

PizzaCore



A product developed by
Ishpal Mattu, Brent Pereira, Maxence Roy, and Liam Scalzulli

Stakeholders

Developers:

- Ishpal Mattu (Programmer)
- Brent Pereira (Programmer)
- Maxence Roy (Programmer, Scrum Master)
- Liam Scalzulli (Programmer)

Customers / Product Owners:

- Claudiu Scotnosis
- Talib Hussain

Project Goals

Customer goals from the start included:

- A well-designed application that handles online ordering and payments
- Sales monitoring and statistics
- Employee creation and management

Our team had a few goals in mind when setting out to build to project:

- Learn the ASP.NET framework and apply it to a production application
- Collaborate using the Agile methodology
- Practice elaborate code review and feedback

Methodology

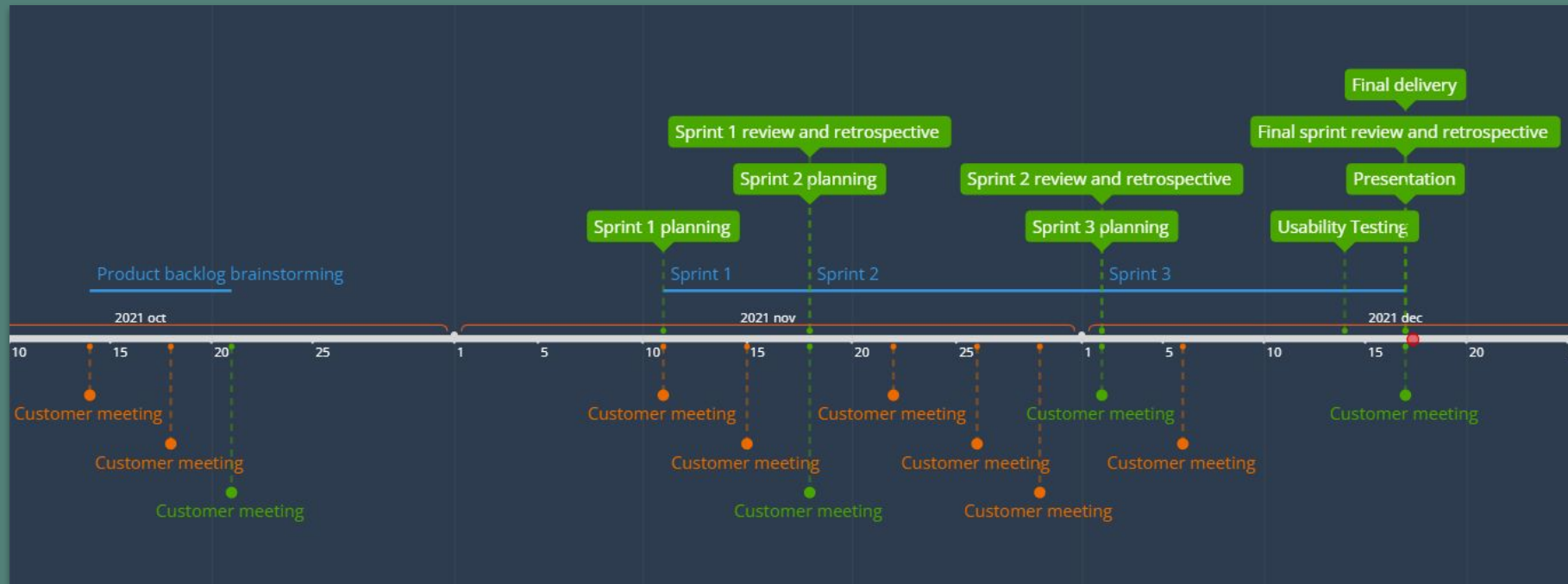
Our team used the Agile methodology to develop this application. This consisted of standup meetings 2-3 times a week and sprint planning once a week.

Our meetings consisted of mainly asking the following questions:

- What was worked on previously to this meeting?
- What will be worked on after this meeting?
- What tasks are currently blocked?

We used the Azure Devops platform to manage our sprint and backlog boards in addition to our pipeline. We used GitHub as the git client for pull requests and code reviews.

Timeline



Project Requirements

Pages & Features

- Home page with carousel
- Contact page
- Job vacancies page
- COVID-19 safety page
- Menu page
- Checkout page
- Shopping cart
- Footer on every page

Accounts

- Customer
 - Order as a guest or with an account
 - Email confirmation for orders
- Owner / Manager
 - Create employees and assign them roles
 - Dashboard with business information
 - View all order status
- Front-Service Person / Cook / Delivery Person
 - Place orders and update their status

Software Design

The main technology stack used to develop this project was:

- Razor templating engine (Frontend)
- EF Core (ORM)
- SQL Server (Database)
- ASP.NET Core (MVC Framework)

The design pattern primarily applied was the Model-View-Controller design pattern (MVC) which helped to manage the increasing complexity of our application via the modularization of code and the separation of concerns.

Moreover, we employed the usage of the repository design pattern to encapsulate our data access logic in order to ensure ease of code maintainability.

Lastly, Authentication was managed by ASP.NET Identity and we employed a role-based authorization scheme to handle multiple user types.

UI Design (1/2)

Consistent color scheme

- **Light** background
- **Green** for headers and footers
- **Red** for buttons

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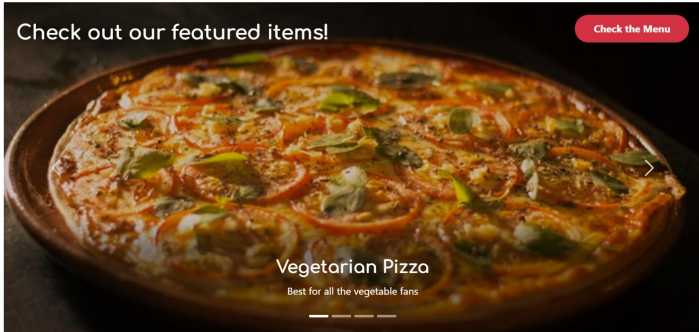
 [About](#) [Contact Us](#) [Menu](#) [Careers](#) [Profile](#)

Hello maxence.roy3@gmail.com! [Logout](#) [English](#) [Cart](#)

Welcome to PizzaCore!

Check out our featured items!

[Check the Menu](#)



Vegetarian Pizza
Best for all the vegetable fans

[Home](#) [About](#) [Contact Us](#) [Careers](#) [COVID-19](#)

Pizzas



Vegetarian Pizza
Best for all the vegetable fans

Small **\$11.99**

[Add](#)



Traditional Cheese Pizza
The most enjoyed pizza of all time, just cheese!

Small **\$10.40**

[Add](#)



Super Cheese Pizza
The super cheesy pizza best for cheese lovers

Small **\$10.99**

[Add](#)



Pepperoni Pizza
For all pepperoni lovers! Can't get wrong with the traditional pepperoni pizza!

Small **\$10.99**

[Add](#)



Specialty Egg Pizza



All-dressed Pizza

Your Cart

	Large Traditional Cheese Pizza	1 \$15.50
	Small Unsalted Fries	2 \$5.98
	OS Fresh Diet Coke	1 \$1.50
Sub Total:		\$22.98
Taxes:		\$3.44
Total:		\$26.42
Checkout (4 items)		

UI Design (2/2)

Interactive buttons

- Animations
- Visibly disabling buttons

Sticky regions

- Prevents constantly scrolling

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[Register](#) [Login](#) [English](#) [Cart](#)

	Medium ALL-DRESSED PIZZA Can't go wrong with all-dressed pizza! Remove	Quantity 1	Item Total \$14.99
	OS FRESH DIET COKE Deliciously refreshing diet coke Remove	Quantity 1	Item Total \$1.50
	Large SALTED FRIES Traditional salted fries for everyone Remove	Quantity 1	Item Total \$5.99

2. Information

First Name

Last Name

Email

Order Summary

Sub total:

\$22.48

GST:

\$1.12

QST:

\$2.24

Total:

\$25.84

[PLACE ORDER](#)

[Check the Menu](#)

Your Cart



Small
Pepperoni Pizza

×

\$10.99

− 1 +

Sub Total: \$10.99

Taxes: \$1.65

Total: \$12.64

[Checkout \(1 items\)](#)

Usability Analysis

2 forms

- Customer form (7 questions, 3 respondents)
- Employee form (7 questions, 2 respondents)

Total questions: 10 (some are shared between each form)

Total respondents: 5

Questions are listed in the following slides.



Usability Analysis - Overall impression

What was your overall impression of the website?

3 responses

I enjoyed the design of the page and the colors. The menu and checkout were very convenient to use.

It was nice and easy to use. I liked how the featured items were shown to me right away when I opened the website. Opening hours, phone number & location are easy to find. The website looks good overall!

I found the website to be polished and consistent. The colour theme persists throughout each of the available pages and the design is streamlined.

Key Action: Keep the current colour scheme and website design.

What was your overall impression of the website?

2 responses

The site is very user friendly. It was easy to navigate and I didn't have a hard time finding anything that I was looking for.

I found that the website looked very professional due to its clean design and appealing color scheme.

Usability Analysis - Home Page

What was your impression of the home page?

3 responses

The home page looks a bit empty but I like how it shows featured items and how clicking them brings you to the menu.

It was simple and well designed.

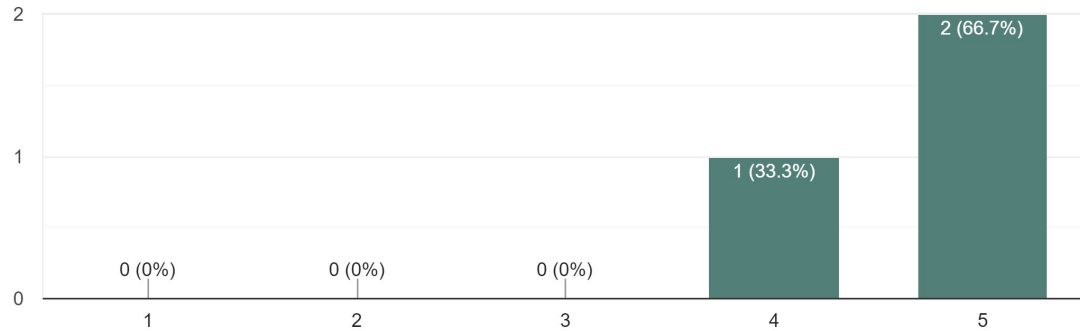
The home page is very straight to the point and prompted me to check out the menu. Popular pizzas are looping infinitely, and I was easily able to access every page on the website via the navigation bar or the footer.

Key Action: Add more information (featured items, delivery options, etc.) in the home page.

Usability Analysis - Menu Page

On a scale of 1-5, how easy did you find navigating the menu page?

3 responses

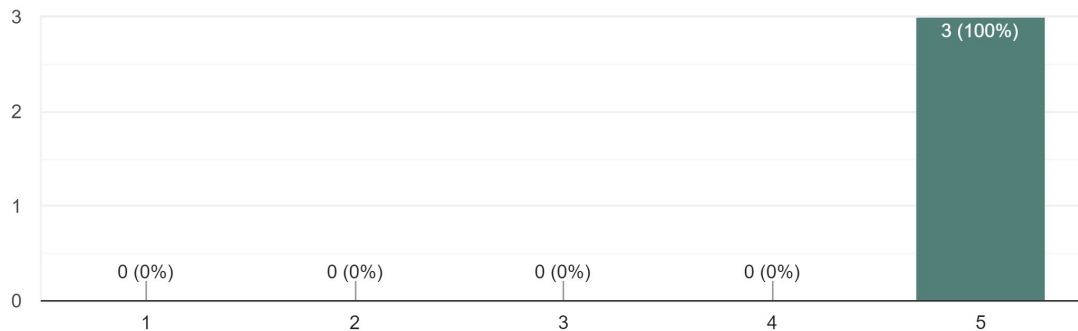


Key Action: Keep the page as it is.

Usability Analysis - Checkout Page

On a scale of 1-5, how easy did you find navigating the checkout page?

3 responses

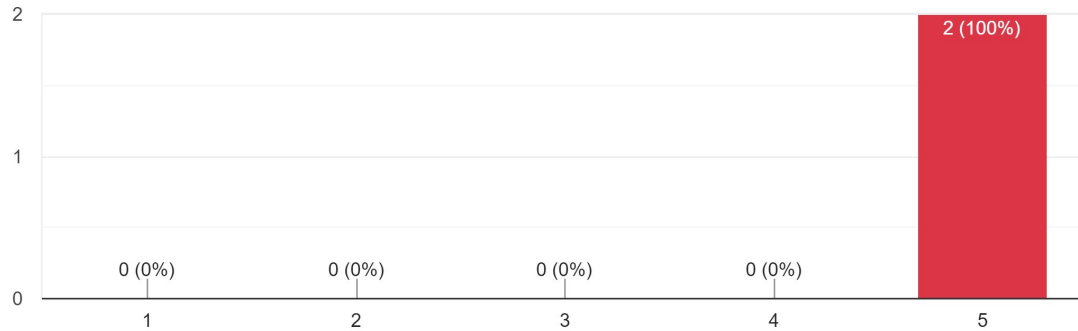


Key Action: Keep the page as it is.

Usability Analysis - Employee Login

On a scale of 1-5, how easy did you find logging into your employee account?

2 responses



Key Action: Keep the login process as it is.

Usability Analysis - Dashboard

What was your impression of the dashboard?

2 responses

I found that the dashboard did a good job of displaying all relevant data in an organized way.

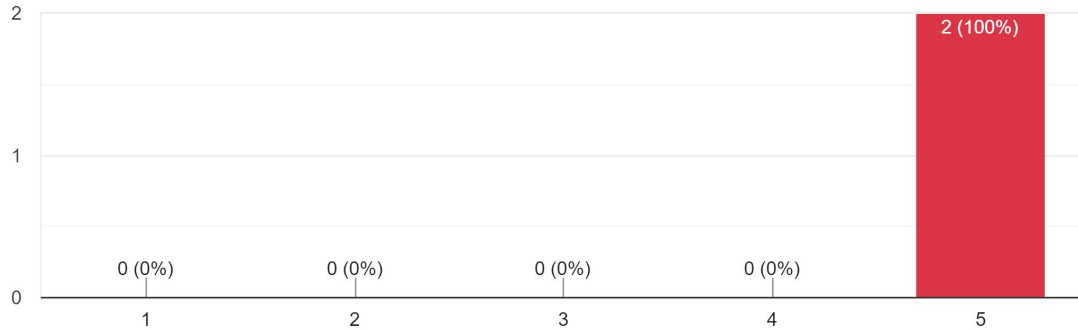
At first I found that the dashboard was slightly overcrowded but after taking a second to process all of the information that was included in it I found that it was really informative.

Key Action: Give every section a bold header.
(DONE)

Usability Analysis - Adding new employees

On a scale of 1-5, how easy did you find adding new employees?

2 responses



Key Action: Keep the page as it is.

Usability Analysis - Good features

Which feature improved your user experience the most?

3 responses

I like how the cart is always visible when ordering in the menu. I also like how you can change the amount of items in the cart so you don't have to navigate the menu multiple times.

The simplicity of the menu and easy to checkout and order. I also liked the fact that I can see what I put in the cart on the side instead of clicking on the cart icon.

When I click the 'cart' icon I am able to continue as a guest, which is critical for me, as I dislike making a new account for each pizza restaurant I order from.

Key Action: Keep the cart and checkout process as it is.

Which feature improved your user experience the most?

2 responses

The dashboard because it allowed me to view all business metrics from one place.

The ability to easily add, remove, and edit employees through the manager page.

Usability Analysis - Causes of frustration

What, if anything, caused you frustration?

3 responses

I didn't like that the page refreshes every time an item is added. I had to scroll every time I want to add something.

When I add something to the cart, it scrolls back to the top. The about page, and some menu pictures don't really look nice. Maybe redesign it. When logging in, the Google button doesn't look like it is to log in with google.

Not having the translation work in French, since PizzaCore is located in Montreal, a bilingual province, it would be ideal that the website could be translated in French.

What, if anything, caused you frustration?

2 responses

I found that my experience with the website was seamless and I wouldn't say that there was anything that caused me frustration.

There wasn't really any aspect of the site that caused me frustration.

Key Actions:

- After adding a new item to the cart, the menu page should be refreshed at the same scroll position as before.
- Find better pictures for items (higher quality, consistent resolution).
- Put the Google logo next to the Google login button.
- Implement the French version of the website.

Usability Analysis - Improvements

If you could add or change one thing in our website, what would it be and why?

3 responses

I would make it so you can change the size of an item through the cart. Because if you pick the wrong size you need to remove the item then add it again.

Fixing the Google button so it looks like it is a "log in using google".

On the home page I would make it so that the carousel transitions don't include an intermediary screen and just transition directly to the next image. It isn't pleasant to look at an intermediate screen and would be nicer if it transitioned directly to the next image.

If you could add or change one thing in our website, what would it be and why?

2 responses

One feature that I would add would be to have forms pre-fill information when I am signed in.

I would condense some of the longer pages so that less scrolling would be needed to navigate the page.

Key Actions:

- Allow the user to change the size of an item via the cart.
- Put the Google logo next to the Google login button.
- Remove the intermediary screens on the carousel.
- Add auto-fill for forms when logged in. (DONE)
- Condense form pages to reduce height.

Key Customer Feedback

Our product was well received on every iteration.

Feedback on the overall design, as well as the cart and checkout implementation, were very positive. The customer liked our modular approach for each sprint.

Most critiques were small and centered around increasing clarity and ease of navigation

Ex: Not specifying file size limit on file upload; Not being able to click items on the home page

Issues like these were promptly fixed at the start of the sprint following the review.

Next Steps

1. Actual payment system
2. Fix causes of frustration for the customer
3. User mentioned improvements
4. Current deals - attract more customers
5. Sales report - better idea for what ingredients to buy
6. Order history for customers - order same thing quicker + review
7. Download order receipt from order history
8. Customers track order - gives some feedback
9. Customer can “save” items - better user experience

What, if anything, caused you frustration?

3 responses

I didn't like that the page refreshes every time an item is added. I had to scroll every time I want to add something.

When I add something to the cart, it scrolls back to the top. The about page, and some menu pictures don't really look nice. Maybe redesign it. When logging in, the Google button doesn't look like it is to log in with google.

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Lessons Learned

Prioritize stories

- Learning the importance of prioritizing essential stories allowed our team to be able to deliver the most valuable product possible to the customer at the end of every sprint.

Coordinate tasks

- Over the course of the development we became more proficient at effectively coordinating tasks in order to help reduce the overall time spent waiting for a story to be completed before another can be started.
- This skill also helped to support autonomy, allowing for team members to work individually and gain mastery while still maintaining a common vision within the team.

Conclusions

Our goal before starting the development of our pizza shop application was to create a well-designed product that can support the needs of both customers, and staff.

We were able to effectively achieve this and continuously delivered a valuable product to our customer through the use of the agile methodology.

We found developing this product very insightful and, through the user and customer feedback, we are certain that it will be useful to the customers of PizzaCore.