

Back-end Developer Take Home Assignment

Create a REST API with CRUD features using any programming languages you prefer and any web framework.

Required features: list items, add, remove and delete item

- create service and repository layer using in any sql/nosql storage with your own data model.
- create API functional test to ensure the feature is working.
- develop the task with the mindset that it must be ready for production.
- a great plus if the app is deployed to hosting (heroku/aws/azure/digital ocean).
- please push the source code into your github repository and we will review the codes.

Assessment points:

- REST API routing design → 5 points
- Application modelling and abstraction skill → 5 points
- Quality assessment with functional API test (optional) → 3 points
- Deployment to cloud infrastructure (optional) → 3 points

Case study:

1. Product and category management. a product can belong to a category and the category can have hierarchical structure.
2. Passing criteria: 7 points can be spread around all components, mandatory components minimum score 5.
3. Please push your work to your Github repository

STUDY CASE TEST

Giftano

Giftano is an IT company focus on digital voucher based in Singapore. Our vision is making Giftano as “The Gift Company”, where people will associate Giftano as Gift website, marketplace and platform.

Right now, Giftano working with 3 different parties:

1. Regular customer (B2C)
2. Corporate customer (B2B)
3. Business partner, merchant or store who selling e-voucher with Giftano platform

Our natural growth without any marketing is about 30-40% annually. With traffic 40% transaction come from outside Singapore.

The Plan

Giftano have own gift platform that work completely fine. We estimated, this platform will still work until next 1-2 years. Before reach end of the life, we planning to re-build our gift platform with following criteria

1. Better than current platform(new platform must have all current feature from current platform + new feature)
2. Scalable
3. Future proof
4. Well Documented

Our long-term plan is making Giftano as Global Brand and Marketplace for Digital Gift.

Questions:

Q1: Which architecture do you think is the best, Monolithic or Microservices Architecture? Why?

Q2: This question related with backend, Which languages are better, low level language or high-level language? Why?

Q3: If you are the architect of this platform, what is the tech stack you will use related with the short and long term of Giftano? Why?

Q4: Could you please make a high-level design how the techstack will work (from developer local host to production server)? You may draw a diagram to make it easier for you to explain

Q5: To start rebuilding gift platform, how many people is needed and what's the composition?

Notes:

- If you have alternative answer, please write it down.

ADDITIONAL QUESTIONS



Do you have a project that we can access online?

If you do, please share you project and indicate your role.