Prenotalo: project high-level specification

Cecchetto A., d'Antonio S., Perrella C., Roccia E., Zerpa Ruiz J. E.

January 2024

1 introduction

In this document, we provide the initial idea and high-level specification of the project describing what are its objectives, what the system should do, what are the potential users and the more important use cases. The project deals with the development of a distributed system, made up of different micro-services, to manage bookings and related operations. Prenotalo is at its core a simple but comprehensive booking system.

Project Glossary

Term	**Definition**
Consumer	Someone that requests or books a service offered by a Producer
Producer	Someone that provides services to Consumers
User	Platform user, so both Consumer and Producer

The aim of this project is to create a distributed system, made up of different micro-services, that primarily provides booking management functionalities and also integrating additional services and utilities.

2 Objectives

With objectives of the project we mean what the system aims to facilitate or solve. The system, Prenotalo, provides booking management functionalities also integrating additional services and utilities, like notification and analytics.

It facilitates interaction between consumers and producers. It aims to provide a simple and straightforward way for consumers to find, book, and manage their appointments or reservations. It helps producers manage their resources effectively.

3 Functionalities

For functionalities, we mean what the application should do in order to satisfy concretely the objectives. The main functionalities of the system will be:

- Provide a way to register user data.
- Provide a way for a producer to create new events.
- Provide a way for a consumer to look for available events.
- Provide a way for a consumer to book an event.
- Provide a way for a consumer to look for booked events.
- Provide a way for a consumer to cancel a booking.
- Provide a way for a producer to cancel events.
- Provide a way for a consumer to pay for an attended event.
- Send consumers notifications about booked events, e.g. reminders.
- Provide a way for a producer to create notifications about an event, e.g. broadcast messages.
- Collect surveys about completed events.

- Provide data analytics obtained by the system to producer.
- Provide a web application interface to use the system.
- Provide a mobile application interface to use the system.

4 Potential users

Such a system could potentially be used by any small business, merchant or self-employed practitioner. This booking system aims to be general enough to be useful any time there is a service offered in slots of time. Hence, some examples of potential users might be lawyers, doctors, hair salons, schools like driving schools, dancing schools, etc. On the other hand, clients of such businesses might use the system to book the offered services.

5 Main use cases

The most relevant use cases of the system are the following:

- **A producer creates an event**: a producer defines a name for the event, specifying its duration and a start time. Then the event is published and so is viewable by consumers.
- **A consumer requests an event**: a consumer finds the appropriate provider that offers the needed services. Then the consumer selects the service from the list of offered services, of the relative producer. Then selects a time slot and sends a request for an event to the producer. Consequently, the producer can either accept or discard the request recieved.
- **A consumer books an event**: a consumer searchs for a producer, cheking if there are events to which he can partecipate. The consumer then can sent a booking request for the event of interest. The producer the recieves a request of partecipation that can either be accepted or discarded.
- **A consumer pays for a booked event**: a consumer checks for its booked events. Selects an event that supports payment trough the system. The payment sequence is then managed by an external service that then notifies wheter the payment was succesful or not.