Politecnico di Torino

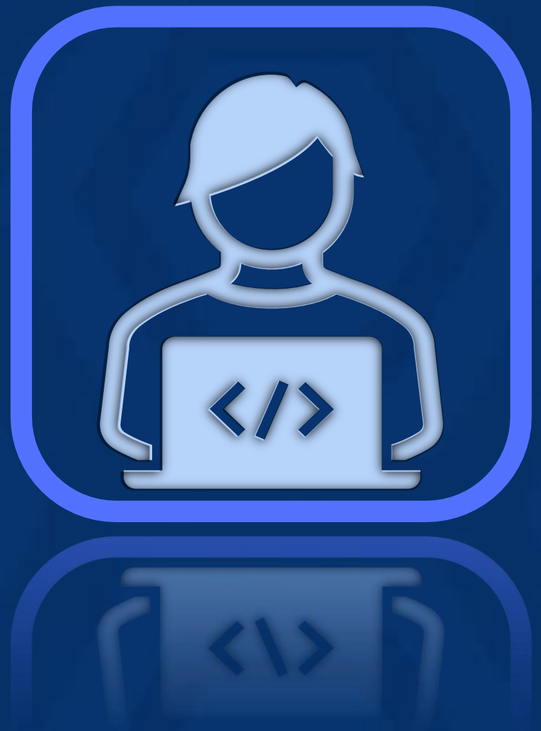
A2 – Storyboard and Low-Fi Prototypes

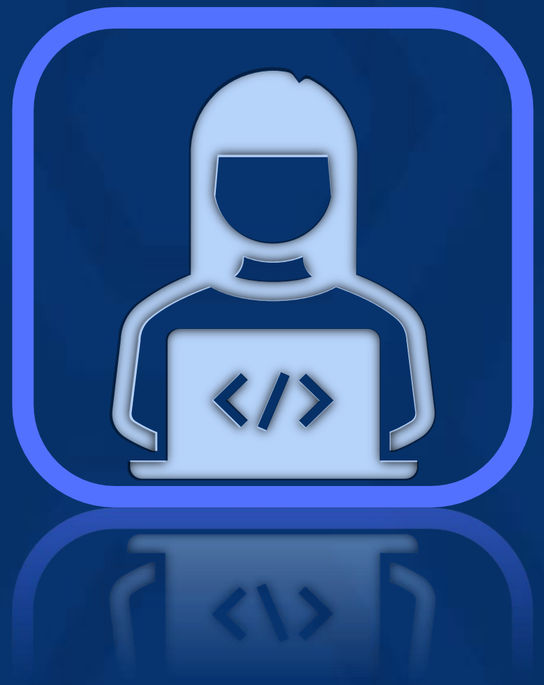
UrbanHub

Inclusive and effortless Urban Travel

Presentation

1 Introduction





Team members

Sylvie Molinatto

I'm a 22 years old Computer Engineering student from Condove, a little town near Turin. I have a deep enthusiasm for computer science and its potential to create a positive and valuable impact on society.

Alessandro Bianco

I’m a 23 years old student from Ciriè, near Turin. My two biggest passions are computer engineering and sports. I am currently studying cybersecurity and I hope to make it my future career.

Elia Ferraro

I’m a 24-year-old student from Asti. I really like software development and music because they are tools to generate emotions from very simple ideas that can improve the lives of people who use them.

Kevin Gjeka

I am a 23 years old Cybersecurity Engineering student from Turin. I have a keen interest in cybersecurity and ethical hacking and I hope to contribute to this space in the future.

UrbanHub

Inclusive and effortless Urban Travel

UrbanHub

Inclusive and effortless Urban Travel

We decided to call our project «UrbanHub» because this name emphasizes the urban aspect of the project, making it clear that it's centered around city and urban travel, and suggests a central place or location for gathering information and resources. In the context of trip planning, it indicates that the project serves as a central hub for urban travelers to access everything they need.

Indeed, the term "urban" relates to cities and the associated infrastructure, services, and living environments. "Hub" typically implies a central point or a place where various activities, services, or resources converge.

Problem

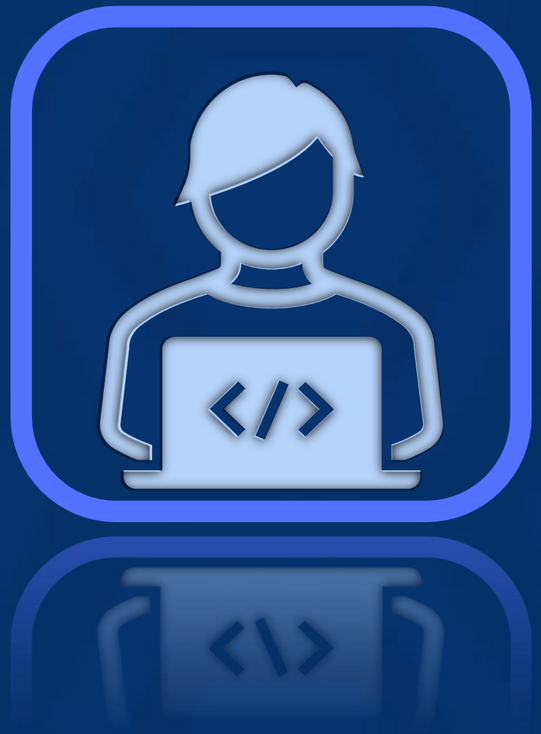
Through the 5 conducted interviews, as a team, we were able to gain insights into the recurring needs of individuals when planning a trip. What we have understood is that people require the ability to plan a trip quickly and easily, tailored to their specific needs. Additionally, other crucial aspects include the reliability and completeness of information, and finally, the option to reschedule activities in case of unforeseen circumstances.

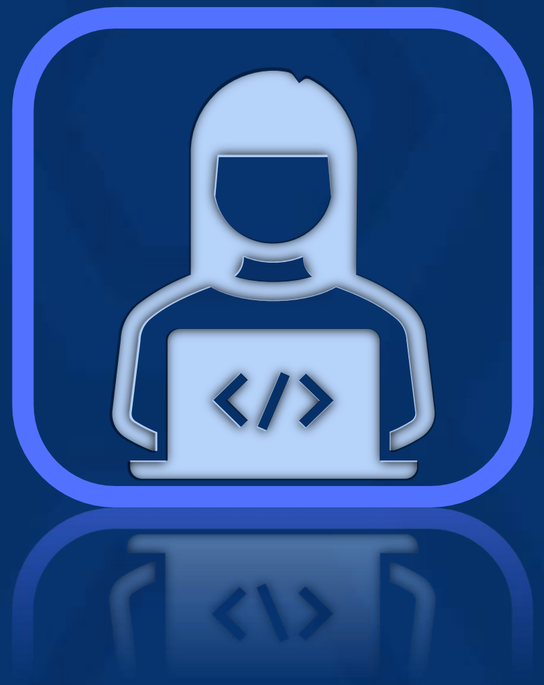
Solution

The proposed solution involves the utilization of surveys to gather information about user’s preferences and constraints, thereby facilitating the tailoring of the suggested itinerary to align with individual needs. The aim of the project is to ensure a level of customization that goes beyond generic recommendations. As a consequence, the project consists in creating a centralized platform where users can input their requirements and preferences, allowing them to receive a tailored trip itinerary.

2

Tasks and Storyboards





Simple task

Select a destination and a time period

Entering a destination and a time period is a straightforward and commonly performed task. Users are typically familiar with inputting information, and it requires minimal decision-making. The task involves a single action, and users are guided by prompts to enter the desired city and dates. The simplicity lies in the familiarity of the action and the clarity of the user's goal.

Moderate task

Insert needs and preferences to get a personalized itinerary

This task involves a moderate level of complexity due to the additional decision-making and customization required. Users need to articulate their specific interests, set a budget, and initiate the generation of a personalized itinerary. While it's user-friendly, it introduces more variables and preferences, making it moderately complex. The app's ability to process these inputs and generate a tailored itinerary adds a layer of sophistication.

Complex task

Modify/Reschedule the trip plan

Modifying or regenerating an itinerary introduces complexity as it requires users to interact with an existing plan. Users may want to adjust specific details, durations, or add/remove activities, necessitating a more advanced level of interaction. The app needs to handle dynamic changes to the itinerary intelligently. Complexity arises from managing multiple components of the itinerary and ensuring seamless adjustments without disrupting the overall coherence of the plan.

Storyboard

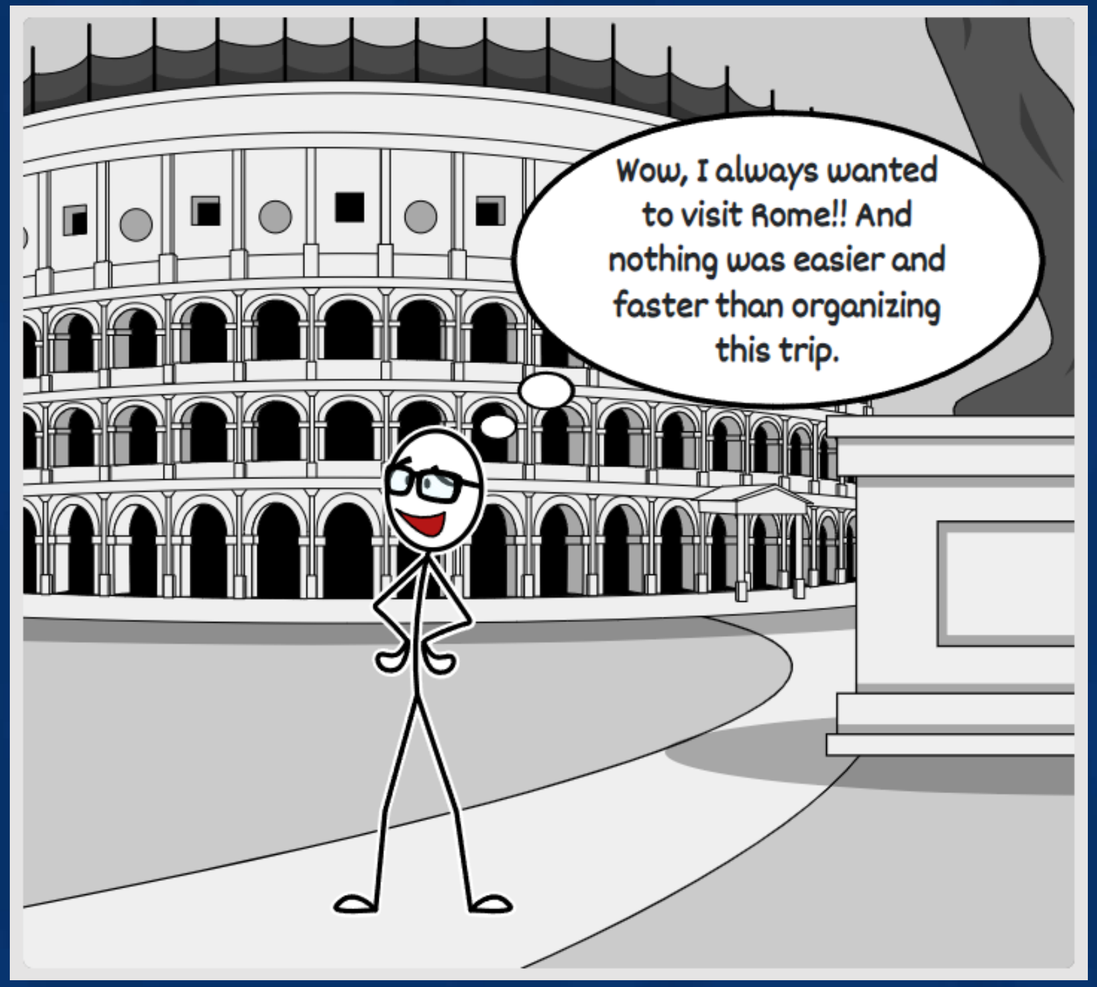

29/03/2024
SU M TU W TH F SA
I did a good job! In a few minutes I will finish my work for today.
29/03/2024
SU M TU W TH F SA
Oh no, I have too many things to do after work and I have very little time to plan my Easter holiday trip...
29/03/2024
SU M TU W TH F SA
I can use UrbanHub!

Storyboard


29/03/2024
SU M TU W TH F SA
Ok, first I have to choose the destination and the time period. I think that going to Rome for three days could be a great idea.
29/03/2024
SU M TU W TH F SA
Now I select my interests: I would like to do a mix of sightseeing, local cuisine, and outdoor activities. Finally I can set my budget.
29/03/2024
SU M TU W TH F SA
The itinerary is ready, there are a lot of activities and everything fits my needs!!

Storyboard


29/03/2024
SU M TU W TH F SA
I just have one doubt: maybe it's better to stay for 5 days so that I can see all the attractions (?!)
Oh yes, I can modify the plan, let's do it!

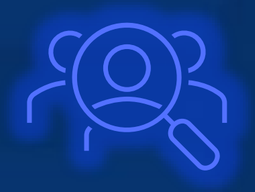

Wow, I always wanted to visit Rome!! And nothing was easier and faster than organizing this trip.

Storyboard - Why ?

We decided to use a simple storyboard to keep things clear. This decision reflects our commitment to presenting complex details in a clear and easily understandable manner. We created this storyboard because it encapsulates the essence of UrbanHub: simplicity, efficiency, and personalization. By understanding the real needs of our users and crafting a narrative that mirrors their experiences, we aim to provide a travel planning solution that seamlessly integrates into their lives.

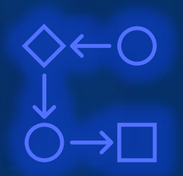
Storyboard - Strengths

User-Centric Approach



The storyboard effectively portrays a user-centered scenario, emphasizing the protagonist’s real-world problem and need for a quick and stress-free trip planning solution.

Clear Flow of Tasks



The tasks (entering a destination, providing interests, and modifying the itinerary) are presented in a logical sequence, making the user journey easy to follow.

Personalization Highlighted

The storyboard emphasizes the personalization aspect, showcasing how UrbanHub tailors the itinerary based on the protagonist preferences and constraints.

Storyboard - Weaknesses

Limited Context

The scenario is somewhat limited in scope, focusing solely on the protagonist’s need for a last-minute trip. It may not capture the diversity of user scenarios and requirements.

Simplicity Over Details

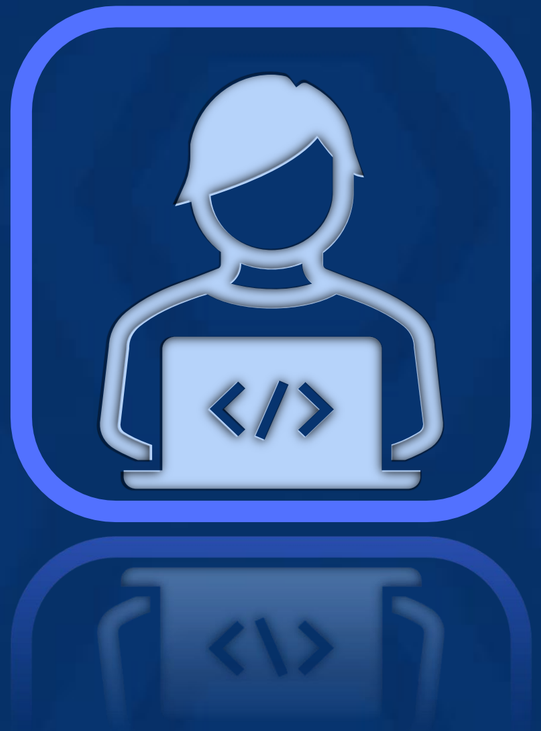
While simplicity is a strength, the storyboard may lack depth in showcasing the intricacies of UrbanHub's features. It provides a high-level overview but may not cover all functionalities.

Storyboard - Resume

The storyboard successfully achieves the identified goals and user needs. It creates a narrative that resonates with users, showcasing the app's ability to personalize, operate swiftly, adapt to changes, and provide trustworthy information. This positions UrbanHub as a user-friendly and efficient solution for urban travel planning.

3

Modalities exploration



Modalities exploration

Moving from theory to practical implementation, our team explored some ways to give substance to our concepts, with a particular focus on integrating Artificial Intelligence. We considered various options:

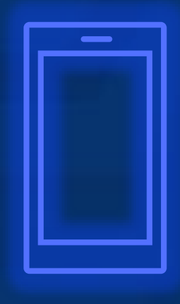
- A **mobile app** emerged as a strong choice due to the widespread use of smartphones.
- Another option under consideration was a **website** that calculates itineraries based on user-provided responses.
- We explored the feasibility of a **chatbot** because it provides an intuitive and inclusive interaction method with the system.

Modalities exploration

After a thorough evaluation, our team decided to exclude the chatbot. Although it is intuitive and inclusive, there were concerns about its ability to handle the extensive information needed to plan a personalized trip based on user preferences. Additionally, there were worries about its compatibility with the significant data load our centralized platform must generate for users. As a result, we have chosen to focus on the **mobile-based application** and the **web application** as our preferred modalities.

Selected Alternatives

Web application



Mobile application

The two options allow the user to experience an approach with artificial intelligence in different ways

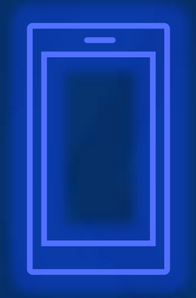
Web application- Motivation

The utilization of a web application stands as a viable option, given that users can conveniently access it from both mobile devices and desktop computers, thereby augmenting the versatility of our solution. Our conceptualization for this particular solution involves the incorporation of artificial intelligence (AI) capabilities. Specifically, we intend to integrate AI functionalities to generate pertinent questions and assess user responses systematically. This proactive approach will precede the presentation of the proposed itinerary to ensure a tailored and well-informed travel plan for the user.

Web application

Mobile-based app - Motivation

According to what we gathered from interviews, people seem to have interest in a fast and easy way to plan a urban trip, so the mobile app is one of the best choices for that objective. The fastest way for a user to communicate with a system is using his voice, so we decided to exploit the AI to recognize the user preferences from a vocal recording. Indeed, voice interaction can offer a convenient and inclusive way for users to provide their preferences and limitations. Users can verbally express their needs, such as accessibility requirements or sensory preferences, in a natural and efficient manner. Voice technology, coupled with natural language processing, can quickly gather user input and tailor trip suggestions accordingly.



Mobile application

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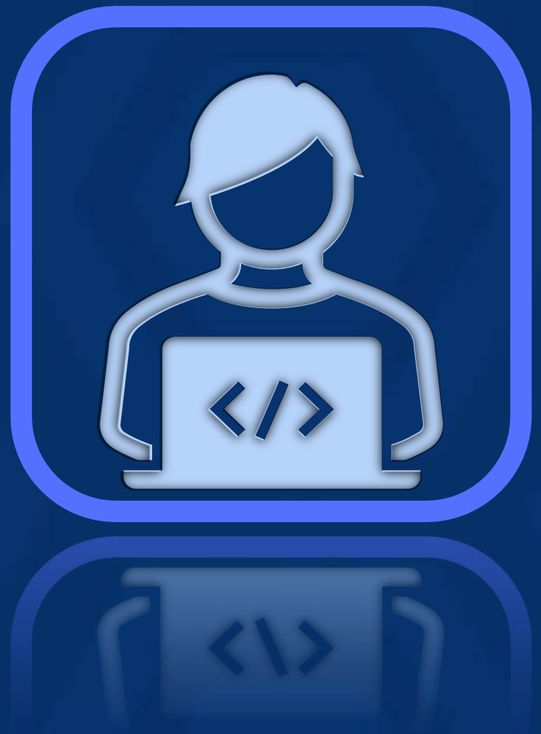
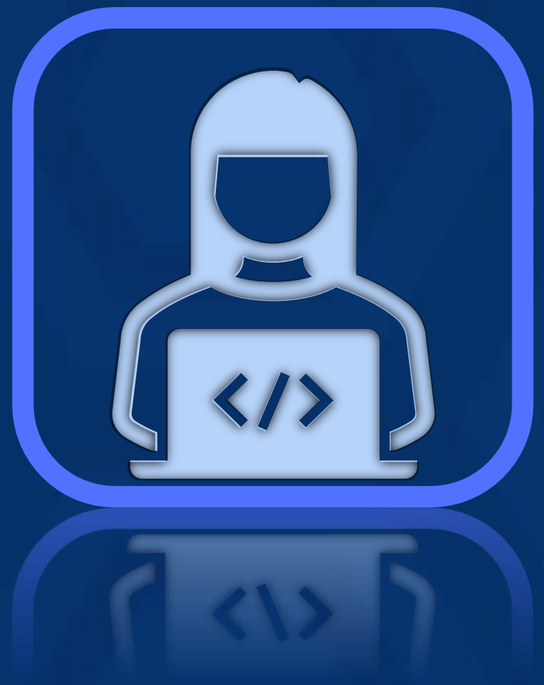
Paper prototype #1

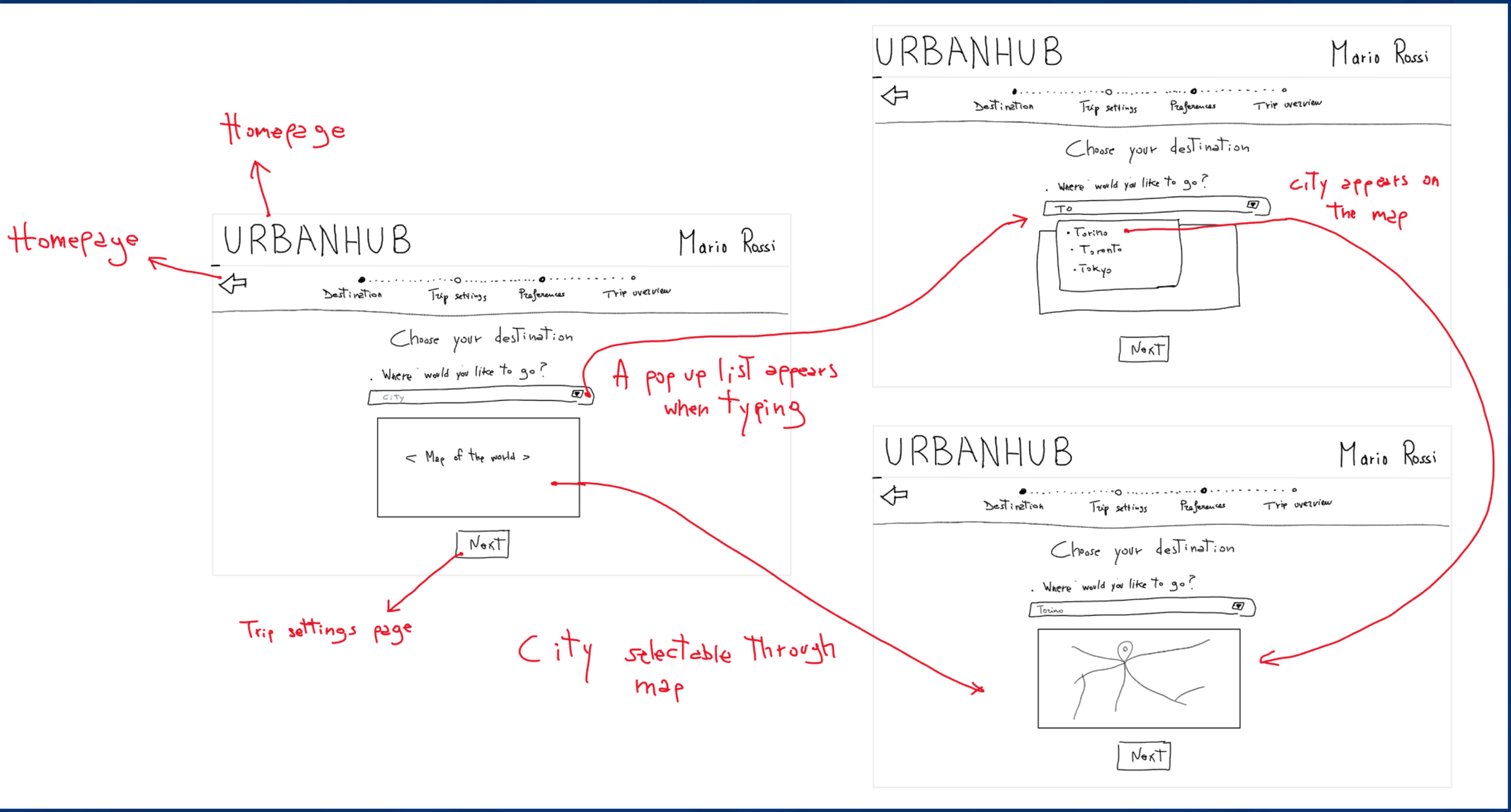




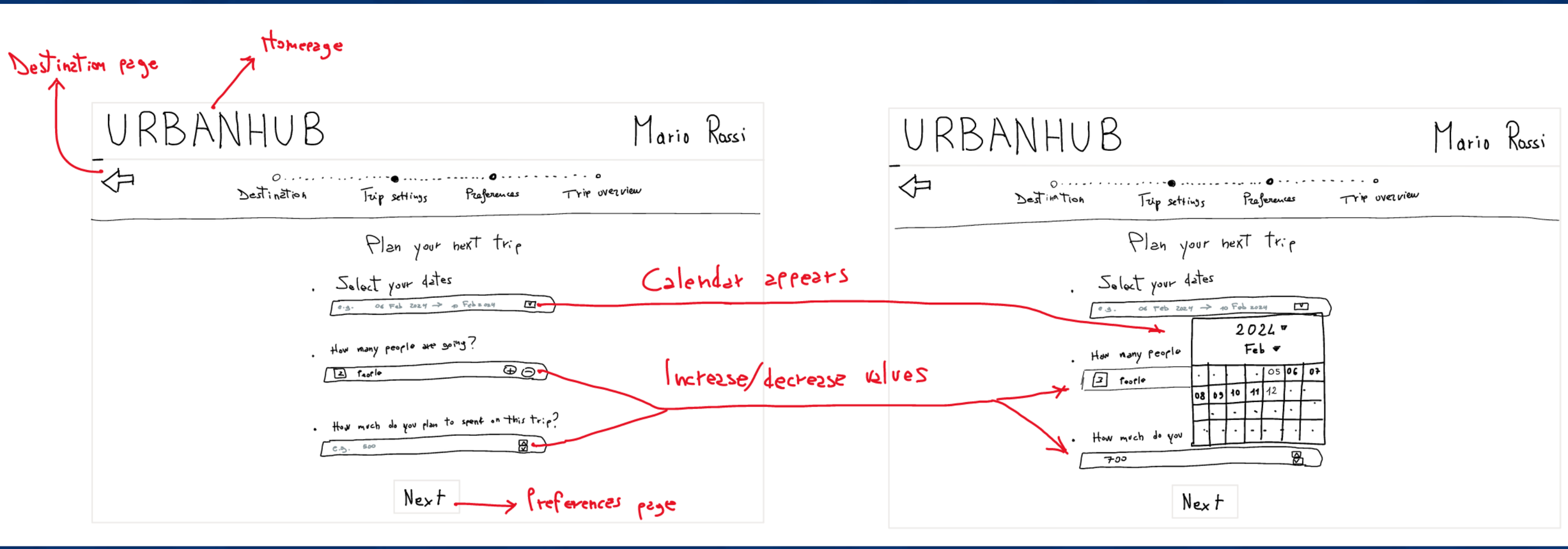
Homepage


Refresh
URBANHUB
Mario Rossi
Start a new trip
My trips
Destination page
My trips page

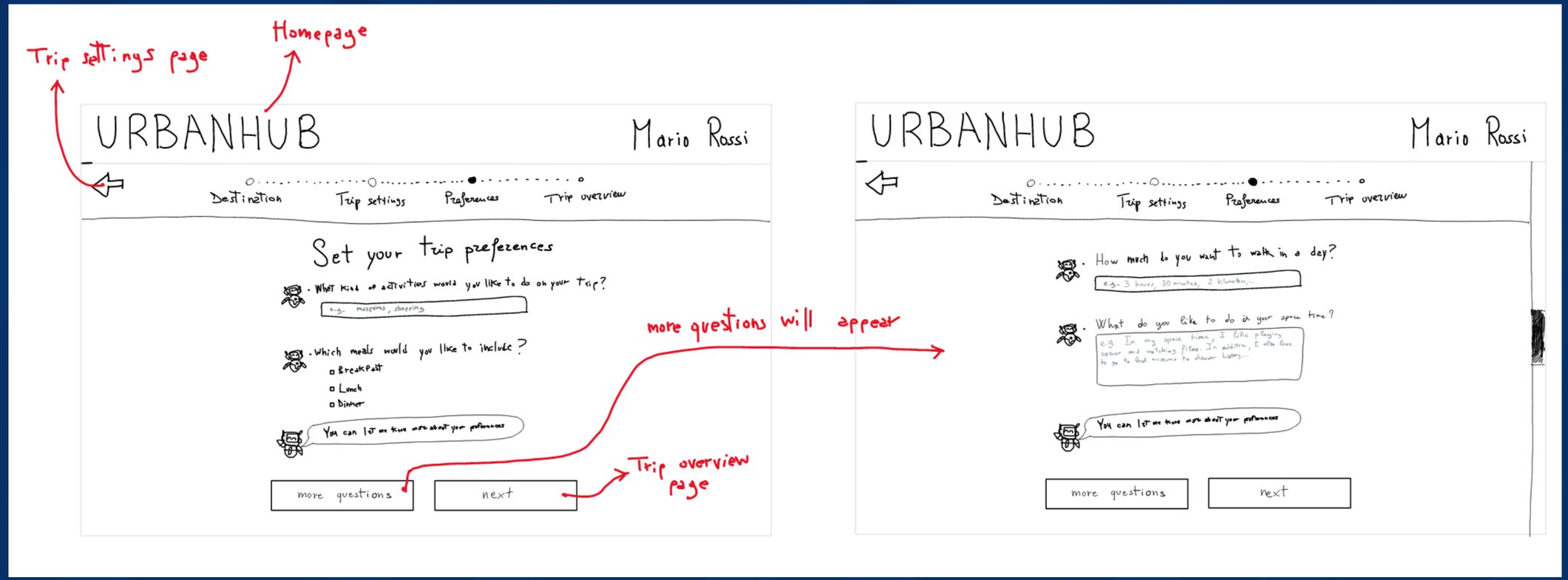
Destination page



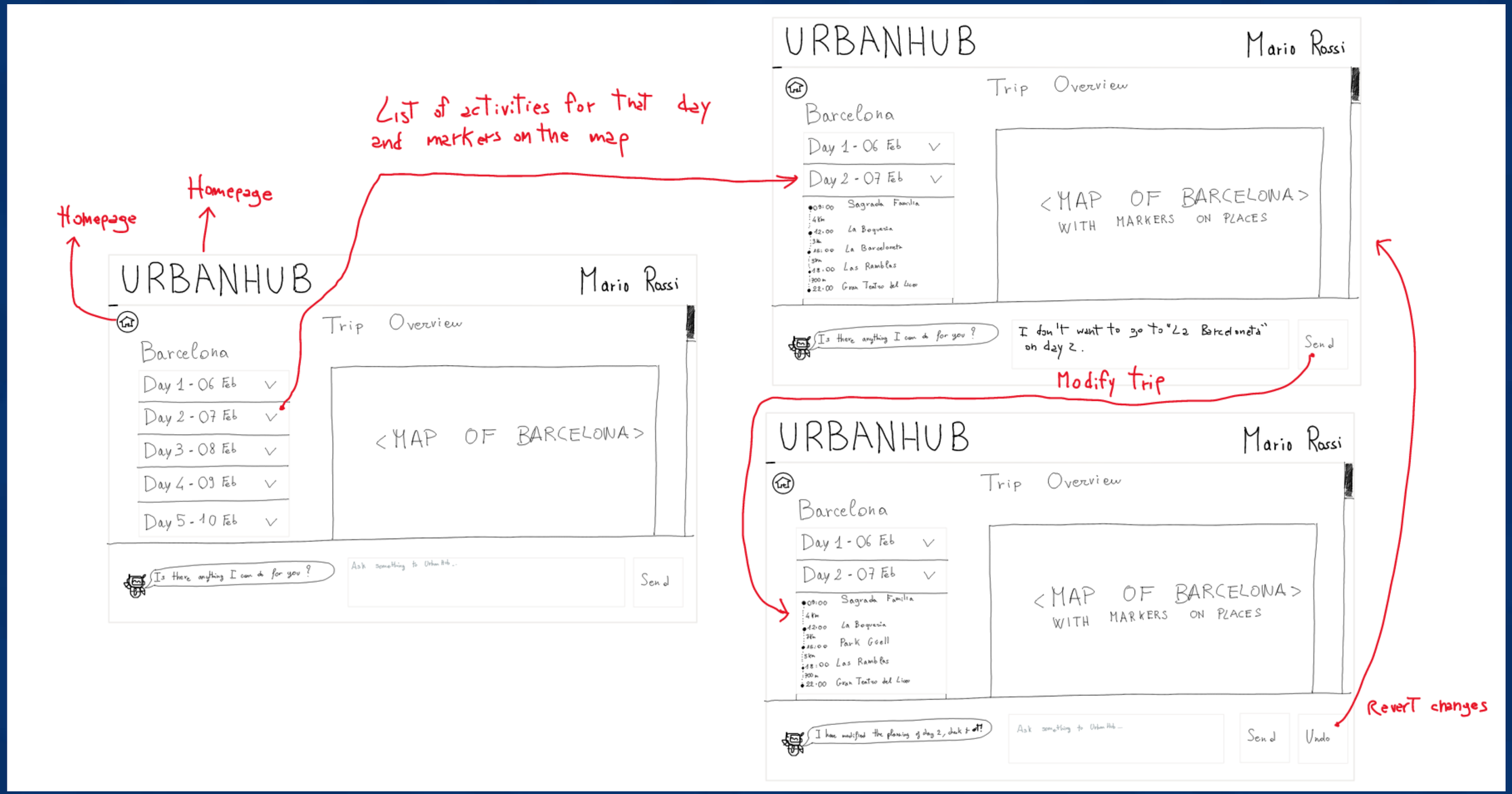
Trip Settings page



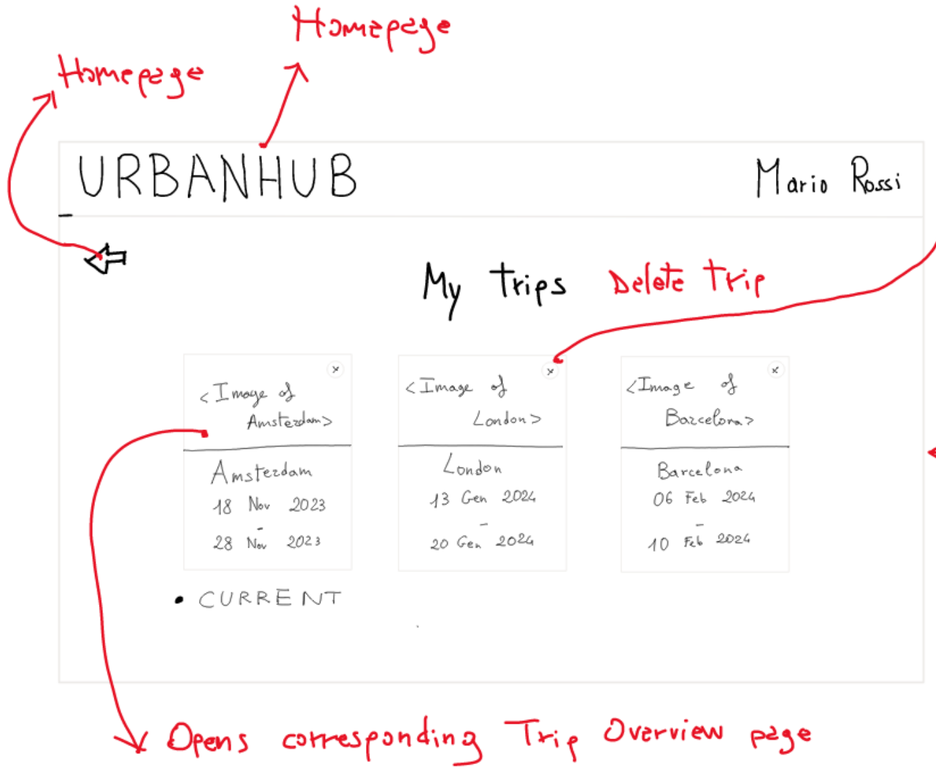
Preferences page

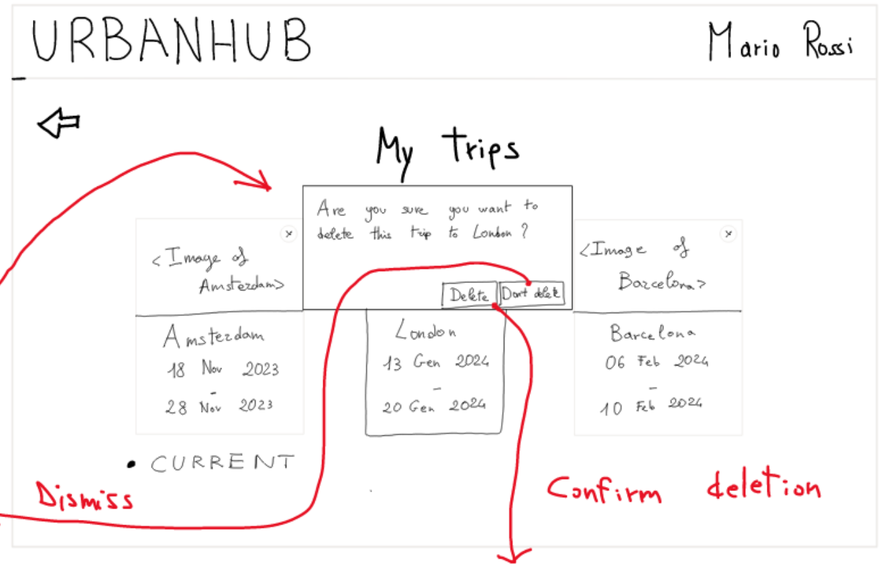


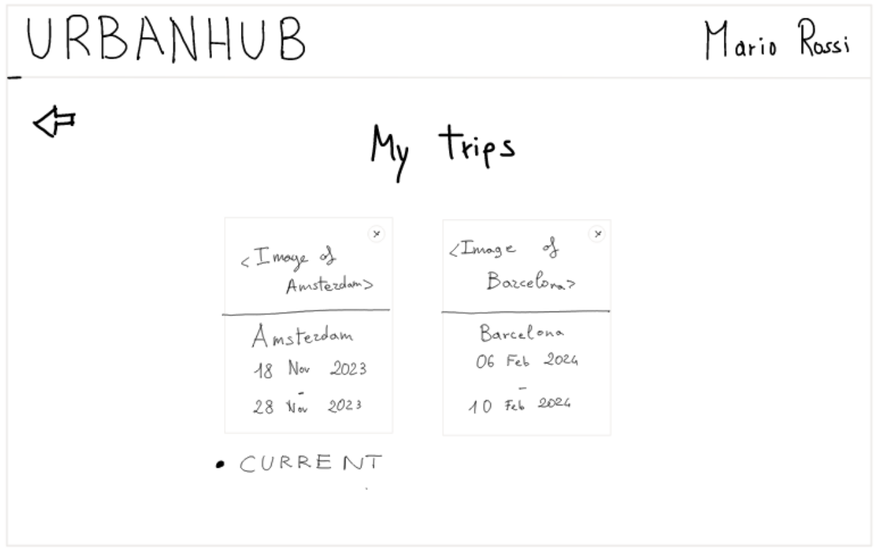
Trip Overview Page



My Trips page







Paper Prototype #1 – Connections with storyboard and tasks

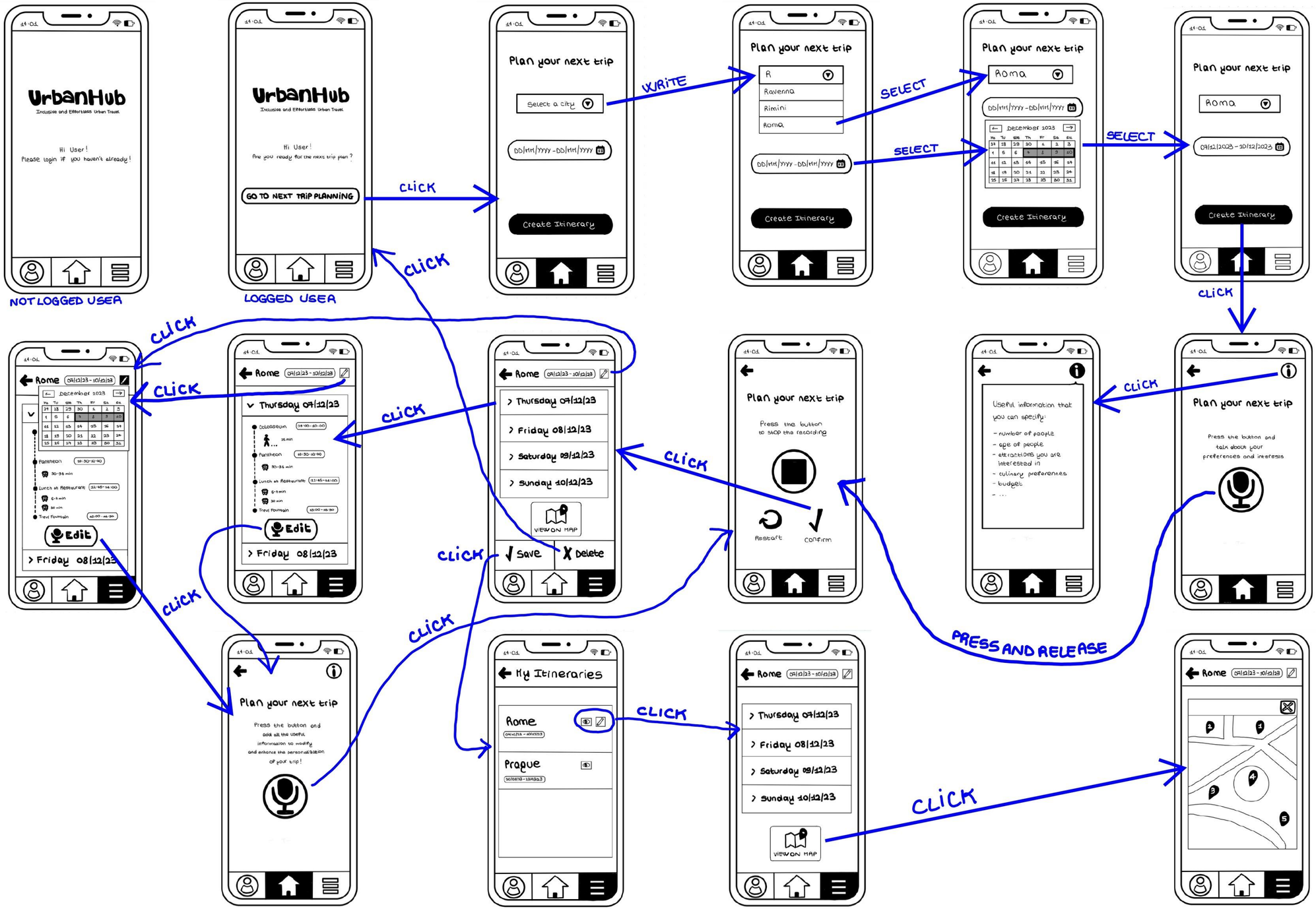
Our Low-Fi Prototype synergistically integrates with an engaging storyboard, bringing to life the narrative of a man seeking a stress-free vacation.

Through three simple tasks - selecting a city, entering preferences, and modifying the itinerary - we provide an intuitive user experience for personalized trip planning.

The end result? The user on vacation, thanks to our app that transforms complex travel planning into a seamless and enjoyable process.

5

Paper prototype #2


UrbanHub
Inclusive and Effortless Urban Travel
Hi User!
Please login if you haven't already!
NOT LOGGED USER
UrbanHub
Inclusive and Effortless Urban Travel
Hi User!
Are you ready for the next trip plan?
GO TO NEXT TRIP PLANNING
LOGGED USER
CLICK
Plan your next trip
Select a city
DD/MM/YYYY - DD/MM/YYYY
Create Itinerary
WRITE
R
Ravenna
Rimini
Roma
SELECT
SELECT
Roma
December 2023
SELECT
09/12/2023 - 10/12/2023
CLICK
Rome
Thursday 07/12/23
Colosseum
Pantheon
Lunch at Restaurant
Trevi Fountain
Edit
Friday 08/12/23
CLICK
Friday 08/12/23
Saturday 09/12/23
Sunday 10/12/23
VIEW ON MAP
Save
Delete
Plan your next trip
Press the button to stop the recording
Restart
Confirm
Useful information that you can specify:
- number of people
- age of people
- attractions you are interested in
- culinary preferences
- budget
Press the button and talk about your preferences and interests
PRESS AND RELEASE
Plan your next trip
Press the button and add all the useful information to modify and enhance the personalization of your trip!
My Itineraries
Rome
Prague
CLICK
VIEW ON MAP
CLICK

Paper Prototype #2 – Connections with storyboard and tasks

The prototype of the mobile application satisfies all three tasks previously discussed. As also shown in the storyboard, it allows the user to:

- Select a destination and a time window.
- Indicate preferences as input and obtain an adequate personalized itinerary.
- If necessary, user can also provide other specifications and edit the proposed itinerary to generate a new one.