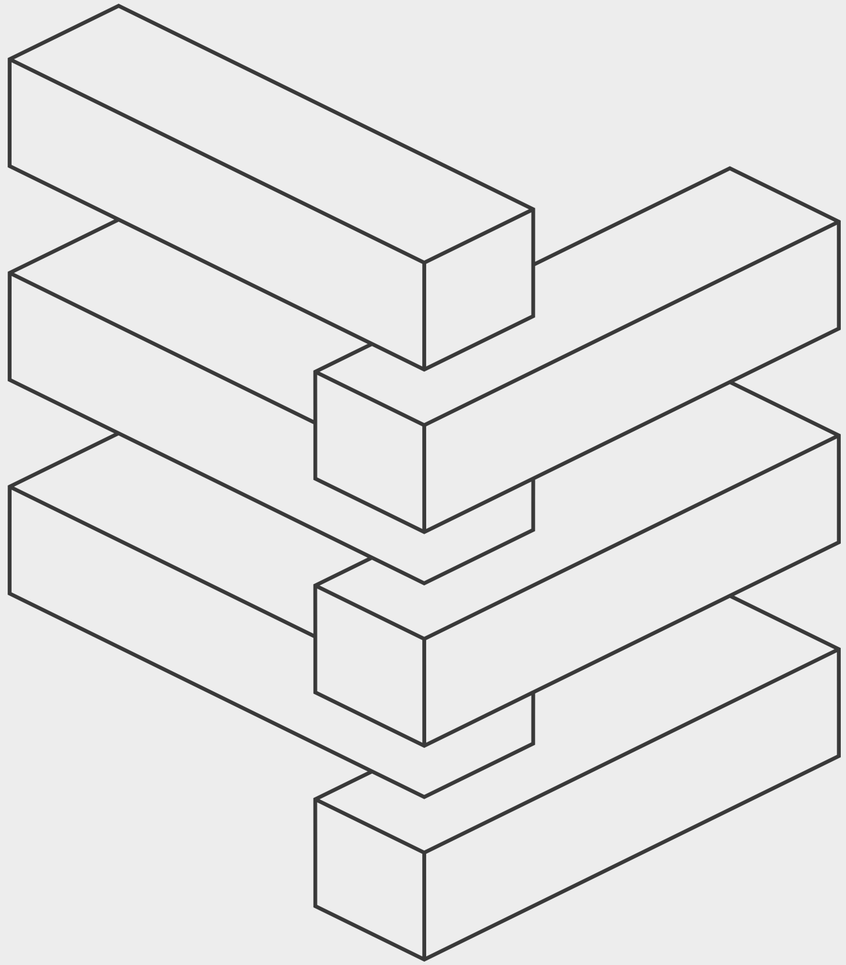
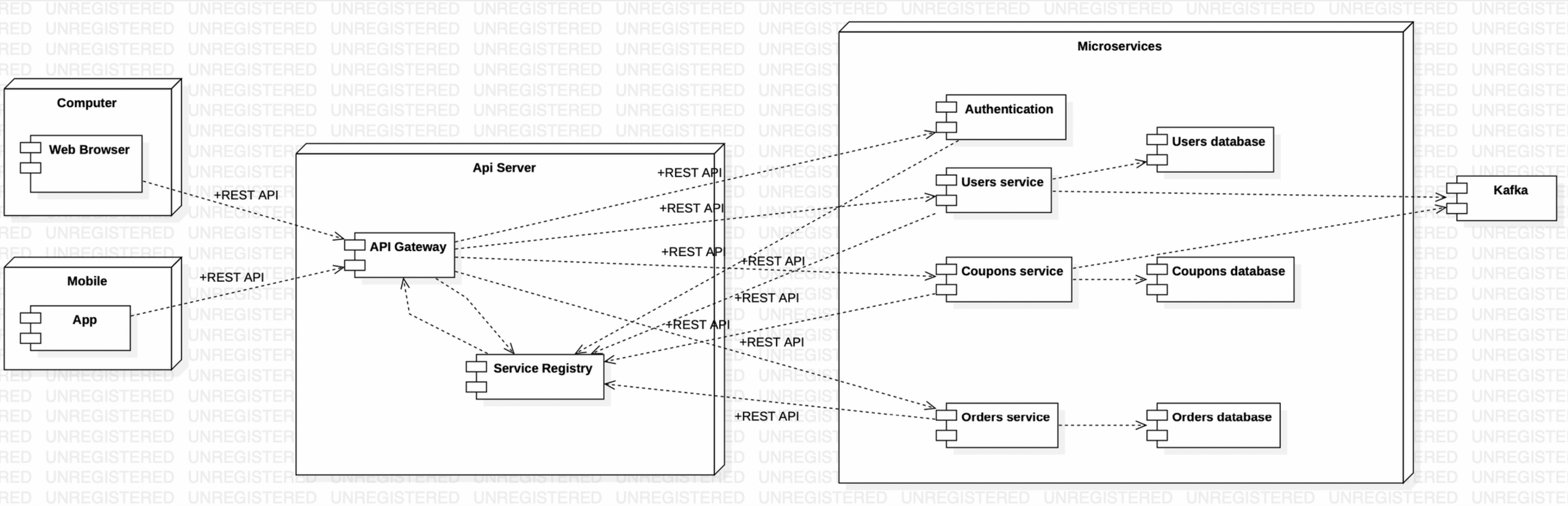
Coupon Service



Microservice Architecture

Presented by Mukan Erkebulan

Deployment Diagram

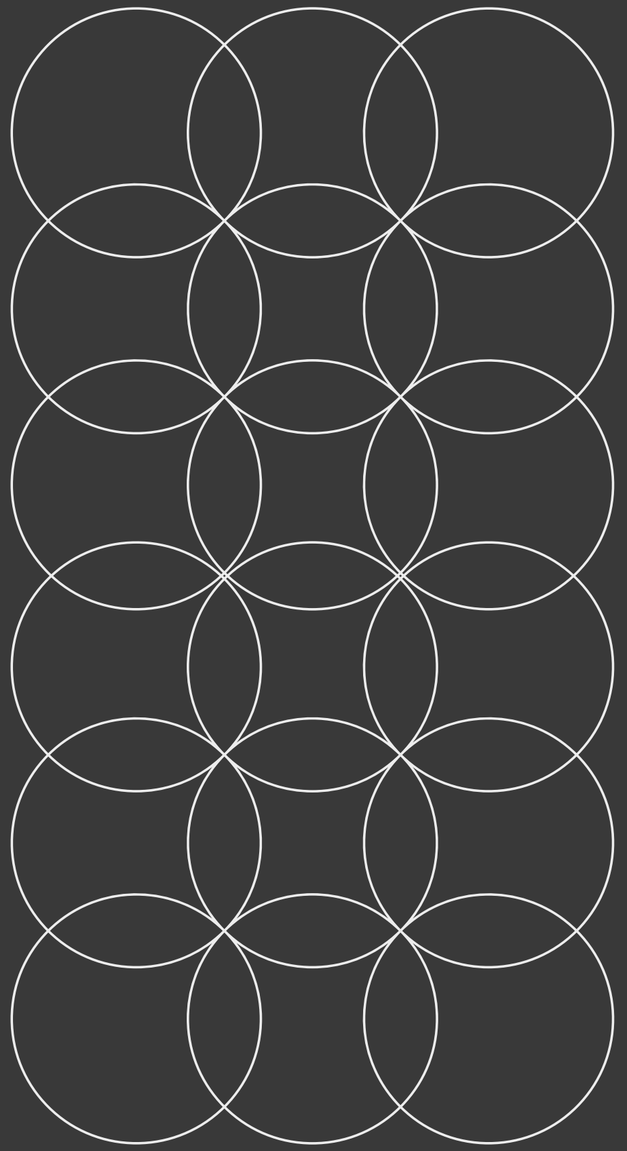


Clients

As you can see in the diagram, I have 2 types of clients that can send http requests, these are web and mobile.

API Gateway

An API gateway is the conductor that organizes the requests being processed by the microservices architecture to create a simplified experience for the user. It’s a translator, taking a client’s many requests and turning them into just one, to reduce the number of round trips between the client and application. An API gateway is set up in front of the microservices and becomes the entry point for every new request being executed by the app. It simplifies both the client implementations and the microservices app.

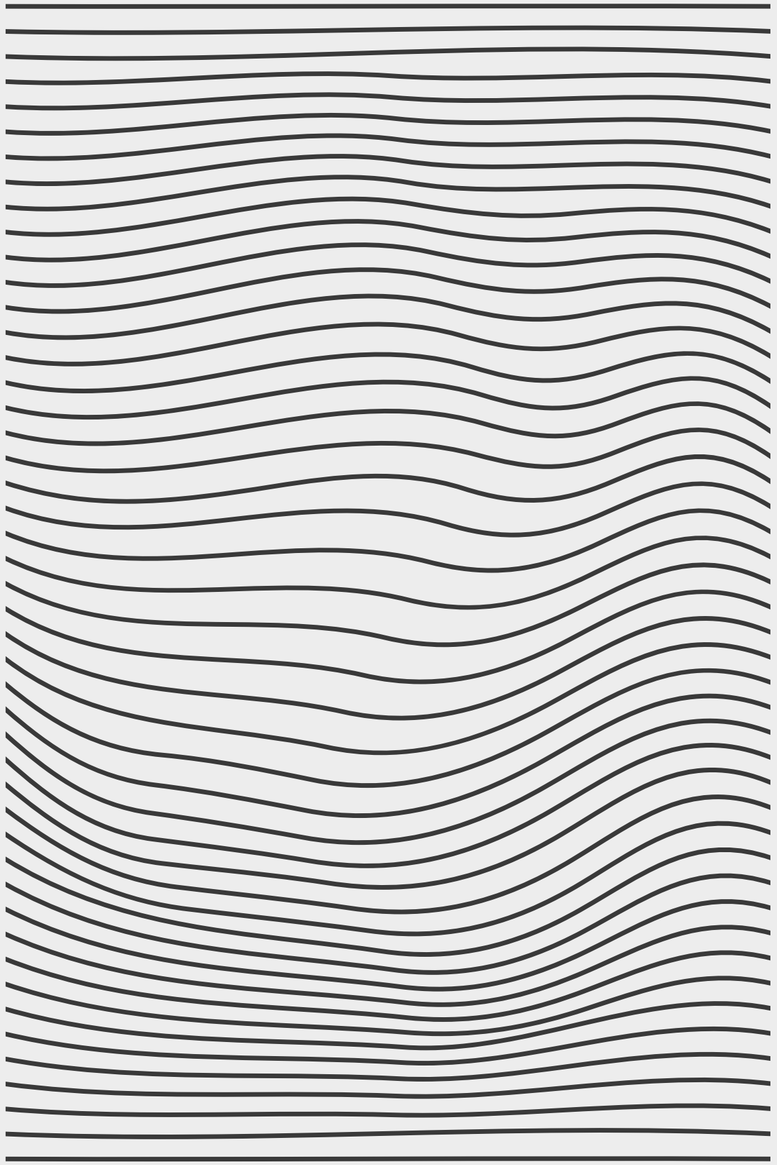


Service Discovery

Discovery is the counterpart to registration from the point of view of clients. When a client wants to access a service, it must find out where the service is located (and other relevant information) to perform the request. Server-side discovery makes the API gateway handle the discovery of the right endpoint (or endpoints) for a request.
My microservices can self-register by interacting with the registry service.

Microservices

Here I have 4 microservices:
1) **Users**: used for creation, delete, change user data, and has own database.
2) **Authentication**: authentication, authorization, and everything related to logging into the system.
3) **Coupons**: used for viewing coupons by category and has own database.
4) **Order**: used for buying a coupon and has own database.



Kafka

Users and Coupons microservices interact with the Kafka message broker to perform decentralized caching to quickly retrieve frequently accessed data.