Test Assignment: URL shortener service

Objective

Your assignment is to implement a URL shortening API service.

User stories

Our Goal is implement an API endpoint `(A)` https://<your.domain>/api/shorten

- As an authenticated API user, When I have a long URL `(B)` (example: https://www.mongodb.com/docs/mongoid/current/reference/queries/#condition-syntax), I can be able to use the API `(A)` and expect it responses a shorter version `(C)`, (example: http://<your.domain>/GeAi9K).
- As a guest user, when I copy `(C)` and visit it in my web browser, it will automatically redirect me to the origin version B.

Assignment

Design and implement a service to solve the above user stories with:

- Language: **Ruby**
- Web Framework: Rails or Sinatra, it's up to you
- Database: It's your decision

Technical requirements

- Simply ensure that a URL can be encoded into a short URL and that the short URL can be decoded back into the original URL.
- Endpoint (A) should only accept JSON as body input and response JSON format following JSONAPI standard.
- The shortened value must be less than 6 characters not including special ones.
- Provide tests for your endpoints (and any other tests you may want to write).
- In the scope of this assignment, the service will serve continuously for a few numbers of users (max 2 - 5 requests per second), however it need to have good performance and user should not see any errors (consider if there are any collision/concurrent problem).

You do not need to build a scalable service in this scope of the assignment.

Real life problem

- Please share your concern (if any?) and your solution to improve your assignment to be able to adapt all real life situations.

Code Submit and Deployment

Please organize, design, test, and document your codebase as if it were going into a demo state, then push your code to GitHub. A public repo is okay.

Provide detailed instructions on how to run your assignment in README markdown file.

After you have pushed your code, you may submit the assignment by reply the email.

You can choose whatever free server to deploy your demo on, (or docker image)

All the best and happy coding.