



FEUP FACULDADE DE ENGENHARIA
UNIVERSIDADE DO PORTO

P1 - Online/Web Store

Project Specification

Sistemas de Informação
MIEIC - 2017/2018

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Project Overview

The project consists of the development of a web application for the management of an online book store with no physical stores.

This application allows the customer the usual shopping cart and purchase order registration, access to the product catalog, the inquiry of inventory by category, the selection of the most convenient warehouse, the track of status of its order, amongst other functionalities.

There will also be information on the sales, purchases, inventory, billing and other relevant information. This will be showed for the web application administrators only.

This application will use ERP Primavera as a backoffice for the sales process and stock management. The communication between the app and the ERP will be done through a Web API in C#.

Functionalities/Features

Product view

- **PRODUCT_INFORMATION**
 - Present to the user information about the product being shown on the page: title, subtitle, author, rating, edition, type, language, if in stock, list of available warehouses, if in discount, price, some other product details like the ISBN code, editor and number of pages and book synopsis.
 - This has the goal of informing the client about the product so the client can know if they're interested in the product.
- **PRODUCT_BUY**
 - Button to be used in order to proceed with the purchase of the product.
 - This has the goal of leading the client into the purchase action, giving value to both the client and the business.
- **PRODUCT_RELATED**
 - Present a small catalogue of books of the same author with the option of clicking on them to open their product page.
 - This has the goal of presenting more options that can be appealing to the customer, possibly leading the customer to buying more products.
- **PRODUCT_WISH**
 - Button to be used in order to add the product to the personal wish list.
 - This has the goal to bookmark products the client is interested in so he can revisit them later.

Customer profile

- **CUSTOMER_INFORMATION**
 - Present to the user information about him in the system: name, birthdate, email, phone number, shipping address and NIF (VAT identification number in Portugal).
 - This has the goal of allowing the customer to be able to review the information and correct it in case of a mistake using the edit functionality.

- CUSTOMER_INFORMATION_EDIT
 - A button to the user to proceed to a screen for editing user information.
 - This will allow the user to correct wrong information about themselves in the system.
- CUSTOMER_ORDERS
 - Present to the user information about their orders created in the system: order number, total price, date of payment, shipping method, shipping address, billing address, estimated time of arrival, order state and order's items.
 - This has the goal of the customer being able to see an overview of their orders.
- CUSTOMER_ORDER_PROBLEM
 - A button for the user to report a problem with the order.
 - With this, the business can serve the customer, solve their problem and improve the service.

Product Catalogue

- CATALOGUE_SUGGESTIONS
 - Show trendy products to the user.
 - This will show potentially interesting products to the user, causing the user to potentially buy listed products.
- CATALOGUE_BESTSELLERS
 - Show products with the most sales to the user.
 - This will show potentially interesting products to the user, causing the user to potentially buy listed products.
- CATALOGUE_CATEGORIES
 - Show products of a specific category.
 - This will show potentially interesting products to the user, causing the user to potentially buy listed products.
- CATALOGUE_SEARCH
 - Show products from a specific keyword.
 - This will show potentially interesting products to the user, causing the user to potentially buy listed products.

Shopping Cart

- **SHOPPING_PRODUCT**
 - Show the products the user has selected to place in the shopping cart with some information: book title, subtitle, if it has discount, price, IVA (VAT) and availability.
 - This allows the user to review the chosen products and adjust the quantities before paying, allowing for a better user experience.
- **SHOPPING_SUMMARY**
 - Summary data for the selected products: Number of products, price of the products, price of the shipping and total price.
 - This is a more summarized review of the products for the user.
- **SHOPPING_CHECKOUT**
 - Button to proceed to the payment area.
 - This is an outward path of the whole website, allowing the user to pay for the selected products.

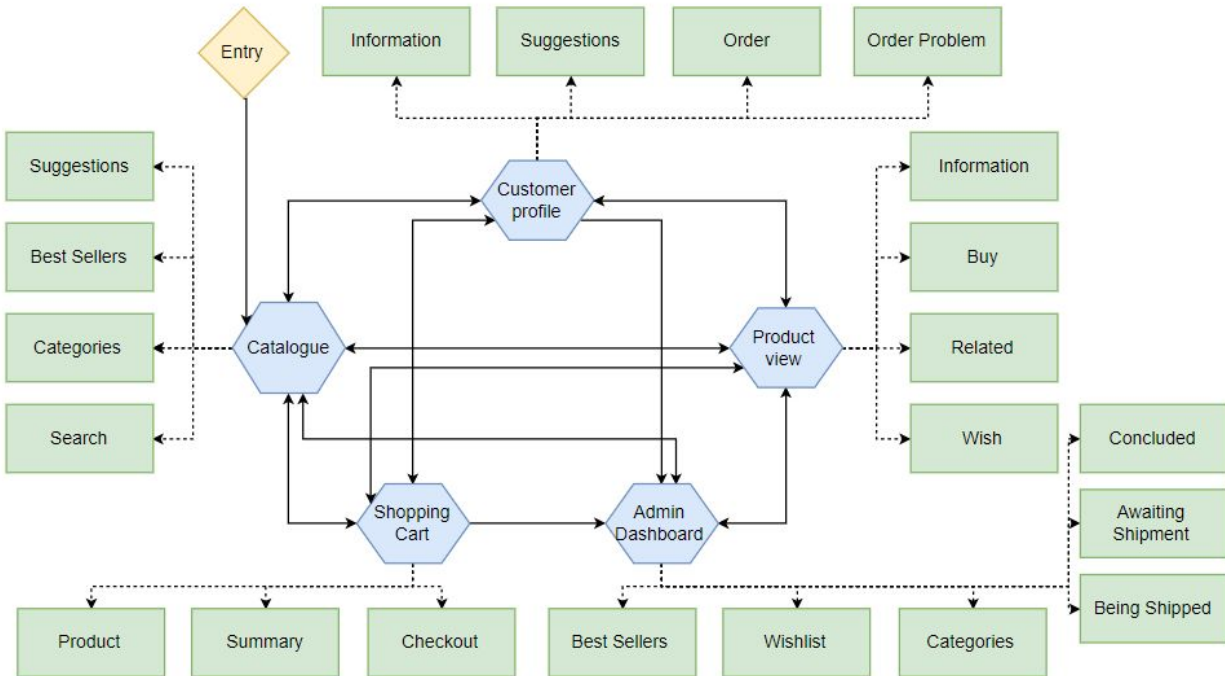
Administrator Dashboard

- **ADMIN_DASHBOARD_BESTSELLERS**
 - Show the best selling products.
 - This will show the admin the most interesting products to the users with their respective sales volume and revenue, so that he can make informed decisions in the future.
- **ADMIN_DASHBOARD_TOP_WISHLIST**
 - Show the products that appear more in wishlists.
 - This will show the admin what are the products that the users most intend to buy with their respective sales volume and revenue, so he can make informed decisions in the future.
- **ADMIN_DASHBOARD_BEST_CATEGORIES**
 - Show the best selling categories.
 - This will show the admin the most interesting categories to the users with their respective sales volume and revenue, so that he can make informed decisions in the future.
- **ADMIN_DASHBOARD_ORDERS_AWAITING_SHIPMENT**
 - Show the total orders awaiting shipment and their respective value.

- This will show the admin the value of the products currently awaiting shipments with their respective sales volume and revenue, so that he can make informed decisions in the future.
- ADMIN_DASHBOARD_ORDERS_BEING_SHIPPED
 - Show the total orders being shipped and their respective value.
 - This will show the admin the value of the products currently being shipped with their respective sales volume and revenue, so that he can make informed decisions in the future.
- ADMIN_DASHBOARD_ORDERS_CONCLUDED
 - Show the total concluded orders and their respective value.
 - This will show the admin the value of the products shipments concluded with their respective sales volume and revenue, so that he can make informed decisions in the future.

Paths Diagram

Legenda



Information Architecture (core views)

1. Product view

ID Core View:

PRODUCT_VIEW

User and Business Goals

- | | |
|--------------------|------------------------|
| User | Business |
| - Product overview | - Promote/Sell product |
| - View/Buy product | |

Inward paths/ Trigger Words:

- External search
- Internal search
- Catalogue suggestion
- Product in the shopping cart (SHOPPING_CART view)
- Product in an order made by the customer (CUSTOMER_PROFILE view)

The wireframe illustrates a product view page for a book. It features a header with a search bar, navigation links, and user icons. The main content area is divided into several sections: a book cover, title, subtitle, author, ratings, edition details, stock status, and price. Below this is an 'About the Product' section with a synopsis and details. At the bottom, there's a 'From the same author' section with a grid of book covers and titles. The footer contains 'Contact Us' and 'Admin' links.

Outward paths/ Call to Action:

- Add product to the customer's shopping cart
- Add product to the customer's wishlist
- Product suggested
- Provide the user detailed information about the product

Elements of the core:

- | | |
|-------------------------------------|---------------------------------------------|
| - Panel_001 - Product overview | - Panel_003 - Product suggestions |
| - Image_001 - Product cover image | - Button_001 - Add product to wishlist |
| - Panel_002 - Product detailed info | - Button_002 - Add product to shopping cart |

2. Customer Profile

ID Core View:

CUSTOMER_PROFILE

Inward paths/ Trigger Words:

- Sign in
- Navigation Bar

User and Business Goals

User

- Review and change personal information
- Contact administrators about problems with an order
- Track the orders made on the website
- Rate products

Business

- Provide online support to know about problems with the orders
- Provide information about the orders tracking

Outward paths/ Call to Action:

- Edit profile information
- Contact administrators about problems with an order
- Provide the customer detailed information about the orders made and allow their tracking
- Rate products (if order state is "delivered")

Website Logo Search bar Categories

Personal Information

Name:
Birthdate:
Email:
Phone number:
Product shipping address:
Billing address:
NIF:

Edit Information

Order Information and Tracking

Order number:
Total price:
Payment received on day:
Shipping method:
Shipping address:
Billing address:
Estimated arrival time:
Order tracking state:

Products Ordered:
1. Book Title (Subtitle)
2. Book Title (Subtitle)
3. Book Title (Subtitle)
4. Book Title (Subtitle)

Problem with the order?

Order number:
Total price:
Payment received on day:
Shipping method:
Shipping address:
Billing address:
Estimated arrival time:
Order tracking state:

Products Ordered:
1. Book Title (Subtitle)
2. Book Title (Subtitle)
3. Book Title (Subtitle)
4. Book Title (Subtitle)

Problem with the order?

Contact Us Admin

Elements of the core:

- Panel_001 - Customer information
- List_001 - Orders information
- Button_001 - Edit customer's information

- Button_002 - Problem with order

3. Product Catalogue

ID Core View:

CATALOGUE_VIEW

Inward paths/ Trigger Words:

- Navigation Bar
- Internal Search
- Sign in

User and Business Goals

User

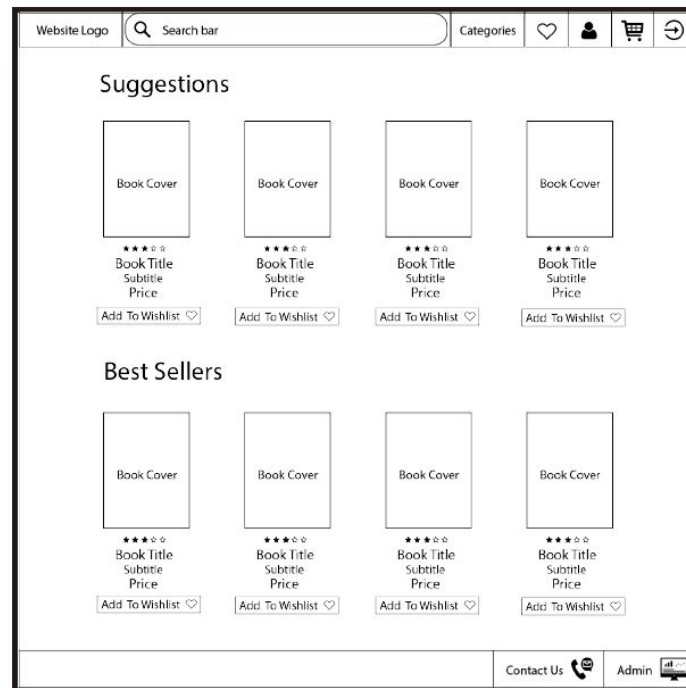
- See products according to the search made.
- Save a product in the wishlist to buy it later

Business

- Promote products

Outward paths/ Call to Action:

- Product View (PRODUCT_VIEW)
- Provide access to product pages that go according to the search made



Elements of the core:

- Panel_001 - Suggestions
- Panel_002 - Best Sellers
- Panel_003 - Search bar

- Button_001 - Add product to wishlist

4. Shopping Cart

ID Core View:

SHOPPING_CART

User and Business Goals

User

- See the list of products that are going to be purchased
- Change the quantity of the items being purchased
- Purchase the items (Checkout)

Business

- Sell the products

Inward paths/ Trigger Words:

- Navigation Bar

Shopping Cart	
Units: - 1 +	Book Title Subtitle Discount? % IVA In stock? Price
Units: - 1 +	Book Title Subtitle Discount? % IVA In stock? Price
Units: - 1 +	Book Title Subtitle Discount? % IVA In stock? Price
Summary	
(nr) Products	Total price of products
Estimated shipping	Total price of shipping
Total	Total price to pay
Checkout	

Outward paths/ Call to Action:

- Product View (PRODUCT_VIEW)
- Payment/Checkout
- Change the number of units of each item

Elements of the core:

- Table_001 - Products on the shopping cart
- Table_002 - Total price of the order
- Button_001 - Checkout

5. Administrator Dashboard

ID Core View:

ADMIN_DASH

User and Business Goals

Business

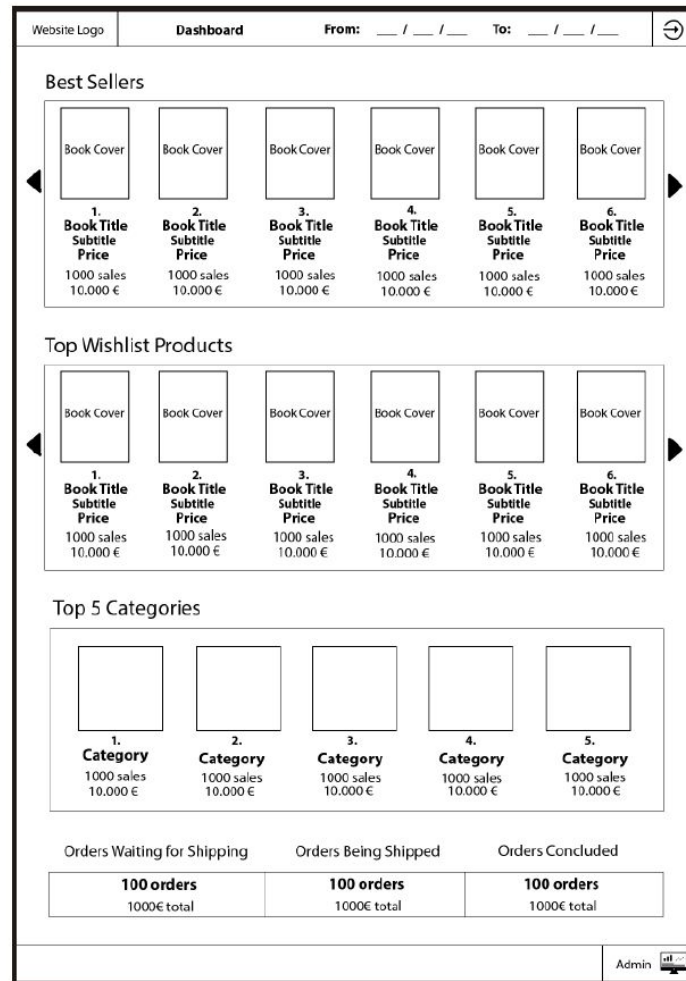
- Keep track of the sales volume and revenue
- Know what items are more popular
- Have an overview of the orders

Inward paths/ Trigger Words:

- Footer
- Sign in (as admin)

Outward paths/ Call to Action:

- Product View (PRODUCT_VIEW)



Elements of the core:

- List_001 - Best selling products
- List_002 - Top products on wishlists
- List_003 - Top 5 categories with the most sales

- Panel_001 - Orders information

Interoperability with Primavera

Webservice ID	Webservice Description	Related Core View(s)	Route + Verbs	Input Example	Expected Output
get_product	Return the product with the specified ID	PRODUCT_VIEW and SHOPPING_CART	GET <ip>/api/product/{id}	ProductID	{ "product" { "id": "x", "title": "x", "subtitle": "x", "author": "x", "edition": "x", "type": "x", "language": "x", "discount": "x", "price": "x", "isbn": "x", "editor": "x", "pages": "x", "synopsis": "x" } "warehouses" { "1": "x", "2": "x", "n": "x" } }
get_product_suggested	Return the products related to the product with the specified ID	PRODUCT_VIEW	GET <ip>/api/product/related/{id}	ProductID	{ "suggested_products" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x" }, "2" { "id": "x", "title": "x", "subtitle": "x", "price": "x" }, ... "4" } }
get_client_orders	Return the client orders	CUSTOMER_PROFILE	GET <ip>/api/client/orders/?userId={userId}	UserID and Page	{ "orders" { "1"

			}&page={page}		<pre> { "id": "x", "price": "x", "payment_date": "x", "shipping_method": "x", "shipping_address": "x", "billing_address": "x", "eta": "x", "trackingState": "x" { "products_ordered" { "1" { "id": "x", "title": "x", "subtitle": "x" }, "2" { "id": "x", "title": "x", "subtitle": "x" }, ... "n" { "id": "x", "title": "x", "subtitle": "x" } } }, ... "5" { "id": "x", "price": "x", "payment_date": "x", "shipping_method": "x", "shipping_address": "x", "billing_address": "x", "eta": "x", "trackingState": "x" { "products_ordered" { "1" { "id": "x", "title": "x", "subtitle": "x" }, "2" { "id": "x", "title": "x", "subtitle": "x" }, ... "n" { "id": "x", "title": "x", "subtitle": "x" } } } } } </pre>
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					<pre> "subtitle": "x" } } } } </pre>
get_suggested	Return the suggested products	CATALOGUE_VIEW	GET <ip>/api/product/suggested	N/A	<pre> { "suggestions" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } }, ... { "4" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } } } </pre>
get_best_sellers	Return the best seller products	CATALOGUE_VIEW	GET <ip>/api/product/best_sellers	N/A	<pre> { "best_sellers" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } }, ... { "4" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } } } </pre>
get_category	Return the products of a set category	CATALOGUE_VIEW	GET <ip>/api/product/?category={category}&page={page}	Category and Page	<pre> { "category" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } } } </pre>

					<pre> } }, ... { "8" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } } } </pre>
get_search	Get the products of a set search	CATALOGUE_VIEW	GET <ip>/api/product/?expression={expression}&page={page}	Expression and Page	<pre> { "search" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } }, ... { "8" { "id": "x", "title": "x", "subtitle": "x", "price": "x" } } } </pre>
add_sale	Checkout the order made by the client	SHOPPING_CART	PUT <ip>/api/client/id	User ID	N/A
get_admin_best_sellers	Get the best selling products	ADMIN_DASH	GET <ip>/api/admin/best_sellers?startDate="yyyy-mm-dd"&endDate="yyyy-mm-dd"	StartDate and EndDate	<pre> { "best_sellers" { "1" { "id": "x", "title": "x", "subtitle": "x", "price": "x", "sales": "x", "value": "x" } }, ... { "10" { "id": "x", "title": "x", "subtitle": "x", "price": "x", "sales": "x", "value": "x" } } } </pre>

					<pre> } } } </pre>
get_admin_best_categories	Get the top sold categories	ADMIN_DASH	GET <ip>/api/admin/best_categories?startDate="yyyy-mm-dd"&endDate="yyyy-mm-dd"	StartDate and EndDate	<pre> { "top_categories" { "1" { "name": "x", "sales": "x", "value": "x" } }, ... { "5" { "name": "x", "sales": "x", "value": "x" } } } </pre>
get_admin_orders_being_shipped	Get stats on the orders being shipped	ADMIN_DASH	GET <ip>/api/admin/being_shipped?startDate="yyyy-mm-dd"&endDate="yyyy-mm-dd"	StartDate and EndDate	<pre> { "orders_being_shipped" { "total_sales": "x", "total_value": "x" } } </pre>
get_admin_orders_awaiting_shipment	Get stats on the orders awaiting shipment	ADMIN_DASH	GET <ip>/api/admin/awaiting_shipment?startDate="yyyymm-dd"&endDate="yyyymm-dd"	StartDate and EndDate	<pre> { orders_awaiting_shipping { "total_sales": "x", "total_value": "x" } } </pre>
get_admin_orders_concluded	Get stats on the concluded orders	ADMIN_DASH	GET <ip>/api/admin/orders_concluded?startDate="yyyy-mm-dd"&endDate="yyyy-mm-dd"	StartDate and EndDate	<pre> { orders_concluded { "total_sales": "x", "total_value": "x" } } </pre>