

# A demonstration of DDD modeling for FinFlx

## Strategic Design

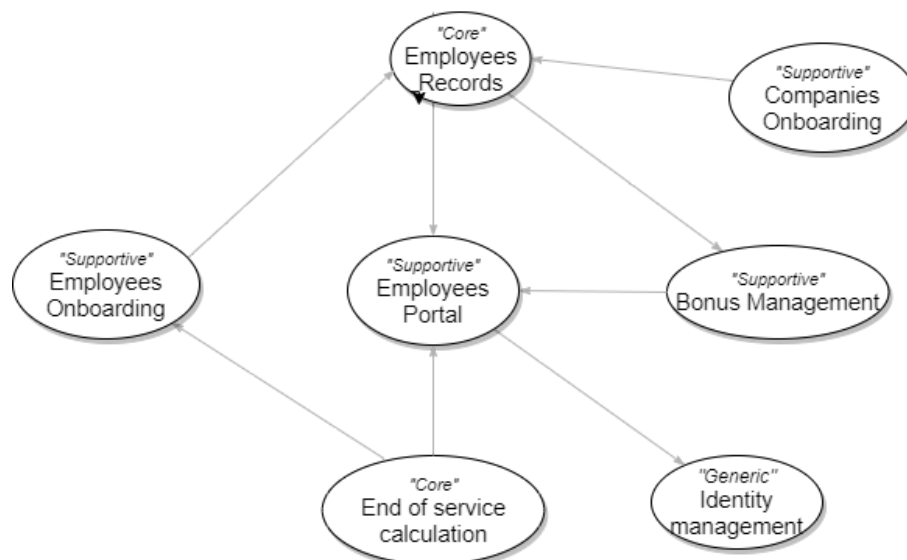
### Domain

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

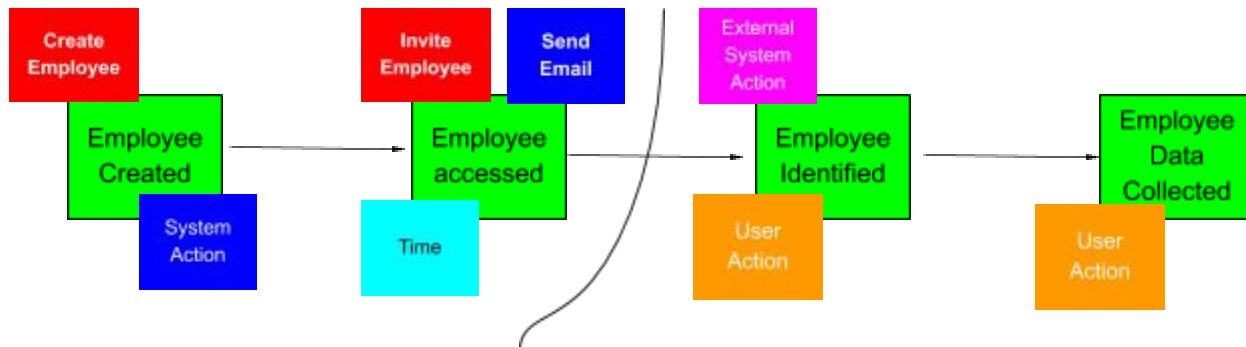
## Relationships Between Contexts



## glossary of terms

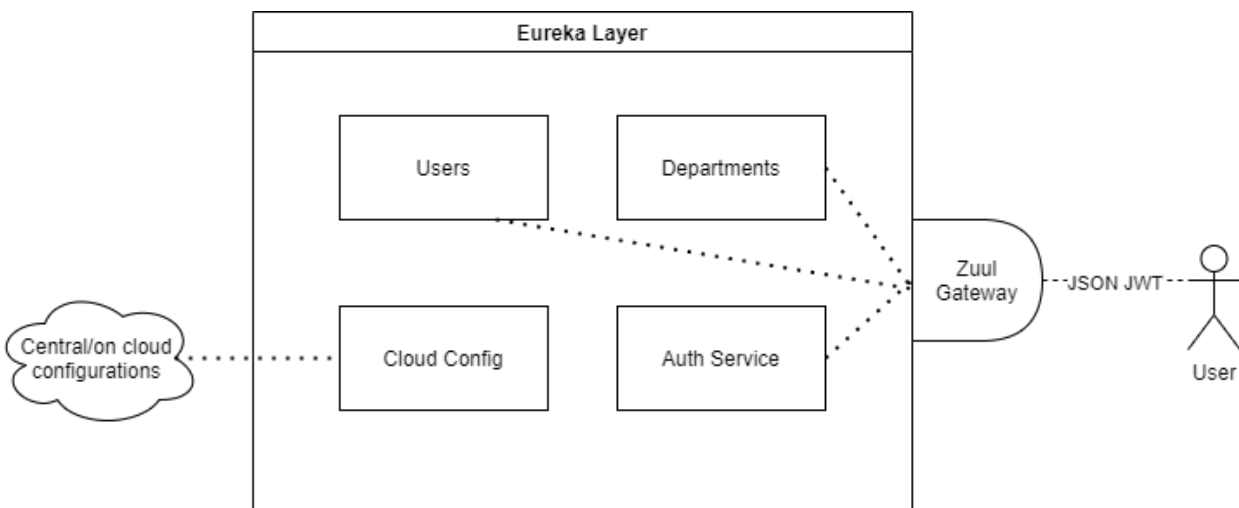
Outstanding	The total amount due for an employee or a list of employees, that a company has to pay as of now.
Paid	The amount paid until today
Accrued	The total amount due to the employee, whether paid or not.

## 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.

## Control and Maintainability

- Use containers for a faster deployment.
- Creating Hystrix Dashboard for system monitoring.
- Implement Zipkin and Sleuth

## Security

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

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