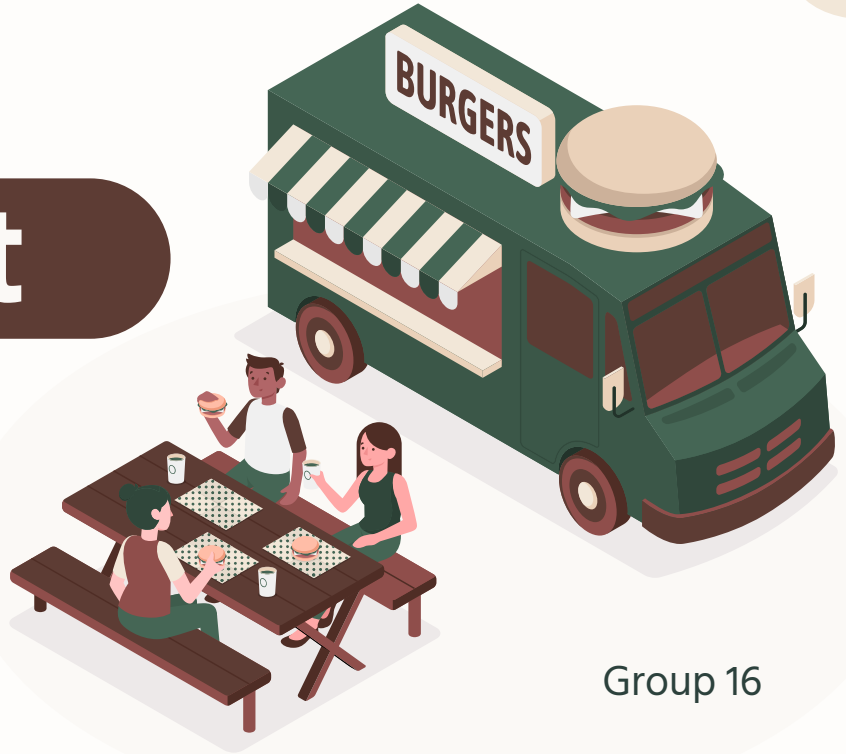
Pocket Market

Final report



Group 16

Index

01

Executive Summary

Mission Statement

Our objective of helping the city's residents could take many forms, but we chose to target **small businesses** with our product. Why? **48%** off all workers in the US are employed by small businesses, and with the current pandemic they need more help than ever. In fact, **38%** of businesses viewed it as unlikely or only somewhat likely that they would be open as of the end of 2020.

User Research

How can we help small businesses? What are their biggest challenges? What's stopping people from buying from them? With these questions in hand, we interviewed small businesses in the Lisbon area, along with their customers. User research was also crucial for our development, giving us feedback on every step of the way to create an app that users would love to have and use.

Bartik, Alexander W. et al "The impact of COVID-19 on small business outcomes and expectations." *Proceedings of the National Academy of Sciences* 117.30 (2020): 17656-17666. Web. 26 Jan. 2022.

Our solution

With input from both owners and customers, a concept appeared: an app that would target one of small businesses' main weaknesses: online presence and recognition. Our app allows users to **quickly and easily find small businesses** to shop from, **online or in person**, and provides **rewards in the form of tokens** to incentivize participation.

Development

We prototyped our app in **Figma** in progressing degrees of fidelity, testing them with users at each increase. With this information, we developed, using **Outsystems**, a fully functional prototype, and tested that too. It is available both as a web preview, and as an Android native app.

02

Background

Our team

João Antunes	João Jorge	Gonçalo	Marta	Roman
Back-End Lead	Front-End Lead	UX Lead	Design Lead	Proj. Manager

Who is our app for?

For our project, we identified that there would be **two major stakeholders** who would benefit the most from using our application:

Customers

People aged from 18 to 29 years old who shop online and on store premises.

Businesses

Small businesses/stores & their employees.

Schedule

November

- Group creation
- Ideation

December

- Project pitch
- Initial user research
- Initial design (low fidelity prototype)

January

- Mid fidelity prototype
- User testing
- High fidelity prototype
- Final prototype

February

- Final presentation
- Final report

03

Overview

Application Context

Our application is called “Pocket Market”, and its main objective is to encourage people to “shop small”. To achieve that, it uses a **reward system**: everytime you shop on a Small Business through the app, and using real money, you receive cryptocurrency (**tokens**) that can be used to make other purchases, also through the app.

The app has two main ways to perform purchases: **online** and **on-site**. When online, the purchase and reward are made through the app. When on-site, it uses a QR-reader to confirm the purchase. To be more accessible, the app also has information on all partner-shops, such as description, evaluation, directions, website, social media and online catalog, when possible and existing.

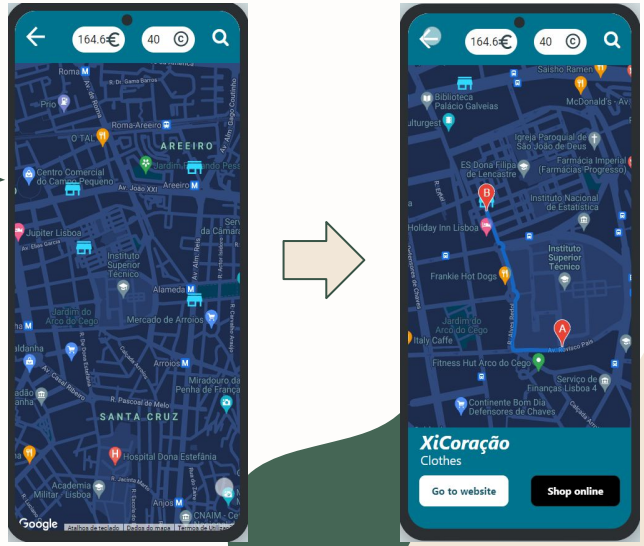
Main Features

Shop Online

This functionality allows the user to select from a list of stores that have an **online purchase system** and access it's **catalog of items**. In each purchase the user can use either **Money** or **Tokens** as a method of payment to buy the selected item.

Shop In-Person

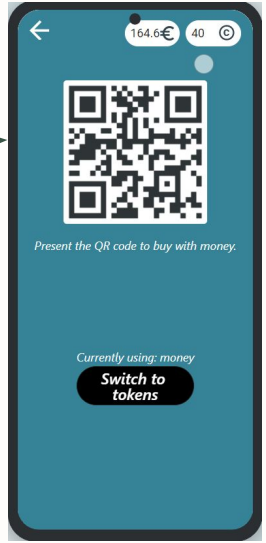
In this feature, the user can access an **interactive map** in which it is possible to see the store icons of **all available stores in the application system**. By clicking a store icon, the application shows the **closest path** from the user's current location and the selected store location. The user can also access the store's website and online catalog (if the store has an online purchase system).



Main Features

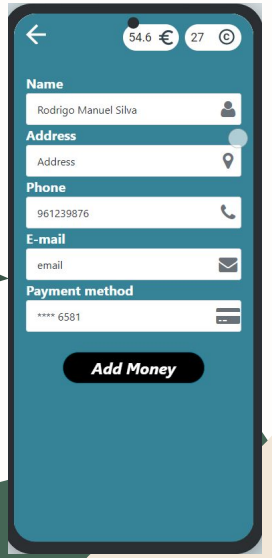
QR-Pay

When **on-site**, this functionality uses a **QR-reader** to confirm the purchase of an item. The user can once again choose between paying with **Money** or **Tokens**.



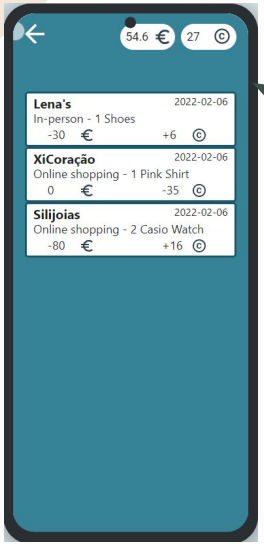
Settings

The user can also access its **profile** and customize all the **available fields**. It is also possible to **add more money** to the user's application **account**.



Transactions

In this feature the user can verify all the **effectuated transactions** and its associated purchase description. This purchases list is supported by our **blockchain** to ensure that all transactions are secure.



04

Process

Initial User Research

We wished to answer the following questions:

- Do people support our idea?
- What is our target audience?
- What should it do?
- Which features will have our app?

For this, we created:

- **Online questionnaires** for the **primary users** and sent it out to mainly people in our target group and gathered **53 responses**.
- **Structured interviews** with primary users (**11 responses**) and small businesses (**5 responses**).

Results conclusions

Customers (Primary Users):

- Users recognize the value of small businesses.
- Don't shop from local stores for various reasons, one of them being due to **higher and expensive prices.**
- Token idea can decrease prices and be the catalyst for more consistent clients.

Stores/Businesses (Secondary Users):

- Suffer from **lack of clients.**
- Are open to a be part of a **purchase reward system**.

Design Objectives

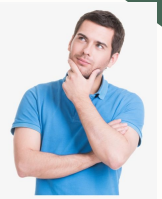
After analysing the previous results we decided that our application should:

- Have an **online** and **in-person** purchase system.
- Allow users to pay both with **money** and **tokens** as a method of payments.
- Allow users to **gain tokens** with each purchase made.

Personas and Scenarios

In this step we created 2 customer personas and 1 small business personna in order to analyse both sides of the application usage. This analysis allowed us to create guidelines on how our app should be.

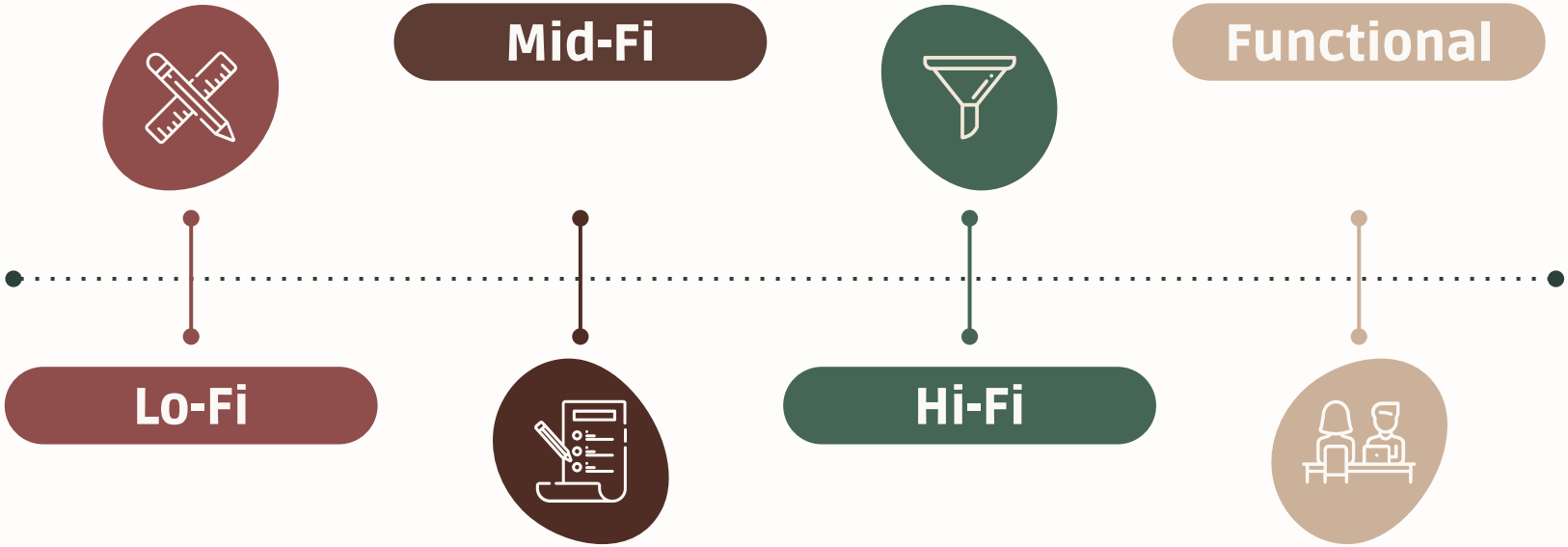
Brad Smith:
"Big store companies over-produce their products and are not eco-friendly, I prefer to buy from small stores."



Amanda North:
"It is very difficult to find stores that sell vegan products. Also these products are more expensive than non-vegan ones."

Nelson Scott (Store owner):
"I'm trying new approaches to attract more clients to my store but so far it has been difficult to create a store online system."

The process



- For the design process we **iteratively** created the **Low-Fi**, the **Mid-Fi**, **High-Fi**, and the **Final Fully Functional** prototypes while gathering user feedback to know how we would later evolve each one the prototypes and which tasks and functionalities were most **effective**, **efficient** and **appealing**.

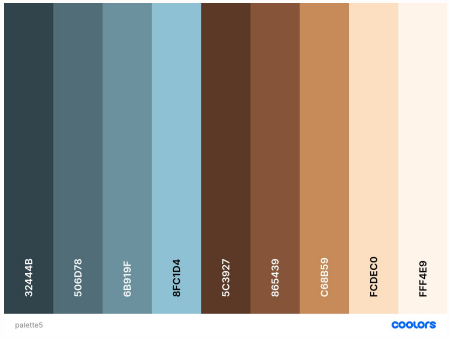
Study of Color

In this step we studied the best **color scheme** to apply to our application design and considered the following options:

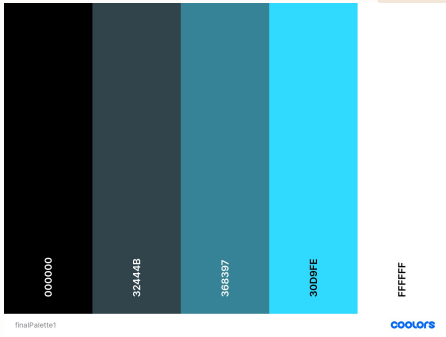
- **Blue**: is used to stimulate feelings like confidence, responsibility, balance and seriousness
- **Brown**: Brown color represents stability, devotion, naturalness, seriousness and warmth. It is generally associated with soil/land.
- Decided on **Blue** and **Brown**: Blue is used to emphasize calmness and confidence in the services and products that you receive and Brown for stability, devotion, naturalness and warmth, all characteristics of Small Business products and user service.

Color Pallets

Initial Pallet:



Final Pallet:



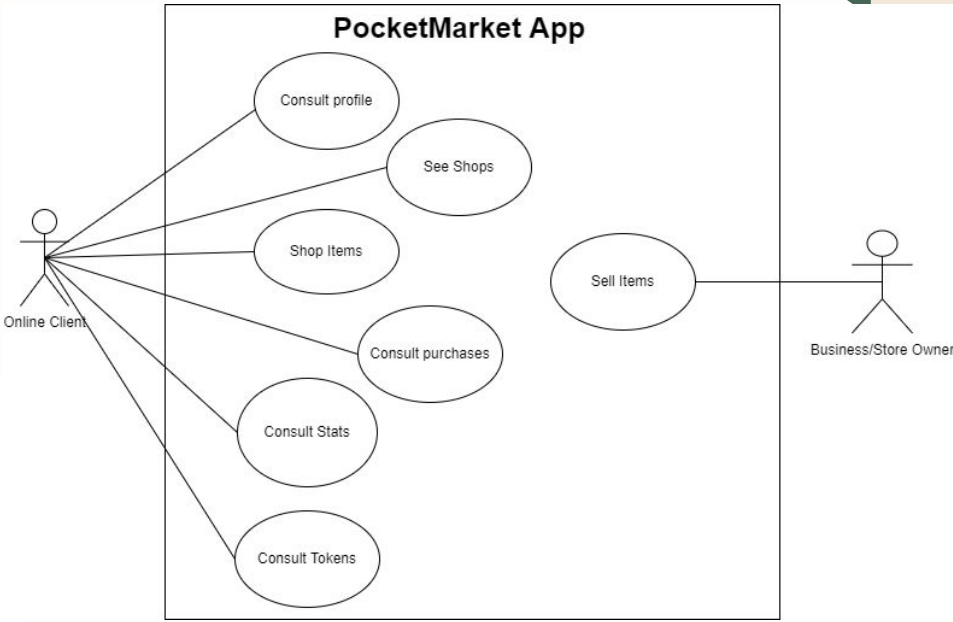
Changes:

- Removed Brown because it made the application dull.
- Brighter tones of Blue to make the application more appealing.
- Black and White to make it more modern.

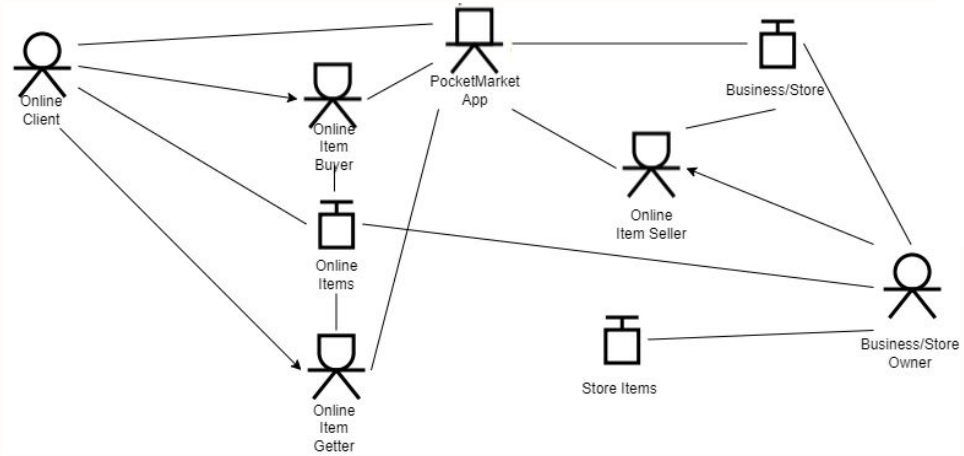
Functionalities choice

While taking into consideration our initial user research, it was time to determine which functionalities the application would have. For this purpose we performed a **Stereotypical** results synthesization and developed a **Use Cases** model and **User Roles** model.

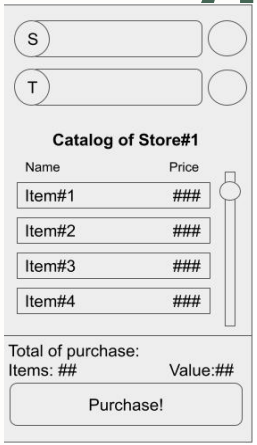
Use Cases

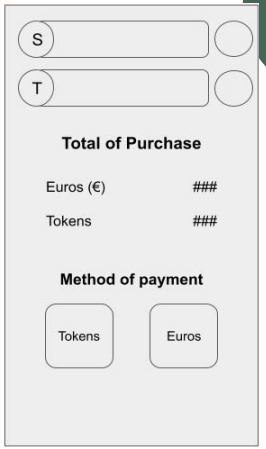


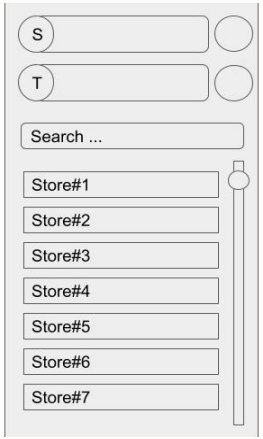
User Roles

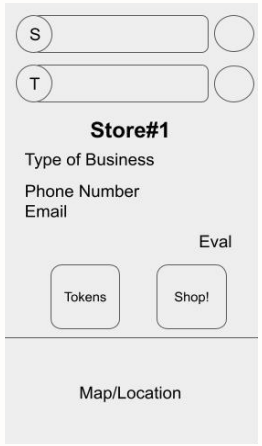


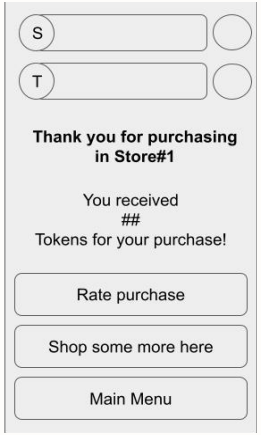
Low-Fidelity Prototype











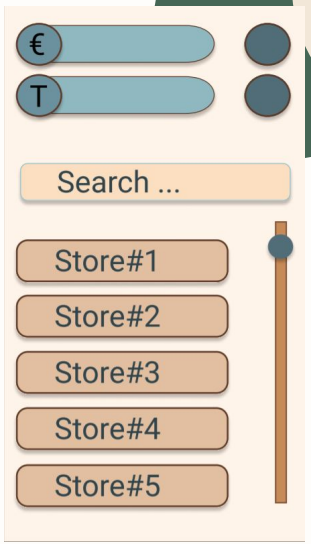
With an initial idea in mind of the chosen functionalities, we then started to model our Low-Fidelity Prototype but due to the current COVID-19 background, this was done through Figma and not with the usual paper prototype.

With this prototype we were able to get an initial idea of how our Users would be able to **navigate** through the application's functionalities and screens.

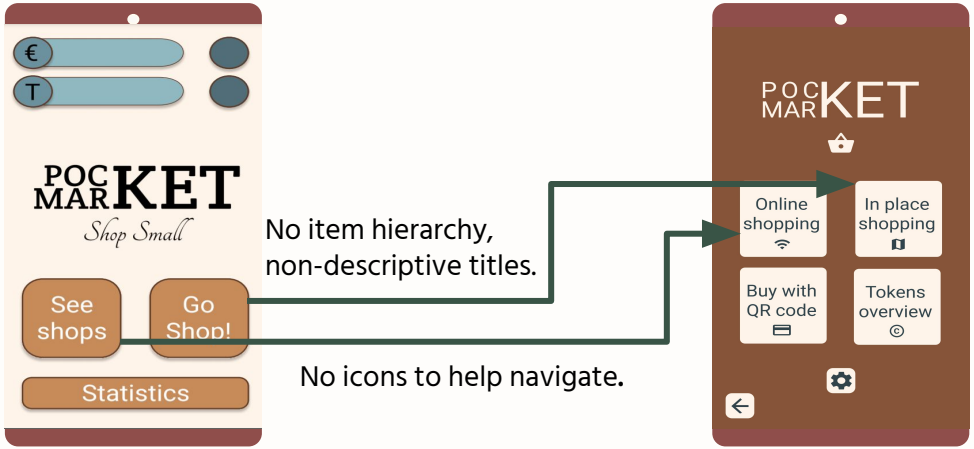
Mid-Fidelity Prototype

We then proceeded in creating our Mid-Fi prototype with Figma.

After receiving some feedback within the project group members, this design suffered several changes.



Refinement:



Mid-Fidelity Prototype Testing

Methodology: Wizard Of Oz

The next step consisted on testing our prototype with users, for this we conducted the **"Wizard Of Oz"** testing methodology and performed several User interviews where we asked about general feedback.

Due to the current pandemic background all the interviews were conducted online (Zoom and Figma with screen sharing).

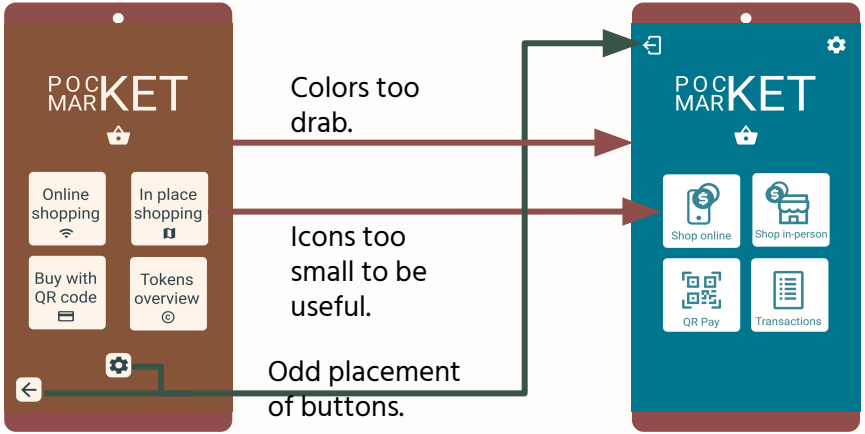
The interviewed Users later filled a **questionnaire** after their exploration of the prototype.

Testing Results

In this round of testing we were able to interview **16 Users** and the following results were gathered:

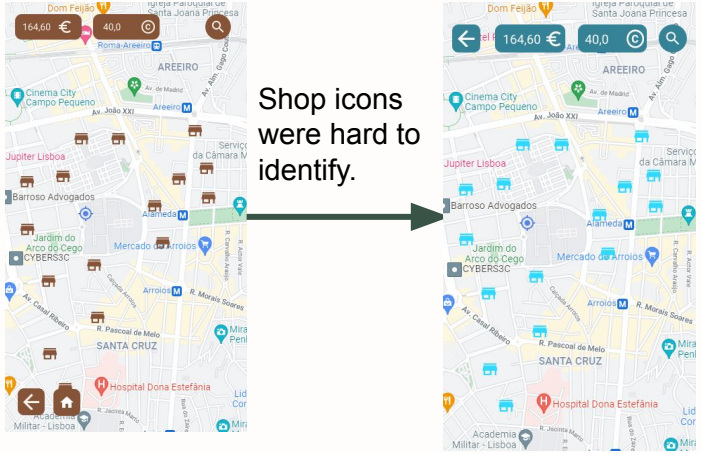
- Shop icons were hard to identify.
- Map interface was confusing.
- Color scheme was too drab.
- Some UI items were too small to click easily.
- Lack of highlighted buttons to tell users what's next.

Prototype Refinement



In the next step of the prototype redesign, we applied changes to the Mid-Fidelity Prototype and applied them in the High-Fidelity Prototype. From the previous results we improved:

- **Colors**: Colors were made consistent and vibrant.
- **Icons too small to be useful**: Replaced and increases the size of the functionality icons
- **Odd placement of buttons**: Changed the locations of several buttons.
- **UI items too small to click easily**: Increased the size of the list containers
- **Shop icons hard to identify**: Increased the size of the shop icons and changed its color to blue



High-Fidelity Prototype Testing

Methodology: Scripted Evaluation

In this iteration of testing we conducted **User interviews** and developed a **User Guide with 5 predefined critical tasks**, each of them testing one functionality of the prototype.

Users filled a questionnaire before and after doing the tasks (Pre-test and Post-test questionnaire). In the Pre-test questionnaire we asked about biometric data and in the Post-test questionnaire we asked about the User's satisfaction with the tested functionalities.

In this round of testing we also used **evaluation measures** in order to test our prototype **effectiveness**, **efficiency** and **user satisfaction**. In each question of the user satisfaction level, the User must answer a number between 1 and 5 (1 being totally disagree and 5 being totally agree).

Once again, due to the current pandemic background all the interviews were conducted online (Zoom and Figma with screen sharing)

High-Fidelity Prototype Testing

Evaluation Criteria and Measures

Effectiveness criteria:

- Number of **subtasks** done successfully.
- Measure: On average, it is expected for each task that each user misses at most 1 of the subtasks.

Efficiency criteria:

- On average each task must be done in a short time period.
- Measure: Each task must be completed in a **defined time limit**.

Satisfaction criteria:

- **Post-test questionnaire answers**.
- Measure: On average each given answer must be equal or superior to 4

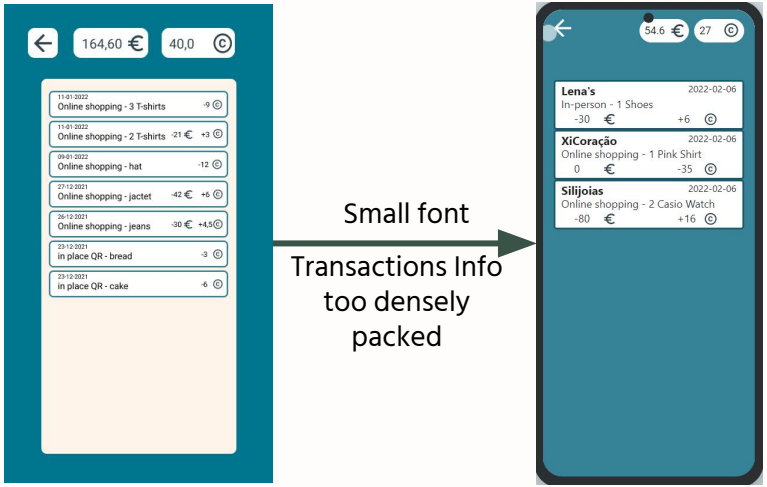
Testing Results

In this round of testing we were able to interview **5 Users** and the following results were gathered:

Task	Avg. Number of Missed Tasks	Avg. Completion Time	Avg. User Satisfaction Level	Time Limit
Task 1	0.2	55 seconds	4,2	1 minute and 10 seconds
Task 2	0.2	50 seconds	4,3	1 minute and 10 seconds
Task 3	0	32 seconds	4,3	1 minute and 10 seconds
Task 4	0	21 seconds	4,5	30 sec
Task 5	0.2	43 seconds	4,4	1 minute

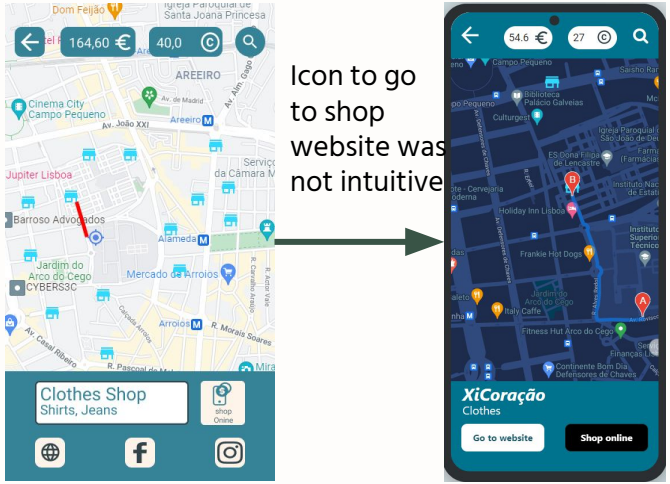
- With the previous results we were able to conclude that all of our tasks were efficient, effective and appealing to our Users regarding our criteria and measures.

Prototype Refinement



Despite the previous results **40% of our users** had issues to point out and offered feedback:

- **Small font**: Fonts were still too small in certain menus.
- **Transaction layout**: The information in each transaction item is too densely packed.
- **Website icon**: Icon to go to shop website was not intuitive.



Fully Functional Prototype Testing

The Final Prototype

Finally, we started developing our final prototype, while taking into consideration all the User's feedback of all testing stages. This prototype was developed with the **OutSystems** studio platform and it has a feature that it can be downloaded to the phone as an android app through the QR code below:

outsystems

Methodology: Scripted Evaluation

In this round of testing we applied the same testing methodology described in the High-Fidelity prototype and applied **the same evaluation criteria and measures**, but this time we took into consideration the following **research questions** regarding in what we wanted to learn:

- Is the prototype **intuitive**?
- Are the functionalities easy to use?
- Do users like the **design** and find it **appealing**?
- Are the functionalities **effective** and **efficient**?
- What would users **change**?

Fully Functional Prototype Testing Evaluation Criteria and Measures

Effectiveness criteria:

- Number of **subtasks** done successfully.
- Measure: On average, it is expected for each task that each user misses at most 1 of the subtasks.

Efficiency criteria:

- On average each task must be done in a short time period.
- Measure: Each task must be completed in a **defined time limit**.

Satisfaction criteria:

- **Post-test questionnaire answers**.
- Measure: On average each given answer must be equal or superior to 4

Testing Results

In this round of testing we were able to interview **6 Users** and the following results were gathered:

Task	Avg. Number of Missed Tasks	Avg. Completion Time	Avg. User Satisfaction Level	Time Limit
Task 1	0	54 seconds	4,6	1 minute and 10 seconds
Task 2	0.5	47 seconds	4,5	1 minute and 10 seconds
Task 3	0	37 seconds	4,67	1 minute and 10 seconds
Task 4	0	14 seconds	4,75	30 sec
Task 5	0	42 seconds	4,61	1 minute

- With the previous results we were able to conclude that we got even better results than the High Fidelity testing round.

05

Conclusion

Have we achieved our goals?

Along all the testing stages we witness the impact and effect the **User's feedback** took on our application. With that said, we should return to our **initial goals** and take a conclusion if we achieved them all:

- ✔ Easy to find small businesses.
- ✔ Easy shopping, both online and in-person.
- ✔ Incentives for continued participation.
- ✔ Functional and appealing app.

We reach to the conclusion that all of our tasks were **efficient**, **effective** and **appealing** regarding our evaluation criteria, measures and our users feedback and that we achieved all of our initial goals and developed an easy to use application that would attract more clients to small businesses/stores and incentive them to "Shop Small".

Possible Improvements

Still, **50%** of our interviewed Users pointed out a few possible **improvements** to our application. If more time was given to us we could apply the following improvements to the final prototype while taking into consideration the feedback of the last testing stage:

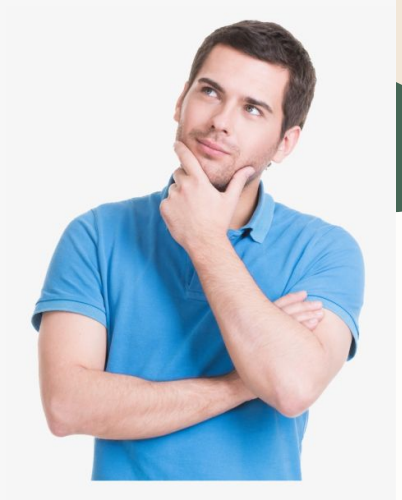
- Add a shopping cart as a functionality extension of the application.
- Display the name of the stores in the Shop In-Person functionality without the need of clicking on the store icon.
- Add an edit button to each field of the Settings functionality.
- Add a button to save changes on each altered field of the Settings functionality.

06

Annex

Brad Smith

Demographics



- Age: 20 years old.
- Location: Lisbon, Amadora.
- Job title: Working computer engineering student.
- Personality: Hardworking person with not much free time. Interested in music and movies.

Bio:

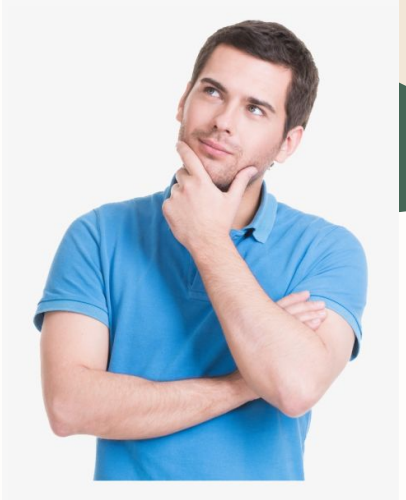
Brad is an experienced software developer and designer. Driven by getting good grades, and takes pride in providing help to his colleagues when possible. As a student his goals are to finish college with a good grade average and get a good stable job that allows him to travel abroad. In addition to this Brad has been recognized by his colleagues for his extraordinary sympathy and for being an good friend.

Behaviour

Goals:

- Focused on getting good grades and a good future.
- Contribute on helping other people.
- Needs: More time.
- Desires: Travel abroad and explore other cultures.

Brad Smith Attitudes



- Opinion about small businesses:
  - They're close to home and you often know the people who work there.
  - Good to support our local businesses.
  - Finds it likely to buy from local stores and shops online very often.
- Very comfortable with any device or online platform.
- Up to date with current technology.

Scenario:

Brad’s shoes are starting to tear apart and he needs to buy a new pair of shoes, but he can’t find the time to go to a store and look for shoes. Brad then considers to shop online, but he does not wish to buy from big store companies because he thinks they over-produce their products in large quantities, which it’s harmful for the environment. While brad was browsing he noticed an add for an application that allows you to order items from small businesses/stores. Brad then decides to install the application and search for a new pair of shoes. While using the app, Brad searches for a shoe store and eventually finds a pair of shoes that he likes. Brad then decides to create a profile and order the shoes to his address.

Amanda North

Demographics

- Age: 21 years old.
- Location: Porto, Vila do Conde.
- Job title: Management student.
- Personality: Relaxed attitude. Likes to visit cultural events and to read fantasy books.

Bio:

For over 2 years, Amanda has been studying management engineering at college. She is known by her college colleagues has a lovable person and a book enthusiast. Amanda would like to have more money in order to pay her college depts and later in life travel to other countries. Amanda identifies herself as a vegan.

Behaviour

Goals:

- Goals: Wants to travel around the world and have new experiences.
- Needs: More money.
- Desires: Wishes to open a bookstore someday.

Amanda North

Attitudes

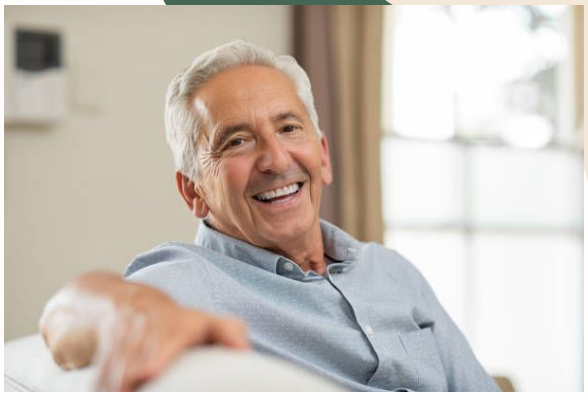
- Opinion about small businesses:
  - More competent and experienced employees.
  - More expensive when compared to big companies.
- Uses phone applications regularly to read e-books.

Scenario:

Amanda needs to do her groceries but it is very difficult to find stores that sell vegan products. Also these products are more expensive than non-vegan ones. A friend recommended Amanda to try out a new application that is associated with some not very known vegan stores with natural products. Amanda then proceeds to install the app and search for vegan businesses within the app. Amanda then notices that some of the products are a bit expensive but later learns that if she buys products from the app, she can later earn tokens to spend back at the application, and so save some money and get quality natural products. Amanda then creates a profile and buys some products from the app and notices that she has received tokens as an offer of her purchase and becomes eager to buy from this app in a close future.

Nelson Scott

Demographics



- Age: 60 years old.
- Location: Lisbon, Odivelas.
- Job title: Owner of a shoe store.
- Personality: Focused on his work and very proud and competent at managing his store.

Bio:

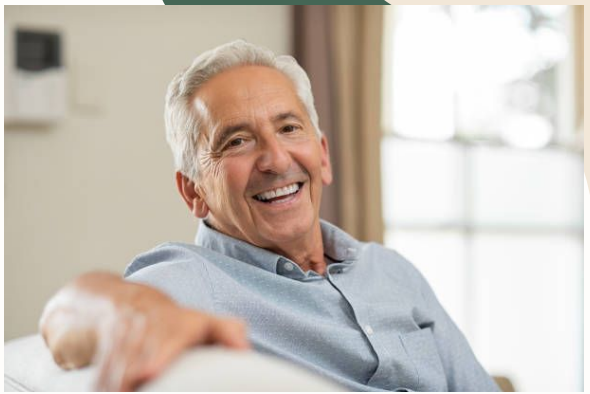
Nelson has owned a shoe store for 30 years. He is driven to provide a reliable service to his clients. Nelson his known by his clients for always showing a smile and being very nice to his clients. Nelson has been taking online lessons on how to implement a software system to his store and thinking of new approaches to bring more clients to his store because in the last years there have been less clients purchasing from his store.

Behaviour

Goals:

- Goals: Run a successful business.
- Needs: More clients.
- Desires: Learn more about software systems.

Nelson Scott



Attitudes

- Finds it difficult to interact with online or computer systems.
- It is difficult for Nelson to use his smartphone.

Scenario:

Nelson has been thinking for some time of new approaches to attract more clients to his store but so far he has find it difficult to create an online system to his store. Nelson's daughter suggests his father to register his store in an application that she is been using to buy items. Nelson later tries to look for the application and learns that the application provides tokens to his clients to later spend in the store, which might attract more clients. Nelson decides to take a shot and register his store in the application.

Annex

Architecture

For the functional prototype we used Outsystems. Our Outsystems account was sent to our lab teacher Catarina Rodrigues (catarina.rebelo.rodrigues@tecnico.ulisboa.pt) and the teacher Paulo Bala (paulo.bala@iti.larsys.pt) along with our project submission.

Our Prototype Preview link can be found here, which is also available in our website deliverables tab (Please select the Samsung Galaxy S21 360x800 preview screen): https://personal-zbifcopy.outsystemscloud.com/PreviewInDevices/?IsMobilePreview=True&DeviceName=Smartphone&URL=/PocketMarket/loginScreen?_ts=637782320481100561

Our project website can be found here:
http://web.tecnico.ulisboa.pt/ist187668/CCU/Group16/

System Design

The Outsystems studio platform, handle both front-end and back-end properties.

Back-End properties:

- Stores and Items are pre-defined Excel Tables that later convert to Data Tables in the Outsystems “Data” tab.
- Our Blockchain was simulated by creating a Data Table. Each block of the Blockchain is added with each purchase. Each block also contains the ID of the previous block, and the current block ID is the Id for the whole Blockchain. Each block also stores information associated to each purchase.

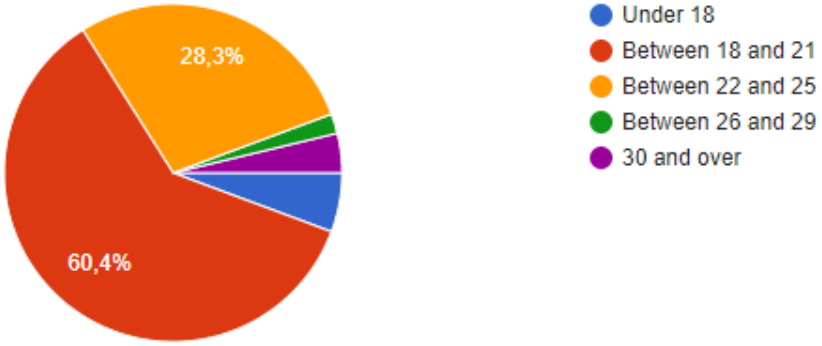
Initial User Research Results

The following charts show the questionnaire and interviews results of the user research.

Customers (Primary Users):

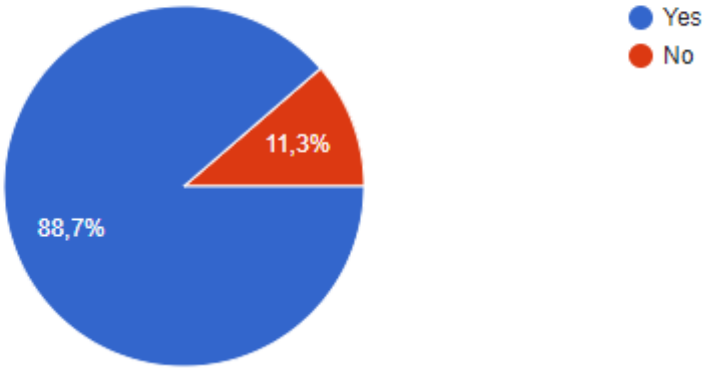
How old are you?

53 respostas



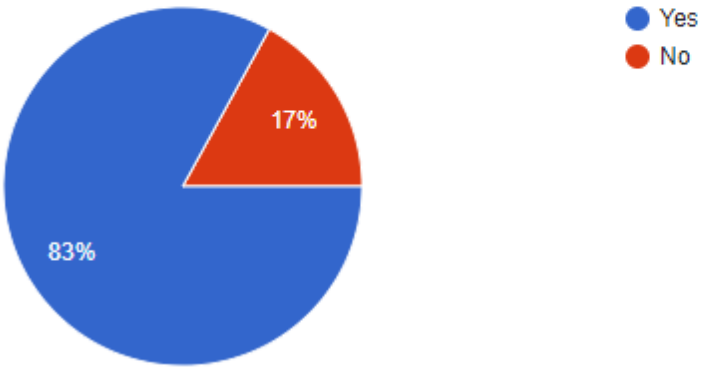
Do you shop online?

53 respostas



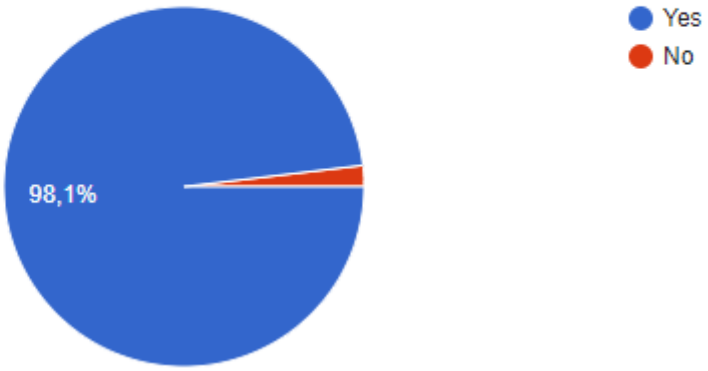
Do you shop in big company stores or chain stores? (Ex: Zara, Continente, etc.)

53 respostas



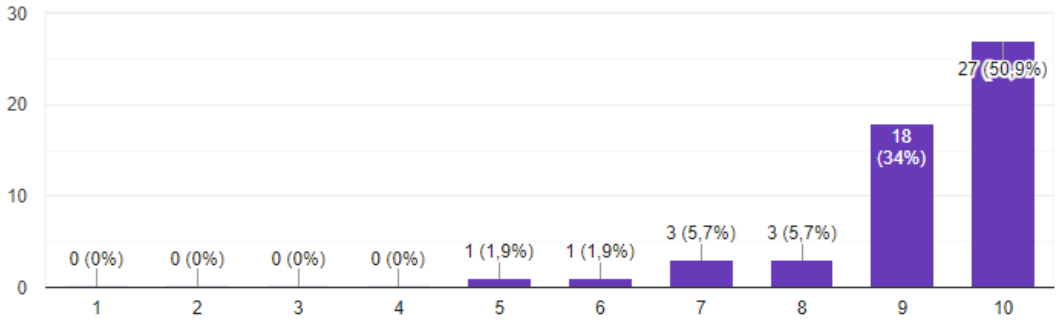
Are you familiar with phone applications?

53 respostas



From 1 to 10, how easy it is for you to use phone apps?

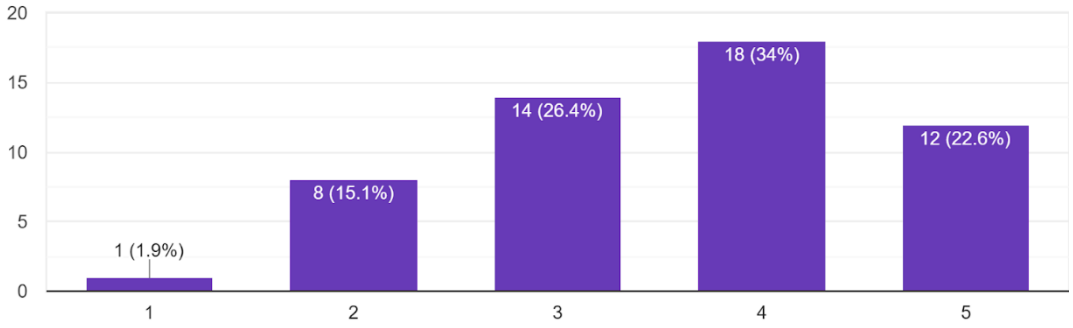
53 respostas



1 being “Very Hard” and 10 “Very Easy”

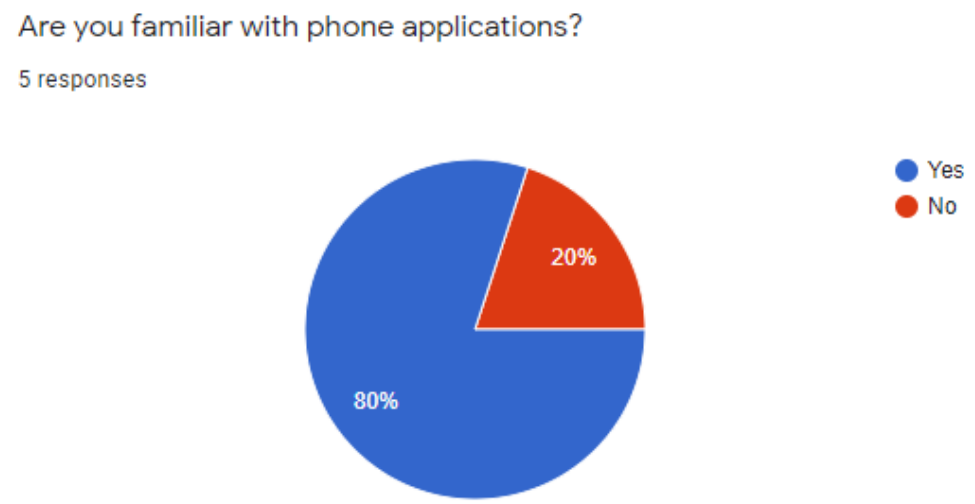
How likely are you to shop from a local store?

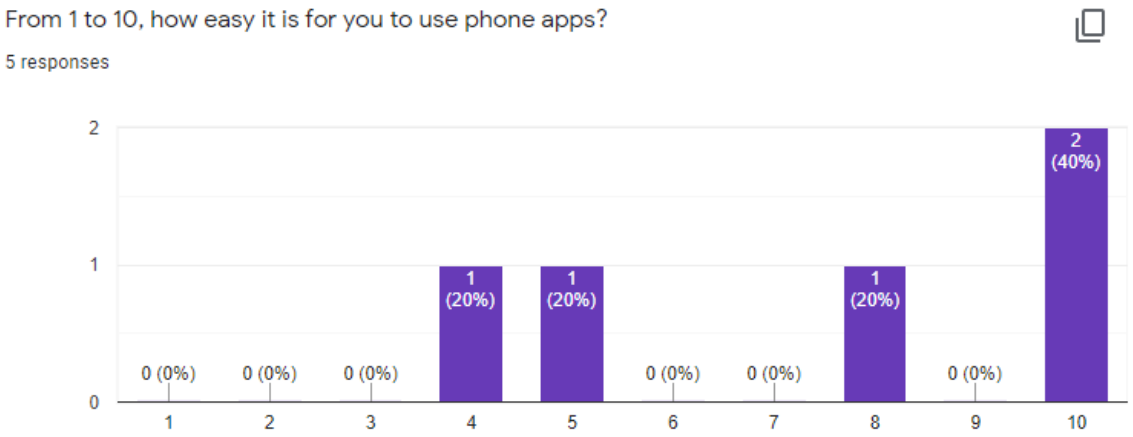
53 responses



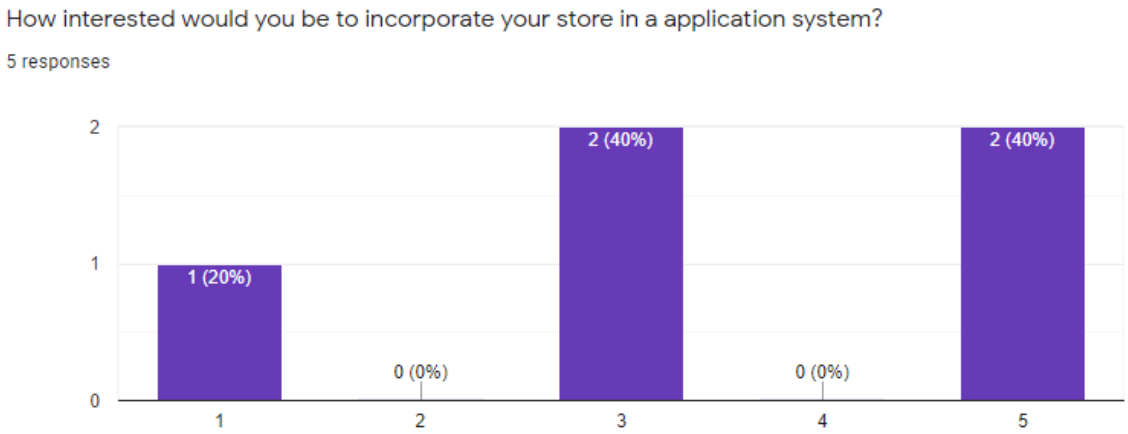
1 being “Not Likely” and 5 being “Very Likely”

Store Owners (Secondary Users):





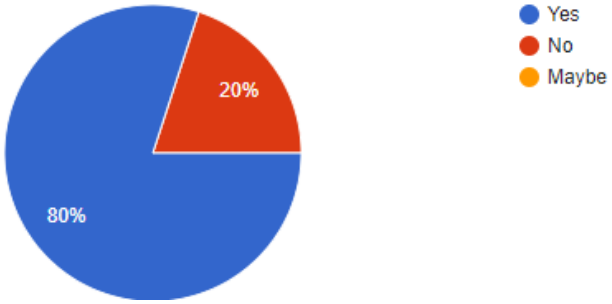
1 being “Very Hard” and 10 “Very Easy”



1 being “Not Interested” and 5 being “Very Interested”

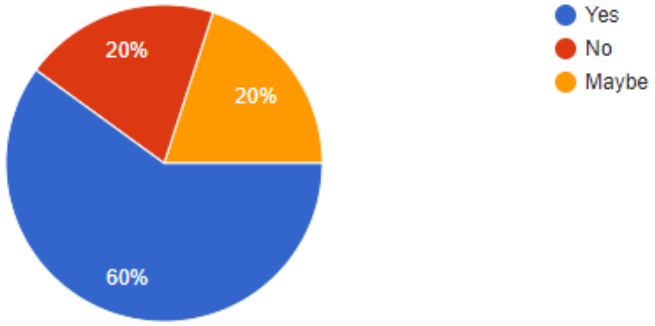
If you provide a reward system to each purchase to your clients, do you think they would be more interested to buy from your store in the future?

5 responses



If so would you be interested in be part of a reward system to each purchase?

5 responses



Mid Fidelity - Wizard Of Oz User Testing

The following charts show the questionnaire and interviews results of the Wizard Of Oz User Testing.

Post-Test questionnaire:

1. For each of the performed tasks attribute a number in a scale of 1 to 5 (1 being totally disagree and 5 being totally agree), rating if you agree or not with the following statements.

	Func. 1	Func. 2	Func. 3	Func. 4	Func. 5
It was intuitive.					
The information given in the interface was sufficient to perform the task.					
The way the functionality of each task was organized, and it was appropriate.					
The design was appealing.					
The tested functionality was appropriate to an online purchase system.					
I would like to use this functionality in a real-world setting.					

2. Is there any aspect of the app that you did not like?
   ☐Yes ☐ No

If so, what was it? _____

_____

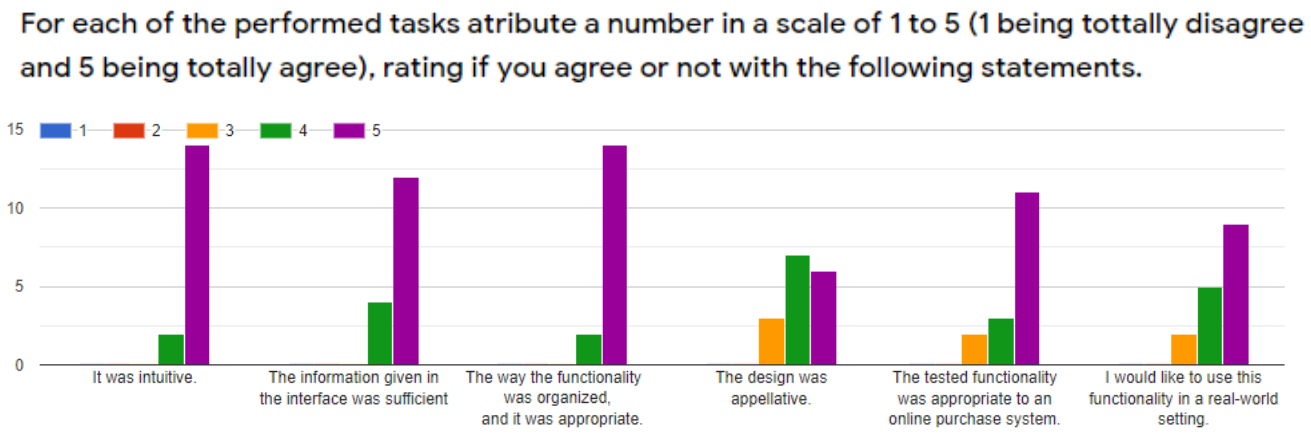
3. What improvements would you suggest to our application?

_____

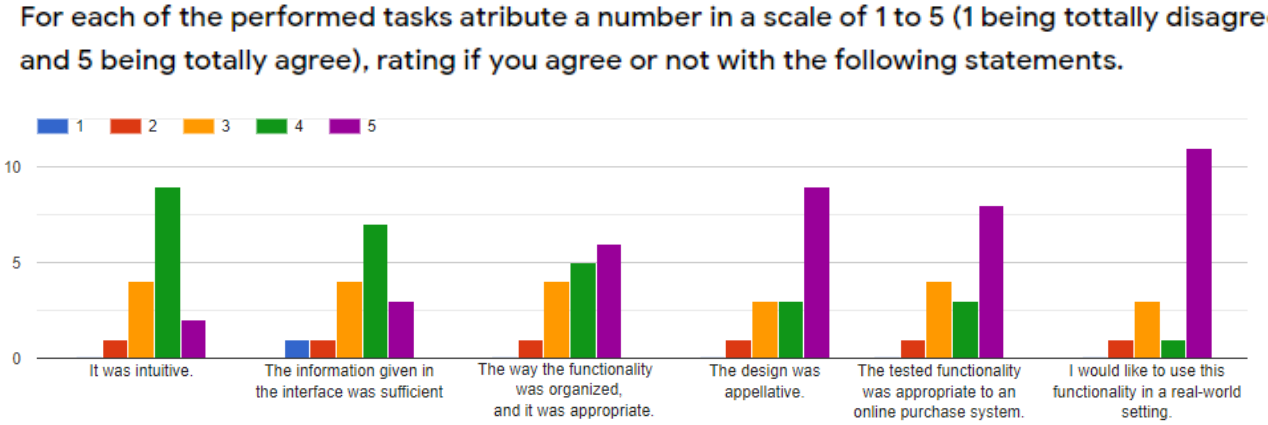
_____

Thank you for your collaboration!

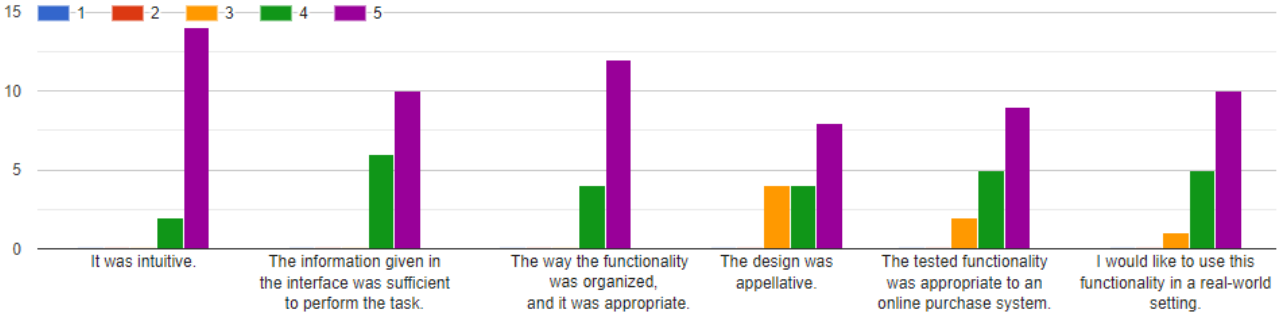
Functionality 1: Online shopping



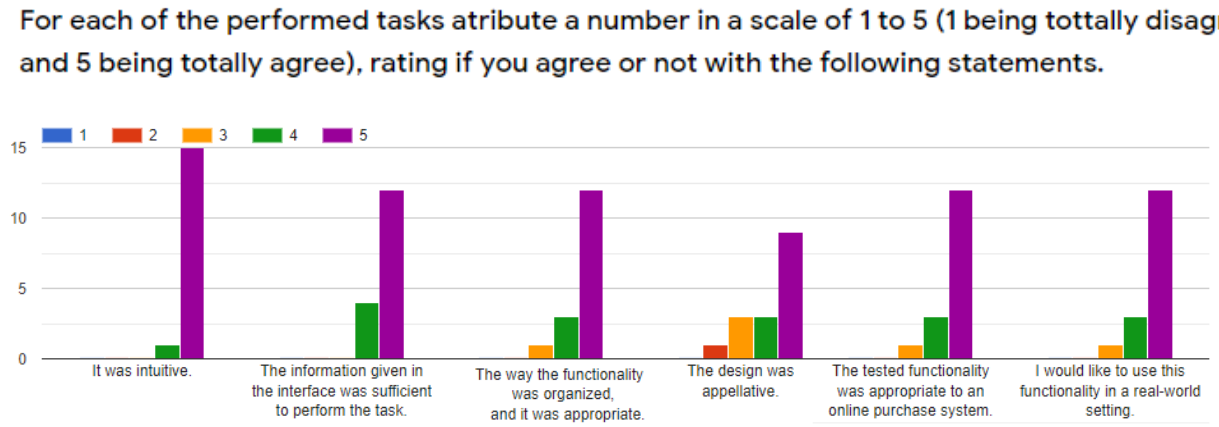
Functionality 2: In place shopping



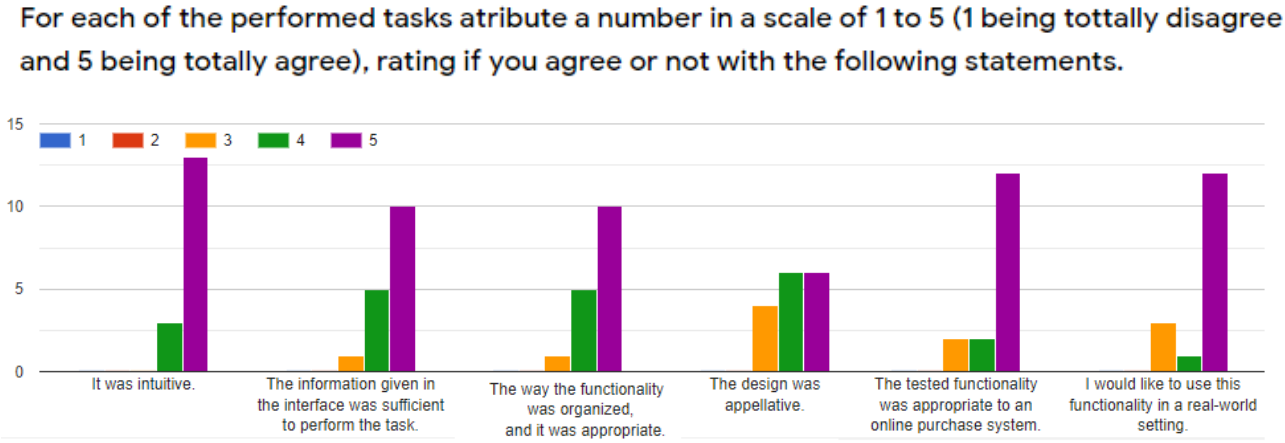
Functionality 3: Buy with QR code

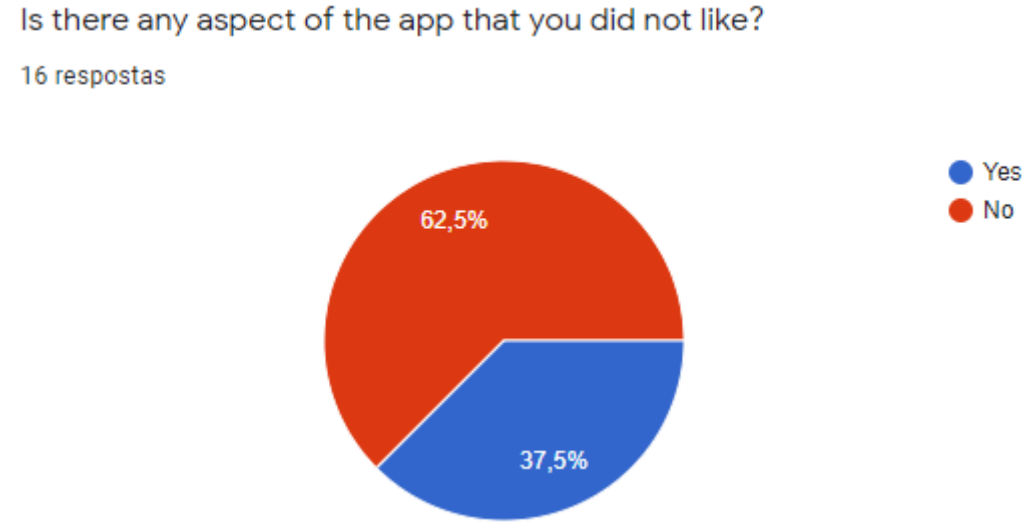


Functionality 4: Tokens overview



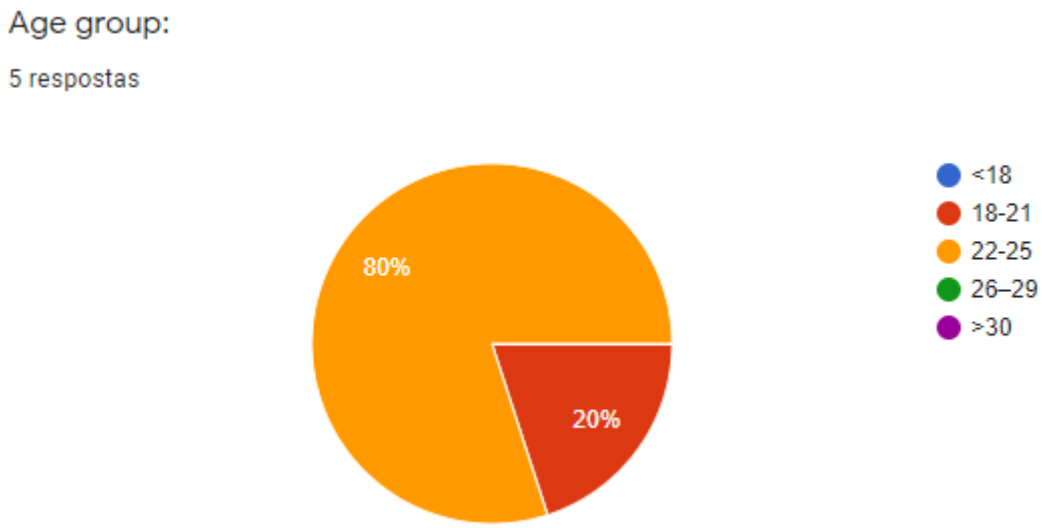
Functionality 5: Settings

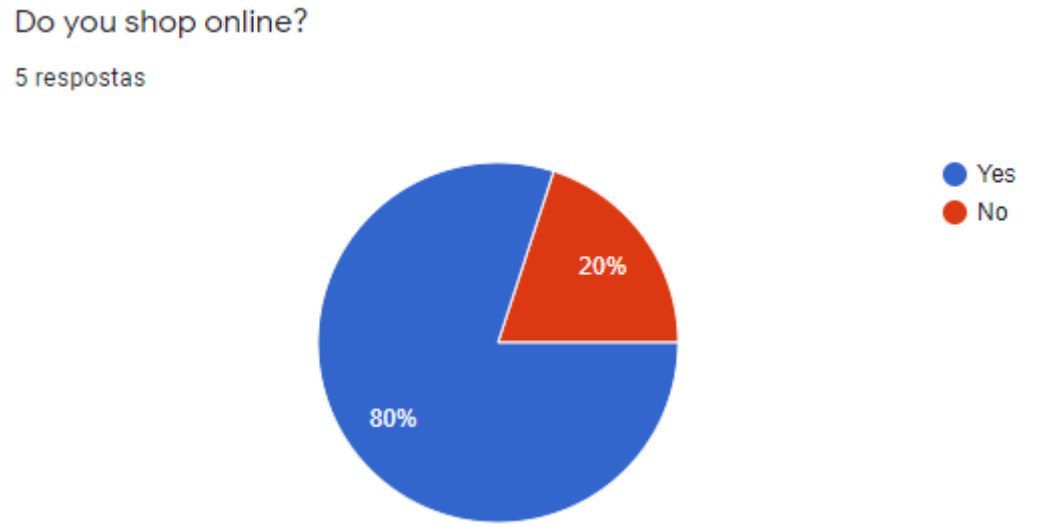




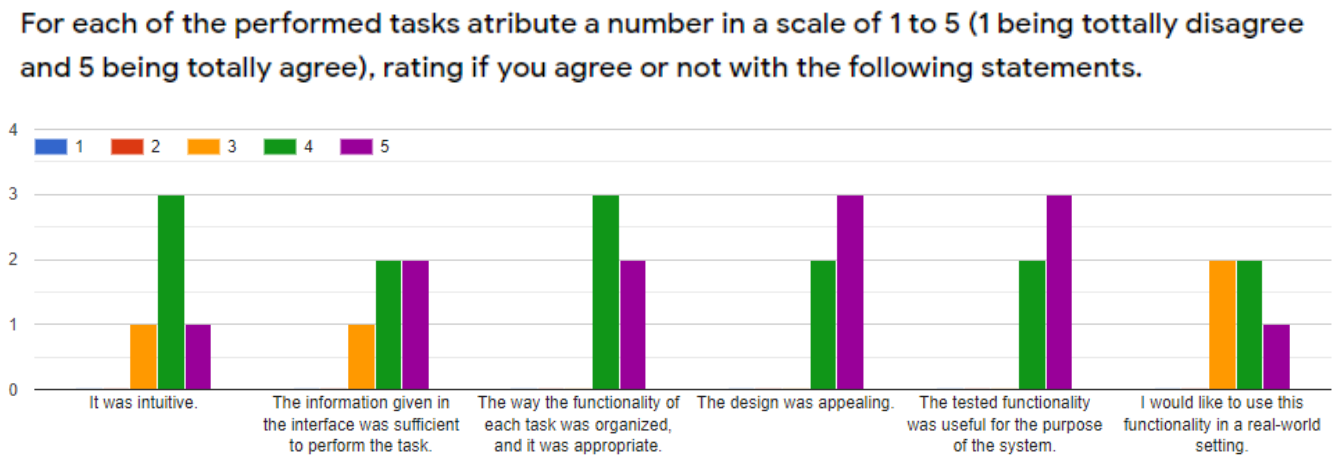
High Fidelity - Scripted evaluation User Testing

The following charts show the questionnaire and interviews results of the High-Fidelity Scripted Evaluation User Testing.



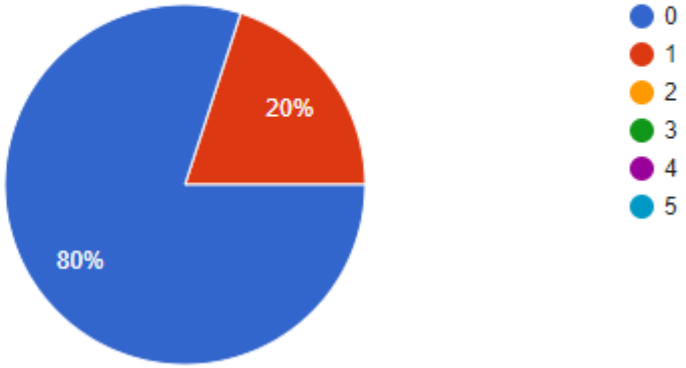


Functionality 1: Shop Online



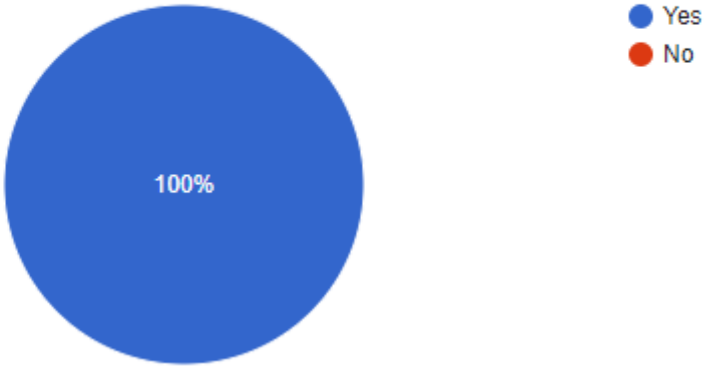
How many subtaks missed?

5 respostas



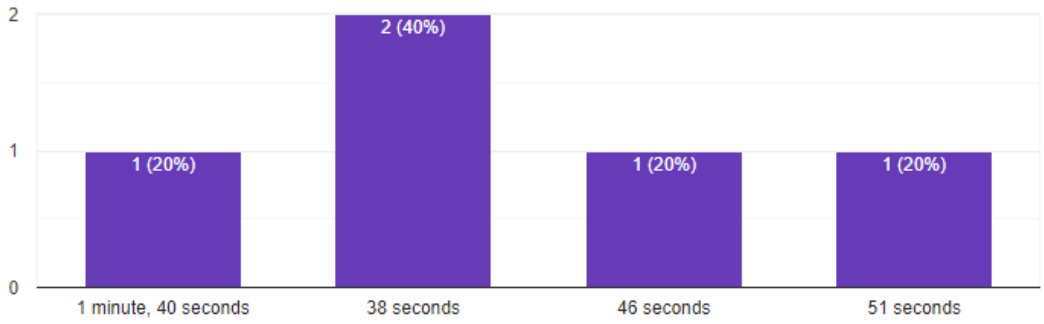
Was the task effective?

5 respostas



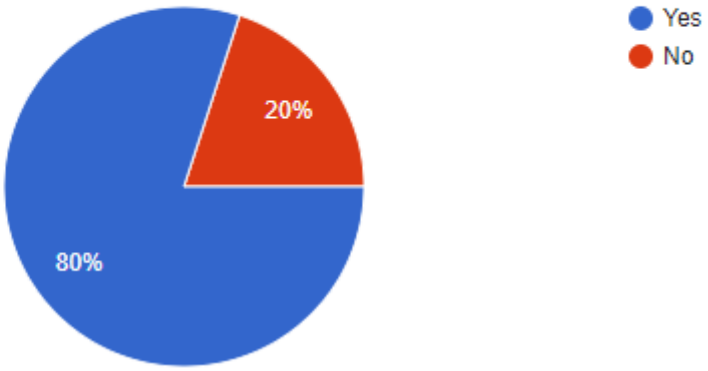
How much time did it take?

5 respostas



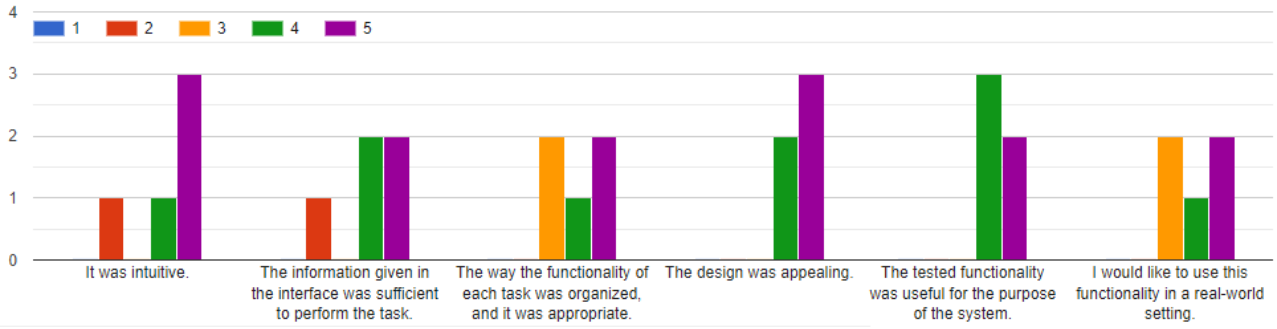
Was the task efficient?

5 respostas



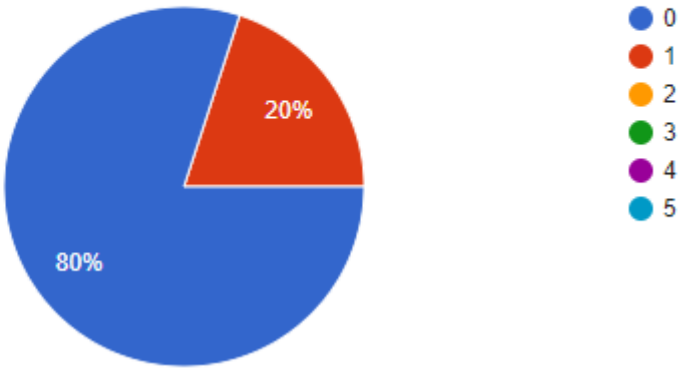
Functionality 2: Shop In-Person

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



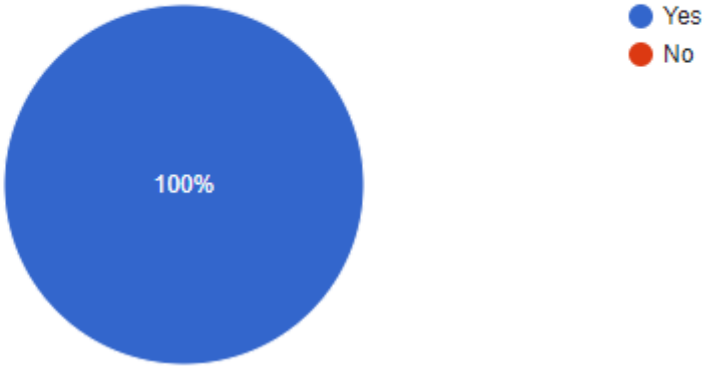
How many subtaks missed?

5 respostas



Was the task effective?

5 respostas



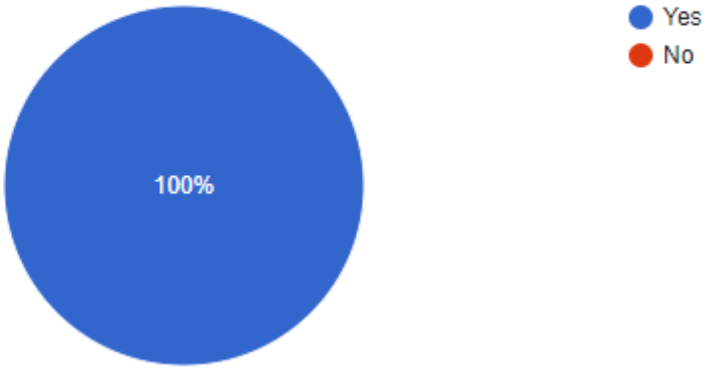
How much time did it take?

5 respostas

30 seconds
53 seconds
56 seconds
50 seconds
1 minute

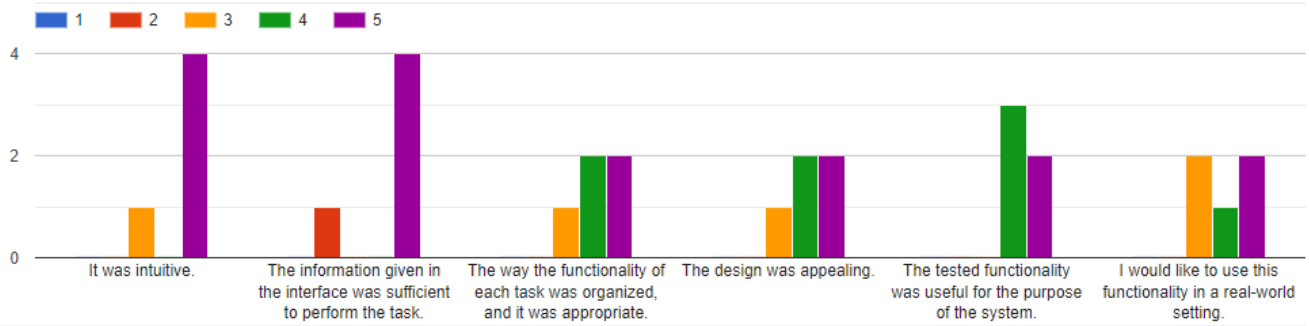
Was the task efficient?

5 respostas



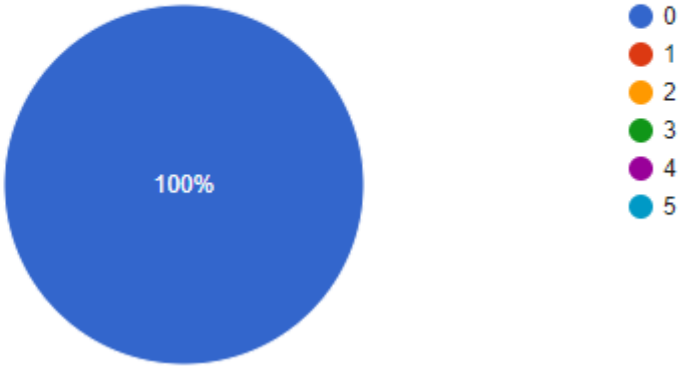
Functionality 3: QR Pay

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



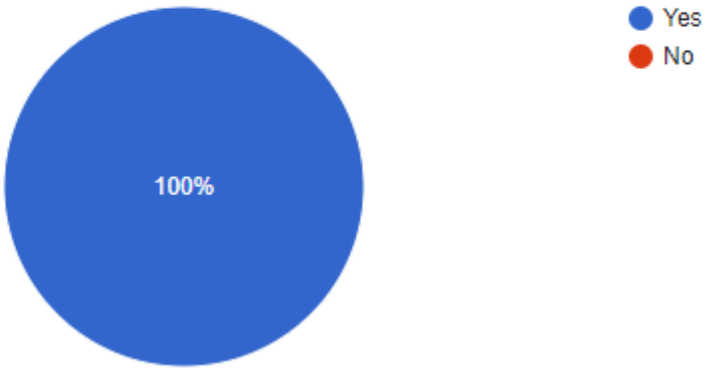
How many subtaks missed?

5 respostas



Was the task effective?

5 respostas



How much time did it take?

5 respostas

10 seconds

1 minute

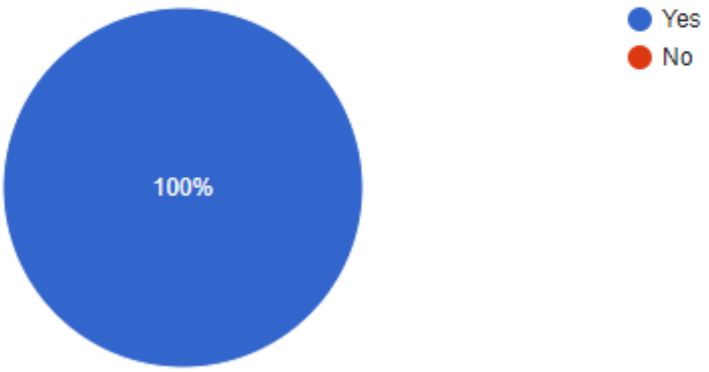
24 seconds

39 seconds

26 seconds

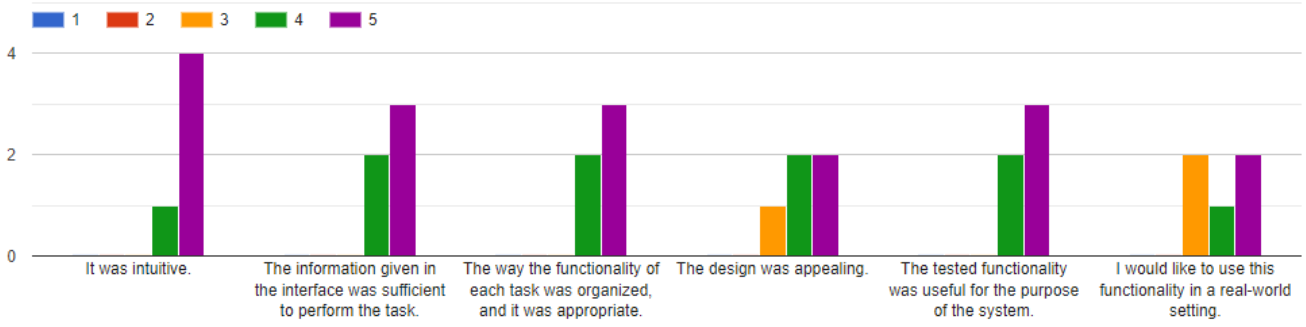
Was the task efficient?

5 respostas



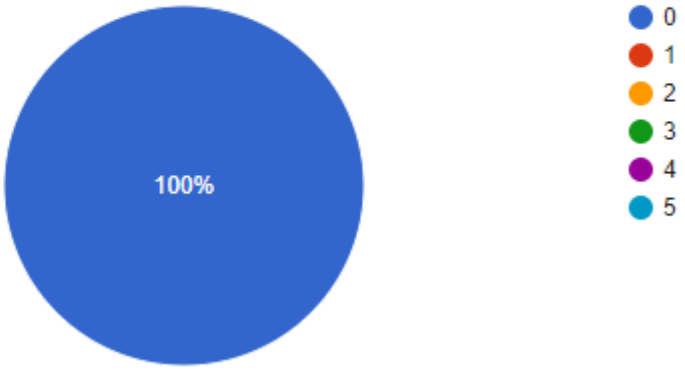
Functionality 4: Transactions

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



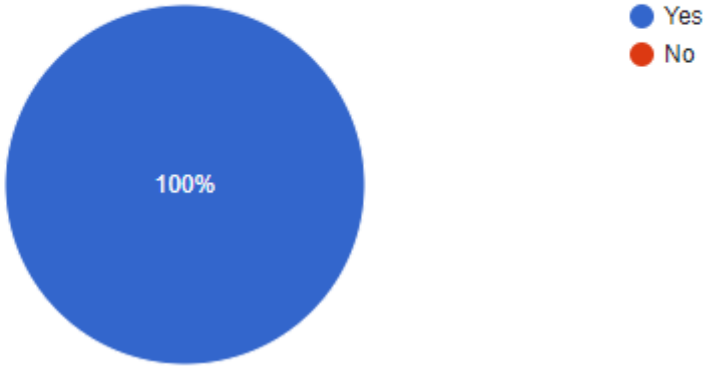
How many subtaks missed?

5 respostas



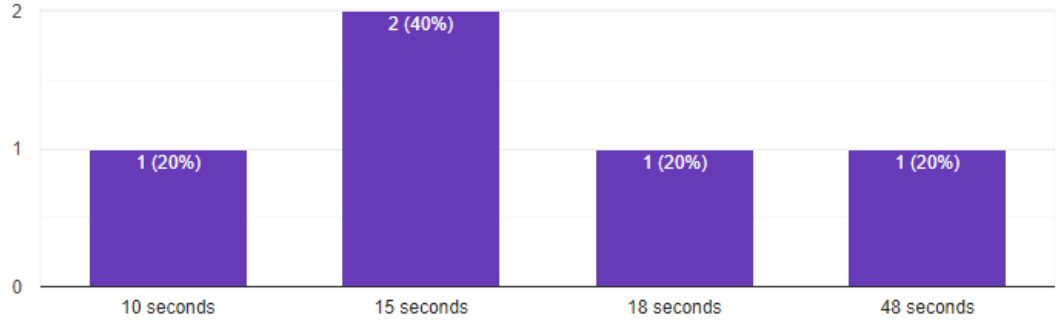
Was the task effective?

5 respostas



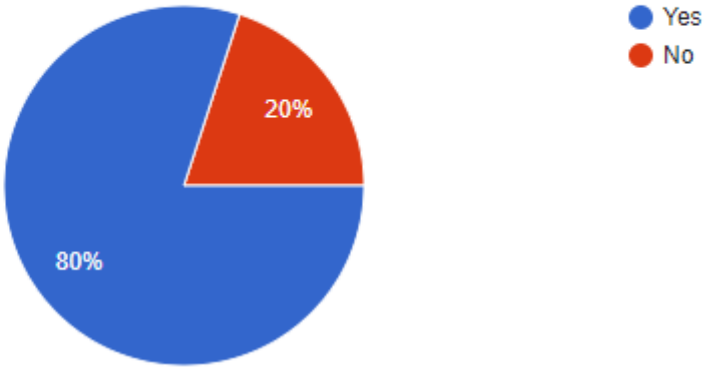
How much time did it take?

5 respostas



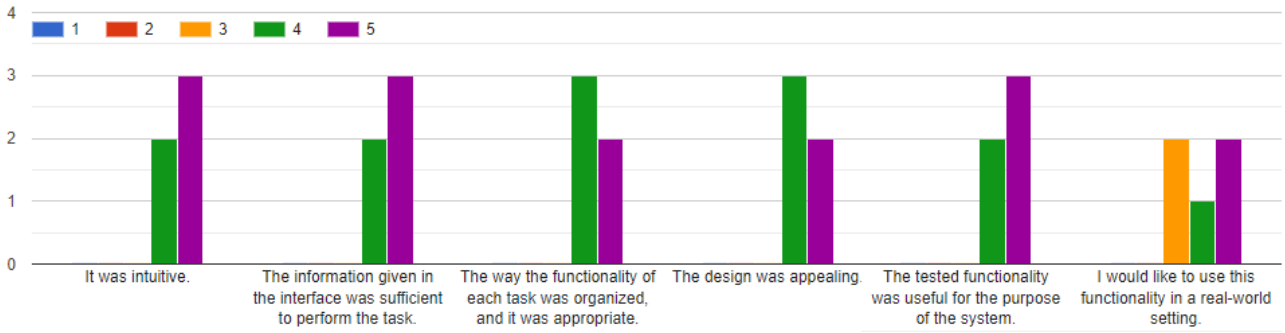
Was the task efficient?

5 respostas



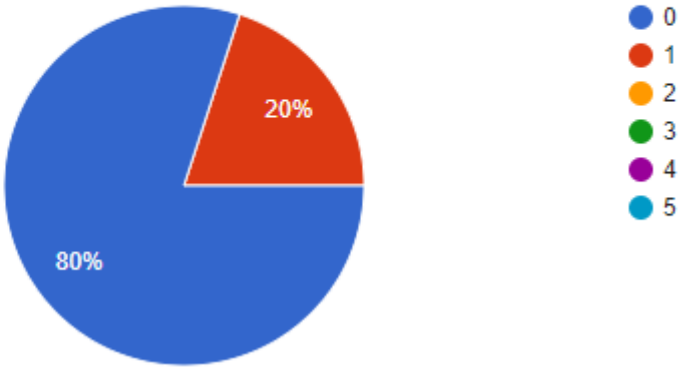
Functionality 5: Settings

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



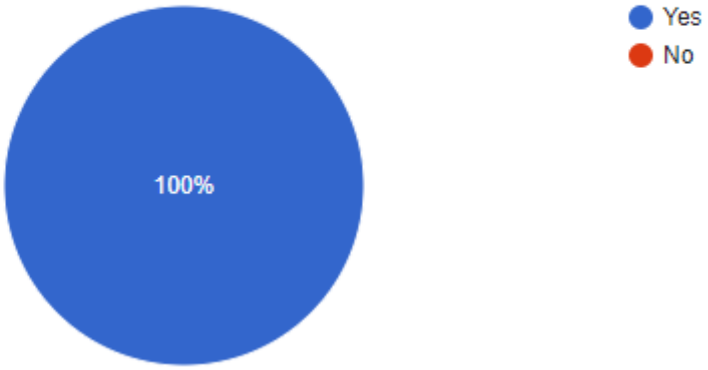
How many subtaks missed?

5 respostas



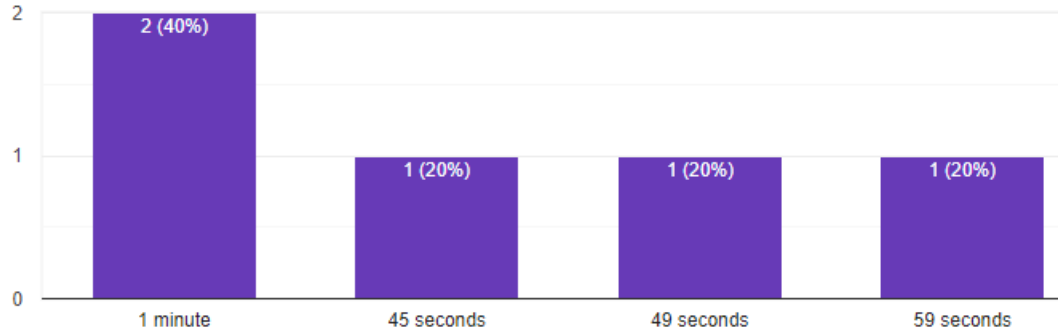
Was the task effective?

5 respostas



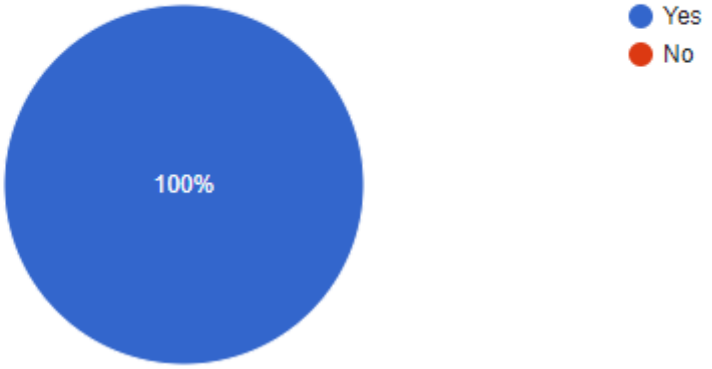
How much time did it take?

5 respostas



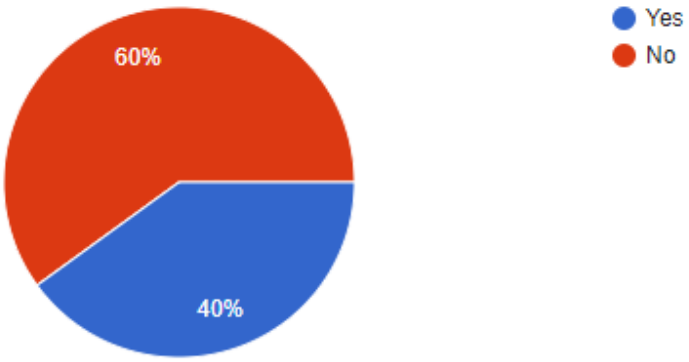
Was the task efficient?

5 respostas



Is there any aspect of the app that you did not like?

5 respostas

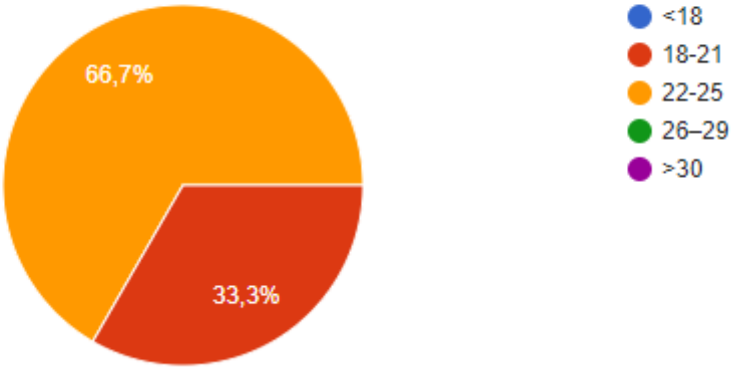


Fully Functional Prototype - Scripted evaluation User Testing

The following charts show the questionnaire and interviews results of the Fully Functional Prototype Scripted Evaluation User Testing.

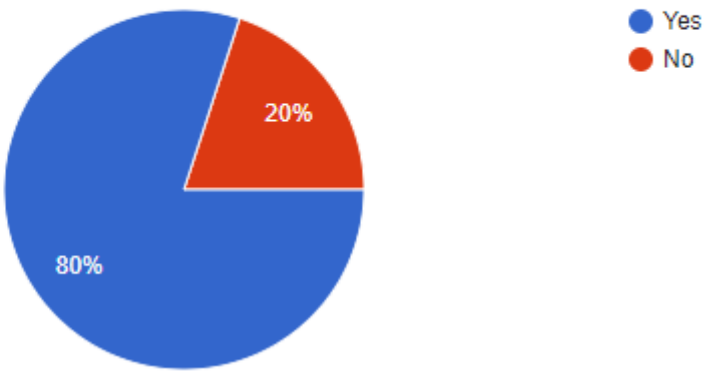
Age group:

6 respostas



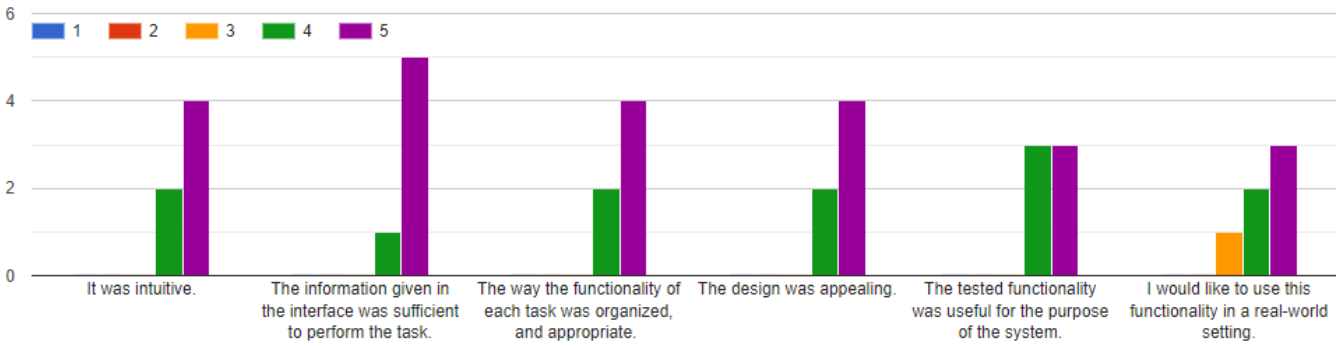
Do you shop online?

5 respostas



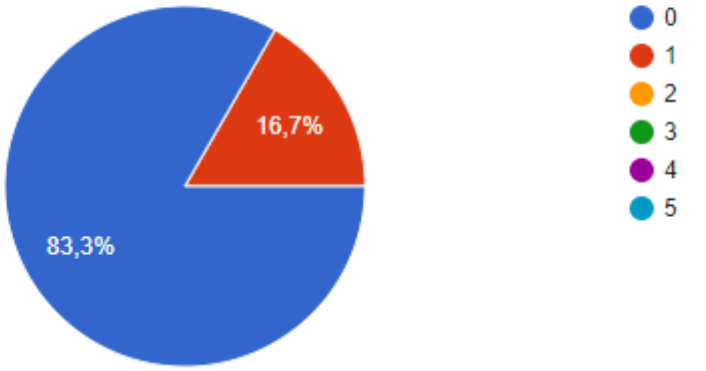
Functionality 1: Shop Online

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



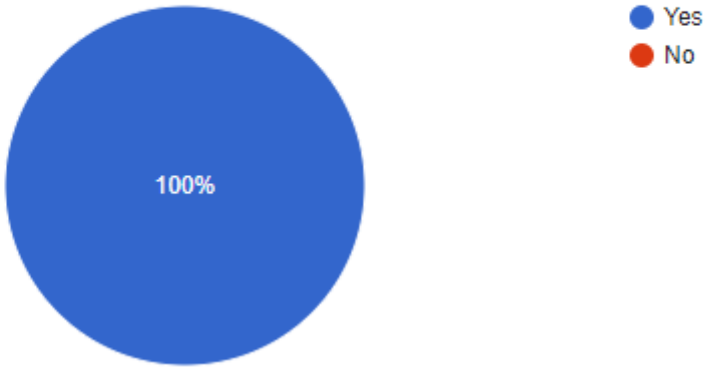
How many subtaks missed?

6 respostas



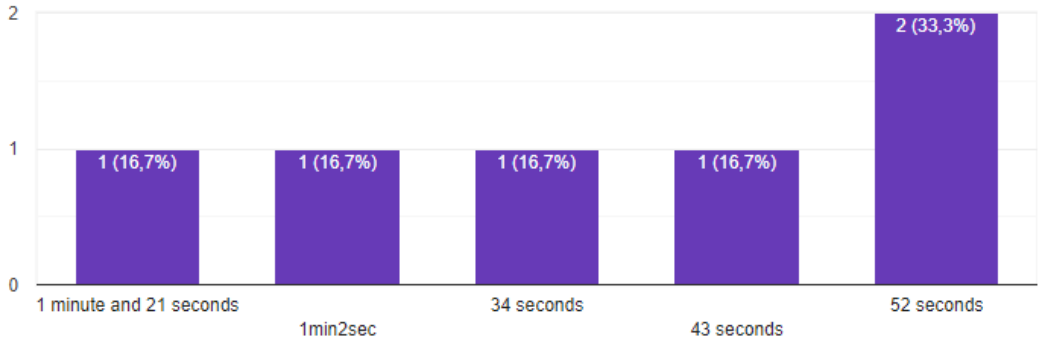
Was the task effective?

6 respostas



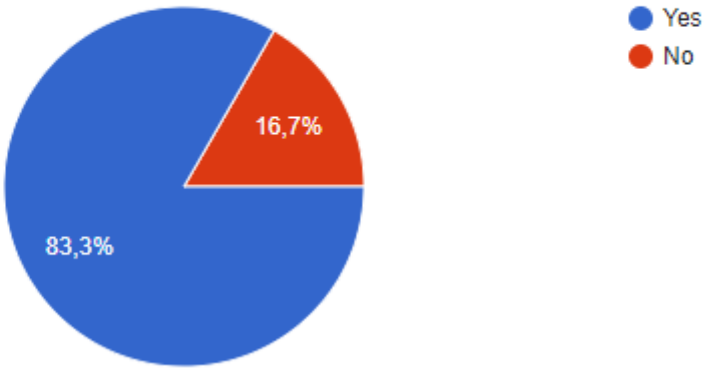
How much time did it take?

6 respostas



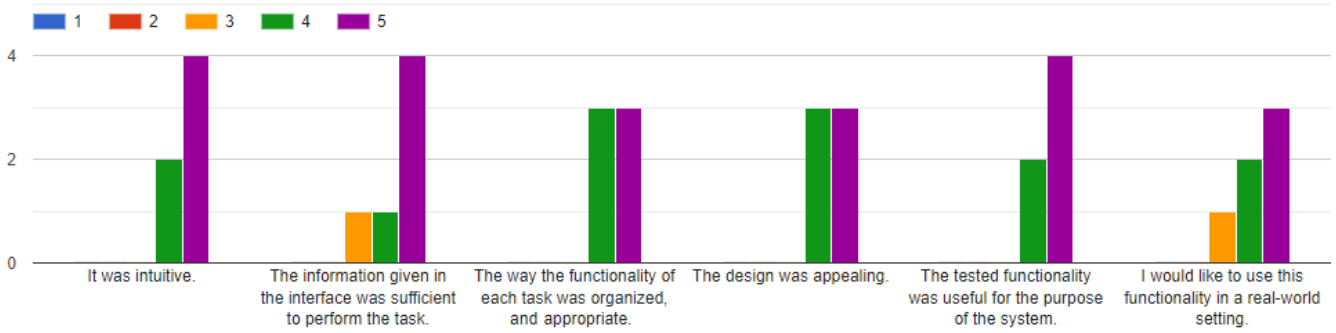
Was the task efficient?

6 respostas



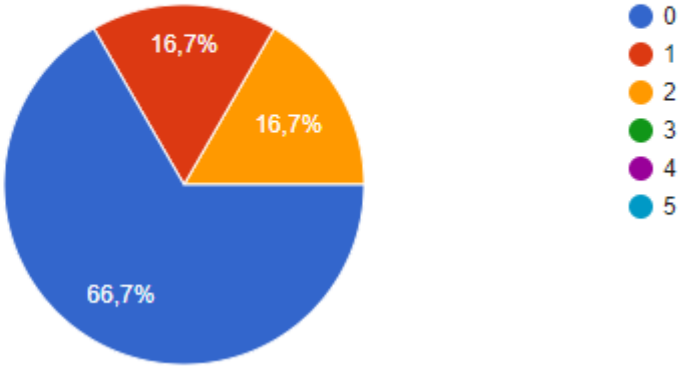
Functionality 2: Shop In-Person

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



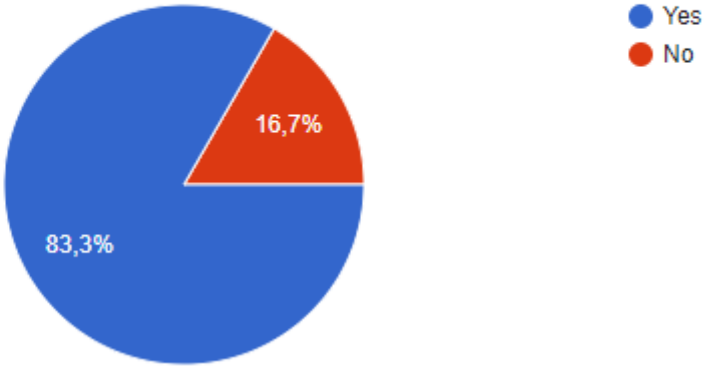
How many subtaks missed?

6 respostas



Was the task effective?

6 respostas



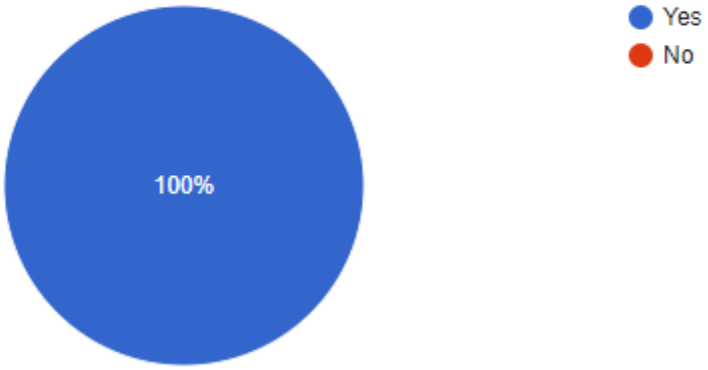
How much time did it take?

6 respostas

- 49 seconds
- 47 seconds
- 45 seconds
- 32 seconds
- 44 seconds
- 1min5sec

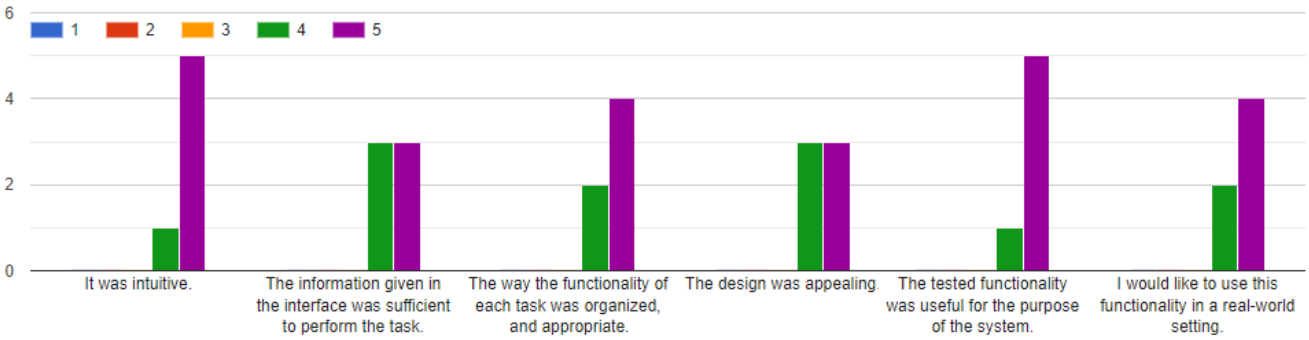
Was the task efficient?

6 respostas



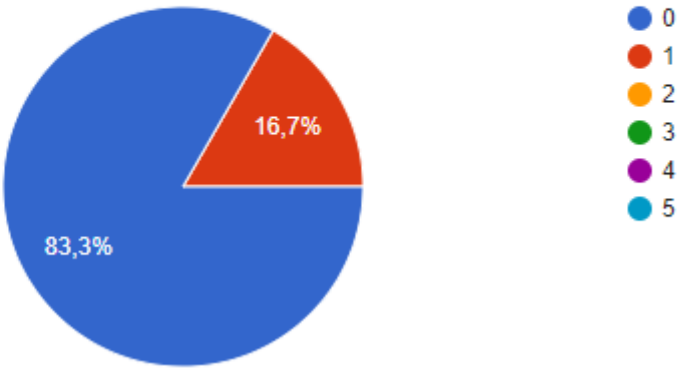
Functionality 3: QR Pay

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



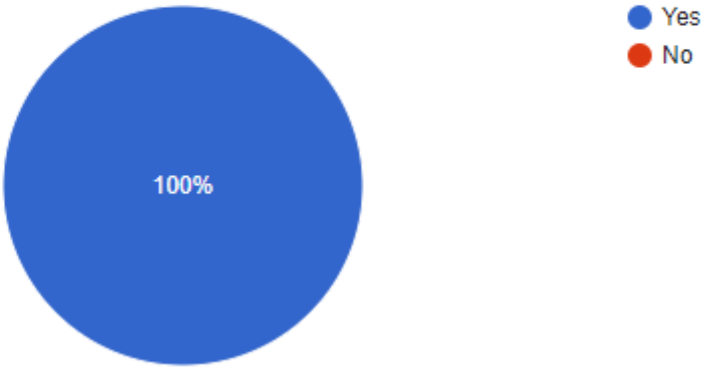
How many subtaks missed?

6 respostas



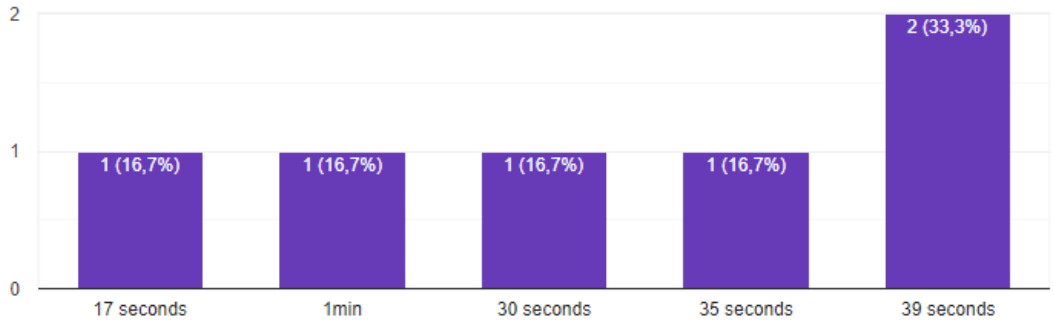
Was the task effective?

6 respostas



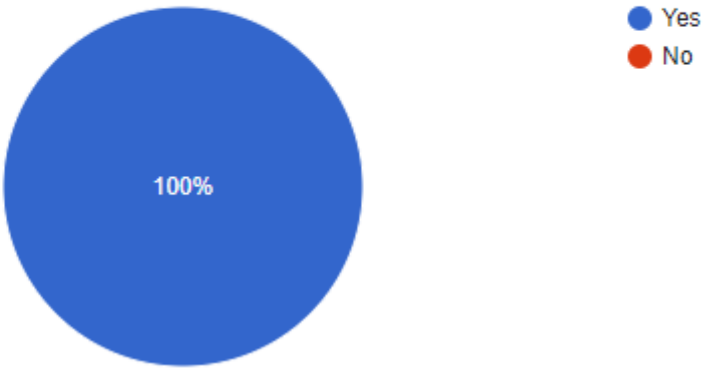
How much time did it take?

6 respostas

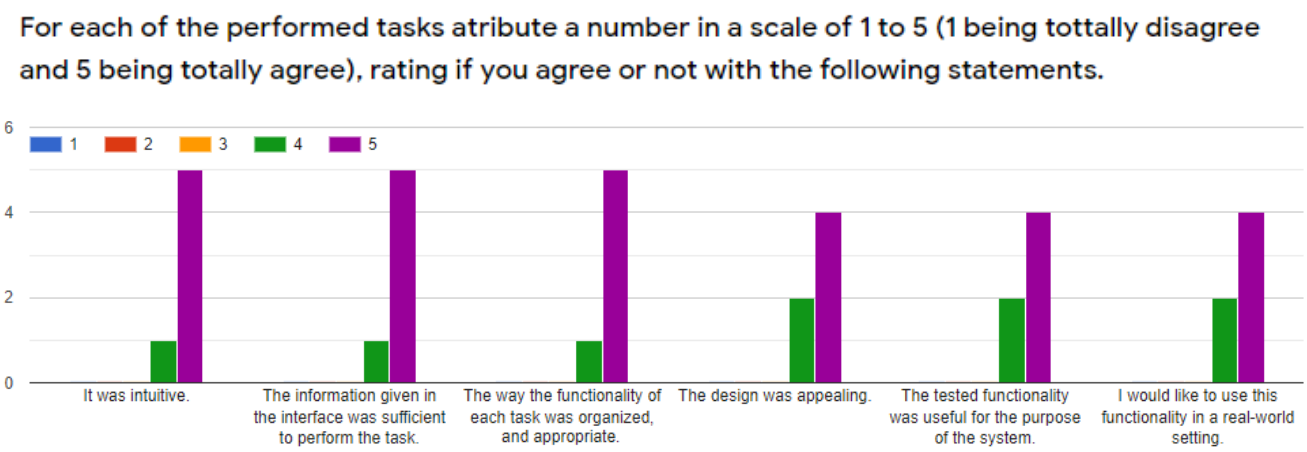


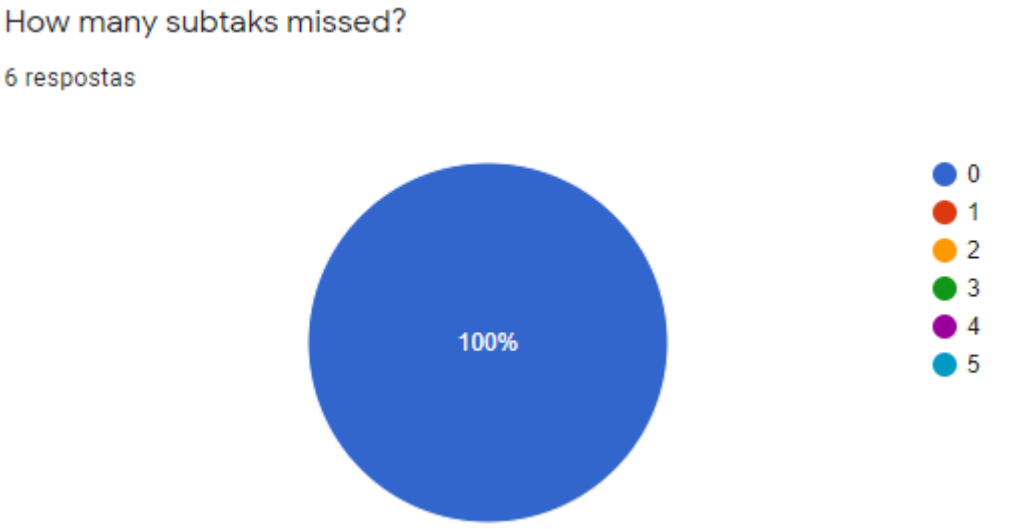
Was the task efficient?

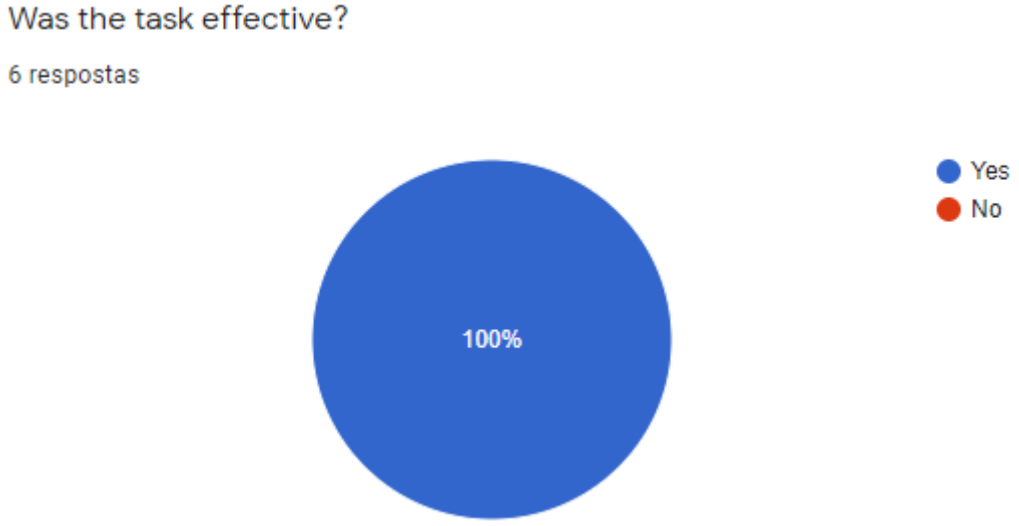
6 respostas



Functionality 4: Transactions







How much time did it take?

6 respostas

20 seconds

23 seconds

8 seconds

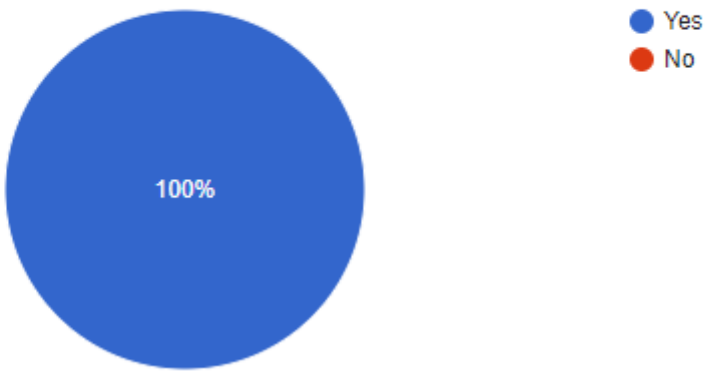
10 seconds

9 seconds

14sec

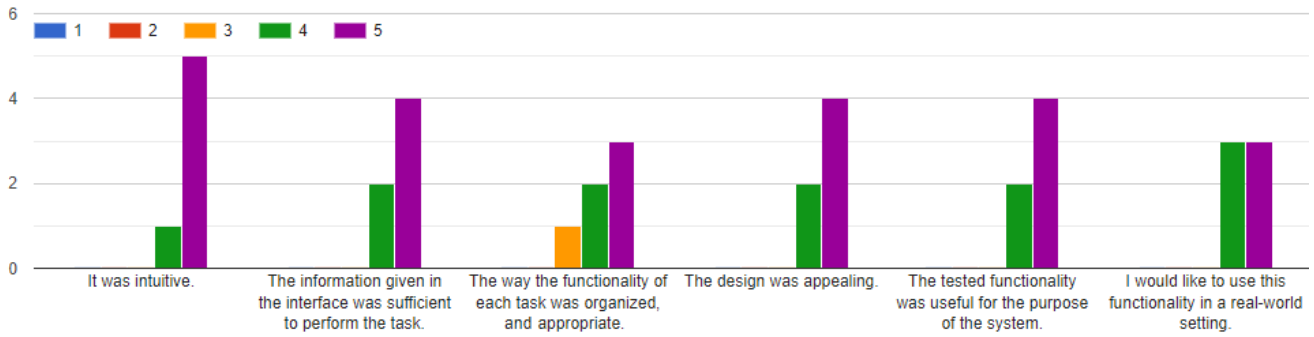
Was the task efficient?

6 respostas



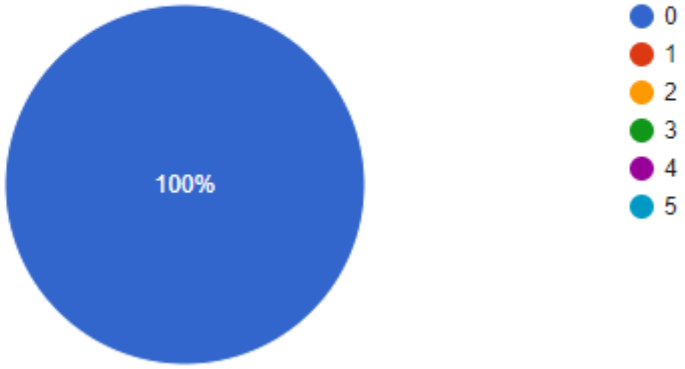
Functionality 5: Settings

For each of the performed tasks atribute a number in a scale of 1 to 5 (1 being tottally disagree and 5 being totally agree), rating if you agree or not with the following statements.



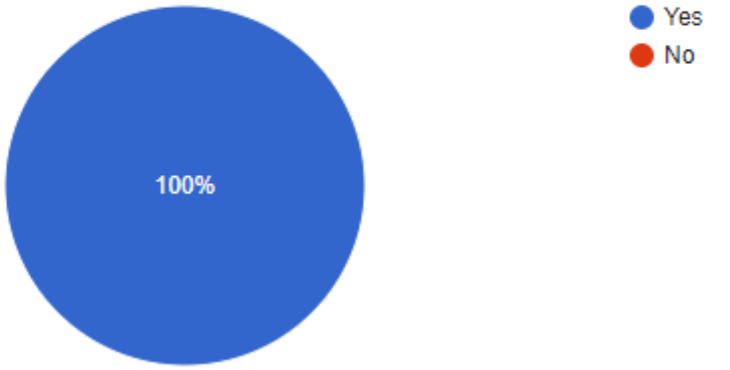
How many subtaks missed?

6 respostas



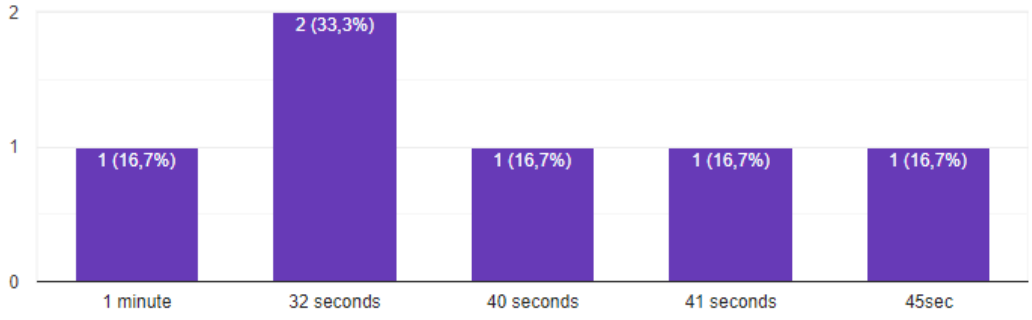
Was the task effective?

6 respostas



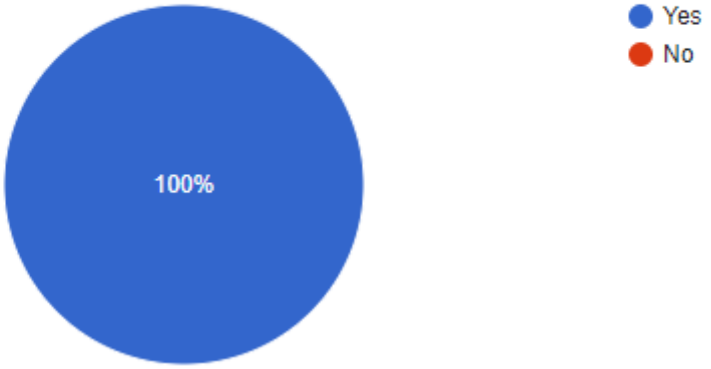
How much time did it take?

6 respostas



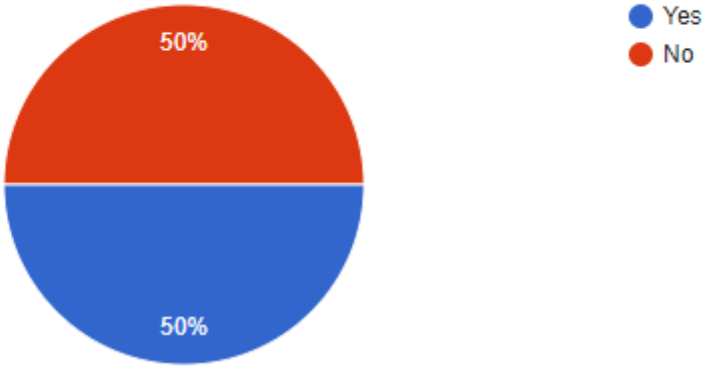
Was the task efficient?

6 respostas



Is there any aspect of the app that you did not like?

6 respostas



CCU - User-Centered Design and Evaluation

User's Testing - High Fidelity Prototype

MEIC - Group 16

Test guide

1. Preparation

To evaluate the application developed in relation to the User-Centered Design and Evaluation subject, we will conduct user testing.

These tests will be performed by individuals who agreed to participate in them and will be conducted through remote (videocall) means and the Figma platform due to the current pandemic background.

The necessary equipment for user testing consists of a computer with any HTML-5 capable browser and an internet connection.

In addition, the user will participate in 2 questionnaires, one conducted beforehand in order to collect demographic data, and the second one after the test to obtain the user's opinion.

2. Introduction

The application was developed in a mobile format, to be used on a smartphone. With these tests, we intend to gauge the system's efficiency, useability, and functionality, and identify any strong or weak points of our design.

During the test, the user will be asked to perform 5 tasks, and the time and steps they require to do so will be measured, The objective of this test is to only evaluate the interface, and by no means the user's performance. As such, there is no pressure on speed or correctness in attempting to perform the requested tasks.

The user's questions may not be answered during the test, and they may not be offered help to evaluate the ease with which they can understand the system. Any of their questions can and will be answered before or after the execution of the tests.

Furthermore, the user may abandon the test at any moment if they so wish. The testing is expected to take around 10 to 15 minutes.

3. Introduction of the System/Application

Our application is called "Pocket Market", and its main objective is to encourage people to "shop small". To achieve that, it uses a **reward system**: everytime you shop on a Small Business through the app, and using real money, you receive cryptocurrency (**tokens**) that can be used to make other purchases, also through the app.

The app has two main ways to perform purchases: **online** and **on-site**. When online, the purchase and reward are made through the app. When on-site, it uses a QR-reader to confirm the purchase. To be more accessible, the app also has information on all partner-shops, such as description, evaluation, directions, website, social media and online catalog, when possible and existing.

4. Consentiment form

I consent to the anonymous recording of usage and demographic data for the purpose of statistical and interface evaluation.

☐ Yes ☐ No

5. Pre-Test Questionnaire

1. Age group:

☐ <18 ☐ 22-25 ☐ >30
☐ 18-21 ☐ 26-29

2. Do you shop online

☐ Yes ☐ No

3. How would you rate your experience with mobile apps

☐ Unexperienced ☐ Familiarized ☐ Experienced

4. How easy is it for you to learn a new mobile application

☐ Very easy ☐ Normal ☐ Very hard
☐ Easy ☐ Hard

6. Evaluation

1st Task: *Shop online*

1. Login to the App
2. Check the Rank of the "Clothes Shop". (tell the evaluator)
3. Buy online 2 blue t-shirts using tokens as payment.
4. Buy online 3 blue t-shirts using money as payment.

2nd Task: *Shop in-person*

1. Go back to the main menu.
2. Search the way to a nearby store/business.
3. Go to the website of the selected store/business.
4. Go to the catalog of the "Clothes Shop".

3rd Task: *Qr Pay*

Context: Assume that you are already in a physical store that does not have online shopping, but did partner with our reward system..

Note: To simulate the reading of the QR code, please click on it.

1. Go back to the main menu.
2. Buy a product using the QR code with money as a method of payment.
3. Buy a product using the QR code with tokens as a method of payment.

4th Task: *Transactions*

1. Go back to the main menu.
2. Verify how many tokens you earned when you bought 2 blue t-shirts. (tell the evaluator)

5th Task: *Settings*

1. Go back to the main menu.
2. Change your name to Manuel.
3. Verify your current credit card number. (tell the evaluator)
4. Add 100 euros to your account in the app.
5. Exit the app.

7. Criteria and measures

Effectiveness criteria: Number of subtasks done successfully.

- **Measure**: On average, it is expected for each task that each user misses at most 1 of the subtasks.

Efficiency criteria: Each task must be done in a short time period.

- **Measure**: Each task must be completed, respectively, in the following time limits.:
  - Task 1: Under 1 minute and 10 seconds.
  - Task 2: Under 1 minute and 10 seconds.
  - Task 3: Under 1 minute and 10 seconds.
  - Task 4: Under 30 seconds.
  - Task 5: Under 1 minute.

Satisfaction criteria: Pos-test questionnaire.

- **Measure**: On average each given answer must be equal or superior to 4.

8. Post-Test Questionnaire

1. For each of the performed tasks, attribute a number in a scale of 1 to 5 (1 being totally disagree and 5 being totally agree), rating if you agree or not with the following statements.

	Task 1	Task 2	Task 3	Task 4	Task 5
It was intuitive.					
The information given in the interface was sufficient to perform the task.					
The way the functionality was organized was appropriate for the task.					
The design was appealing.					
The tested functionality was useful for the purpose of the system.					
I would like to use this functionality in a real-world setting.					

2. Is there any aspect of the app that you did not like?

☐ Yes ☐ No

2.1 If so, what was it?

_____

_____

3. What improvements would you suggest to our application?

_____

_____

Thank you for your collaboration!

CCU - User-Centered Design and Evaluation

User's Testing - Fully Functional Prototype

MEIC - Group 16

Test guide

1. Preparation

To evaluate the application developed in relation to the User-Centered Design and Evaluation subject, we will conduct user testing.

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The necessary equipment for user testing consists of a computer with any HTML-5 capable browser and an internet connection.

In addition, the user will participate in 2 questionnaires, one conducted beforehand in order to collect demographic data, and the second one after the test to obtain the user's opinion.

2. Introduction

The application was developed in a mobile format, to be used on a smartphone. With these tests, we intend to gauge the system's efficiency, useability, and functionality, and identify any strong or weak points of our design.

During the test, the user will be asked to perform 5 tasks, and the time and steps they require to do so will be measured, The objective of this test is to only evaluate the interface, and by no means the user's performance. As such, there is no pressure on speed or correctness in attempting to perform the requested tasks.

The user's questions may not be answered during the test, and they may not be offered help to evaluate the ease with which they can understand the system. Any of their questions can and will be answered before or after the execution of the tests.

Furthermore, the user may abandon the test at any moment if they so wish. The testing is expected to take around 10 to 15 minutes.

3. Introduction of the System/Application

Our application is called "Pocket Market", and its main objective is to encourage people to "shop small". To achieve that, it uses a **reward system**: everytime you shop on a Small Business through the app, and using real money, you receive cryptocurrency (**tokens**) that can be used to make other purchases, also through the app.

The app has two main ways to perform purchases: **online** and **on-site**. When online, the purchase and reward are made through the app. When on-site, it uses a QR-reader to confirm the purchase. To be more accessible, the app also has information on all partner-shops, such as description, evaluation, directions, website, social media and online catalog, when possible and existing.

4. Consentiment form

I consent to the anonymous recording of usage and demographic data for the purpose of statistical and interface evaluation.

☐ Yes ☐ No

5. Pre-Test Questionnaire

1. Age group:

☐ <18 ☐ 22-25 ☐ >30
☐ 18-21 ☐ 26-29

2. Do you shop online

☐ Yes ☐ No

3. How would you rate your experience with mobile apps

☐ Inexperienced ☐ Familiarized ☐ Experienced

4. How easy is it for you to learn a new mobile application

☐ Very easy ☐ Normal ☐ Very hard
☐ Easy ☐ Hard

6. Evaluation

1st Task: *Shop online*

1. Login to the App
2. Check the Evaluation score of the store "XiCoração". (tell the evaluator)
3. Buy online 1 pink t-shirt using tokens as payment.
4. Buy online 2 black digital watches using money as payment.

2nd Task: *Shop in-person*

1. Go back to the main menu.
2. Search the way to a nearby store.
3. Go to the website of the selected store.
4. Without leaving the current functionality, go to the catalog of the store "Siljoias".

3rd Task: *Qr Pay*

Context: Assume that you are already in a physical store that does not have online shopping, but did partner with our reward system..

Note: To simulate the reading of the QR code, please click on it.

1. Go back to the main menu.
2. Buy a product using the QR code with money as a method of payment.
3. Try to buy a product using the QR code with tokens as a method of payment. (tell the evaluator what happened)

4th Task: *Transactions*

1. Go back to the main menu.
2. Verify how many tokens you earned when you bought the item "Shoes". (tell the evaluator)

5th Task: *Settings*

1. Go back to the main menu.
2. Change your name to Manuel.
3. Verify your current credit card number. (tell the evaluator)
4. Add 100 euros to your account in the app.
5. Exit the app.

7. Criteria and measures

Effectiveness criteria: Number of subtasks done successfully.

- **Measure**: On average, it is expected for each task that each user misses at most 1 of the subtasks.

Efficiency criteria: Each task must be done in a short time period.

- **Measure**: Each task must be completed, respectively, in the following time limits.:
  - Task 1: Under 1 minute and 10 seconds.
  - Task 2: Under 1 minute and 10 seconds.
  - Task 3: Under 1 minute and 10 seconds.
  - Task 4: Under 30 seconds.
  - Task 5: Under 1 minute.

Satisfaction criteria: Pos-test questionnaire.

- **Measure**: On average each given answer must be equal or superior to 4.

8. Post-Test Questionnaire

1. For each of the performed tasks, attribute a number in a scale of 1 to 5 (1 being totally disagree and 5 being totally agree), rating if you agree or not with the following statements.

	Task 1	Task 2	Task 3	Task 4	Task 5
It was intuitive.					
The information given in the interface was sufficient to perform the task.					
The way the functionality was organized was appropriate for the task.					
The design was appealing.					
The tested functionality was useful for the purpose of the system.					
I would like to use this functionality in a real-world setting.					

2. Is there any aspect of the app that you did not like?

☐ Yes ☐ No

2.1 If so, what was it?

_____

_____

3. What improvements would you suggest to our application?

_____

_____

Thank you for your collaboration!