



Prenotalo

Laboratory of Advanced Programming Project
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Alessandro Cecchetto - 1941039

Silvio d'Antonio - 2145048

Christian Perrella

Emanuele Roccia - 1967318

Josef Emanuele Zerpa Ruiz - 1837394



What's Prenotalo?

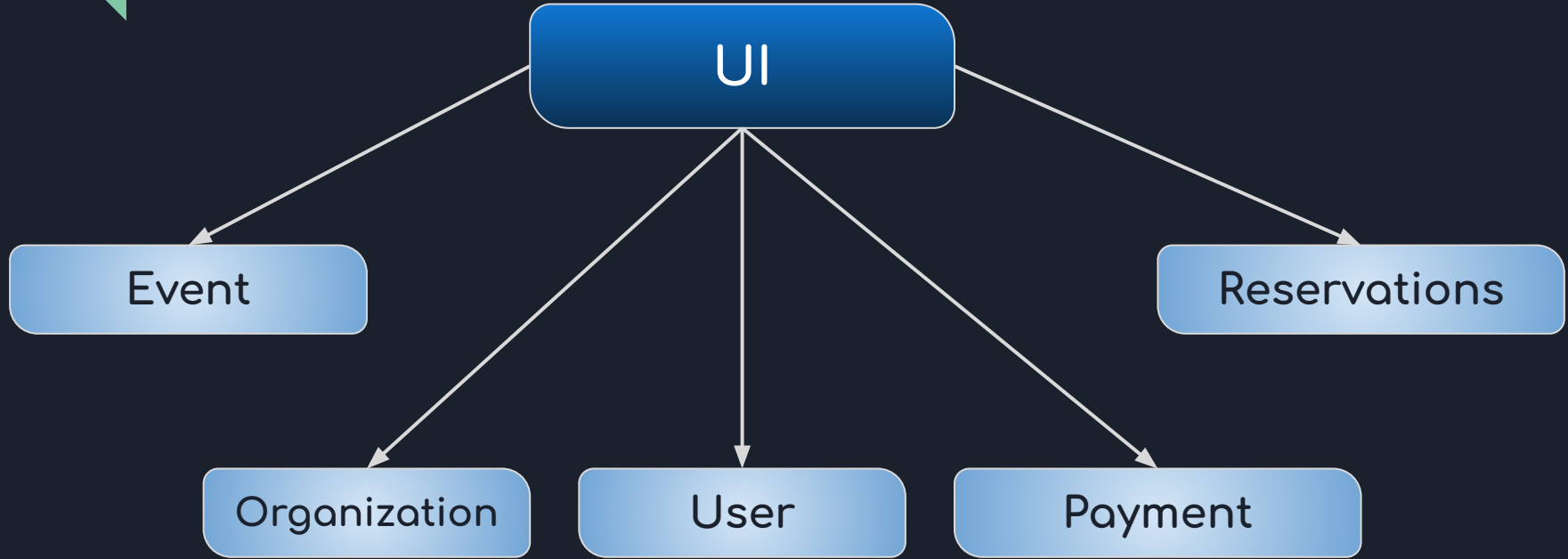
Prenotalo is a user-friendly platform that allows individuals and organizations to easily browse and book for events of all types.

Users can search for organizations by name or keywords. They can view events offered by them and also detailed event information, including the event date, time, location, and a description.

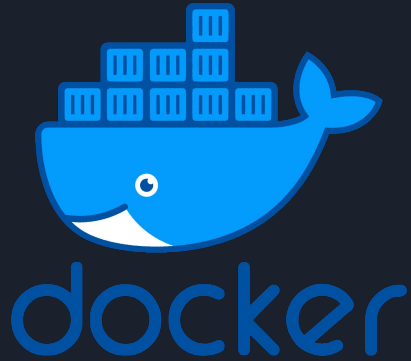
Once they find an event they are interested in, users can easily book their number of tickets needed directly through the application, possibly specifying special requests for the organizer.

An event organizer can easily browse through his/her events performing actions on it such as eliminating or modifying it and he/she has always the possibility to create a new event.

Microservices



Technologies





User microservice

The user microservice is used for retrieve users informations and manage login, registration and session key.

- **/sessions**
 - **POST:**
Receives: username and password in HTTP request body
Returns: session_id, user_id
 - **DELETE:** execute logout by deleting a session
- **/session/<session_id>**
 - **GET:** used by other services for checking for authentication
Returns: HTTP codes 204 or 404
- **/users**
 - **POST:** creates a new user
Returns: HTTP codes 201 or 409
- **/user/<id || email>**
 - **GET:** returns data of the specified user



Organization microservice

The Organization microservice is used for managing the organizations in order to add new organizations, retrieve a specific organization or the list of organizations and organization informations.

- **/organizations**
 - GET: returns all the organizations
 - POST: create a new organization
- **/organization/<id>**
 - GET: returns all the data of the specified organization



Event microservice

The Event microservice is used to retrieve the events of an organization, to create a new organization and for seeing all the reservations of an event.

- **/events[?organization_id]**
 - GET: returns all the events
 - ?organization_id: returns all the events of the specified organization
 - POST: create a new event
- **/event/<id>**
 - GET: return the specified event
 - DELETE: delete the event
 - PUT: update the event



Reservations microservice

The Reservation microservice manages the reservations of event it can return all the reservations of an event, create a new reservation, update and delete it.

- **/reservations[?user_id || ?event_id]**
 - GET: return all reservations
 - ?user_id: returns all reservations done by the specified user
 - ?event_id: returns all the reservations done for the specified event
 - POST: create a new reservation
- **/reservation/<reservation_id>**
 - GET: return the specified reservation
 - PUT: update the reservation
 - DELETE: delete the reservation



Payment microservice

The Payment microservice allows the participant to pay an event in order to finalize the reservation of it.

- `/payments[?user_id]`
 - **GET:** get all the transactions done by the specified user
 - **POST:** creates a new transaction
- `/payment/<id>`
 - **GET:** retrieve the informations of a specified transaction
 - **PUT:** updates an existing transaction

Cost: estimation vs reality

G22					
	A	B	C	D	E
1	USER STORIES or TASKS				
2	TASK TITLE	TASK DESCRIPTION			
3	Registration	As a user, I want to be able to register myself, in order to use the platform.			
4	Login	As a user, I want to be able to login, to authenticate quickly to the platform.			
5	Logout	As a user, I want to be able to do the logout from my account, in order to terminate my session.			
6	Organization list	As a participant, I want a list of all organizations, to look up for one where to book an event.			
7	Organization search	As a participant, I want to be able to search through available organizations by name, to look up already known organizations.			
8	Filter organizations by tag	As a participant, I want to be able to filter available organizations by tag, to find all organizations that provide a specific service.			
9	Available event list	As a participant, when selecting an organization, I want a list of all available events, to choose what events to book.			
10	Filter events by date	As a participant, I want to be able to filter available events by date, to have a more organized view of available events.			
11	Filter events by time	As a participant, I want to be able to filter available events by time, to have a more organized view of available events.			
12	Book an event	As a participant, I want a book event button, to register my intention to participate in an event.			
13	Event booking confirmation	As a participant, I want a visual confirmation of my booking, to be sure of the outcome of my request.			
14	Notification dashboard	As a user, I want to be able to see all my notifications, for review.			
15	Event booking notification	As a participant, I want to receive a notification confirming my booking request, to keep the details of my booking for later review.			
16	Participant pay notification	As a participant, I want a payment result notification, to be sure of the outcome of my payment action.			
17	Organizer cancel event notification	As a participant, I want to receive a notification when an event I'm booked for gets cancelled, to reschedule my appointments.			
18	New survey notification	As a participant, I want to receive a notification when I'm requested to fill a survey, in order to provide my feedback.			
19	Booked events dashboard	As a participant, I want a dashboard of all events I booked, to see and manage my activity.			
20	Participant cancel reservation	As a participant, I want a cancel button, to be able to delete my appointments.			



Available Event List

Home/Store/Event

Prenotato



Choose event

  Tag 

Organization name

Description
Address
Opening hours
Phone number

Day

Hour

Event_1

00:00:00 00:00:00 00:00:00 00:00:00 00:00:00
00:00:00 00:00:00 00:00:00 00:00:00 00:00:00

Prenota

Event_2

00:00:00 00:00:00 00:00:00 00:00:00 00:00:00
00:00:00 00:00:00 00:00:00 00:00:00 00:00:00

Prenota

Cost: estimation vs reality

Software Size

Sizing MethodFunction Points

Unadjusted Function Points143

Language3rd Generation Language

Software Scale Drivers

PrecedentednessVery Low

Architecture / Risk ResolutionVery Low

Process MaturityVery Low

Development FlexibilityLow

Team CohesionVery Low

Software Cost Drivers

Product

Required Software ReliabilityLow

Data Base SizeLow

Product ComplexityVery Low

Developed for ReusabilityLow

Documentation Match to Lifecycle NeedsVery Low

Personnel

Analyst CapabilityLow

Programmer CapabilityLow

Personnel ContinuityVery High

Application ExperienceVery Low

Platform ExperienceVery Low

Language and Toolset ExperienceVery Low

Platform

Time ConstraintNominal

Storage ConstraintNominal

Platform VolatilityLow

Project

Use of Software ToolsNominal

Multisite DevelopmentVery Low

Required Development ScheduleNominal

MaintenanceOff

Software Labor Rates

Cost per Person-Month (Dollars)

Calculate

Results

Software Development (Elaboration and Construction) Staffing Profile

Effort = 56.0 Person-months

Schedule = 14.5 Months

Cost = \$0

Total Equivalent Size = 11440 SLOC

Effort Adjustment Factor (EAF) = 0.98

Acquisition Phase Distribution

Phase	Effort (Person-months)	Schedule (Months)	Average Staff	Cost (Dollars)
Inception	3.4	1.8	1.9	\$0
Elaboration	13.4	5.4	2.5	\$0
Construction	42.6	9.1	4.7	\$0
Transition	6.7	1.8	3.7	\$0



Cost: estimation vs reality

First estimate

- 143 FP
- 56 Person-months (14 months of effort per team member)

Final estimate

- 84 FP (60% of the first estimate)
- 29 Person-months (7 months of effort per team member)

Actual effort

- 260 total hours of mean development time
- 1.6 Person-months (6% of final estimate, 3% of first estimate)



Scrum artifacts