PROJECT Design Documentation

> *The following template provides the headings for your Design Documentation. As you edit each section make sure you remove these commentary 'blockquotes'; the lines that start with a > character and appear in the generated PDF in italics.*

Team Information

- Team name: b-fishes
- Team members
  - Cristian Malone
  - Connor McRoberts
  - Harbor Wolff
  - MEMBER4

Executive Summary

Our rare fish e-store is a cutting-edge platform designed to provide customers with an easy-to-use and secure online shopping experience. The website is built using a single-page application (SPA) architecture, utilizing the Angular framework for the front-end and Java Springboot for the back-end. This technology combination enables us to provide a fast, responsive and dynamic user interface.

The website allows users to create an account and log in. Once logged in, users can browse our extensive selection of rare fish, view detailed product information, and add their desired fish to their shopping cart. The shopping cart is designed to be user-friendly, allowing users to easily edit and update their orders before checkout.

The website also features an admin login, providing the administrators with a secure back-end portal to manage product information, customer data, and order fulfillment. Administrators can add, edit, and remove products, view and manage customer data, and process orders, ensuring the website's operations run smoothly.

In conclusion, our rare fish e-store offers customers an exciting and hassle-free shopping experience. With our extensive selection of rare fish, user-friendly shopping cart, we are confident that our customers will enjoy shopping with us.

Purpose

> *The purpose of this project is to allow customers to purchase their favorite exotic fish, all while our product owner gets to make some profit while providing a needed service.*

Glossary and Acronyms

> *Provide a table of terms and acronyms.*

Term	Definition
SPA	Single Page

Requirements

This section describes the features of the application.

> *In this section you do not need to be exhaustive and list every story. Focus on top-level features from the Vision document and maybe Epics and critical Stories.*

Definition of MVP

> *_A reward points system made for users.*

MVP Features

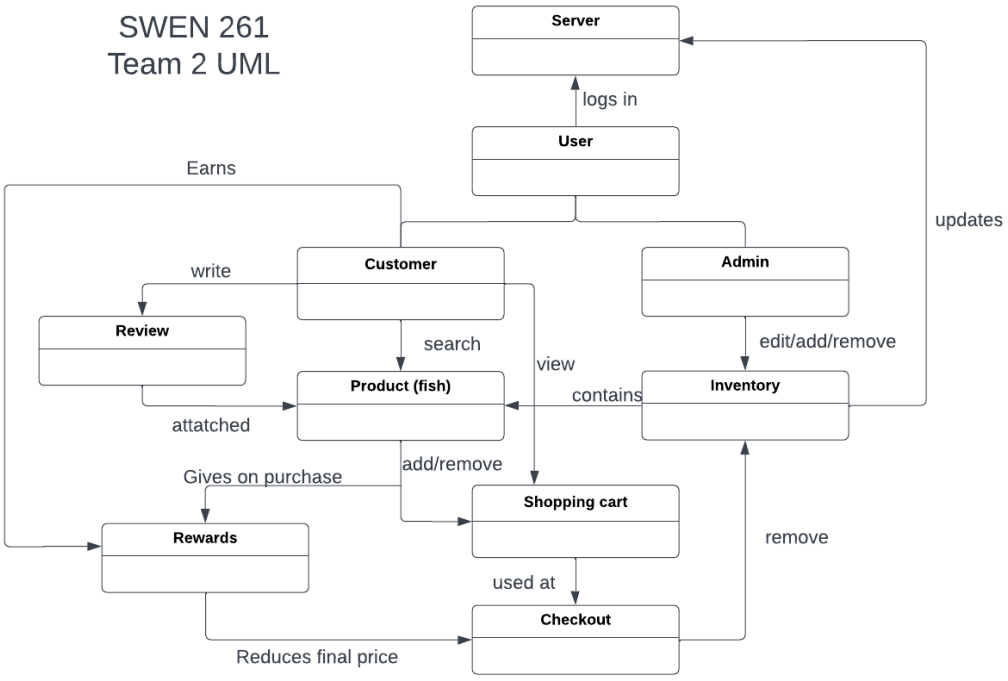
> - *Calculating points for each product*
> - *Integrating it into User and product backends*
> - *Building working rewards points component in angular*

Roadmap of Enhancements

> *Provide a list of top-level features in the order you plan to consider them.*

Application Domain

This section describes the application domain.



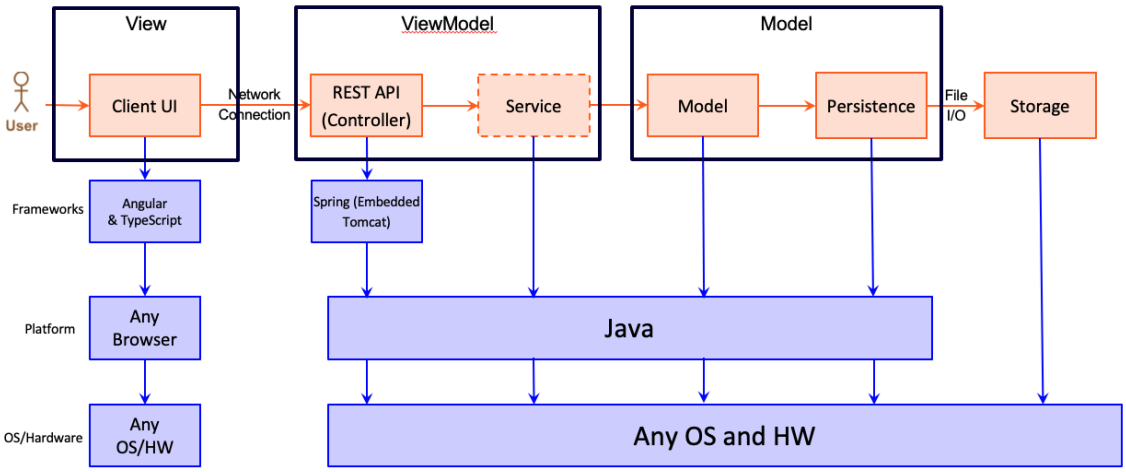
> *Provide a high-level overview of the domain for this application. You can discuss the more important domain entities and their relationship to each other.*

Architecture and Design

This section describes the application architecture.

Summary

The following Tiers/Layers model shows a high-level view of the webapp's architecture.



The e-store web application, is built using the Model–View–ViewModel (MVVM) architecture pattern.

The Model stores the application data objects including any functionality to provide persistance.

The View is the client-side SPA built with Angular utilizing HTML, CSS and TypeScript. The ViewModel provides RESTful APIs to the client (View) as well as any logic required to manipulate the data objects from the Model.

Both the ViewModel and Model are built using Java and Spring Framework. Details of the components within these tiers are supplied below.

Overview of User Interface

This section describes the web interface flow; this is how the user views and interacts with the e-store application.

> *Provide a summary of the application's user interface. Describe, from the user's perspective, the flow of the pages in the web application.*

View Tier

> *Provide a summary of the View Tier UI of your architecture. Describe the types of components in the tier and describe their responsibilities. This should be a narrative description, i.e. it has a flow or "story line" that the reader can follow.*

> *You must also provide sequence diagrams as is relevant to a particular aspects of the design that you are describing. For example, in e-store you might create a sequence diagram of a customer searching for an item and adding to their cart. Be sure to include an relevant HTTP reuqests from the client-side to the server-side to help illustrate the end-to-end flow.*

ViewModel Tier

> *Provide a summary of this tier of your architecture. This section will follow the same instructions that are given for the View Tier above.*

> *At appropriate places as part of this narrative provide one or more static models (UML class diagrams) with some details such as critical attributes and methods.*

Model Tier

> *Provide a summary of this tier of your architecture. This section will follow the same instructions that are given for the View Tier above.*

> *At appropriate places as part of this narrative provide one or more static models (UML class diagrams) with some details such as critical attributes and methods.*

Static Code Analysis/Design Improvements

> *Discuss design improvements that you would make if the project were to continue. These improvement should be based on your direct analysis of where there are problems in the code base which could be addressed with design changes, and describe those suggested design improvements.*

> *With the results from the Static Code Analysis exercise, discuss the resulting issues/metrics measurements along with your analysis and recommendations for further improvements. Where relevant, include screenshots from the tool and/or corresponding source code that was flagged.*

Testing

> *This section will provide information about the testing performed and the results of the testing.*

Acceptance Testing

> *Report on the number of user stories that have passed all their acceptance criteria tests, the number that have some acceptance criteria tests failing, and the number of user stories that have not had any testing yet. Highlight the issues found during acceptance testing and if there are any concerns.*

Unit Testing and Code Coverage

> *Discuss your unit testing strategy. Report on the code coverage achieved from unit testing of the code base. Discuss the team's coverage targets, why you selected those values, and how well your code coverage met your targets. If there are any anomalies, discuss those.*