download maps shared by other platform members.

📝 Notes

Going the extra mile is much appreciated and considered a big bonus. We encourage you to show off your expertise in non-functional aspects like code quality, maintainability, performance, and security.

If there is something that you want to share, but it will take a lot of time and effort to implement, feel free to put your thoughts in a free form in the readme file. Design decisions, implementation challenges, ideas for future enhancements — anything you'd like us to know.

The code of the solution is fully yours. This is not an app you develop for us but for yourself. It will be part of your portfolio that you can demonstrate to us and others. The more effort you decide to put into this application (e.g. by implementing extra features), the stronger your portfolio will be and the better we'll be able to see your skills in action! Good luck!