HCI - Assignment n.2

Design and prototyping of an application using a human-centered approach

Deliverable n. 1: Requirement Analysis

Project Title: Cook and Go
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Lab Class: P4

Introduction

Cook and Go

Cooking

- Essential activity
- Enjoyed by some, despised by others
- Requires a good amount of management

Cook and Go: app to help everyone with cooking, from beginners, to experienced cooks

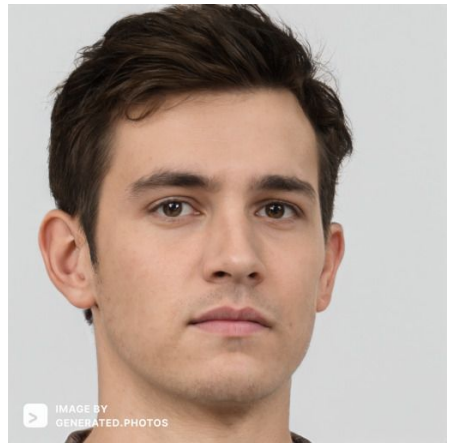
Project Objectives

Cook and Go

- Manage ingredients
- List recipes
- Sort and filter recipes

Personas

Cook and Go



Chad Stevens

Chad is a 20 year old Ohioan who studies at MIT and lives alone. He has neither much cooking experience nor a lot of time to cook, but he also isn't a big fan of his campus' canteen. As such, he prefers meals that are easy and quick to cook.

Joaquina Silva Pereira

Joaquina is a 67 year old retired grandmother. She has a 38 year old son, who is the CTO of a tech company. He has two daughters, but due to his busy lifestyle he doesn't have much time to be with them. Because of this, Joaquina lives with him and the girls and takes care of the girls when their father can't. She often cooks meals for the 4 of them. She enjoys cooking and has been doing it for a long time. As such, she likes to take some time to prepare harder meals with a lot of ingredients.

Scenarios

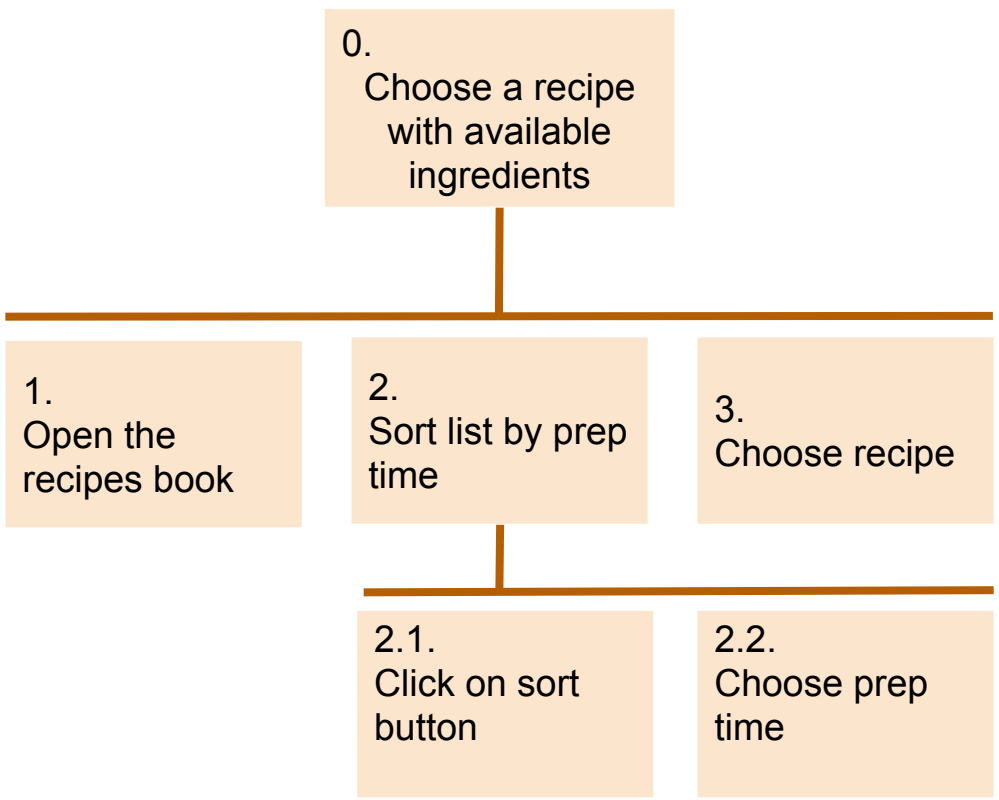
Cook and Go

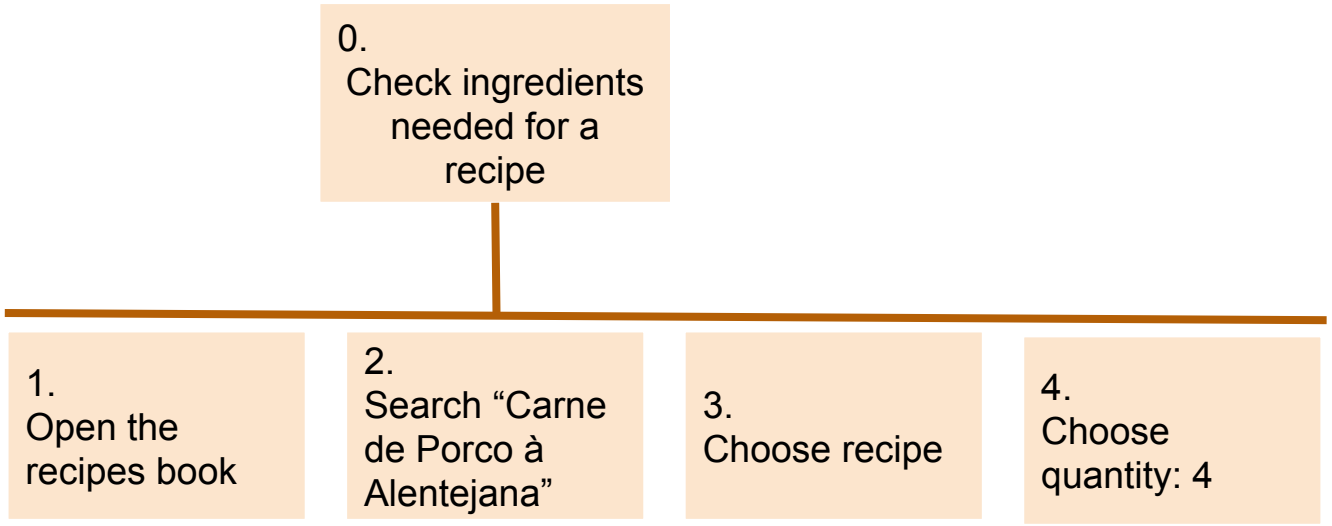
1. Chad cooks dinner with whatever is left at home. Having previously registered the ingredients he has in the app, he applies the filter and sorts by prep time. He selects the quickest meal, sets the amount of meals to 1, reads the recipe and starts cooking it.

2. Joaquina checks the ingredients for 4 meals of “carne de porco à alentejana” to buy what she’s missing for lunch. The app’ll tell her the ingredients that are missing, showing them in red. After purchasing them, she registers the ingredients she bought in the app.

Tasks

Cook and Go





Requirements

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Functional Requirements

- Search
- Filter
- Manage ingredients
- Sort by meal attributes

Non-functional requirements

- Database
- Intuitive and quick to use UI

Low Fidelity Prototype (LFP)

Cook and Go

- We made a digital prototype.
- We asked target users to test our prototype according to our scenarios.

Low Fidelity Prototype

LFP User Evaluation

Cook and Go

- A questionnaire where we asked our target users to accomplish some key tasks.
- The app's features and usability were the main focus.
- All the personas and their respective tasks were used in the testing process.
- Our 7 participants, 4 female and 3 male, were between 19 and 52 years old
- We had to solve two main issues:
  - Profile button not intuitive (used to be a settings gear)
  - Lack of saving filter button

Chad Test
1. You only want to see recipes you can cook with the ingredients you have at home.
2. You want to order those recipes by time (ascending).
3. Choose the recipe that is going to take the least time to cook..
4. Make the recipe.

Joaquina Test
1. You want to see what ingredients you are missing to make "carne de porco à Alentejana" for 4 people.

Extra Test
1. Let the app know you are allergic to fish.

Changes

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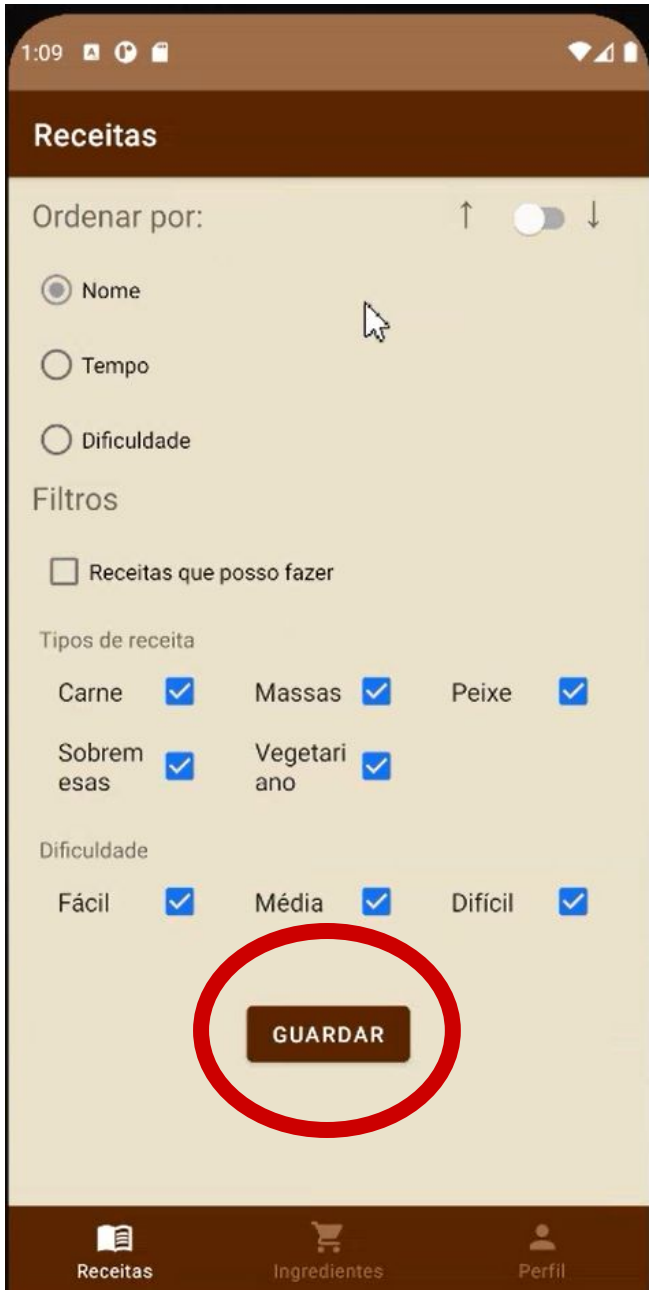
Profile button changed to a standard “profile” button

Changes

Cook and Go

Added a saving filter button (the only way to save before, was to exit the filter page; not intuitive for the participants)



Platform Used for the functional prototype

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- Android Studio and its native libraries was the main tool for the application.
- We used Java instead of Kotlin, due to our familiarity with the language.
- This platform was ideal because it was specifically designed for the development of Android applications, unlike the technologies we had used before.

User Evaluation of the functional prototype

Cook and Go

- Our goal remained the same. All personas and scenarios and their respective tasks were addressed.
- This time we had 5 participants, 2 women and 3 men with ages ranging from 19 to 48.
- This time we only had one main issue: we had search by name on the recipes but not on the ingredients.

Task 1 Diga a app que é alérgico a peixe.

Very difficult 1 2 3 4 5 Very easy

Task 2.1 Encontre os ingredientes que faltam para fazer Carne à alentejana para 4 pessoas.

Very difficult 1 2 3 4 5 Very easy

Task 2.2 Adicione os ingredientes que faltam aos ingredientes.

Very difficult 1 2 3 4 5 Very easy

Task 2.3 Faça a receita.

Very difficult 1 2 3 4 5 Very easy

Task 3 Encontre a receita mais rápida com ingredientes que tenha na dispensa.

Very difficult 1 2 3 4 5 Very easy

Changes

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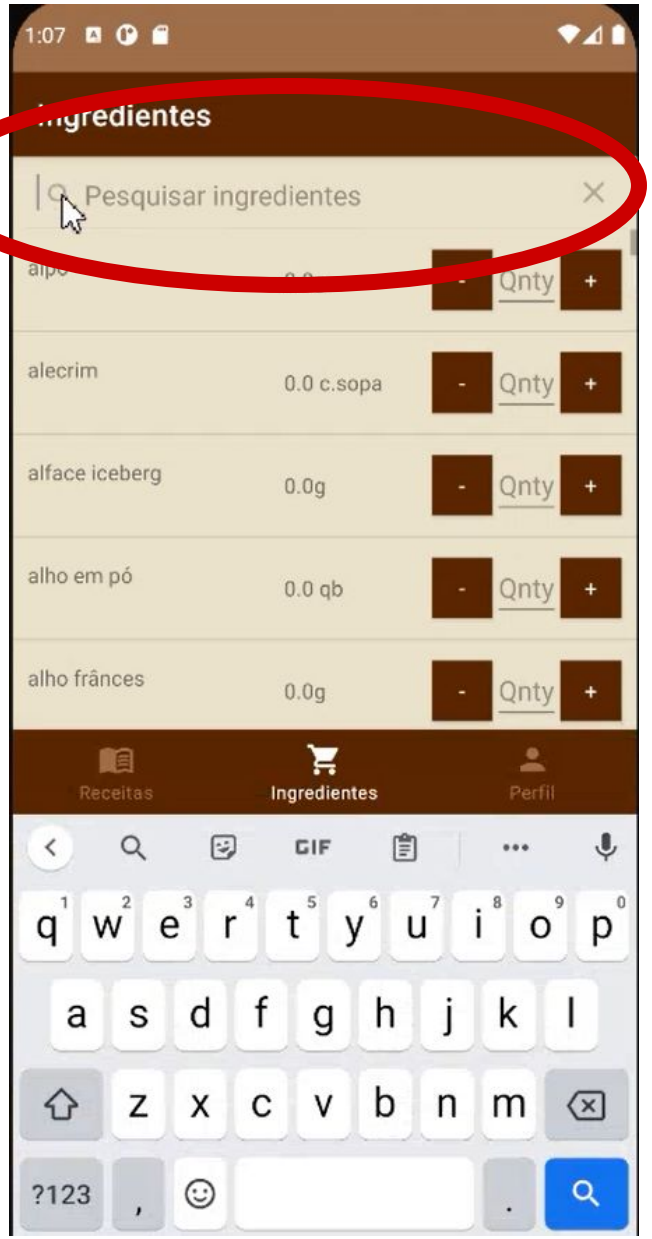
Added a “search by name” field on the ingredients page.



Demo

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Tasks 1 and 2

Task 3

Future Work

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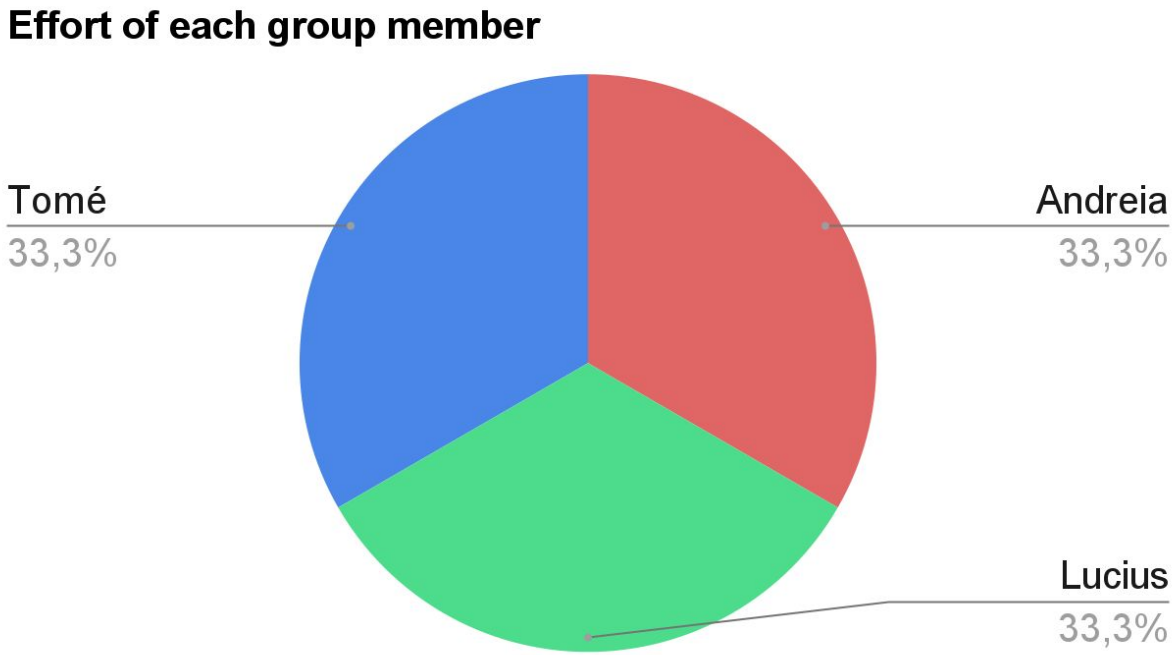
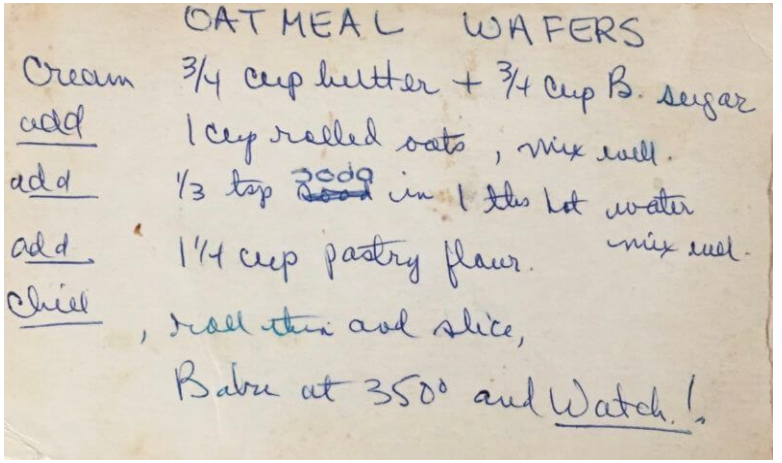
The next step for Cook and Go would be to implement a feature to allow users to add their own recipes and ingredients.

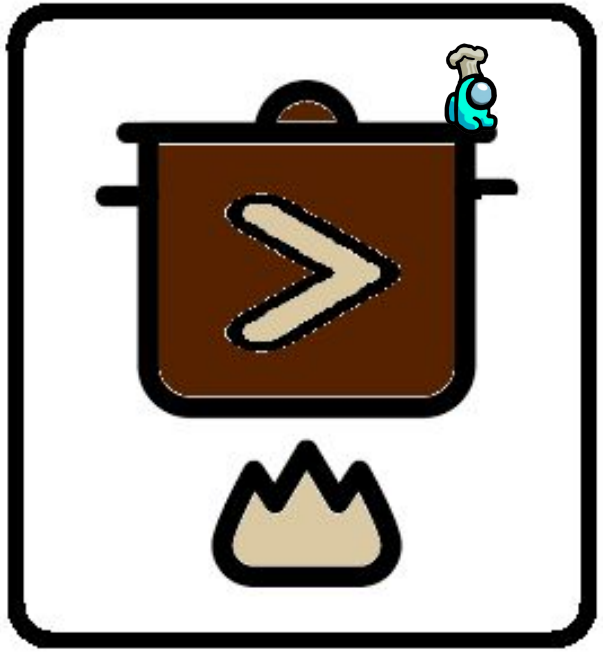




Acknowledgments

Cook and Go

We would like to thank our participants and the teachers who helped us with Android Studio.



(This presentation is based on a template produced by Bernardo Marques)

Questions

Cook and Go