

RASD (draft)

GENERAL BACKGROUND:

The coronavirus emergency has put a strain on society on many levels, due to many countries imposing lockdowns that allow people to exit their homes only for essential needs, and enforcing strict rules even when people are justified in going out (such as limiting the number of accesses to buildings and keeping a distance of at least one meter between people).

In particular, grocery shopping---a most essential need---can become a challenge in the presence of such strict rules. Indeed, supermarkets need to restrict access to their stores to avoid having crowds inside, which typically results in long lines forming outside, which are themselves a source of hazards. In these trying times, people turn to technology, and in particular to software applications, to help navigate the challenges created by the imposed restrictions.

SCOPE:

The goal of this project is to develop an easy-to-use android application that, on the one side, allows store managers to regulate the influx of people in the building and, on the other side, saves people from having to line up and stand outside of stores for hours on end.

MAIN FUNCTIONALITIES:

Basic Service:

Allows the user to search for a supermarket from the search bar and to verify the actual accessibility based on the capacity of the store. In addition it shows the timetable of the supermarket with the possibility of booking a future available time slot (which can always be deleted later).

In case of reservation it will provide the user a QR code to be shown at the supermarket entrance.

In doing so it takes into account the effective client's access, monitoring in real-time the number of customers inside the store.

A notification will pop-up when the booked time is near, and if the access does not happen by X minutes from the start instant of the reservation, the booking will be automatically deleted (with related notification).

Other Services:

- Required initial SignUp, and Login the next times, in order to use the app
- Possibility to manage the bookings in a specific section of the user interface
- Visualization of preferences and past researches under the search bar
- Colored time slots to show the current-supposed crowding of the store.
- Feature to allow the user to switch the application language (ENG - ITA)

Notes:

The store capacity dedicated to the booking by app is equal to X% in order to allow the access also to whoever does not have the app. In this case the customers flow is regulated directly by the manager.