

# User personas and information architecture

In this report, we will explain how we made this task. Here is the table of contents for easier navigation.

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## Motivation

When creating an application or any product, it's crucial to remember that you're not designing for yourself but for real-life users with diverse needs and varying levels of IT knowledge. The purpose of this exercise is to learn how to think from a user's perspective and adapt our design accordingly. Understanding user personas is a crucial step in this process.

User personas are fictional representations of your target audience, based on real data and research. They help you visualize and empathize with your users, allowing you to design products that truly meet their needs and expectations. By creating detailed user personas, we can better understand our users' goals, behaviors, and pain points, which in turn guides our design decisions and helps us create more user-centered products.

Parameters and all other key points will be explained in future paragraphs.

# Introduction

To make this exercise possible, we will make use of ChatGPT to generate 3 user personas that are relevant to given application. What we will be making as our project is Rent a Car web application.

The hardest part of testing the page is collecting data and feedback from users. This process is time and resource-consuming in the lifecycle of a web application. It's crucial that user personas are relevant to our project and cover all key demographics and user types. By creating comprehensive personas, we can:

- Gain insights into user behavior and preferences
- Identify potential pain points in the user experience
- Tailor our design decisions to meet specific user needs
- Ensure our application caters to a diverse range of users

## Creating User Personas

We figured out that our users will be from ages 18 to 80, so that is a large range of people whose needs and abilities differ. For greater variety, we asked ChatGPT to give us 4 user personas from different demographic groups and to list some of their personal information like their age, marital status, number of children, and a few more details of its choosing.

Here is what ChatGPT came up with:

### **Persona 1: Young Professional**

- **Name:** Sarah Lee
- **Age:** 25
- **Relationship Status:** Single
- **Number of Children:** None
- **Occupation:** Marketing Analyst
- **Location:** New York, NY
- **Education:** Bachelor's Degree in Business
- **Income:** \$50,000/year
- **Favorite Activity:** Going to concerts, traveling with friends, and exploring new restaurants.
- **Goals:** Needs affordable, short-term car rentals for weekend trips outside the city.
- **Pain Points:** High rental costs in urban areas and limited parking availability.
- **Technology Comfort:** High – prefers mobile apps and digital payments.

### **Persona 2: Retired Senior**

- **Name:** Robert Carter
- **Age:** 68
- **Relationship Status:** Married
- **Number of Children:** 3 (all grown)
- **Occupation:** Retired Teacher
- **Location:** Phoenix, AZ
- **Education:** Master's Degree in Education
- **Income:** Fixed retirement income
- **Favorite Activity:** Golfing, gardening, and visiting grandchildren.
- **Goals:** Needs a comfortable and reliable car for occasional long trips and family visits.
- **Pain Points:** Prefers in-person services and may struggle with overly complex booking systems.
- **Technology Comfort:** Low – prefers simple interfaces and customer service assistance.

### **Persona 3: College Student**

- **Name:** Javier Martinez
- **Age:** 21
- **Relationship Status:** In a relationship
- **Number of Children:** None
- **Occupation:** Full-time Student (Engineering)
- **Location:** Los Angeles, CA
- **Education:** Pursuing a Bachelor's Degree
- **Income:** Part-time job (\$15,000/year)
- **Favorite Activity:** Gaming, skateboarding, and going to tech meetups.
- **Goals:** Needs affordable and flexible car rentals for short-term use, especially during holidays or weekends.
- **Pain Points:** Budget constraints and additional fees (insurance, age-related fees) for younger drivers.
- **Technology Comfort:** High – prefers apps with social media integration and mobile-first design.

#### **Persona 4: Single Parent**

- **Name:** Lisa Nguyen
- **Age:** 34
- **Relationship Status:** Divorced
- **Number of Children:** 2
- **Occupation:** Nurse
- **Location:** Dallas, TX
- **Education:** Nursing Degree
- **Income:** \$60,000/year
- **Favorite Activity:** Taking her kids to sports practices, family outings, and fitness classes.
- **Goals:** Needs an affordable, spacious vehicle for family trips with child-friendly features (like car seats and safety features).
- **Pain Points:** Balancing affordability with quality, ensuring safety features for children, and finding flexible booking times around a busy schedule.
- **Technology Comfort:** Moderate – prefers mobile apps with clear pricing and easy-to-navigate user interfaces.

Personas 1 and 4 are quite similar, and since the requirements of the task specify using 3 personas, we will eliminate Persona 4 and stick with the first three.

### **Analyzing our personas**

We have 3 personas in total: Young Professional, Retired Senior, and College Student. They all have their strengths and weaknesses that we will have to take into account when designing the application. Taking that into account, we can start with the next phase of our project, and that is generating AI images for our personas.

### **Creating AI images for given personas**

Creating images is not difficult using today's tools, but it is an important step in our development. People are visual beings and they connect over images, so creating them is a good idea. Also, developers create connections as well. When you say: "*I develop this for x who is going to use this for y*", your application is not

going to be user-oriented. When you say: "*I will make this good for Sarah so she can travel safely from A to B*", then your application has prosperity.

For creating images, we used tool called Canva. In our opinion, it creates more human like images. Here is a comparison between ChatGPT and Canva when we gave them description of Sarah Lee:

- **Name:** Sarah Lee
- **Age:** 25
- **Relationship Status:** Single
- **Number of Children:** None
- **Occupation:** Marketing Analyst
- **Location:** New York, NY
- **Education:** Bachelor's Degree in Business
- **Income:** \$50,000/year
- **Favorite Activity:** Going to concerts, traveling with friends, and exploring new restaurants.
- **Goals:** Needs affordable, short-term car rentals for weekend trips outside the city.
- **Pain Points:** High rental costs in urban areas and limited parking availability.
- **Technology Comfort:** High – prefers mobile apps and digital payments.

ChatGPT (left) & Canva (right)



Seeing these differences, You can see why we choose Canva for our project. Here are all of our 3 personas from left to right: Sarah Lee (29), Robert Carter (68) and Javier Martinez (21)



## Information Architecture

Using ChatGPT we found out what Information Architecture is:

The screenshot shows a dark-themed ChatGPT interface. A user question is displayed in a rounded rectangle at the top: "What is Information Architecture? Can you explain that to us in couple of short paragraphs?" Below the question, an AI response is provided, preceded by a circular profile icon containing a stylized swirl. The AI's response is divided into two paragraphs. The first paragraph explains that Information Architecture (IA) refers to the way content and data are structured, organized, and presented within a digital system, involving labeling, categorizing, and mapping navigation paths. The second paragraph discusses how good IA enhances user experience by reducing cognitive load and aligning structure with user needs. At the bottom of the AI's response, there are five small, light-colored icons: a double arrow, a square, a downward arrow, a magnifying glass, and a circular arrow.

Information Architecture (IA) refers to the way content and data are structured, organized, and presented within a digital system, such as a website or application. It involves creating a logical, intuitive layout that helps users find information quickly and efficiently. IA focuses on labeling, categorizing, and mapping out navigation paths, ensuring that users can easily understand how to interact with the content.

Good information architecture enhances user experience by reducing cognitive load, making it easier for users to locate what they need without confusion. It involves techniques like card sorting, user flow analysis, and content hierarchy to align the structure with user needs and behaviors. Ultimately, IA aims to create a seamless, user-friendly digital environment.

Based on our understanding of Information Architecture (IA), we now realize the importance of focusing on the needs of our users for our Rent a Car web application. By analyzing their needs, we can determine what information they will find important and useful, and what can be "hidden away" or removed entirely. This approach will help us create a more efficient and user-friendly experience, ensuring that key information is easily accessible while avoiding clutter and unnecessary features.

Next, we asked ChatGPT to create 20 most topics and tags we can use in our web application. Then we will ask the to simulate for all personas ranking of each topic and tag in descending order and then looking by all simulations to combine all of them into one result. Here are 20 topics he came up with:

- **Vehicle Categories** – Organize by car types (SUVs, sedans, luxury, economy, etc.).
- **Booking Process** – Step-by-step guide to booking a vehicle.
- **Rental Rates** – Pricing breakdowns by car type, rental duration, and location.

- **Insurance Options** – Information on available coverage for renters.
- **Pick-up & Drop-off Locations** – Maps and addresses for rental locations.
- **User Account Management** – Creating, editing, and managing user profiles.
- **Payment Options** – Supported payment methods (credit cards, PayPal, etc.).
- **Loyalty Programs** – Rewards or discounts for frequent users.
- **Terms & Conditions** – Policies around cancellations, deposits, etc.
- **Fuel Policy** – Information on refueling requirements for rented vehicles.
- **Customer Support** – Contact information and FAQs.
- **Vehicle Availability** – Real-time car availability by location.
- **User Reviews** – Customer feedback on vehicles and services.
- **Safety Features** – Information on vehicle safety and additional equipment (child seats, GPS, etc.).
- **Special Offers** – Promotions, discounts, and seasonal deals.
- **Driver Requirements** – Age, license, and additional driver policies.
- **Mobile App Features** – Integration of mobile booking and user services.
- **Damage Policy** – Information on damages, claims, and deductible.
- **Vehicle Upgrades** – Options for upgrading to premium models or features.
- **Cancellation & Refunds** – Rules regarding cancellations and refunds.

What we did above is called card sorting experiment, where You ask x number of people to arrange certain categories or topics into order they find most logical and **important** to them. By using these results, we will know in which direction we have to go when designing our application.

We asked ChatGPT to do card sorting method by arranging topics into 4 categories:

1. Must Have
2. Good to Have
3. Not Important but Useful

#### 4. Not Needed

## Card Sorting Method - results by personas

Not to make this report too long, we will write down only what our personas found out to be in Must Have category.

### Sarah Lee

- **Booking Process** – Step-by-step guide to booking a vehicle.
- **Rental Rates** – Pricing breakdowns by car type, rental duration, and location.
- **Vehicle Categories** – Organize by car types (SUVs, sedans, luxury, economy, etc.).
- **Payment Options** – Supported payment methods (credit cards, PayPal, etc.).
- **Vehicle Availability** – Real-time car availability by location.
- **User Account Management** – Creating, editing, and managing user profiles.

### Robert Carter

- **Booking Process** – Step-by-step guide to booking a vehicle.
- **Vehicle Categories** – Organize by car types (SUVs, sedans, luxury, economy, etc.).
- **Rental Rates** – Pricing breakdowns by car type, rental duration, and location.
- **Pick-up & Drop-off Locations** – Maps and addresses for rental locations.
- **User Account Management** – Creating, editing, and managing user profiles.

### Javier Martinez

- **Booking Process** – Step-by-step guide to booking a vehicle.
- **Rental Rates** – Pricing breakdowns by car type, rental duration, and location.
- **Vehicle Categories** – Organize by car types (SUVs, sedans, luxury, economy, etc.).
- **Payment Options** – Supported payment methods (credit cards, PayPal, etc.).

- **User Account Management** – Creating, editing, and managing user profiles.
- **Vehicle Availability** – Real-time car availability by location.

## Final Results of Card Sorting Method

After ChatGPT gave us these results, we asked him what are “Must Haves” in our web application taking into consideration responses from our personas. Here is what he came up with:

### Must Have

1. **Booking Process** – Step-by-step guide to booking a vehicle.
2. **Rental Rates** – Pricing breakdowns by car type, rental duration, and location.
3. **Vehicle Categories** – Organize by car types (SUVs, sedans, luxury, economy, etc.).
4. **Payment Options** – Supported payment methods (credit cards, PayPal, etc.).
5. **User Account Management** – Creating, editing, and managing user profiles.
6. **Vehicle Availability** – Real-time car availability by location.
7. **Pick-up & Drop-off Locations** – Maps and addresses for rental locations.

### Good to Have

1. **Insurance Options** – Information on available coverage for renters.
2. **Customer Support** – Contact information and FAQs.
3. **Loyalty Programs** – Rewards or discounts for frequent users.
4. **Special Offers** – Promotions, discounts, and seasonal deals.
5. **Mobile App Features** – Integration of mobile booking and user services.
6. **Safety Features** – Information on vehicle safety and additional equipment (child seats, GPS, etc.).
7. **Driver Requirements** – Age, license, and additional driver policies.

### Not Important but Useful

1. **User Reviews** – Customer feedback on vehicles and services.

2. **Fuel Policy** – Information on refueling requirements for rented vehicles.
3. **Damage Policy** – Information on damages, claims, and deductible.
4. **Vehicle Upgrades** – Options for upgrading to premium models or features.

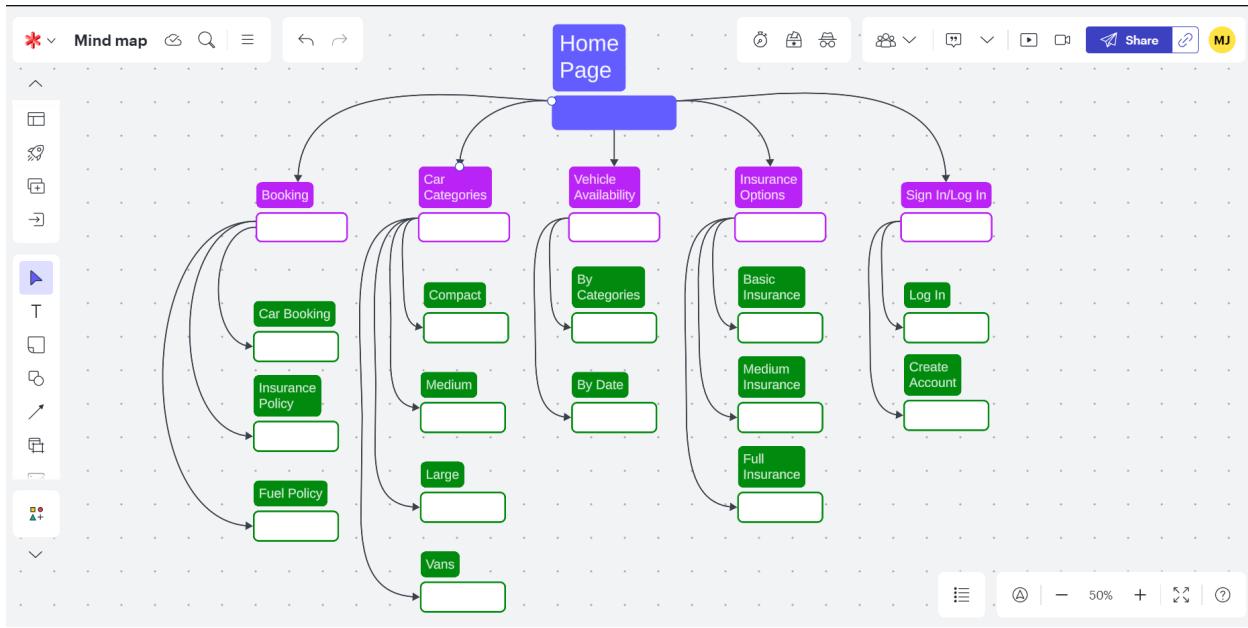
### Not Needed

1. **Terms & Conditions** – Policies around cancellations, deposits, etc.
2. **Cancellation & Refunds** – Rules regarding cancellations and refunds.
3. **Real-time Car Availability** – For some personas, this may not be a priority but is still relevant.
4. **Additional Support Resources** – More detailed FAQs or guides that may not be necessary for all users.

Using these results, we know where to go with our design. We will put most important topics at the top and navigation bar for easy access and things like Terms & Conditions at the bottom of the page or in some menu where it is not "in the way".

## Sitemap

The final task in this phase of the project is to create a Sitemap. A sitemap is a structured outline or visual representation of a website's content and organization. Our goal is to create a detailed sitemap for our application, which will be important for future implementations of our webpage and will enhance user experience. We'll use the results provided by ChatGPT and the tool [LucidChart](#) to create a comprehensive sitemap of our web application. We've included five key categories (excluding Home): Booking, Car Categories, Vehicle Availability, Insurance Options, and Sign up/Log in. The subcategories are visible in the image below.



We will use this image as a reference in our future tasks. Of course, if it needs any improvements during the implementation phase of the project, changes will be made. Of course, Professor, Your feedback here is highly appreciated.

## Conclusion

During this task we learned a lot about human impact not just in web and application design but in everything else. Humans as visual and feeling full beings need compassion to make the best out of anything. If we as a developers design things to be user oriented, users will have better experience using your product and by listening to their feedback you can push the design to its limits.

From the technical aspect we learned about:

- User personas
- Making user connect with the personas
- Information Architecture
- Sitemap
- ...