Cards RESTful web service by Logicea (sr)

Description

Assume an application named **Cards** that allows users to create and manage tasks in the form of cards:

- Application users are identified uniquely by their mail address, have a role (Member or Admin) and use a password to authenticate themselves before accessing cards
  - Members have access to cards they created
  - Admins have access to all cards
- A user creates a card by providing a name for it and, optionally, a description and a color
  - Name is mandatory
  - Color, if provided, should conform to a "6 alphanumeric characters prefixed with a #" format
  - Upon creation, the status of a card is To Do
- A user can search through cards they have access to
  - Filters include name, color, status and date of creation
  - Optionally limit results using page & size or offset & limit options
  - Results may be sorted by name, color, status, date of creation
- A user can request a single card they have access to
- A user can update the name, the description, the color and/or the status of a card they have access to
  - Contents of the description and color fields can be cleared out
  - Available statuses are To Do, In Progress and Done
- A user can delete a card they have access to

Build a **RESTful web service** that satisfies the aforementioned requirements using **Java**, **Spring Boot** and **MySQL**.

Notes

- Signing users up is out of scope for this assignment, feel free to populate your database with a fixed set of users by hand
- Regarding authentication, you are encouraged to generate a JSON Web Token to store user info - said token can be included in the "Authorization" header (as an OAuth 2.0 Bearer Token) in subsequent API calls to identify the calling user
- Optionally document the REST API using a tool of your choice