ADD - Iteration 2

Step 1: Considered Inputs

Driver Type	Description
UC's	All
Concerns	CRN1: Establishing an overall initial system structure.
	CRN2: Some team elements inexperience with a Spring-based systems
	CRN3: The teams reduced size
	CRN4 : Allocate the tasks to the members of the team
	CRN5 : Achiving the goal for the quality standards in a short amount of time
Constraints	CON1: The system is developed using Open-Source Technologies.
	CON2: The application should be available in the near four weeks.
	CON3: The system must achive at least 70% of the level calculated for the code quality standards, through the Sonargraph-Explorer
	CON4: The API is to be then accessible through a single page application (SPA).
	CON5 : The application must use Spring Technology
	CON6 : The system must ensure 99% of unauthorized login attempts are detected
	CON7 : The application must run on several browsers and devices

Step 2: Iteration Goal

This iteration goal is to support primary functionality.

Step 3: Elements to decompose/refine

- Decompose and refine elements from the reference architecture and deployment pattern selected in the previous iteration. Detail and document how different components from different layers
  interact and behave to enable desired application functionality.
- Further specify application presentation layer to be in line with some UI expectations.
- Domain Model

Step 4: Design Concepts

Domain model

The domain model will be specified by DDD standards with the use of Value Objects, Entities and Aggregates.
This will not only further increase the project team knowledge in the application target domain, but also to understand the best way to organize the system primary functionality.

Domain objects

Domain objects / Components that will be utilized by each UC should be specified.
This can be achieved by designing SD diagram for a specific UC as well as identifying, explaining and reasoning each one of the components that are split between the multiple application layers.

Step 5: Instantiate architectural elements, allocate responsibilities and define interfaces

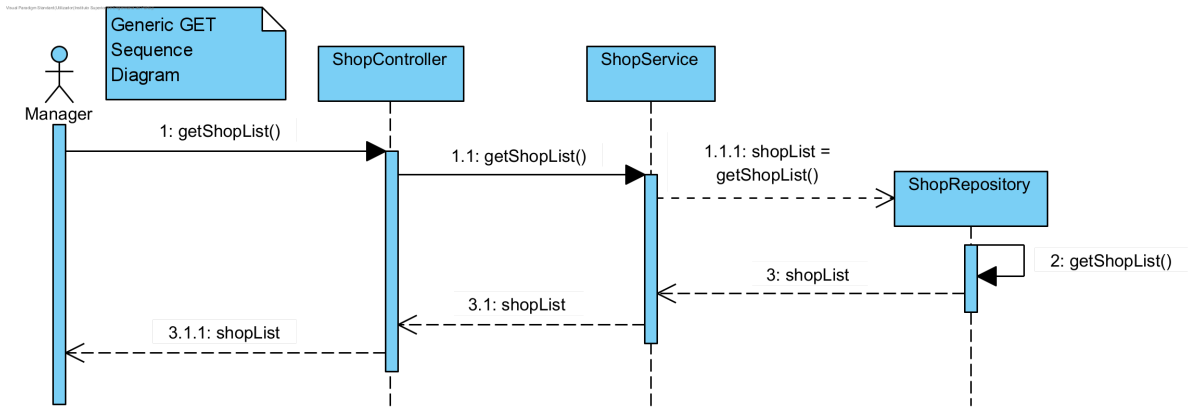
UC

Element	Responsibility
ShopController	Handle HTTP requests. Application entry point
ShopDTO	Shop deprived of any business logic that will be exposed to the exterior through the controller. Can be described as a bag of data.
ShopService	Shop service to abstract business logic and access to ShopController. This enables the change of funcionality without, necesseraly, changing the business core of the application.
ShopMapper	Handles Shop to ShopDTO conversion.
Shop	Shop domain entity representation.
ShopRepository	Shop repository. Consists in an abstraction to the data layer, enabling the application to use other database in the future if there is a need for it.

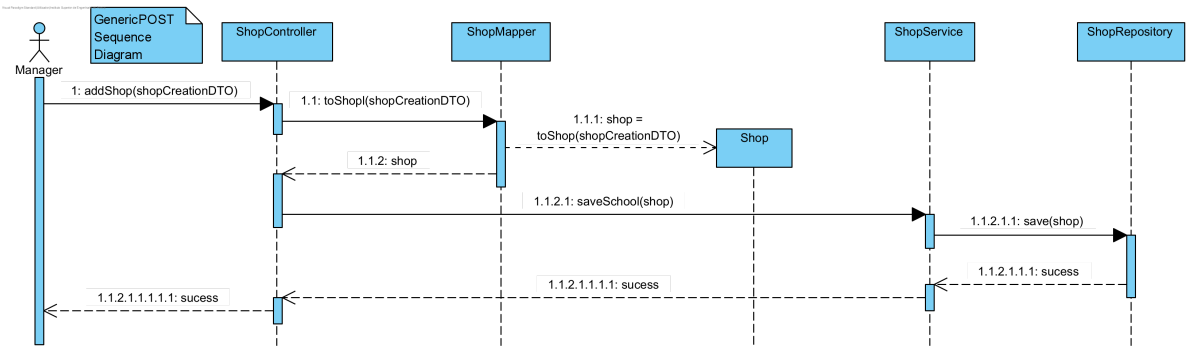
This can be extended for other UC/Aggregates.

Step 6: Sketch views and record design decisions

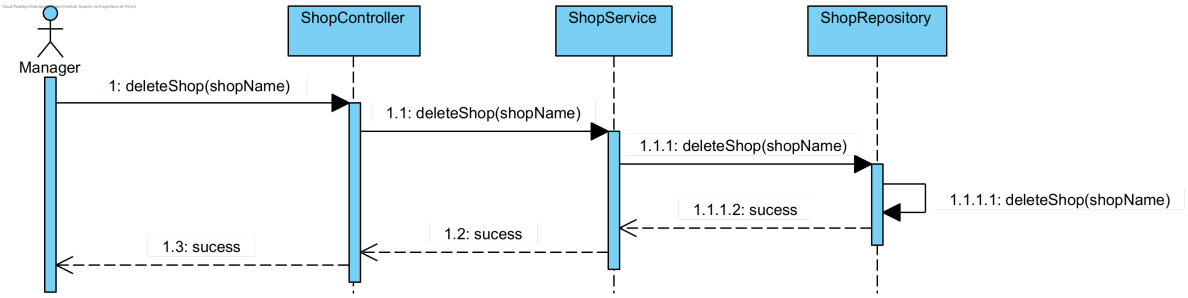
Sequence Diagram - GET



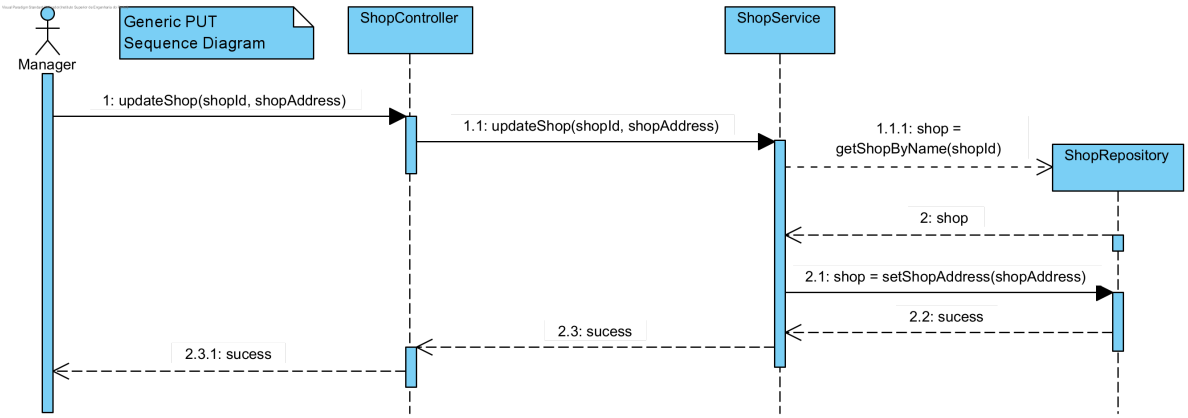
Sequence Diagram - POST



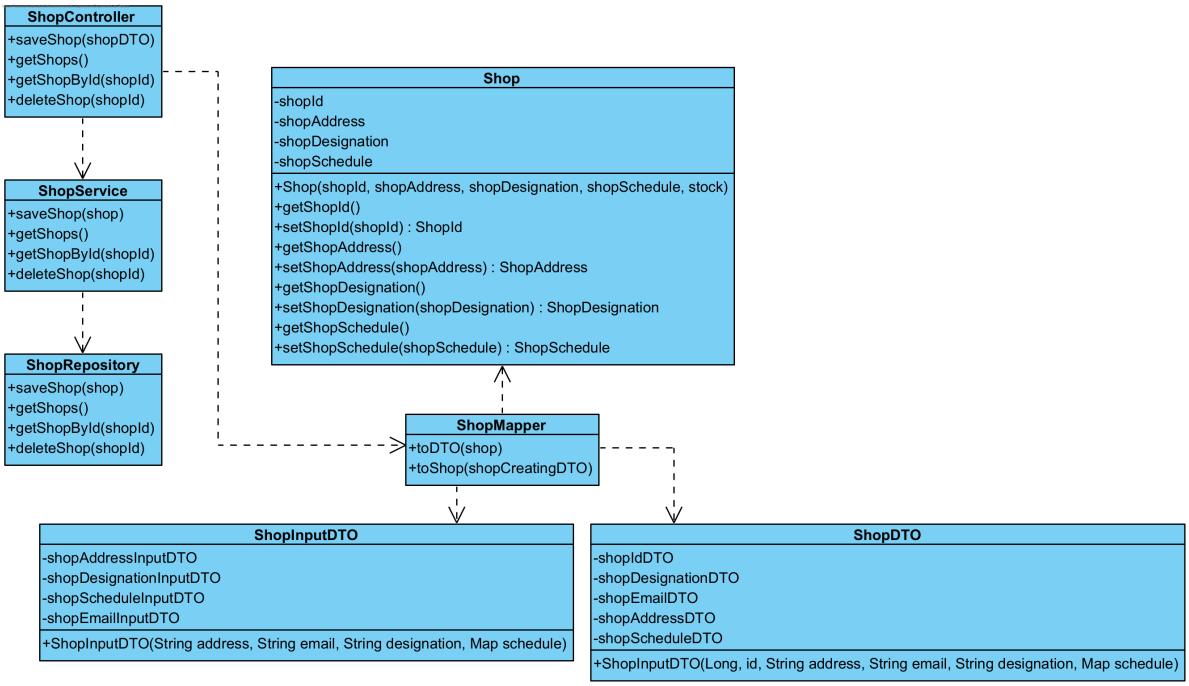
Sequence Diagram - DELETE



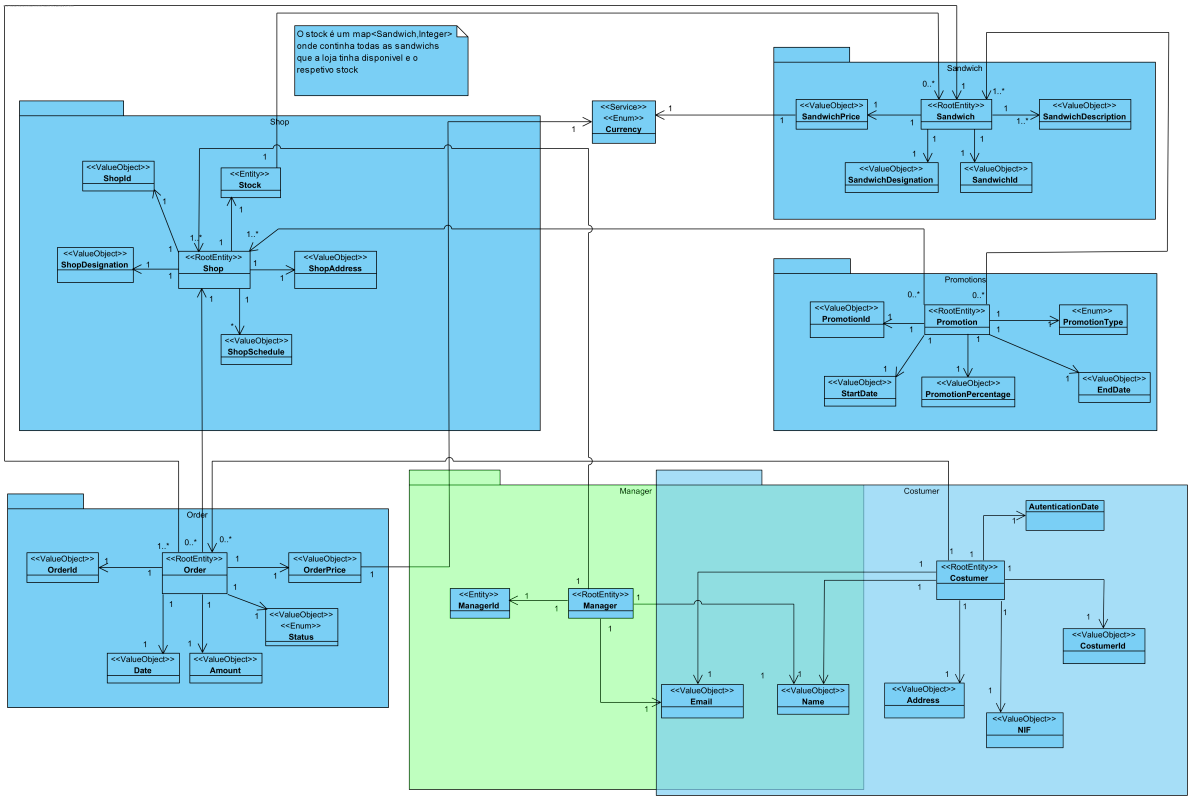
Sequence Diagram - PUT



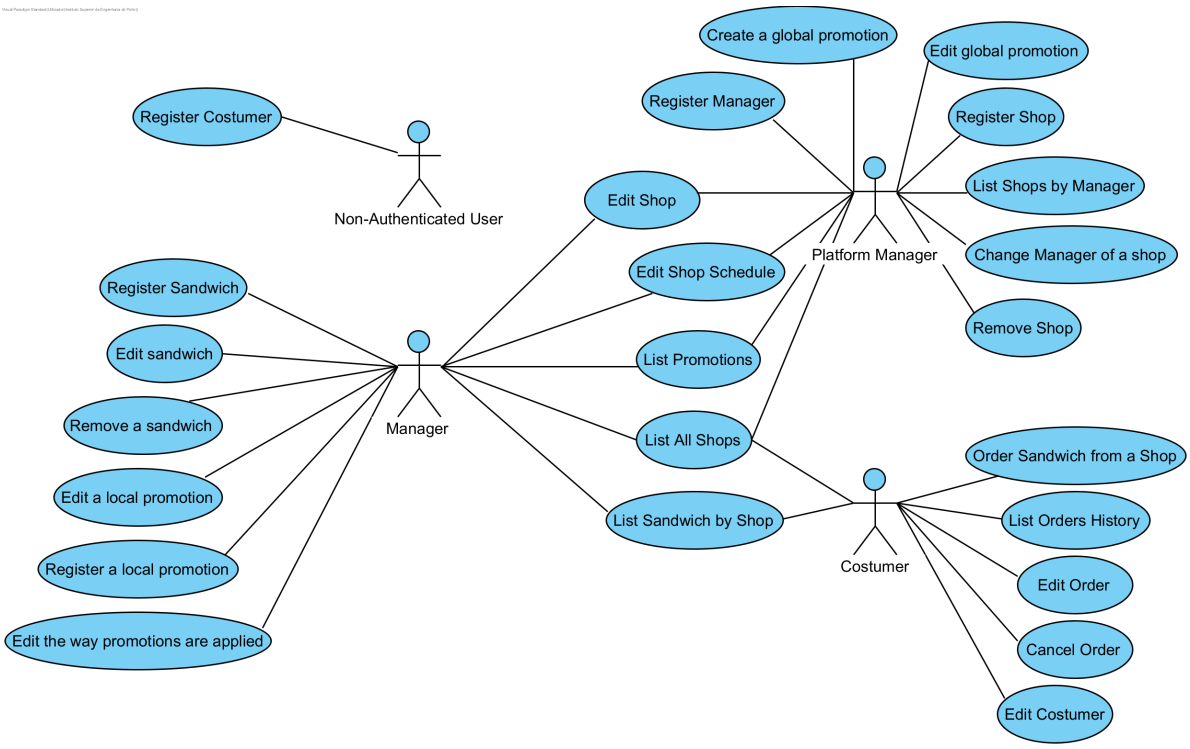
Class diagram



Domain model



Use Case Diagram



ID	Description	Actor	Priority
US1	Register in the platform as a Manager	Platform Manager	High
US2	Register in the platform as a Costumer	Non-Authenticated User	High
US3	Change Manager of a Shop	Platform Manager	High
US4	Register Shop	Platform Manager	High
US5	Edit Shop	Platform Manager, Manager	Medium
US6	Edit Costumer	Costumer	Medium
US7	Remove Shop	Platform Manager	Medium
US8	List all Shops	Platform Manager, Manager, Costumer	High
US9	Create global promotions	Platform Manager	High
US10	Edit global promotions	Platform Manager	Medium
US11	Create local Promotion	Manager	High
US12	Edit local Promotion	Manager	Medium
US13	Edit Promotion Application	Manager	Medium
US14	List Promotions	Manager, Costumer	Low
US15	Register Sandwich	Manager	High

ID	Description	Actor	Priority
US16	Edit Sandwich	Manager	Medium
US17	Remove Sandwich	Manager	High
US18	List all Sandwiches from Shop	Manager, Costumer	High
US19	Order Sandwich	Costumer	High
US20	Edit Order	Costumer	Medium
US21	Cancel Order	Costumer	High
US22	List Order History	Costumer	Low

Design decisions

Design decision	Rationale
Use of domain objects as well decomposing them between all layers	Provide at least one example of domain objects in each of the defined application layers, maybe even with a use case context. This will be important to provide context to the previous chosen architecture and pattern.
Use Spring framework	CON5
Use Angular for the front-end/ UI of the application	CON7
Class Date	The class Date is no long a Service and is an attribute from Order and Promotion. In this context, Date has some conditions and business rules that doesn't allow the group to set as a Service.
Class Amount	The class Amount is no long a Service and is an attribute from Order. In this context, Amount has some conditions and business rules that doesn't allow the group to set as a Service.
Delete Aggregate Stock	For this project, stock isn't one of the main concerns so instead of being an aggregate is an entity that belongs to the aggregate Shop
Class Email and Name	The manager and the costumer share the same conditions and business rules regarding the email and name classes. The group decided to create a single email and name class to avoid code duplication.

Quality decisions

ID	Quality Attribute	Scenario	Associated Use Stories

ID	Quality Attribute	Scenario	Associated Use Stories
QA1	Usability,Performance	The application must run on several browsers and devices	All User Stories
QA2	Security, Modifiability	Usage of Domain Primitives	All User Stories
QA3	Modifiability	The application must be suitable for future modification	All User Stories
QA4	Testability, Performance, Modifiability,Maintainbility	The system must achive at least 70% of the level calculated for the code quality standards, through the Sonargraph-Explorer	All User Stories

Step 7: Perform analysis of current design and review iteration goal and design objectives

Updated Kanban board

	Iteration 2	
Not Addressed	Partially Addressed	Completely Addressed
CRN2	CON1	CRN1
CRN5	CON2	CRN3
CON3	QA3	CRN4
CON4	-	CON5
CON6	-	QA1,CON7
QA4	-	QA2