A demonstration of DDD modeling for FinFIx

Strategic Design

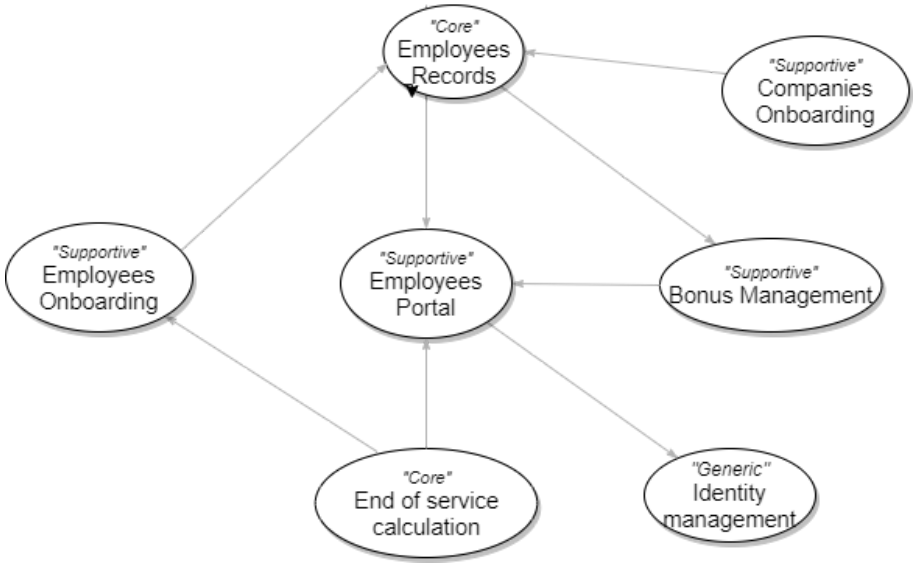
Domain

The domain is “End Of Service”

Sub Domains

We can identify the following sub domains:

- (Core Domain) End of service calculation: Calculating the end of service in different levels of granularity
- (Core Domain) Employees Records: Managing employees details.
- (Supporting Domain) Bonus Management: Managing employees incentives, allowances and bonuses and helping companies convert them into installments.
- (Supporting Domain) Employees Onboarding: Onboarding employees (Individually or by lot) and settle their accrued end of service amounts
- (Supporting Domain) Companies Onboarding: Onboarding companies and setup their preferences.
- (Supporting Domain) Employees Portal: A Portal enabling employees to access and control their financial statuses.
- (Generic Domain) Identity management: To make sure the right users have the right access.



Bounded Contexts

Employees Onboarding bounded contexts:

Employees Onboarding has the following contexts:

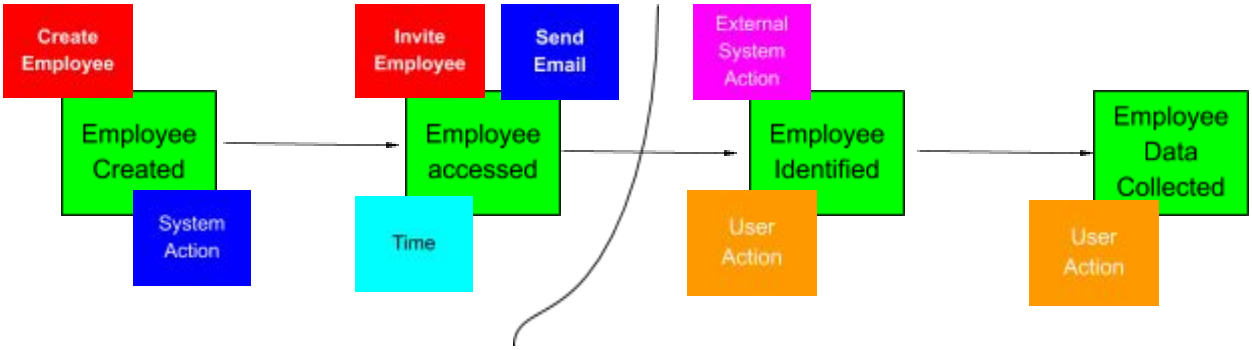
- Employee Creation
- Employee invitation
- ID scan
- Data collection

Relationships Between Contexts

glossary of terms

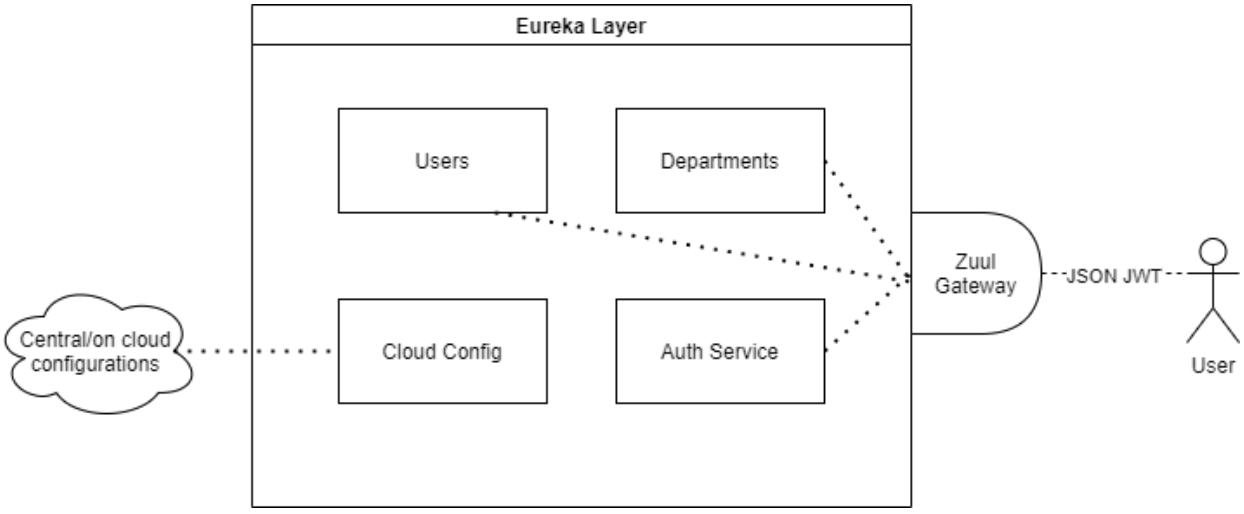
Outstanding	The total amount due for an employee or a list of employees, that a company has to pay as of now.
Paid	The amount paid until today
Accrued	The total amount due to the employee, whether paid or not.

Event storming



Tactical Design

A sample microservice application was created to proof the concept, the following diagram illustrates the structure:



Code available on Github:
https://github.com/yaziderman/cashew-demo

Configurations on Github
https://github.com/yaziderman/cashew-config-server/blob/main/application.yml

Space for Improvement

DDD Approach

- A Wider use of Value Objects for a better maintainability.
- Use DDD Aggregates for a better level of decoupling.
- Apply Domain Event for events triggering.
- Creating Hystrix Dashboard for system monitoring.
- Implement Zipkin and Sleuth

Security

- Use OAuth2 authentication
- Apply Zero Trust concept by controlling internal connections between microservices.

A very high level sample provided by
Yazeed Erman
yazid.erman@gmail.com
+971504516768