Software Engineer Challenge
PT. Synapsis Sinergi Digital

The purpose of this assignment is to test your skills in software engineering, specifically BackEnd development. Task expectations are described below.

As a BackEnd Engineer you are required to create an online store application, you don't need to create a FrontEnd but focus on the BackEnd (RESTful API) only. The programming language you must use is Go-lang or Java spring boot.

You can develop your app by starting with prioritized features first. The following are the priority features to meet the MVP (minimum viable product) criteria:

- Customer can view product list by product category
- Customer can add product to shopping cart
- Customers can see a list of products that have been added to the shopping cart
- Customer can delete product list in shopping cart
- Customers can checkout and make payment transactions
- Login and register customers

Expected output

System design

- Make a good README in this project you are working on.
- RESTful API Design
    - RESTful API is a method for making API compliant with HTTP methods.
    - Design a RESTful API using the openapi specification (https://swagger.io/docs/specification/about/)
    - Or you can use README.md for RESTful API documentation.
- Entity Relationship Diagram (ERD)
    - ERD is a diagram that describes the relationship between data objects that have relationships between relationships. You can use the tool (https://app.diagrams.net/) to create an ERD.

BackEnd Development

- Create the appropriate commit message in each new feature addition.
- Implement the database from the ERD that you created earlier to an RDBMS application such as MySQL (you may also use other databases such as Postgres, etc.)
- Implement the RESTful API that you have previously created into a backend application that can be used using JWT Authentication.

Deployment

- Build into Docker Images and upload to docker registry (docker hub)
- Create docker-compose.yml file
- Added noSQL database (mongodb) - logging option (plus)
- Deploy your app to heroku, AWS or GCP

Assessment criteria

System Design

- README Documentation
- RESTful API Design
- Entity Relationship Diagrams

BackEnd Development

- Commit message
- Database Implementation
- RESTful API (Feature Complete)

Deployment

- Dockerfile
- Docker compose files
- Deploy your app to heroku, AWS or GCP.

Task Collection Mechanism

1. Time to do the task is 7 days.
2. Save the code you created to the Github repository, and collect the repository link in the form we have provided.
3. Also collect the project link that has been built and saved to the registry container hub.docker.com and the api spec link to the form we have provided.

Reference

- https://blog.readme.com/how-to-use-openapi-and-swagger-spec-for-documentation/
- https://github.com/jamescooke/restapidocs/blob/master/examples/README.md
- https://app.swaggerhub.com/apis-docs/sepulsa/RentABook-API/1.0.0#/
- https://www.lucidchart.com/pages/er-diagrams