Architecture Design

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Version History

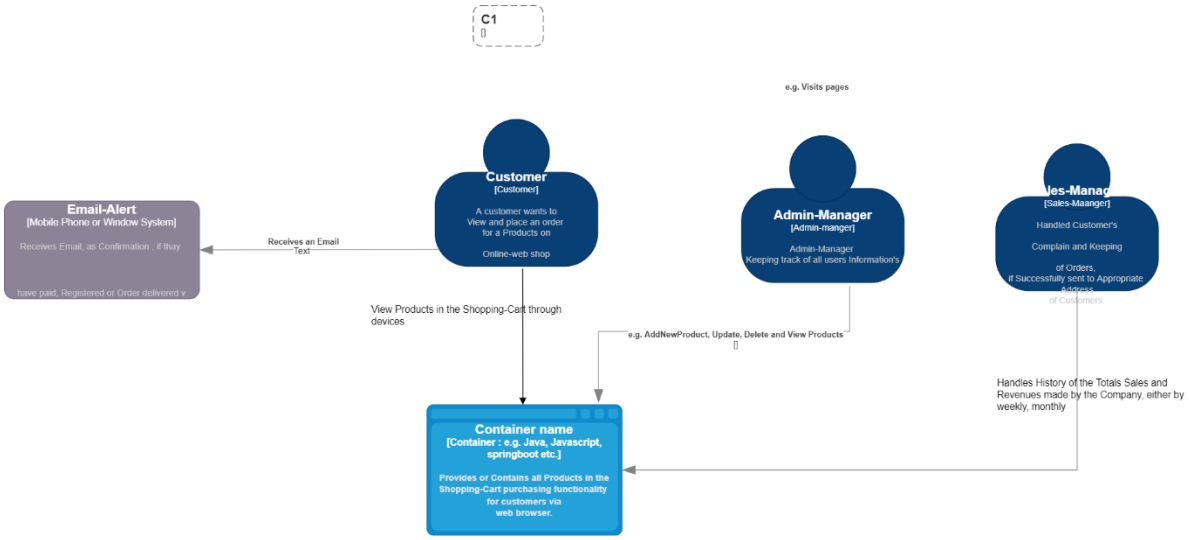
Version	Date	Changes	status
0.1	25 September 2022	Create the document	In progress
0.2	25 September 2022	Add CI diagram setup	In progress
0.3	25 September 2022	Make C2 changes and add explanation, Make C3	In progress

Contents

Description

In this document will contain the C4 Architecture, the explanation of each C4 in detail, with images, that helps you understand/ visualize how the structure of the website is contain and build.

(C1) System Container



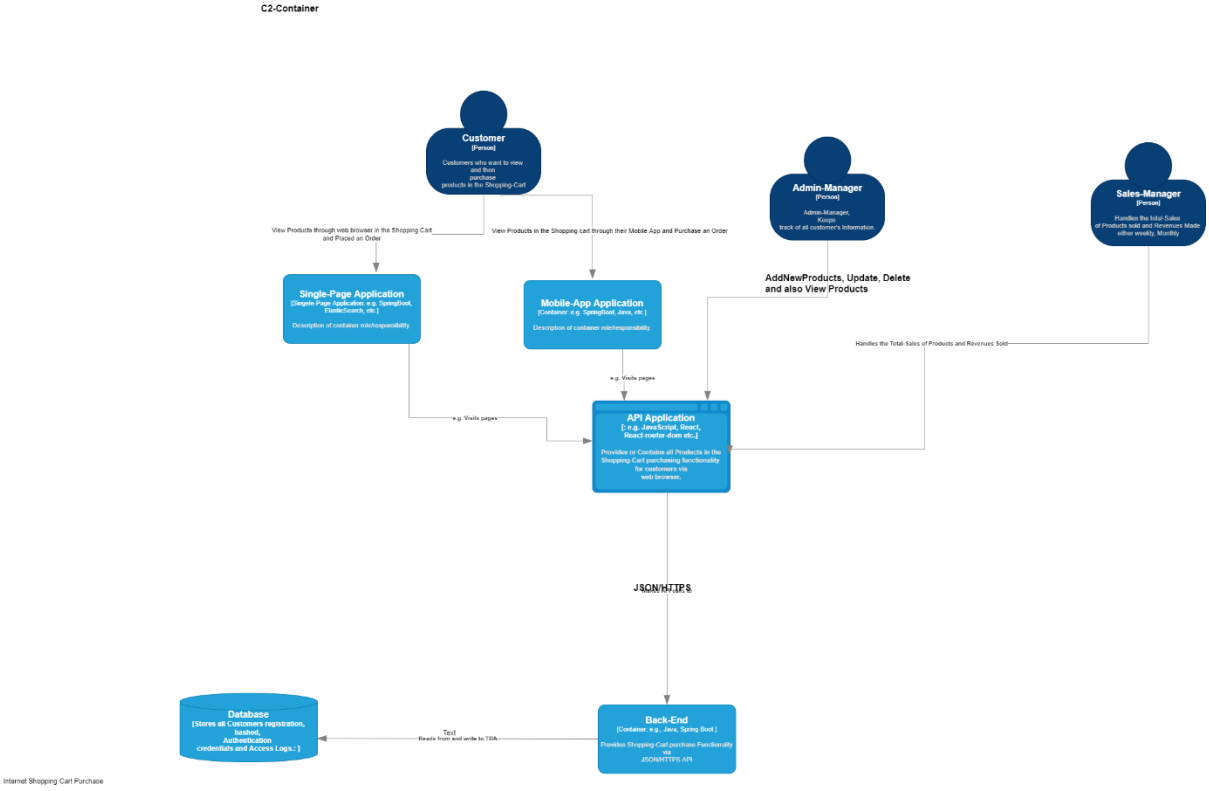
In this (C1) System context layer, we currently have Four user who's going to use the software system, which is a web app for purchasing baseball tickets.

The role of these users:

Role	Description	User story reference
Customer	Want to View, Select and place an Order in the Shopping-Cart, and also made payment for what they ordered on the Cart website.	US1 US2 US3 US4 US5 US6 US7 US8 US9 US10

Admin-Manager	**Manages the Products, Customer's Information.**	**US11** **US12**
Sales-Manager	**1.Oversees total-Sales of Products and Also Revenue made for the Company.** **2. handles Customer's complain,** **3.Keeps track of customers, if sent to their Respective Addresses.** **4 handles customer's Satisfaction.**	**U13** **US14**
Warehouse-Manager	**1.Keeps tracks of stocks inventory, going in and out of the depot or Warehouse.** **2.Approves or Decline Request made by Admin.**	**US15** **US16**

(C2) Container

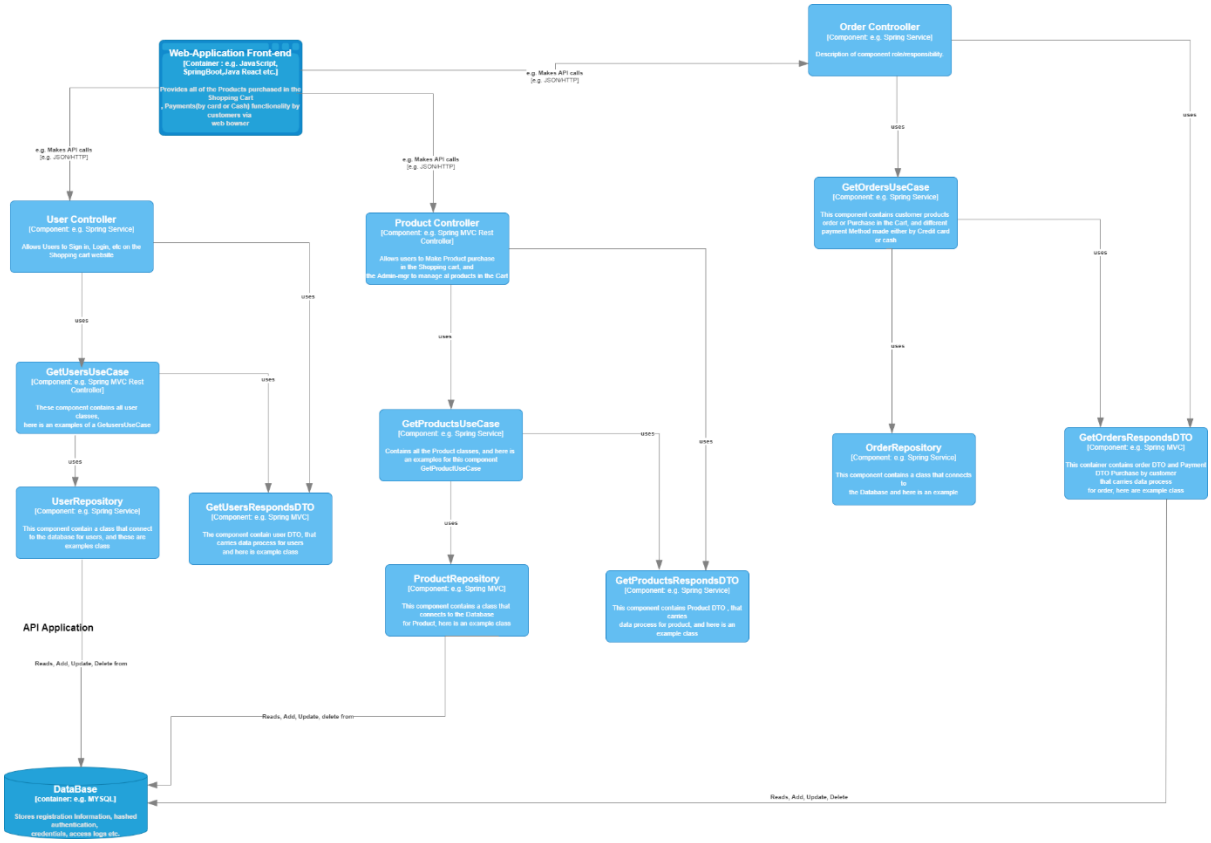


If we zoomed in the software system, we end up seeing all the containers currently in the software system. This is (C2) Containers layer.

We currently have 3 containers:

Container	Description	Tool(s)	Reason for the tool(s)
Web App Front-end	Display the functionality on the website so you can interact with the website.	JavaScript and React	Very easy to use and very well-known language.
Back-end	Provide the data and function for the web app front-end.	Java, Lombok, Spring Boot	Well-known.
Database	Store all the information for the website. From Products, users, etc.	MySQL	It's easy to use and is very popular.

(C3) Components



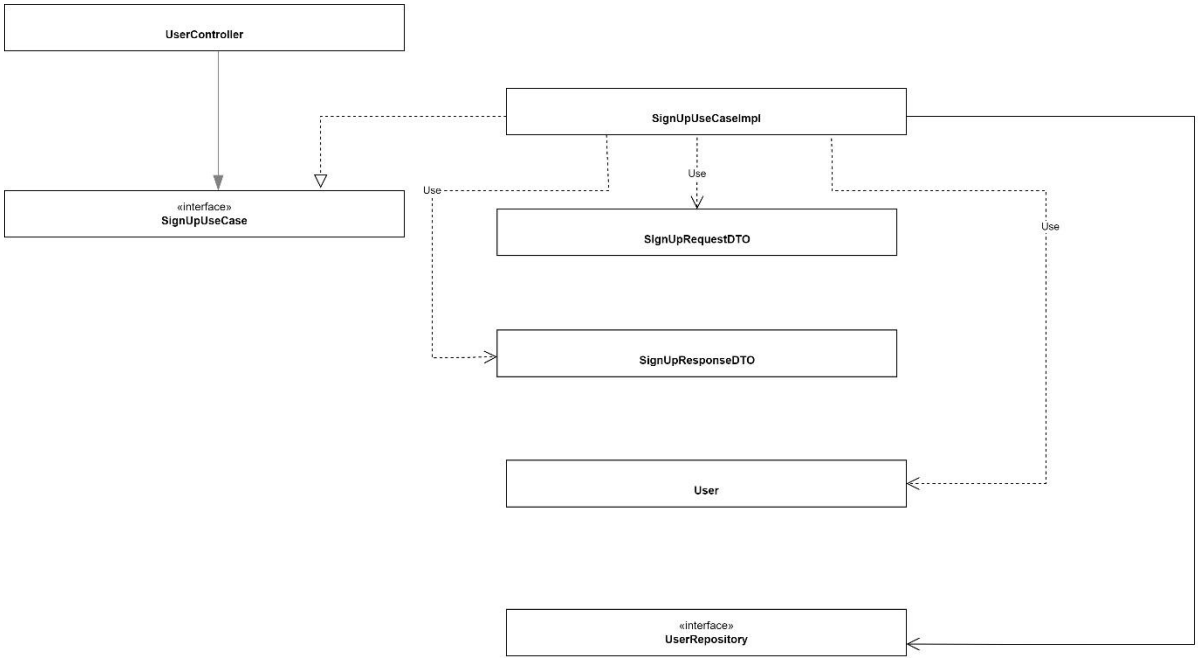
If We zoomed in the back-end container, we get all the components that are currently in the back-end.

In This C3 components is consider files in the back-end and in these file/ components contains classes for specific files/ components. These are some of the example classes that exist in the components. The controllers have all the CRUD functionalities in it. The C3 is structure like the SOLID principal layer design, where each layers have classes with purpose. It's structure like this for code quality and easy implementation.

Component	Example classes	Description
Controller file	UserController, Product Controller Order Controller	This component has all the function for CRUD for user and product, order
Business file	GetUserUseCase, GetProductUseCase GetOrderUseCase	This component contains all the user and product classes except the user DAL class. where this Business layer make connection with the controller and DAL.
Repository file	UserRepository, ProductRepository OrderRepository	This component contains the user and product DAL class where you create, read, update, and delete from the database.

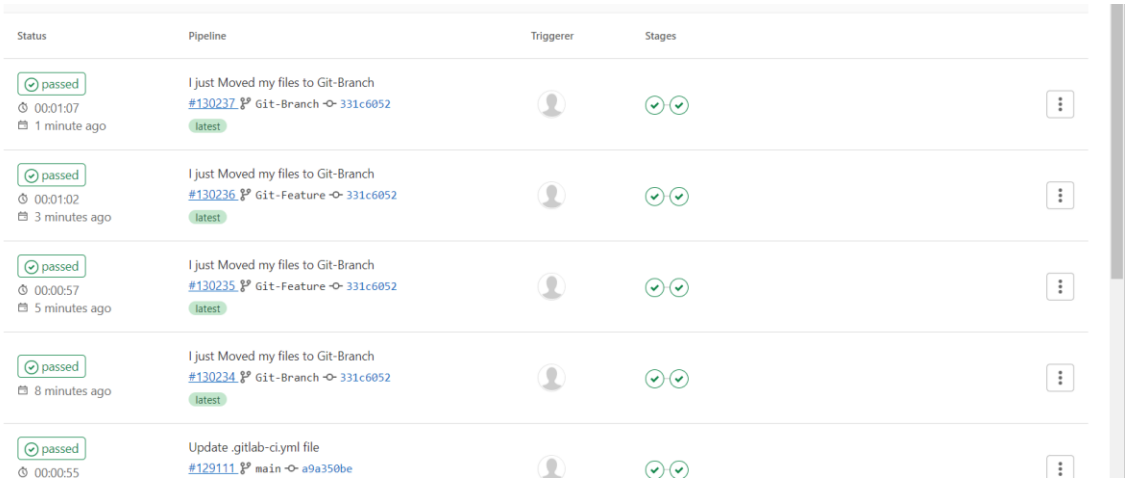
DTO file	GetUserResponseDTO, GetPoductResponseDTO GetOrderResponseDTO	User and product and Customer Order data object

(C4) Code



The reason that the DTO's are being in the SignUpUseCaseImpl, instead of UserController is because, it would be nice and clean code and if another person would look at it, they will understand it much better. If you have all the DTO's logic in the UserController, where it has a lot of use cases for user, it will look

very messy, and it will take a lot of time to try and understand the code. Each use cases are in a separate class for easy to find use case that you need to modify.


Status
Pipeline
Triggerer
Stages
passed
00:01:07
1 minute ago
I just Moved my files to Git-Branch
#130237 Git-Branch 331c6052
latest
passed
00:01:02
3 minutes ago
I just Moved my files to Git-Branch
#130236 Git-Feature 331c6052
latest
passed
00:00:57
5 minutes ago
I just Moved my files to Git-Branch
#130235 Git-Feature 331c6052
latest
passed
8 minutes ago
I just Moved my files to Git-Branch
#130234 Git-Branch 331c6052
latest
passed
00:00:55
Update .gitlab-ci.yml file
#129111 main a9a350be