



NOVA SCHOOL OF  
SCIENCE & TECHNOLOGY

**Human-Computer Interaction**

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# **BookMeal**

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## **Stage 4: Computational Prototype**



# **BOOKMEAL**

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- **Problem description:** Have you ever wanted to have a great dinner in a fantastic restaurant but didn't know where to look or whom to call to book a table? Nowadays, to book a nice restaurant, you already need to know its location and what it serves, and also its contact so that you can book a table. Sometimes when you know all of that, you might get there and be misunderstood by their prices, as they increase or change (for example, due to inflation) and unfortunately you might not be able to pay for it or be surprised when you ask for your bill.

- **Target users:** We recommend an age range between 16 and 65, as it is an age range at which people know how to use the technology better and make better use of the app. Starting at the age of 16, the users can be independent and book a restaurant by themselves.

- **Project goal:** The goal of the application is to help users find and book a table in any restaurant with the type of food they want. This can be helpful as well with a rating system where the user can check some reviews of the other customers, as well as the menus and the prices of each dish. Another of our goals is to have a restaurant floor map for each restaurant that is registered in the application so that the user can search them by the location he is looking for. In conclusion, our primary goal is to design an application to help the users to find the best restaurant they want, for the best price, and be helpful with the system of booking that can also be helpful for the restaurant offering a faster and an efficient process.

- **Competition and what's different from them:** TheFork right now is the company which is in the best position to compete against us. The Australian company, from our perspective, has a great design and a very good user interface. However, their database in Portugal is a bit restricted and our goal is to increase the database and create a better interface experience for the user. Our design will have the capability of booking lots of people with the possibility of choosing the table according to the restaurant's floor plan. What's different as well is the fact that the users can already, before going to the restaurant, choose their menu instead of sometimes waiting more than one hour for their meal as they reach the restaurant.

## • Description of each user class:

Our app will accommodate just one entity (the users).

From the users' perspective, they can book a table at any restaurant, choose how many people they want to bring and even choose the dish before going there. The users will have access to every restaurant's information, such as other customers' scores and reviews, discounts, menus, average prices, location, photos, etc.

Beyond submitting and managing a booking in a restaurant, the users will also have access to the map of restaurants close to the desired location, as well as all their reservations at the moment. Moreover, the users can edit their profiles if they want to update some information about them.

Furthermore, the customer will have access to the restaurant's floor plan to find out which tables are already reserved and which ones are free. The restaurants will have profile views, reservation details, and plenty of statistics for each one of them.

## • Tasks

We have pointed out the best characteristics for each high-level task

### → Login & Register

- Goal  
→ Registration and Login through data authentication. This functionality aims to register users in our database, including various data such as name, address or postal code. The main identifier of the user and the restaurants' owners will be the email.
- Subtasks  
→ There are no subtasks.
- Preconditions  
→ All the information presented in the registration form must be correct, and we will have an email address confirmation to check its correctness. There are no under 16 users.
- Exceptions  
→ The only exception in the sign-in and sign-up forms is some parameters which do not need to be completed (for example the postal code) in the application form.
- Features  
→ The best feature is the design, there are no restrictions and in our app, if it is installed and signed in, there is no need to do it again (only after a month of inactivity).

## → **Booking a Restaurant**

- Goal  
→ Booking a restaurant is one of the tasks where the client has the goal of booking a table at a certain hour, in the desired restaurant.
- Subtasks  
→ The sub-tasks of the main task are the selection of the restaurant according to our search for the desired one (we use filters for example) and the possibility of selecting the meal in advance before going to the restaurant.
- Preconditions  
→ The precondition is that a client can't book two restaurants at the same hour to prevent any client punishment (we will give a timestamp of, for example, 3 or 4 hours in which the user can not book 2 restaurants).
- Exceptions  
→ The exception is the fact that a restaurant can be already full, in this case, the client can't book any table.
- Features  
→ The best feature is scalability, as it can handle a large number of booking requests at several tables in the same restaurant at the same time.

## → **My bookings**

- Goal  
→ List all the books that a certain user has already done at the application.
- Subtasks  
→ There are no subtasks.
- Preconditions  
→ To have any kind of result the user needs to have at least a restaurant book.
- Exceptions  
→ There are no exceptions.
- Features  
→ The best feature is the fact that a client can access all his books to check a restaurant that he likes but didn't remember the name of or to control his movements as well as the amount of money spent.

## → **Edit Profile**

- Goal
  - Both the users and the restaurant owners can edit their profile, adding up or replacing some information which they have written when they first registered.
- Subtasks
  - There are no subtasks.
- Preconditions
  - All the information presented in the profile editing form must be correct.
- Exceptions
  - The only exception is some parameters which do not need to be completed (for example the address) in the profile editing form.
- Features
  - The best feature is the possibility of adding a profile photo to both user and restaurant owner profiles, boosting in quality of the interface in our application (as it is something visual).

## → **Engagements**

- Goal
  - Have some features of comments, reviews and "my favourite restaurants".
- Subtasks
  - There are no subtasks.
- Preconditions
  - The user needs to have already made a successful booking, this means that the user has a finished meal already, so from there he can comment, review or add to his favourite restaurants.
- Exceptions
  - There are no exceptions.
- Features
  - The best feature is the fact that a restaurant can have an average rating with the number of reviews, as well as a comment section to help the new users to have better choices.

- **Scenarios:**

#### First Scenario

Make a reservation at O Nobre Restaurant, where the menu selection is made in the restaurant.

#### Second Scenario

Make a reservation at O Nobre restaurant where the menu selection is made in the application.

#### Third Scenario

Make an evaluation of the O Nobre restaurant for which a successful reservation has already been made.

- **Briefing**

Our application has the main goal for the user to book a table of their choice without contacting directly with the restaurant, allowing a user to book a table at a restaurant, in a day, hour, and the number of people of their choice. User can check their favourite restaurant, make reviews of the restaurant and add them to their favourites.

- **Usability instructions**

Our project was designed to work on a mobile app.

- **Prototype**

In the following link, you can check our prototype developed in marvel.

<https://marvelapp.com/prototype/ijb538e>

- **URL for the GitHub**

Our project is stored in the following GitHub link.

<https://github.com/rafaellopes74/IPM-book-meal>

- **URL for the project**

The APK is in our GitHub repository (in the APK folder) and we'll send it by email. You can run it by cloning the project into Android Studio and running it in the Emulator or in your phone or by downloading it through APK.

<https://github.com/rafaellopes74/IPM-book-meal>

- **IPM link**

In the following link you can see all the other reports and prototypes for this project

<https://github.com/rafaellopes74/rafaellopes74.github.io#rafaellopes74githubio>

- **Tools for the development of the project**

Our project was developed in android studio, using java, JDK version 11.0.13 gradle version 7.3.1.

Using Pixel 4 XL emulator to test our application.

You can also see our application using your mobile phone.

- **Incomplete parts**

- When you choose a person you try to edit the name of a person it doesn't work.
- The “Rate us”, “about us”, “settings” and “navigation” bars don't work. These options are only decorative.
- You can only open the map using your mobile phone, with the emulator it doesn't work.