



Cloud Final Project



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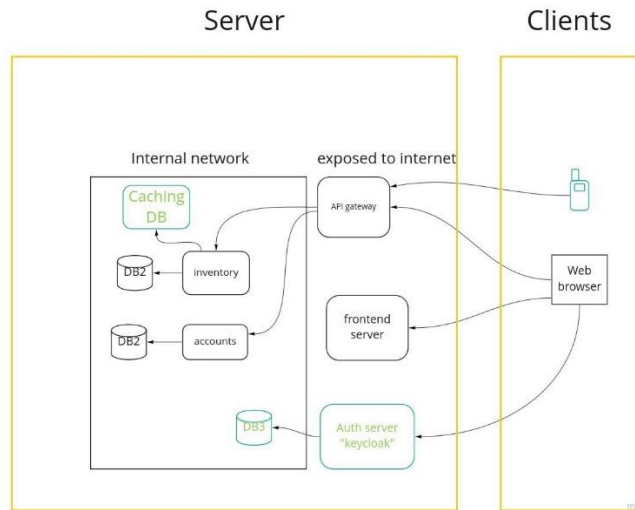


Figure 1 Microservice diagram for the required website

Use cases

- Navigation Bar
- Footer
- Home

A customer at the frontend can do the following:

- **Register for a new account** Sign up Page
- **Login to an existing account** Login Page
- **Get his/her account information** Profile Page
- **Get a list of all products in the database (with filtering)** Categories and ordering by price
- **Search for a product** One Code In Navigation Bar
- **Get the details of a certain product** Product Page
- **Add a product to the cart** Cart Page
- **Checkout** Cart Page

Mandatory

- **Frontend server,** Done
- **API gateway,**
- **Inventory service,** Done
- **Account service,** and Done
- **Uploading the projects on Amazon Web Services: Elastic BeanStalk (AWS EB)**

Bonus

- Mobile application that covers all the above use cases (**Flutter only**):
- **Caching database**
- **Authentication server** Done
- **AI recommendation service**

Docker environment specification:

The following is exposed to internet:

- API gateway
- Frontend server **Done**
- Authentication server **Done**

The following is defined in an internal network:

- Inventory service
- Accounts service
- Caching database

You may add any extra services you need.

Restrictions on the used technologies:

- Mobile application: **Flutter**
- Web application: **React**
- Frontend server: any
- API gateway: any
- Authentication server: any
- Service implementation: Node.js, Python, **PHP**, Java, Golang, **Dart**
- Database allowed: MongoDB, NoSQL DB, **MySQL**, PostgreSQL, MariaDB
- AI recommendation service: any
- Caching database: any

Submission

Provide a public GitHub repository that contains everything: the used images (**Dockerfiles**), **docker-composed-yaml file**, any source codes, and the link to your website.

Reading material

<https://www.nginx.com/blog/building-microservices-using-an-api-gateway/>