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CARGO

Phase #1 User Research
Phase #2 Sketch
Phase #3 Prototype
Phase #4 Usability Testing

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1. Introduction:

These days, owing a car is important for people in general because it provides the opportunity for personal control and autonomy, in sparsely populated areas, owning a car is even more important, since it provides the only opportunity for traveling long distances due to a lack of public transport. For older people, having more difficulties walking (to the bus stop) and cycling, driving is often the only option for independent mobility. We noticed in the early stages of research that many people find it difficult to find cars suitable for their needs, they

face many problems in finding a car that has special features that they want, and the difficulty in providing the cars they want in the agency in their city, and more problems. For these reasons, our team has developed an application that helps those interested in cars by providing several useful features such as creating their dream car and knowing the types of cars similar to their dream cars in the agency, their features, people's opinion about them. They can also submit a request to manufacture their dream cars for the agency and many features that serve the user.

2. Methodology:

To learn more about our users and meet their requirements more efficiently, we conduct interviews and questionnaires to collect data and determine the results. We were looking for people who are interested in cars, of different ages, that start at least from 18 to 35 and older, to get as much information as possible.

For the interview, we interviewed 8 random people who fit our sample specifications. We asked them 10 questions that serve our topic. We focused on knowing their experiences with cars and the problems they face, and how we can develop an application that is interested in car design to meet their needs.

For the questionnaire, we did an online survey and shared it via different social media applications to collect information from different types of people. It contains 9 closed questions to find out what users prefer about cars and their specifications to find the best ways to create a special application that matches their requirements, 41 people had answered the questions.

3. Result

• Interview result:

Eight people were interviewed, and we collected all their answers that will be used in our project. Our team asked a variety of questions to find out what problems users may face when buying a car and what features may be helpful. And the concept of an application that helps them find or make their dream car is interesting to them because of the qualities that they agreed will help them and make it easier to find the car of their dreams. Most of them have issues with their budgets and finding the perfect car that meets their wants and comfort. Another thing we discovered is that, as of the program, practically everyone prefers the drag option over drawing because most people cannot draw. We determined that virtually all of the features discussed with our interviewees about features included in our application they agree with because it will assist them in finding their dream car.

- **Questionnaire result:**

The results of the questionnaire show that most people spend a lot of time choosing a new car as shown in Figure 1 with 90% of people facing that problem, as a result, we developed this design to help them in the easiest and most efficient way. 80.5% of people both agree to the fact that “design” and “product quality and safety feature “is the most important when buying a car as shown in Figure 2. 53.7% of people prefer the feature of “classifying cars based on their purpose” as shown in figure 3. As shown in Figure 4, 73.2% of people prefer to have both the pictures and written descriptions of the car displayed. 43.9% of people think favorite feature is helpful (Figure 5). 48.8% of people don’t agree with the idea of “offering your car for sale” (figure 6). Figure 7 show that 63.4% of people disagree with buying car from a foreign country. “Request to agency” and “see options for similar car “are both preferred as 85.4% of people agree with having them both as shown in figure 8. Figure 9 show that 68.3% of people prefer to contact the owner. (41 people answered the questionnaire)

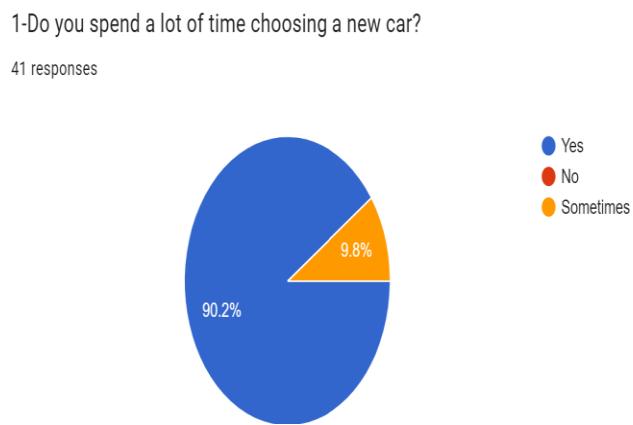


Figure 1: We can see that almost everyone takes a lot of time choosing a new car.

2-What elements do you think are most important when you are buying a car?

41 responses

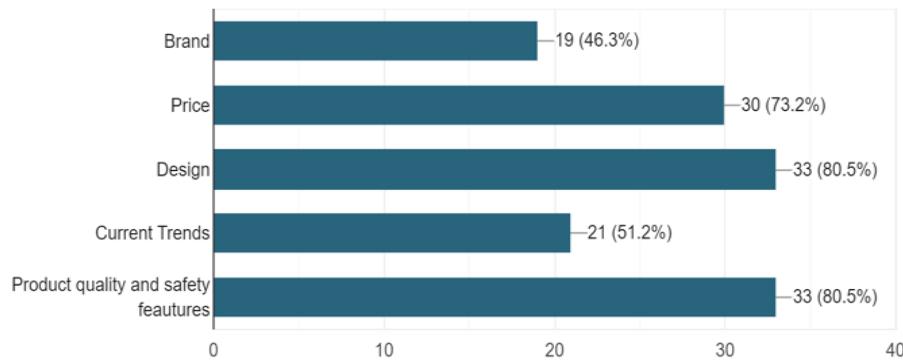


Figure 2: The top 2 most important elements according to people's answers are the design, product quality, and safety features.

3-How helpful do you think a feature about classifying cars based on there purpose would be?

41 responses

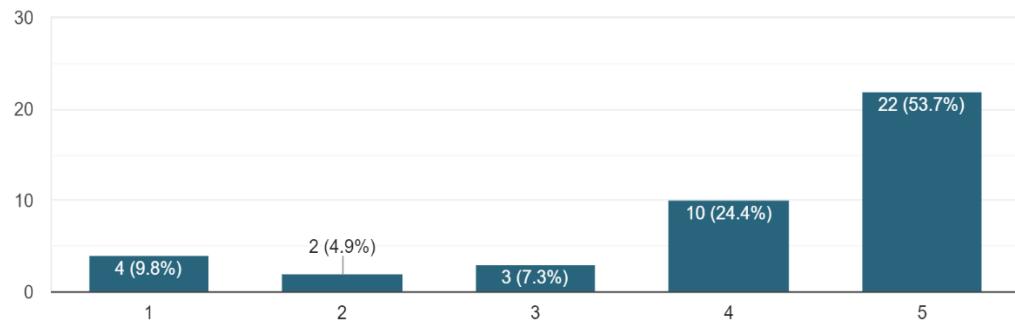


Figure 3: The feature of classifying cars will be very helpful according to people's responses.

4-Are you a person who prefers to have pictures of cars displayed or a written description of a car?

41 responses

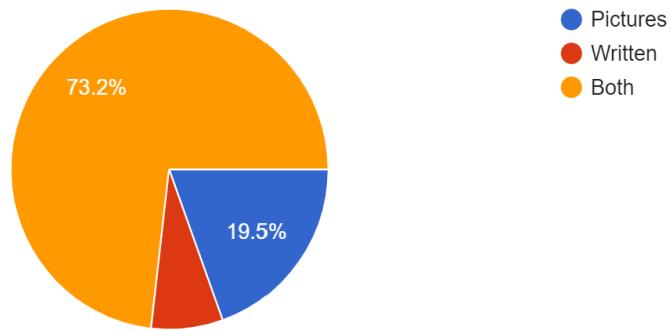


Figure 4: The majority of people prefer to have both written descriptions and pictures of the car.

5-How helpful do you think a favourite feature would be?

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41 responses

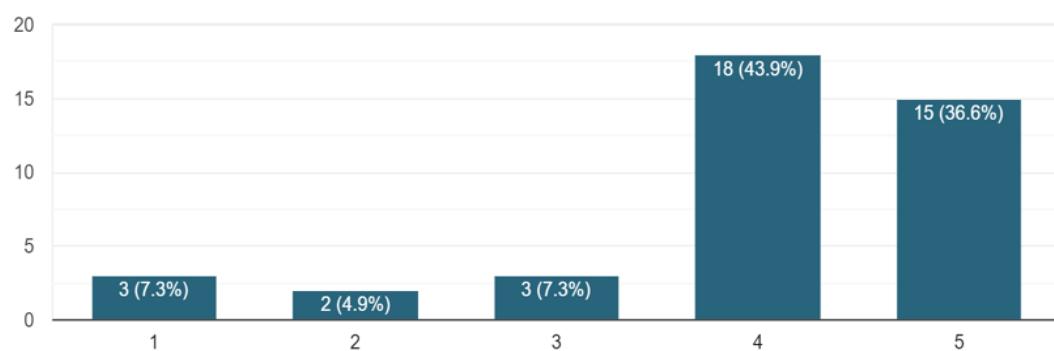


Figure 5: A favorite feature is preferred to be added.

6-How helpful do you think the feature of offering your car for sale will help you?

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41 responses

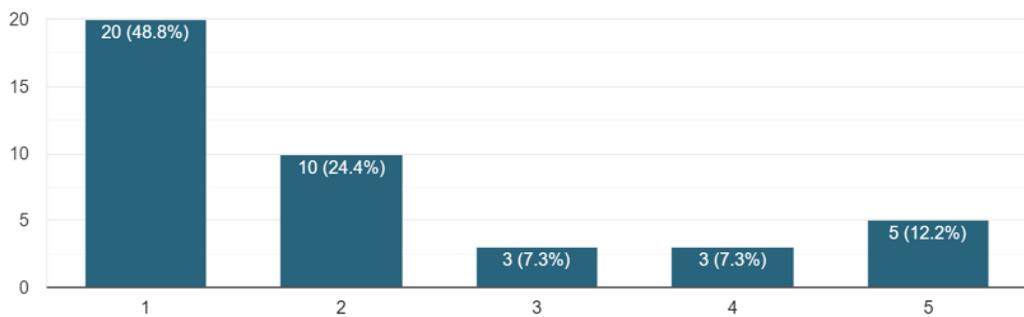


Figure 6: The majority of people don't prefer this feature of offering your car for sale.

7-Would you be interested in feature that allows you to buy your car from a foreign country?

41 responses

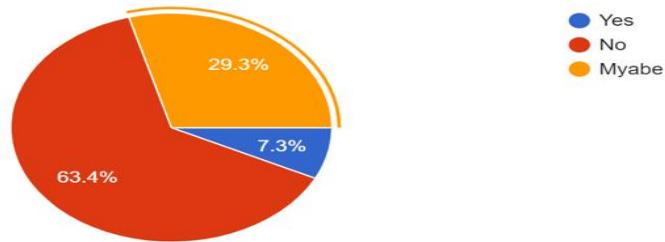


Figure 7: Most people don't prefer to buy car from foreign country.

8-Is it more convenient for you to submit a request to the car agency to implement your dream car, or would you like to see options for similar cars?

41 responses

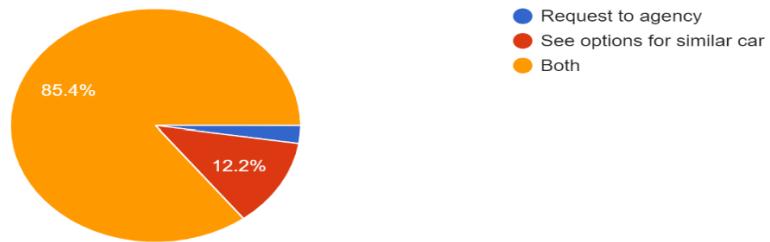


Figure 8: The majority of people prefer to have both features.

9-Would you be interested in contacting the owner via the application if there is a used car for sale?

41 responses

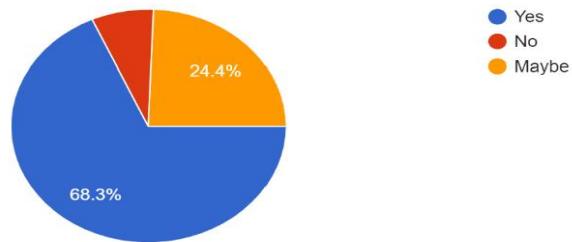


Figure 9: Most people prefer to be able to contact the owner via the application.

4• Personas:

We choose our persona based on the information we gathered from interviews, we define the first persona (Norah) to be 35 years old, she is married with 5 children, she works as teacher she is very busy as a mother and teacher. We defined (Norah) based on [interview 2, answers (1,6,7,10)- interview 4, answers (1,2,4,7,10)- interview 6, answers (1,2,4,7,10)- interview 7, answers (1,4,7) and finally by using questionnaires answers].

The second persona was (Fahad), he is 26 years old, he is single, he works as Engineer, he is having a difficult time dealing with car agencies, we defined (Fahad) based on [interview 1, answers (1,2,4,6,10) -interview 3, answers (1,2,10)-interview 5, answers(1,2,4,6,7,10)- interview 8, answers (1,4,7) and finally by using questionnaires answers].

Norah Khalid - Mother that needs a new car



Age: 35
Gender: Female
Status: Married
Family: 5 children
Work: Teacher
Location: Riyadh, Saudi Arabia

"As a mom who takes her children to school in an overcrowded old car, I am always thinking about purchasing a new, comfortable and safe car for my children, but never have the time."

Goals & Needs

- Finding an easy and creative way to buy a car
- Buying a comfortable safe car
- Having an easy access to the app

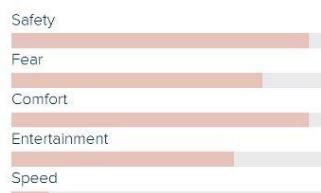
Frustrations

- Don't have time to search for new car
- Having a hard time learning new technology
- Because of high cost of cars it is difficult to find the appropriate car

Bio

Noura is a 35-year-old employee working as a teacher at the Ministry of Education. Noura is a mother of five children. Among her responsibilities is driving her children in a crowded car with old design and features, she wants to replace it with a car that is suitable for her budget and has a design and standards suitable for her children to make driving safer and more comfortable, but she does not have time to search and visit car Showroom .

Motivation



Technology



Fahad Mohammed -Searching for his dream car



Age: **26 years old**
Gender: **Man**
Work: **Engineer**
status: **Single**
Location: **Riyadh, Saudi Arabia**

"Sport cars have always been my dream since I was a child, I am fascinated by their speed and design. I hope to find my dream car someday."

Goals & Need

- buying a sport car .
- Finding an easy way communicate with agencise .
- To have easy access to the app .

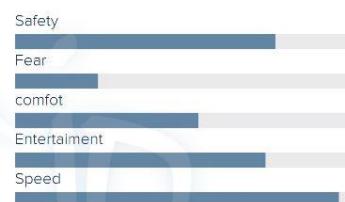
Frustrations

- Having tough time to find a car because they are very exclusive.
- doesn't have enough experience to communicate with agencise .
- Doesn't have a lot of time to search for sport car .

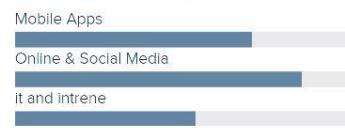
Bio

Fahad is 26 years old ,he works for the Sabic company .He is a single man who has dreamed of owning a sport car since he was young . he tried to communicate with agencise to find a correspond car but unfortunately ,he does not have the experience to .Then he searched for another agency, but most agencies require coming to the showroom to display the car and its information, but he has a full schedule most days .He want an easy way to matches the specifications of his dream car .

Motivation



Technology



5. Solution

Finally, after choosing the idea, conducting interviews and questionnaires, we summarized the results and information that will help us to understand the user's needs. We found out that many people suffer in buying-choosing their dream car, which leads to wasting time, effort, and money, and we came up with this idea to solve all their problems with our CARGO application.

A CARGO application that helps those who suffer from choosing and buying the car that suits them through the availability of many wonderful features such as designing a dream car and displaying the characteristics related to each car to allow comparison in a simplified manner and testing the car in the nearest showroom as well as people's opinions about cars and many characteristics that help in choosing a car appropriate for them.

- **Interviews' Transcriptions:**

- **Interview #1:**

Interviewee: Mohammad, 24-year-old man.

Interviewer: Shahad alfahad .

Q1-What is the most difficult problem that you face when you buy a car?

A1: I have difficulty finding a car that has a good design and at the same time has features that I want.

Q2-What do you think about buying a car of your design?

A2: I prefer that because the design of the car is very important to form a suitable interface for a person.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: I prefer dragging pictures because I don't think I will draw specifically what I want well.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes it will, because If I see a car that I like its design, speed, and color, it will help me to identify its source and where I can find it.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: With the rising prices of cars, a used car has become the perfect choice, but there are concerns that a car may not have a service history.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, it will save my time and effort in searching for a showroom that has the car I want.

Q7-Would you like a filter option that allows you to choose from a list of options {Price, year, ...}?

A7: Yes I would, it will limit my choices so I can choose a suitable car for me.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: I would like to display it as a list because it's more comfortable to look at.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, I do like reading reviews especially if I can't decide what I will buy, it's a good way for you to read various viewpoints that will enable you to effectively decide, understand others, or know the pros or cons of a certain topic.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: I expect it to save me time and effort in finding a car that is suitable for me and has the features I want.

- Interview #2:

Interviewee: Njoud,22-year-old women.

Interviewer:Shahad alfahad .

Q1-What is the most difficult problem that you face when you buy a car?

A1: I spend a lot of time finding a car that fits my needs and my budget.

Q2-What do you think about buying a car of your design?

A2: I think it a great idea it's will solve my problem.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: for sure drag pictures, I draw badly.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, I think it will help me; sometimes I see catchy and foreign cars and I have curious to know more information about it.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: No, I don't, my concerns something they are not allowed to check the car.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, it will save me time.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,..}?

A7: Yes, I would, it will help me focus on the options available to me according to my requirements and needs so I can choose easily.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8:I prefer to show it as a list,I think it's more suitable for eye.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, I am an informed person, and I interested in reading people's opinions and experiences that help me make the right decision.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: It is easy to use and has features that make it easier for the user to choose the right car according to his needs and circumstances.

- Interview #3:

Interviewee: Yzeed ,24-year-old Man

Interviewer: Deema Alharbi.

Q1-What is the most difficult problem that you face when you buy a car?

A1: I don't have enough experience to communicate with agencies and the procedures are complicated.

Q2-What do you think about buying a car of your design?

A2: It's actually a good idea because I can choose color and a lot of different things, and it's will save me a lot of my time and offers.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: "Dragging" it's easier and to be creative.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, for me it's will not be useful because I have a lot of experience on car but for people who don't have a lot of experience It will be very helpful.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: Yes, I have a problem because I have had a bad experience before because I can't check that it is 100% functioning properly.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, because I want to check everything in the car before I buy it.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,...}?

A7: Yes, to limit my choices.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: "List" it's better to compare between the cars.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, I want to know the experience of others with the car.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: I expect the application to give me the best options for cars.

- Interview #4:

Interviewee: Nawal, 35- year-old woman.

Interviewer: Deema Alharbi.

Q1-What is the most difficult problem that you face when you buy a car?

A1: compare between choices, I don't have enough information about the negative things in the car before buying it, And the budget for car insurance.

Q2-What do you think about buying a car of your design?

A2: It's really a good idea, it will save me a lot of time and effort.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: "dragging" it's easier and gives me some options in accessories and I will save time.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, because I don't have any experience of cars and the name so it will be very helpful for me.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: No, on the contrary, I like buying a used car because it will save me a lot of money but first, I have to check the car and Comfort that the car properly 100%.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, to make sure that I like the car.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,...}?

A7: Yes, it will be very helpful.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: "swabbing page" because a liked to take a deeper look at the car.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, I like to read about people's experience before buying anything it helps me so much and let me know the Advantages and disadvantages of the items.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: To be easy to use and have a lot of options and furthers that help me choose the perfect car for me and lastly make the buying process easier than the regular way.

- Interview #5:

Interviewee: Sara, 25-year-old women.

Interviewer: Dana Aldawood.

Q1-What is the most difficult problem that you face when you buy a car?

A1: The most difficult thing in comparing the features between many cars.

Q2-What do you think about buying a car of your design?

A2: It is great that my car is unique and different from the other cars, it will help me a lot.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: dragging the pictures is better for me because I think it makes it easier for me to imagine the shape of the car better.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Of course, it will make it easier for me, because it will shorten the time for me to search for the car I want.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: No, the most important thing is that it fits my needs, and I can know the history of the car or talk to the owner before buying it.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: I think it's so important to me to test the car, to see the car's performance.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,...}?

A7: Yes, it will help a lot because it will show me the characteristics that I want, and it will help in making the selection faster.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: The list is better because many cars appear at the same time, and it will help to purify the cars better.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes. I like reading reviews especially if I can't decide what car to buy.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: It is really a great idea to have an app that gathers all the features that will help in buying the right car.

- Interview #6:

Interviewee: Reema, 23-year-old women.

Interviewer: Dana Aldawood.

Q1-What is the most difficult problem that you face when you buy a car?

A1: I have difficulty finding what I want in a short time.

Q2-What do you think about buying a car of your design?

A2: I think it's a great feature to satisfy all the needs that suit my needs and circumstances.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: I prefer dragging pictures because it will give me more ideas about the shape of the car.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, it will help me when I do not know all the information about the car. It will save me a lot of time.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: Yes, there is a problem if I cannot talk to the car owner before buying it and inquire about it.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, to make sure the car is good for me.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,..}?

A7: I think it would be great to select the range that fits my needs.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: I would like the list because it will help me in choosing the car i need faster.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, reading the viewpoint and experiences of many people helps me take the right car.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: I expect it to save my time in choosing the right car.

- Interview #7:

Interviewee: Niveen, 34-year-old woman.

Interviewer: Shahad Alhaddad.

Q1-What is the most difficult problem that you face when you buy a car?

A1: The problem I face is finding a comfortable and compatible car of my liking with the appropriated budget.

Q2-What do you think about buying a car of your design?

A2: That would be amazing and very helpful.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: I prefer dragging it since I can't draw.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, it would help because not everyone has full information about cars and types of it, and it will be easy to show the type of car I want like that.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: Yes, I have, as a woman I prefer to buy a new car, so I will not face problems in the coming few years.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, I would love that.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,...}?

A7: Yes, it would make the process much easier.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: As a list, because it's faster.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: Yes, because people's reviews are more realistic.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: I would expect it to give me the best options.

- Interview #8:

Interviewee: Abdualaziz , 23-year-old man.

Interviewer: Shahad Alhaddad.

Q1-What is the most difficult problem that you face when you buy a car?

A1: The biggest problem that I face when buying a car is finding an easy way to contact agencies and having a difficult time finding my dream car.

Q2-What do you think about buying a car of your design?

A2: I would say that it is my dream car and a good investment because it applies satisfaction.

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

A3: Dragging the picture.

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

A4: Yes, I believe that uploading a photo of a random car that is similar to my dream car is beneficial. That is due to the fact that I am not as creative with art and graphics, so it would be a lot easier to show what idea I have in mind by uploading something familiar.

Q5-Do you have a problem with buying a used car What are your concerns about it?

A5: I think it's a lot easier to buy a new car rather than a used car, because you don't know what was consumed in the used car, and especially for mileage, its best to just have a new car where you can start from scratch, instead of continuing on a used car.

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

A6: Yes, to make sure it's the perfect car for me.

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,..}?

A7: Having a filter option is very important, because it helps to narrow down what you want.

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

A8: As a list, it gets to the point and shows me all of them in one list.

Q9-Are you interested in reading people's opinions and experiences about the car?

A9: I think it's definitely important to see other people's experiences in a car, reviews are very important for me as I know that it will help me see some stuff that I am not able to see, especially when I am invested in a dream car.

Q10-What do you expect from an application that helps you in choosing the right car?

A10: I expect it to have full transparency, authenticity, and help choose the best car for me.

6. User Stories

In this table, we describe the features that our application has and the steps of applying it.

User story #	Summary	Details	Priority
1	As a user, I want to use the scanner option so that I can find the car I want in the easiest way and shows customers reviews regarding it.	<p>1-From the home page, the user clicks “Scanner” option.</p> <p>2-From Scanner page, user Clicks “Take picture” option.</p> <p>3-the user takes a picture of the car and Clicks “Use photo”.</p> <p>4-System shows the information of the car.</p> <p>5- The user clicks “click for more details” to see all reviews in detail to check the quality of the car.</p> <p>6-System shows all customer reviews.</p>	High
2	As a user, I want to use the Available cars option so that I can find suitable car for me with the nearest showroom in my area.	<p>1- From the home page the user clicks “Available cars” option.</p> <p>2- From the Available Cars page, user clicks “Filter” option.</p> <p>3- From the Filter page, the user can specify the Brand, Price, Color, Type, and Year.</p> <p>4-After the user filters his choice, he/she can choose the car.</p>	High

		<p>5-System shows the information of the car, User clicks “Test” option.</p> <p>6- From the Test page, user clicks “Enter your Location”.</p> <p>7- User select his location on the map and click “Confirm Location”.</p> <p>8- System shows the Results to check the near showroom in user area.</p>	
3	As a User, I want to design my own car so that I can find it easily and sufficiently or request it from an agency.	<p>1-From the home page the user clicks “Design Your Dream car” option.</p> <p>2-After clicking on “Design your dream car”, exterior design page appears, where the user is provided with five possible exterior designs.</p> <p>3- User clicks on “wheels” and is provided with a set of aspects to choose from, once the user clicks on desired design the circle darkens indicating that it has been selected. After that user can click on the next aspect he/she would like to design.</p>	High

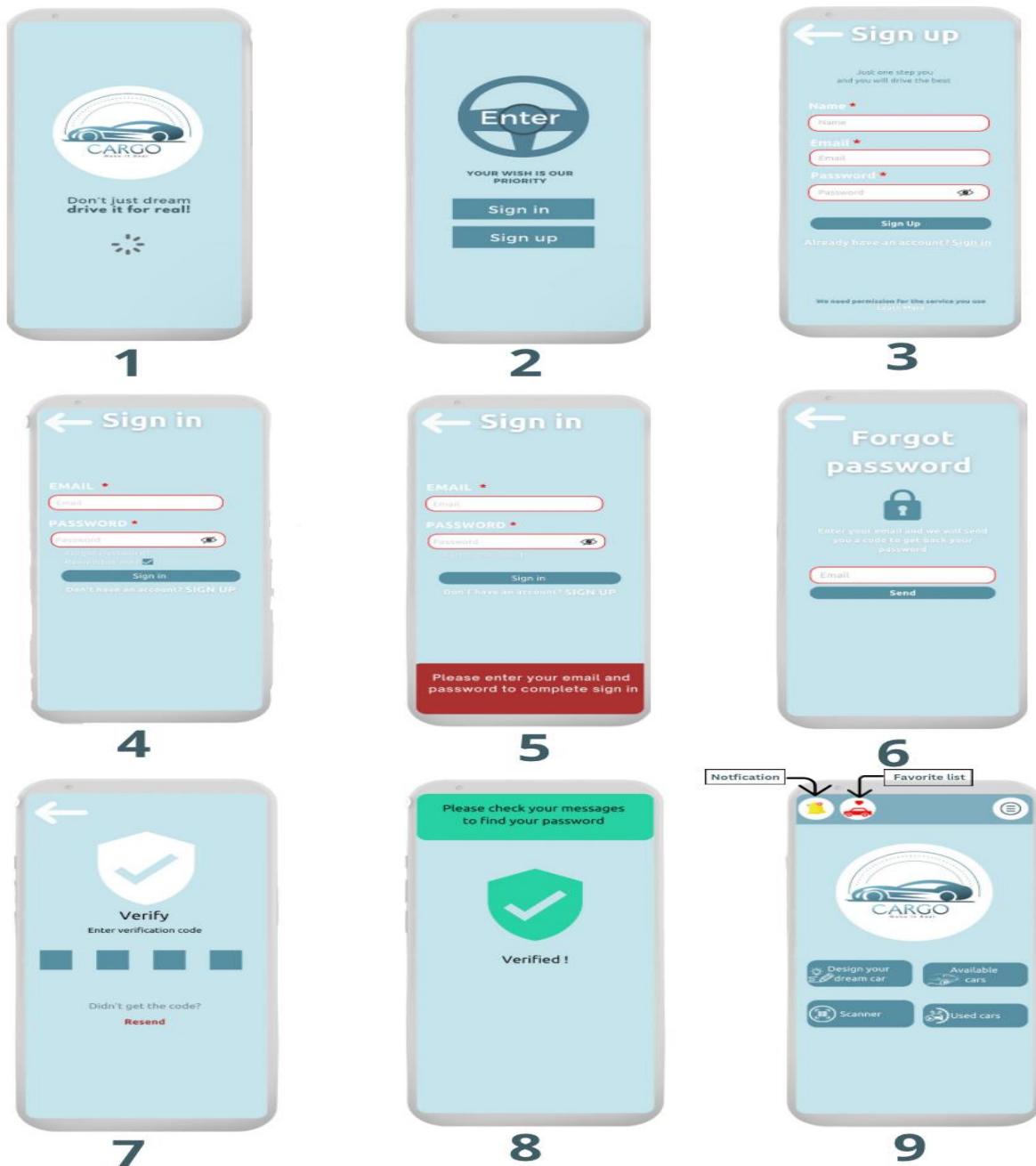
		<p>4- After finishing the exterior design user clicks on “next step” to go to the next step of the design.</p> <p>5- Interior design appears where user gets to click on every aspect to design, once user selects an aspect to design, set of options appear regarding it and when the user clicks on desired design of that aspect the circle will darken indicating that it has been selected.</p> <p>6- After completion user clicks “done”.</p> <p>7- System provides user with the final design look and a set of two options: “look at similar car” or “submitting a request”.</p> <p>7a) If user prefers to have the car ready, user can click “look at similar car” to choose the perfect car that matches his/her dream car and click on it.</p> <p>Information about car appear and options as testing, favoriting it, and peoples reviews appear as well.</p> <p>7b) In case the user wants the car exactly as it's designed, the user can click on “submit a request”</p>	
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		<p>where the user will be provided with a request form. The form must include information and address and you can't proceed without filling it in and , writing a description is optional . After filling in the form the user clicks on “submit”, then the user is provided by confirmation request number and a message emphasizing that the request has been received.</p>	
4	<p>As a user, I want to use the used cars option so that I can find a suitable car for me.</p>	<p>1-From the homepage, user will click on “used car” option .</p> <p>2- From the used car page the system will appear the available car to choose from it.</p> <p>3-the user will choose a car then the system will appear information page to read information about the car.</p> <p>4-then the user will click on “Imperfections” then the system will appear the performance issues page.</p>	High

		<p>5-user clicks on the “chat the owner of this car” and have more information about the car.</p> <p>6- user clicks “favorite” to insert the car into the favorite list.</p>	
5	As a user, I want to compare between the cars I have added to my favorites, so that I can choose the appropriate one for me.	<p>1-From the home page the user clicks “favorite” icon.</p> <p>2-From the Favorite page, user clicks “compare to choose the one” button.</p> <p>3-The system shows brief information about the cars that have been added as favorites.</p> <p>4-The user chooses the car that suits his needs.</p> <p>5-The System shows the car that user chose.</p>	Medium
6	As a user, I want to talk to the owner of a used car before I buy it so that I can check the history of the car.	<p>1-From home page user clicks on “menu” icon.</p> <p>2-From the menu, user clicks “Chat” option.</p> <p>3-From the Chat, the user clicks on the used car owner chat.</p> <p>4- The system shows the user's conversation with the owner.</p> <p>5-The user can communicate with the owner.</p>	Medium

7.Sketches

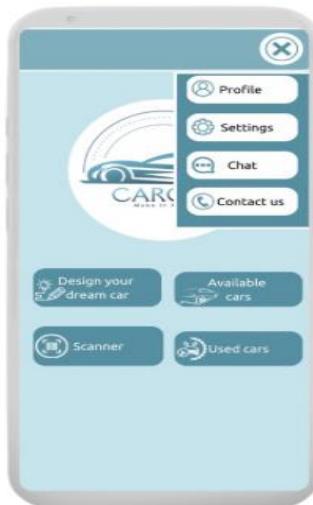
In this section a set of sketches are represented that shows the evolution of the cargo application design process from imagination to implementation. These sketches captured the essence of design concepts that have been carefully crafted to enhance user experience with this sketch's representation.



From sketches 2-8, it's the process of logging/signing in to the cargo account. Sketch 9 is the app home page with icons like: notifications (sketch 10), favorite list (sketch 17), menu, and 4 possible options.



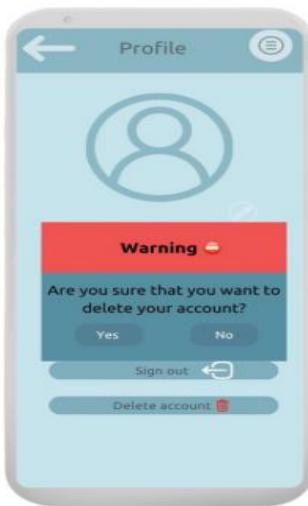
10



11



12



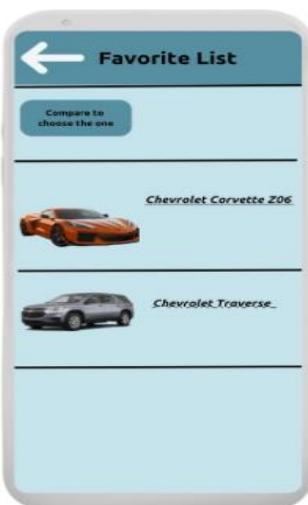
13



14



15



16



17

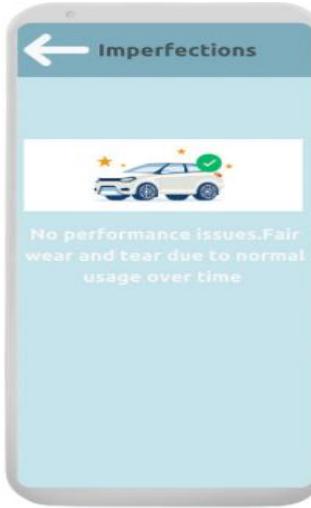


18

Sketch 10 is the notification page. Sketch 11 shows the 4 menu option (profile, setting ,chat, contact us) where every menu option is described individually in the following sketch's (12-16).



19



20



21



22



23



24



25

Every number presented inside the parentheses indicates the number of cars for that category .
as 26,28,29,30



26



27

Sketches(18-22) is about “used car ” option Showing car information, imperfections, and chat.sketches (23-27) is about “available car”.



28



29



30



31



32



33



34



35



36

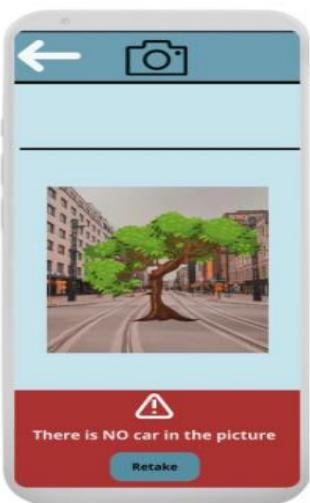
From previous page Sketches(23-27) and sketches (28-35) is about “available car” option. This option includes filtering features such as brand, price, type, and year. It also includes car information , review page, and test option.



37



38



39



40



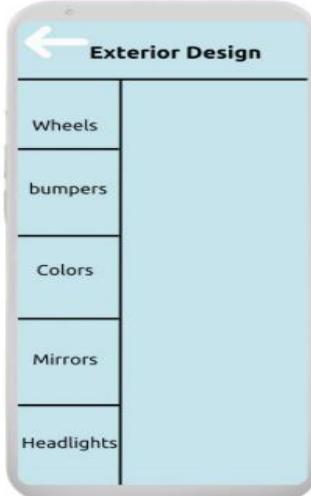
41



42



43



44

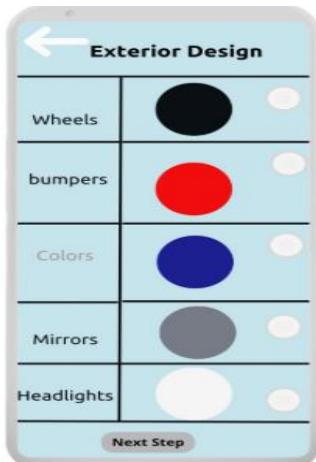


45

Sketches(36-37) is about “scanner” option which includes 2 options that are: ‘upload photo’ or “take a picture”.



46



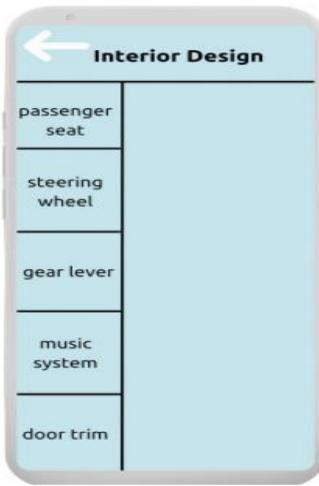
47



48



49



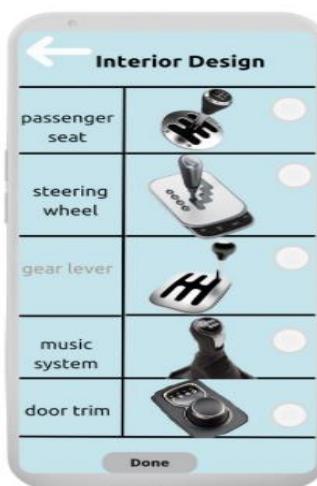
50



51



52



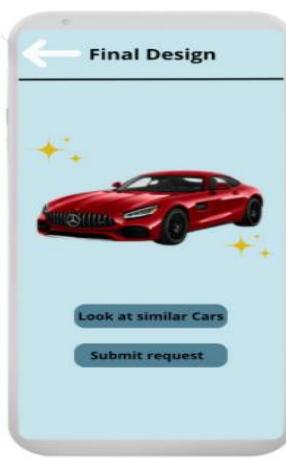
53



54



55



56



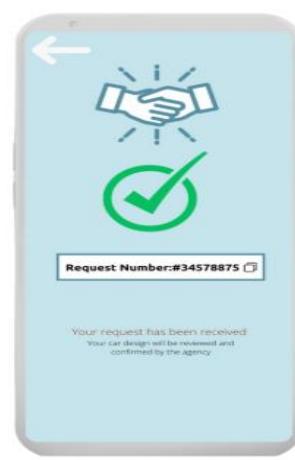
57



58



59



60

Sketch(43-60) it's about “Design your dream car” option, where you design the features of the exterior and interior design. After that you can either : “ look at similar cars” or “Sumit request” to the agency.

8.Story Board

Storyboarding proves to be an immensely powerful tool for effective visual communication, enabling us to showcase the app's layout and present a clear part of the flow for its operation. Through this storyboard, we aim to illustrate some components of the app providing user usage of interface.

HOW I FIND MY PERFECT CAR



1



2



3



4



5



6

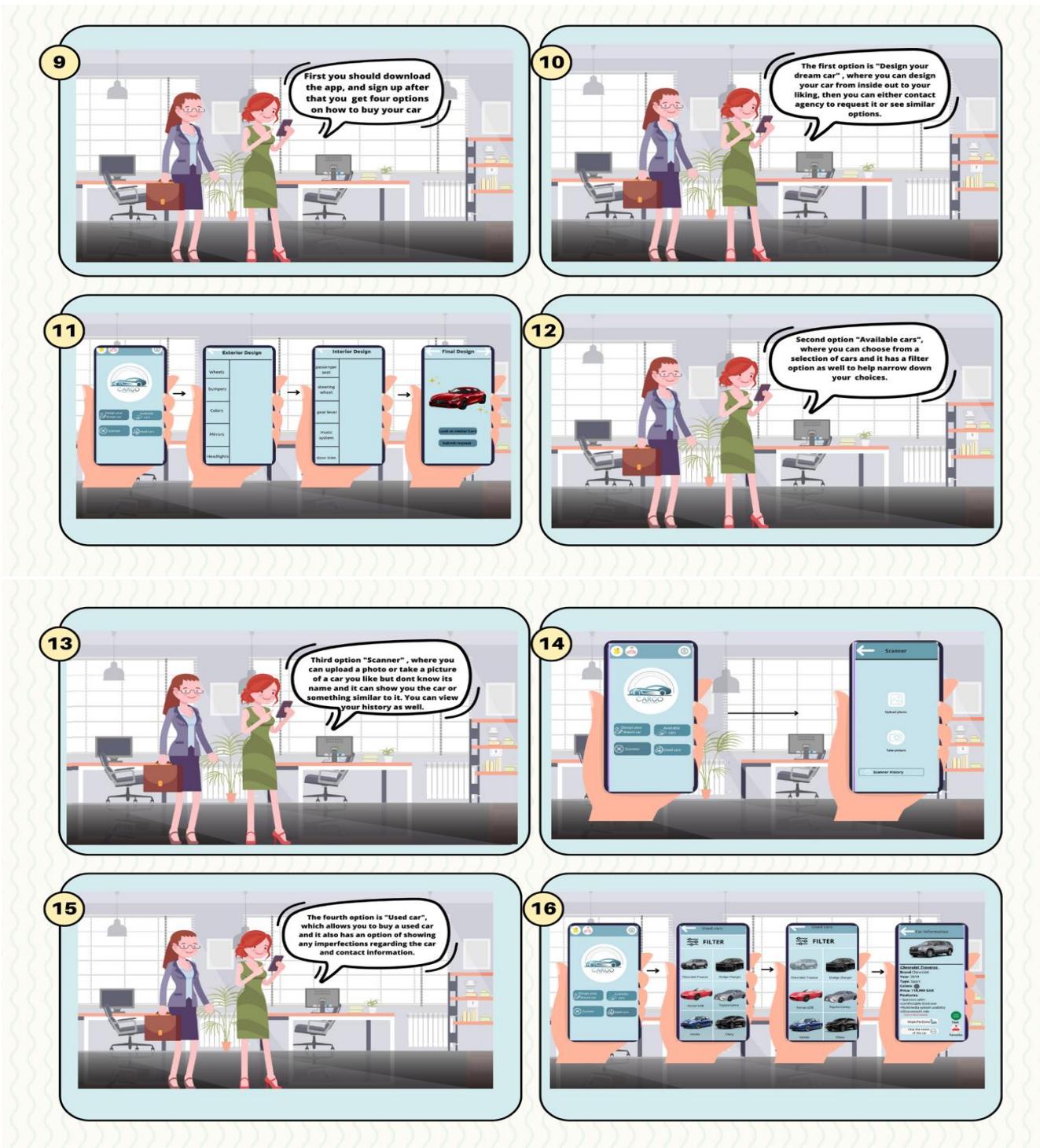


7



8



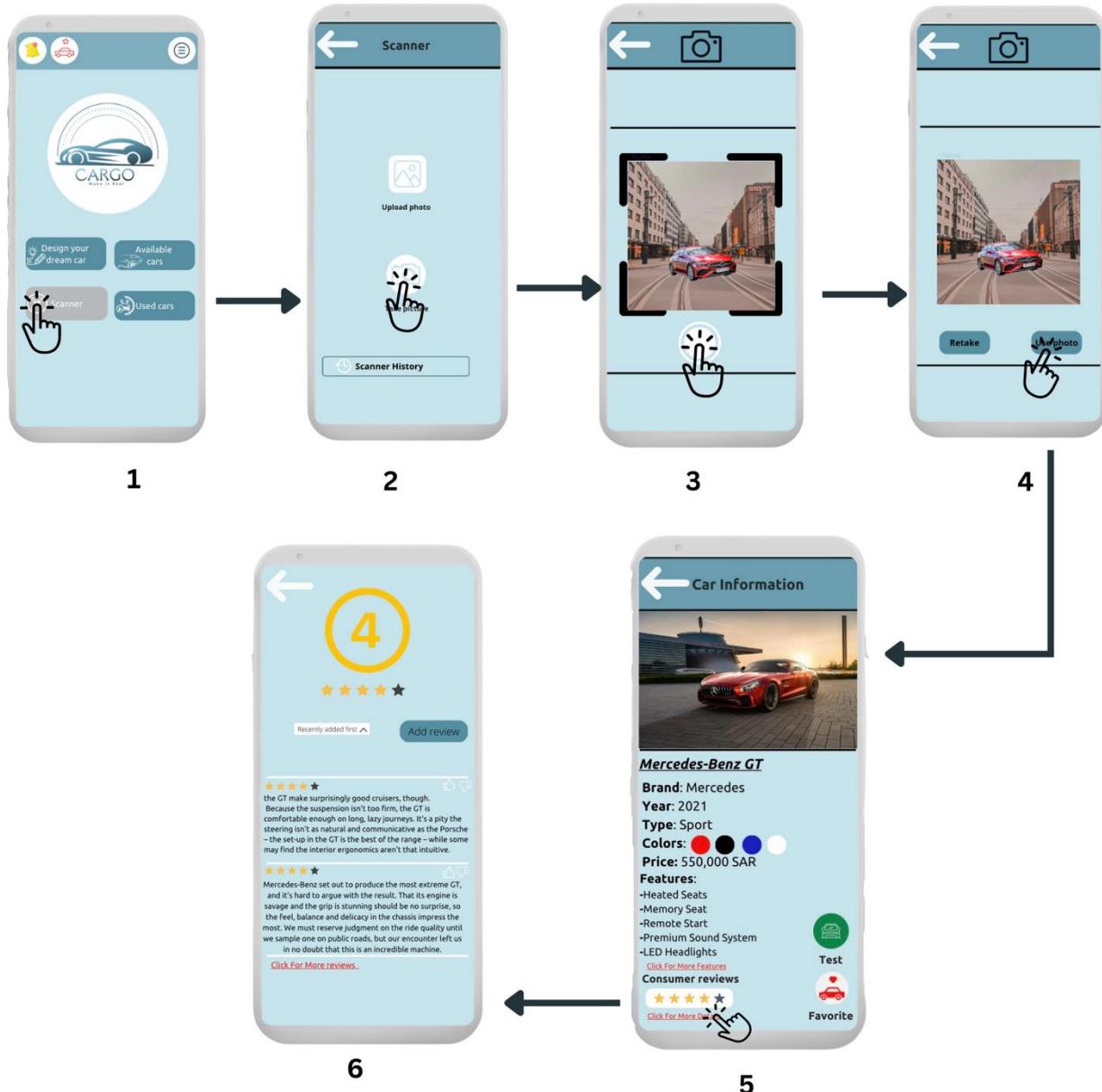




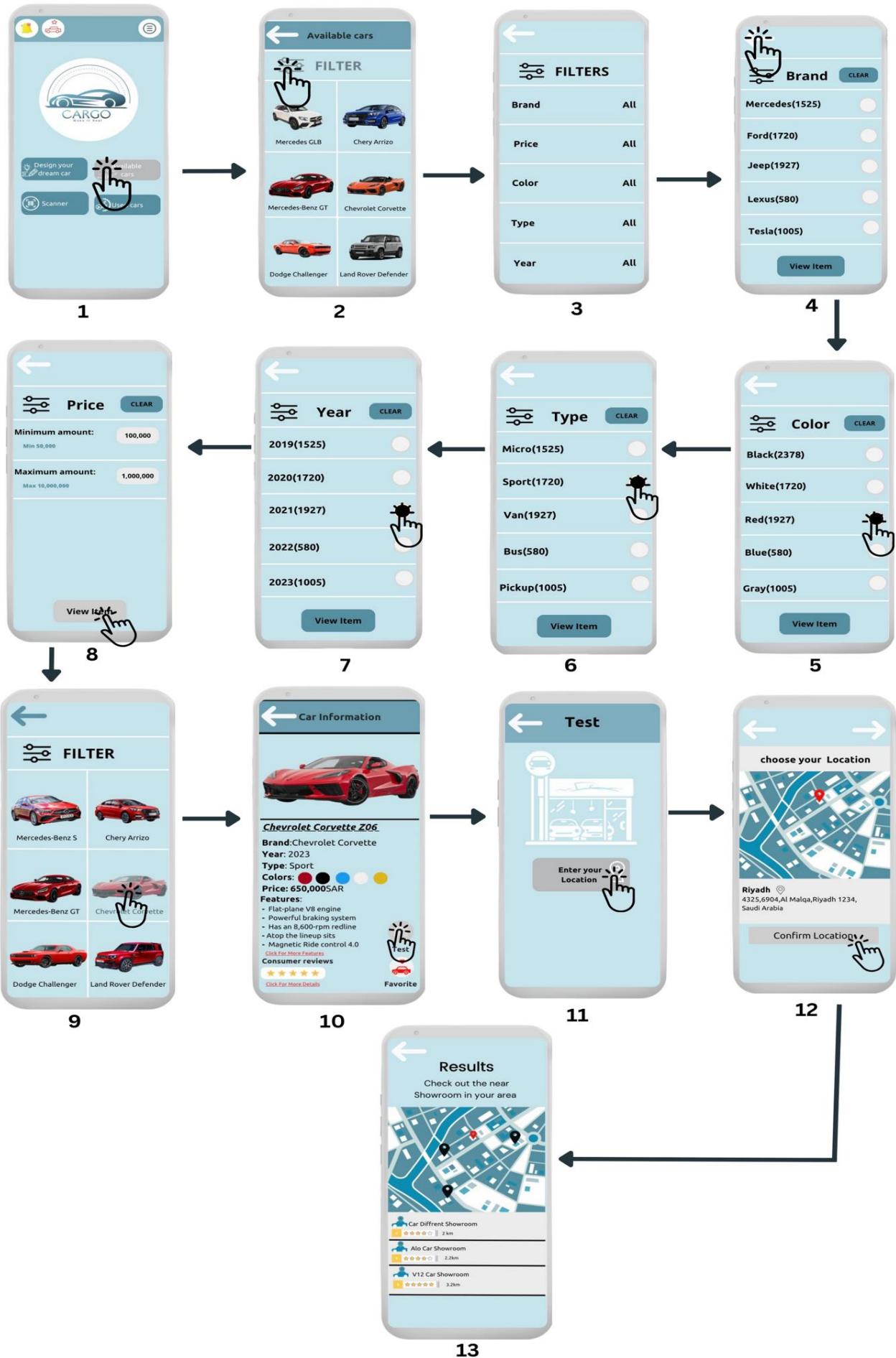
9. User Flow

The user flow is the path taken by a prototypical user on a CARGO application to complete a task. The user flow takes them from their entry point through a set of steps towards a successful outcome and final action, such as purchasing a car.

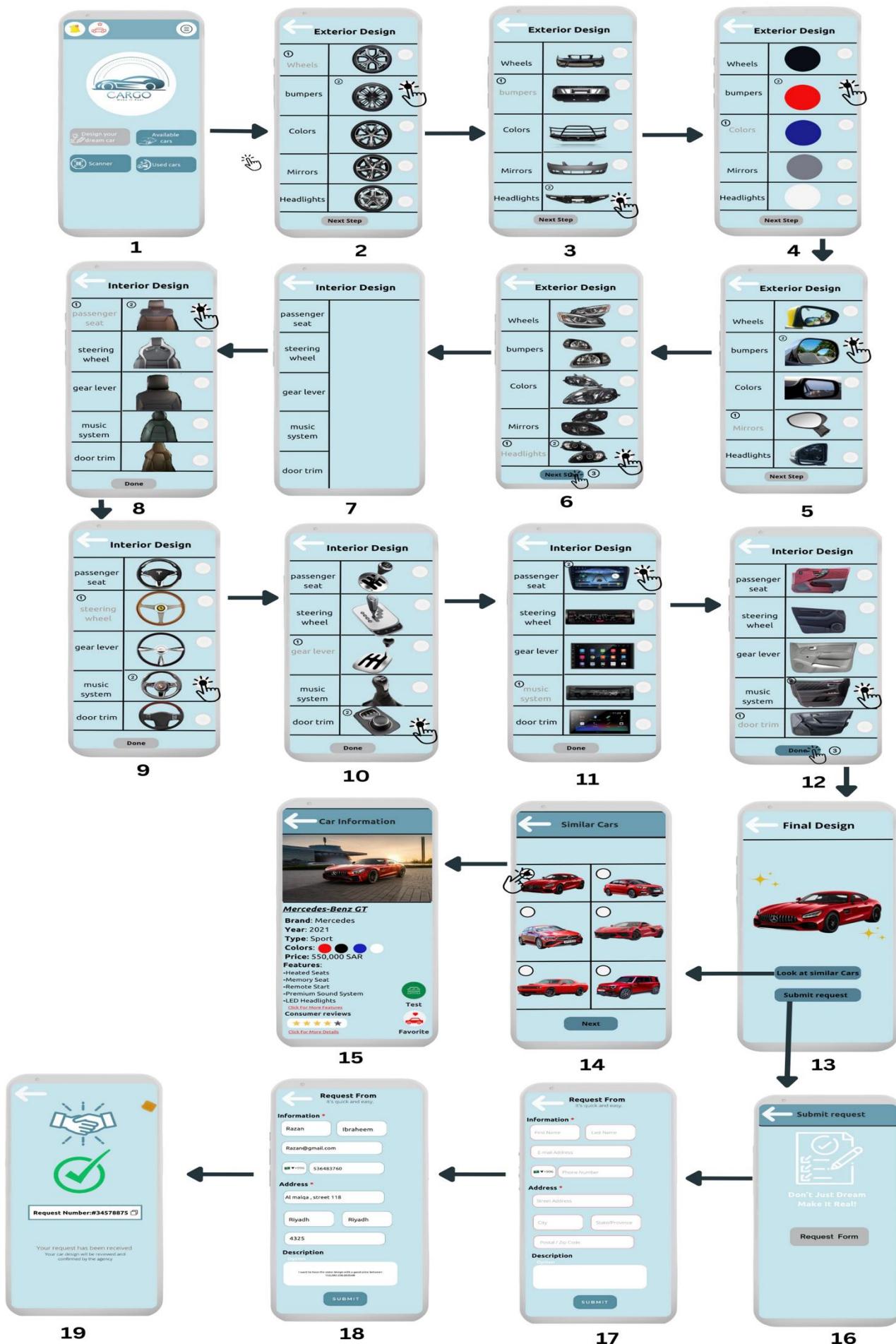
1-Scanner - User story #1



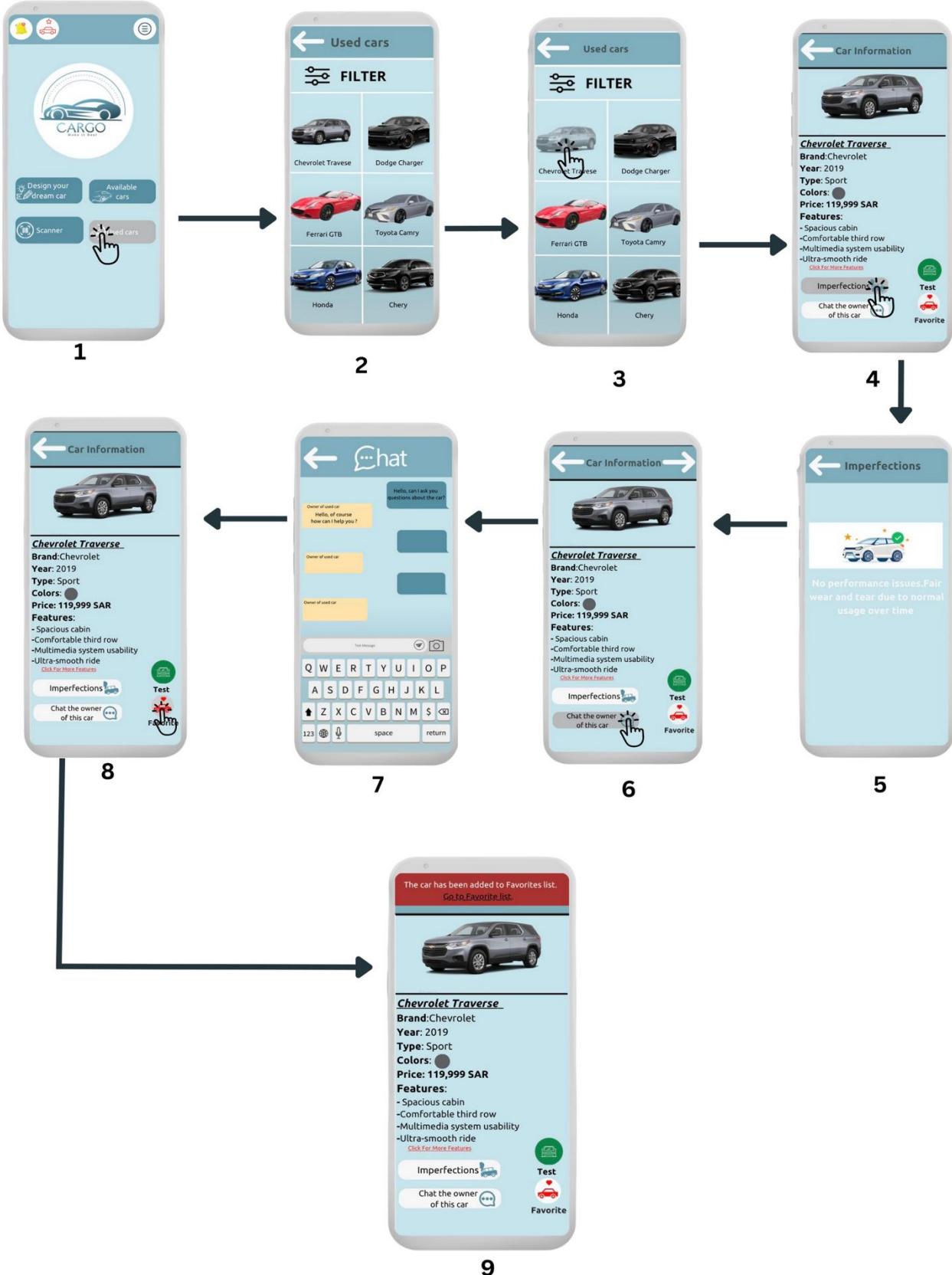
2- Available cars - User story #2



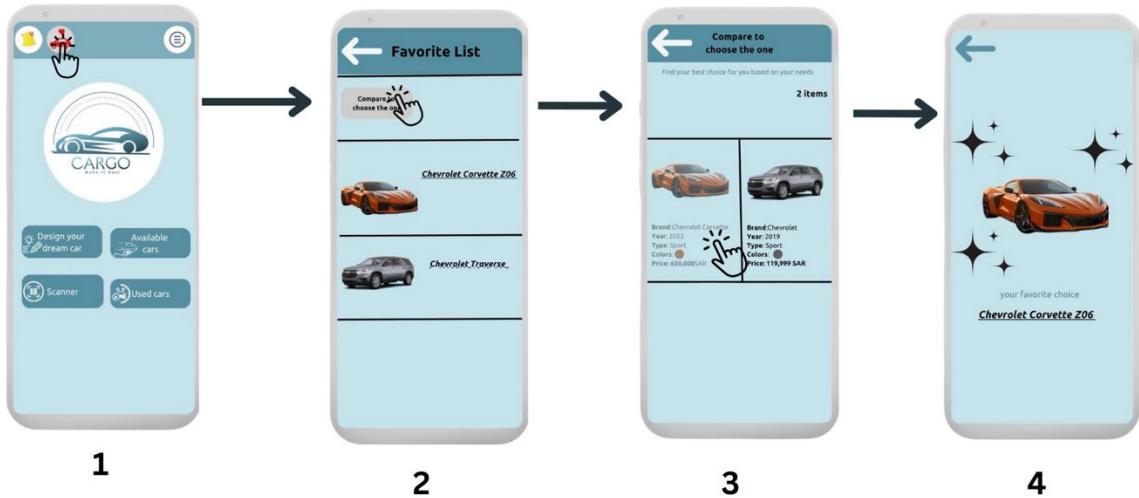
3-Design your dream car - User story #3



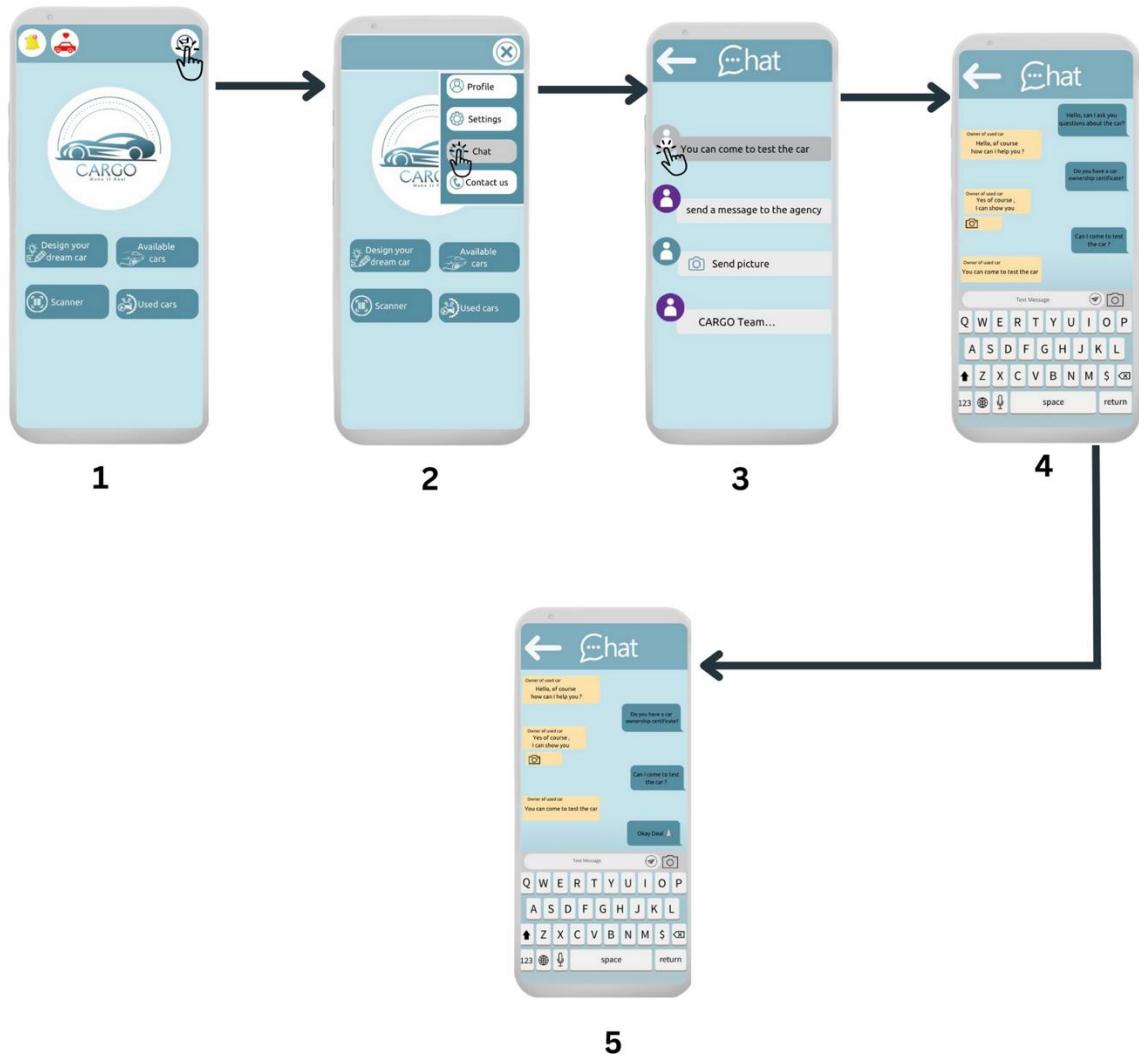
4- Used cars -User story #4



5-Favorite List - User story #5



6-Chat - User story #6



10. Design rules

The below table we have describes how our sketches applied the principles of design rules.

Learnability Principles

Rule #	Principle	Sketch No/ Flow No	Describe how you applied this principle
1 2	Predictability	1)Sketch 2 2)Sketch 4	<p>1)The user can predict that by clicking on “sign up” it means the user will create a new account</p> <hr/> <p>2)The user predict that by clicking the “Remember me” box it will save his information.</p>
	Operation visibility	<p>1)User Flow (design your dream car) sketches (2-6)</p> <p>2) User flow(Design your dream car) sketches (8-12)</p>	<p>1)The (Next Step) button appeared in gray until user design the feature of Exterior Design, then the color will turn blue, and the user can click it.</p> <hr/> <p>2) The (Done) button appeared in gray until user design the feature of Interior Design, then the color will turn blue, and the user can click it.</p>
3	Synthesizability	<p>1)User flow(chat)sketch4 and 5.</p> <p>2)Sketch 21</p> <p>3)Sketch 60</p>	<p>1)User can see the effect the of previous choice, that chat has been send and moves upward.</p> <p>2)Imperfection page appears when user previously clicked on “imperfections”.</p> <p>3) Confirmation page with request number appears.</p>

4	Familiarity	1)Sketch 9 2)Sketch 11	1)The user is presented with notifications , menu, and favorite icons that are previously known to him/her. 2)The menu icon provide user with previously known options such as profile, settings, chat, and contact us.
5	Generalizability	1) Sketch 2	1)The sign-in and sign up are similar to most apps
6	Consistency	1)Sketch 11	1)The menu bar indicates consistency in common name and icons.

Flexibility Principles

Rule #	Principle	Sketch No/ User Flow No	Describe how you applied this principle
7	Dialog initiative	1)Almost all the user flow. 2)Sketch 13 3)Sketches (25-30)	1)Almost all user flow shows (user-primitive)user performing ability. 2)The user will not be able to continue using the app until he chooses one of the two options. (System-primitive). 3)User can freely filter the options he /she like. (user-primitive)
8	Multi-threading (<i>if applicable</i>)	1)User flow(used car) sketch 10.	1) User can view notifications of the car as well as car descriptions and options.
9	Task migratability (<i>if applicable</i>)	-	Since the system is simple, there is no implementation of this principle.
10	Substitutivity	1)Sketch 14	1)User can change the language

11	Customizability	1)Sketch 14	1)The user can customize the settings language, turning on/off notifications, the brightness, and location.
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Robustness Principles

Rule #	Principle	Sketch No/ User Flow No	Describe how you applied this principle
12	Observability	Browsability	1)Sketch 11 The arrangement of the menu icons in the home page are clear.
13		Defaults	1)Sketch 25 1)Result location automatically shows the nearest showroom in area.
14		Reachability	1)Sketch 11 1)User can navigate easily using side bar.
15			2)Almost all sketches (12-17, 19-22, 24-31, 33-35, 37-40, 42-58). 2)User can navigate easily using the back arrow.
16	Recoverability	1)Sketch 39	1)"Take a picture" Option, doesn't allow the user to take a picture that he/she has taken since it is not a car.
17	Responsiveness	1)Sketch 1	1)When opening the app, a downloading icon will appear until the app opens.
18	Task Conformance	1) Sketch 9	1)The user can do many tasks that are available for him/her like: "design your dream car", "Scanner", "Used cars", and "Available cars" and other options.

11. Prototype

During the prototype phase, our team devoted extensive efforts to developing a functional proof-of-concept that effectively showcased the core features and capabilities of our project. Through rigorous iterative design and initial sketches, we created low-fidelity representations of our application. After evaluating these sketches, we chose Canva as the platform to implement our ideas, and we successfully translated them into a prototype using Figma. This prototype served as a tangible representation of our vision and enabled us to test and gather valuable feedback, ensuring alignment with our project objectives.

Key features such as "Design Your Dream Car," "Scanner," "Used Car," and "Available Car" were implemented to enhance the overall user experience. We continuously iterated and improved the prototype based on our expectations and user feedback, making necessary adjustments. Significant enhancements were made to our Canva sketches during the implementation in Figma. These enhancements included refining color coordination, enhancing the "Design Your Dream Car" feature for improved usability, adding home buttons to each feature for easier navigation, and creating more realistic design elements such as the "scanner-upload photo" functionality, the map integration in the "test" feature, the feedback system through a favorite button, and the addition of a dark mode option in the "settings" and we did this functions and features in 175 pages and 5 flows in Figma.

The tools we have used to implement these features are: we used shape tools and text box, used recourses from plugins such as Iconify, icons 8 background remover, and Font Awesome icons, and we used a specific tool, variant, and assets, to make button interactive with a user which is used in homepage, "design your dream car", and some other buttons.

In the accompanying video, we utilized editing techniques to showcase functionalities that could not be implemented directly in Figma, such as transitioning between apps. To indicate this transition, we incorporated a Google Map photo within Figma. We also simulated the scanner and "upload photo" features since Figma does not directly access our photos. Additionally, we addressed the camera access limitation by showcasing an error message as if the user took a picture but encountered an issue since the photo is not a car. We also showed in the video how the system interacted with the dark mood button when the user clicked on it. To fully realize our prototype and create a 3:33-minute video, we utilized multiple applications, including Figma, Canva, Notability, and CapCut.

We have provided links to our Figma prototype one for the prototype design and one for flow of our prototype :

- <https://www.figma.com/file/dinIHedCN4YuF6t0gd4ks3/Untitled?type=design&node-id=0%3A1&t=zZqSNeII8ms1Z7Zm-1>
- <https://www.figma.com/proto/dinIHedCN4YuF6t0gd4ks3/Untitled?page-id=0%3A1&type=design&node-id=71-157&viewport=-335%2C-1844%2C0.34&scaling=scale-down&starting-point-node-id=71%3A157&showproto-sidebar=1>

We have provided links YouTube video, where we demonstrate key feature interactions with users:

- <https://youtu.be/-GesafbrF04>

12. Usability Testing

12.1. Participants

We performed usability testing with a group of 8 individuals ages between 19 to 27, comprising an equal distribution of four females and four males. Our findings revealed that the majority of participants had previous experience with a similar product. Furthermore, all participants possessed prior knowledge of using mobile interfaces.

<i>Participant name</i>	<i>Age</i>	<i>Gender</i>	<i>Experience with similar products (1-5)</i>	<i>Use of mobile/website interface (1-5)</i>
1- Lama	23	Female	3	5
2- Mohammad	27	Male	4	5
3- Tala	19	Female	3	5
4- Njoud	22	Female	4	5
5-Sultan	25	Male	4	4
6-Yzeed	26	Male	3	5
7-Abdulmohsen	24	Male	4	4
8-Joud	21	Female	4	5

12.2. Procedure

Outline of the procedure

Upon completing the design of our cargo application, we proceeded to conduct usability testing. To ensure a representative sample, we randomly selected 8 participants from our research pool. Before the testing, we set up a suitable environment and ensured that the prototype, questionnaire, and tasks were all prepared and ready. We began by providing a brief introduction and description of our application to the participants, followed by conducting individual interviews with each of them.

During the testing session, we instructed the participants to perform a set of 5 tasks while verbalizing their thoughts aloud. We also recorded the time taken for each task as well as the overall duration. Additionally, we kept track of any errors made by the participants and promptly addressed any questions they had.

After completing the testing phase, we provided the participants with an online form to gather their honest feedback. We expressed our gratitude for their participation in the study.

Timeline

The user testing took place over a four-day period, starting from Sunday, May 28, 2023, and concluding on Wednesday, May 31, 2023. The testing sessions were conducted between 9:00 AM and 4:00 PM each day.

Among the participants, Njoud completed the tasks in the shortest amount of time, taking only 7 minutes. On the other hand, Mohammed took the longest duration, requiring 12 minutes to finish the tasks. Therefore, the overall range of completion times for the participants fell between 7 and 12 minutes.

Participant name	Day	Date	Start session time	Finish session time	Duration of session
1- Lama	Sunday	28/5/2023	9:00 AM	9:08 AM	8 min
2- Mohammad	Sunday	28/5/2023	10:00 AM	10:12 AM	12 min
3-Tala	Monday	29/5/2023	2:30 PM	2:42 PM	12min
4-Njoud	Monday	29/5/2023	3:00 PM	3:07 PM	7 min
5-Sultan	Tuesday	30/5/2023	3:23 PM	3:32 PM	9 min
6-Yzeed	Wednesday	31/5/2023	11:00AM	11:10AM	10min
7-Abdulmohsen	Wednesday	31/5/2023	2:45 PM	2:53 PM	8 min
8-Joud	Wednesday	31/5/2023	3:30 PM	3:41 PM	11 min

Tasks

In order to evaluate the readability, ease of navigation, and interface design of our CARGO application, we conducted testing on a total of 5 tasks. These tasks encompassed various functionalities within the application. The initial task focused on designing a dream car, allowing users to customize both the exterior and interior of their ideal vehicle. They were then given the option to explore similar car models or submit a request to an agency. The second task revolved around browsing through a selection of available cars. Users had the ability to refine their choices based on their preferences for the car's appearance, aligning it with their desired look. The third task involved the examination and browsability of used cars provided by individual owners. Users were able to review information about the cars and explore any modifications that had been made to them. The fourth task centered around a scanner feature, offering users two options: either uploading a car picture or taking a photo using the application's built-in camera. Based on the picture, the app would provide relevant car information. Lastly, the final task focused on the favorite list feature. Users were able to view and compare their preferred choices within the list, as well as add new items to it. These tasks were designed to assess the application's performance in terms of car design, browsing available options, exploring used cars and modifications, utilizing the scanner feature, and managing a favorite list.

Task #	Task (as it is was presented to users)	Objective of the task (What was this task designed for measuring?)
1	Design your dream car	Check the ability of user to create his/her dream car.
2	Available car	Check the ability of user to browse through the available car and filter to his/her liking.
3	Used car	Check the user's ability to browse through used car and chat to the owner to check from the car history.
4	Scanner	Check the ability of user to scan the car he/she want by uploading or taking of the picture of car.
5	Favourite list	Check the ability of user to compare favourite list of cars to choose what's best for him/her.

Performance Measures and Feedback

The metrics we employed are effectiveness, efficiency, and satisfaction. Effectiveness was measured by tracking the number of tasks completed successfully and the frequency of errors encountered during each task. Efficiency was evaluated by calculating the time taken to complete each task. Satisfaction was measured through a survey. Participants were asked to provide feedback on their experience with the tasks, and upon completion, we calculated the satisfaction rate based on their responses. By utilizing these metrics, we aimed to gauge the overall effectiveness, efficiency, and user satisfaction of our application.

Metric	How was it measured?	How was the data created/captured?
Effectiveness	Task success	By observing the participants during the task, they do.
	Number of Errors	By observing the participant and counting every error they do.
Efficiency	Time on Task	By using a timer to calculate the time spent on each task.
Satisfaction	User surveys	By making google forms surveys to gather feedback from participants.

12.3 Results:

Task Completion Success Rate and Time on Task

The following table presents an overview of the tasks performed by participants, indicating whether each task was completed and the corresponding time taken. Notably, all participants successfully completed all the given tasks. The average completion times for each task were as follows: "Design Your Dream Car" took an average of 132.5 seconds, "Available Car" took 60.75 seconds, "Used Car" took 53.625 seconds, "Scanner" took 34.125 seconds, and "Favorite List" took 24.5 seconds. It is apparent that the task "Design Your Dream Car" had the longest average completion time, while "Scanner" had the shortest average completion time.

Participant	Task 1 Design your dream car		Task 2 Available car		Task 3 Used car		Task 4 Scanner		Task 5 Favourite list	
	Complete Task	Time On Task	Complete Task	Time On Task	Complete Task	Time On Task	Complete Task	Time On Task	Complete Task	Time On Task
1	✓	110s	✓	45s	✓	40s	✓	25s	✓	20s
2	✓	130s	✓	60s	✓	65s	✓	40s	✓	30s
3	✓	106s	✓	51s	✓	42s	✓	39s	✓	26s
4	✓	134s	✓	68s	✓	62s	✓	40s	✓	25s
5	✓	133s	✓	67s	✓	55s	✓	35s	✓	28s
6	✓	140s	✓	65s	✓	50s	✓	30s	✓	24s
7	✓	110s	✓	60s	✓	50s	✓	29s	✓	20s
8	✓	125s	✓	70s	✓	65s	✓	35s	✓	23s
Success	8		8		8		8		8	
Completion Rates	100%		100%		100%		100%		100%	
Average Time on Task	123.5		60.75		53.625		34.125		24.5	

Errors

The table below summarizes the errors encountered by users while attempting the tasks. In the first task, four users experienced difficulties with button clicking, and error of a flow for the home button where it will take them to the test page. For task two, three users faced a problem, some of them got confused about “ADD” option, and favorite message, However, no issues were reported for tasks 3, 4, and 5, indicating a smooth user experience.

Tasks	Number of errors		Errors description	Critical or non-critical (C,NC)
Task 1	4		The users can't click the button easily.	NC
			When the user's click the home button in request form it will take him to the test page.	NC
Task 2	3		Some users got confused about that they have to click “ADD“to Activate the filter option.	NC
			The user does not have enough time to read the favourite message.	NC
Task 3	0		Users completed the task without any errors.	
Task 4	0		Users completed the task without any errors.	
Task 5	0	Users completed the task without any errors.		

Summary of Data

The summary of the test data is presented in the table below. The highest error rate and time taken for each task are highlighted in red. However, it is important to note that we did not highlight the lowest completion rate, as all tasks were successfully completed.

Tasks	Task Completion	Errors	Time on Task
Task 1	8	4	123.5s
Task 2	8	3	60.75s
Task 3	8	0	53.625
Task 4	8	0	34.125s
Task 5	8	0	24.5s

User Satisfaction

We used questionnaire to take feedback from our participant, to know what they feel about the Application, in terms of ease of use and understanding, and the result was as follows:

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean Rating	Percent Agree*
Does the system have a similar interface to other applications?			1	3	4	4.375	88%
I think that the use of every function is easy and understandable				6	2	4.25	100%
I need to learn a lot of things to use the CARGO app.	3	4	1			1.75	0%
I found the layout of application to be well arranged.			1	3	4	4.375	88%
I would suggest the application to others.			1	4	3	4.25	88%

*Percent Agree (%) = Agree & Strongly Agree Responses combined

Satisfaction Question :

Does the system have a similar interface to other applications?

8 responses

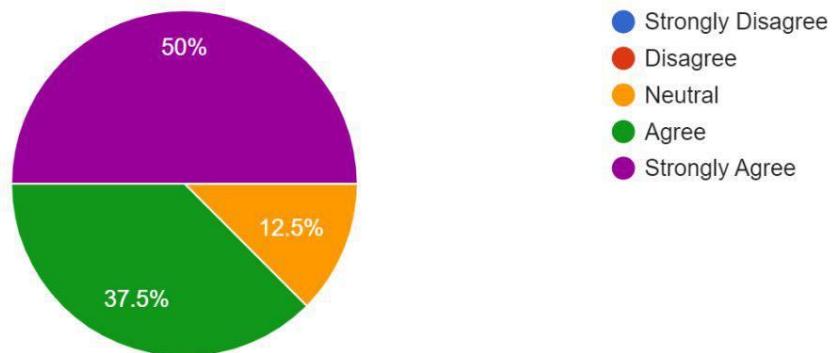


Figure1. Four of the participants (50%) strongly agree that the system have a similar interface to other Applications, there of the participants (37.5%) agree that have a kind of similar interface to other, and one of participants (12.5%) was neutral.

I think that the use of every function is easy and understandable.

8 responses

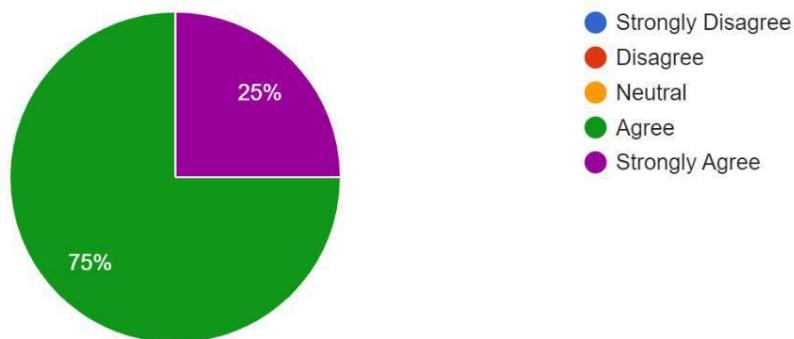


Figure2. Two of the participants (25%) strongly agree that the use of every function is easy and understandable, six of the participants (75%) agree that the use of function is easy and understandable.

I need to learn a lot of things to use the CARGO app!

8 responses

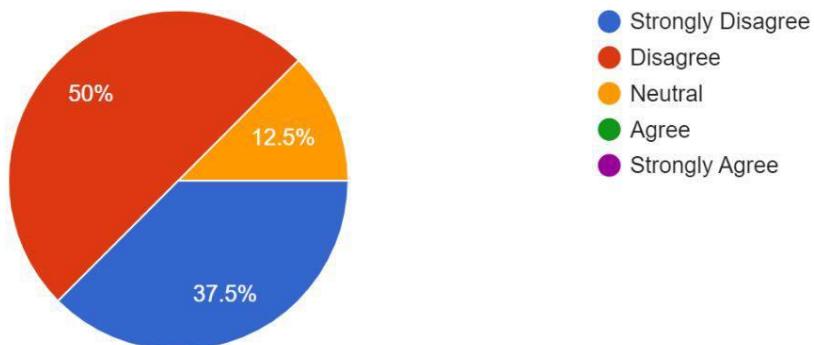


Figure3.There of the participants (37.5%) strongly Disagree that they need to learn a lot of things to use the Application, four of the participants (50%) Disagree that they need to learn a lot of things to use the Application, and one of participants (12.5%) was neutral.

I found the layout of the application to be well arranged.

8 responses

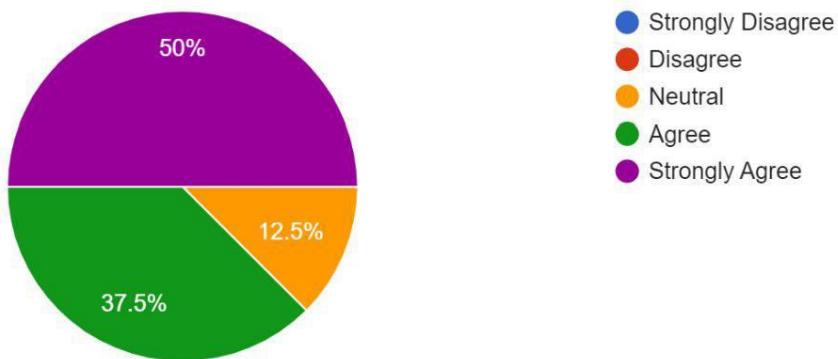


Figure4.Four of the participants (50%) strongly agree that they need found the layout of the Application arranged very well, there of the participants (37.5%) Agree that they need found the layout of the Application arranged, and one of participants (12.5%) was neutral.

I would suggest the application to others!

8 responses

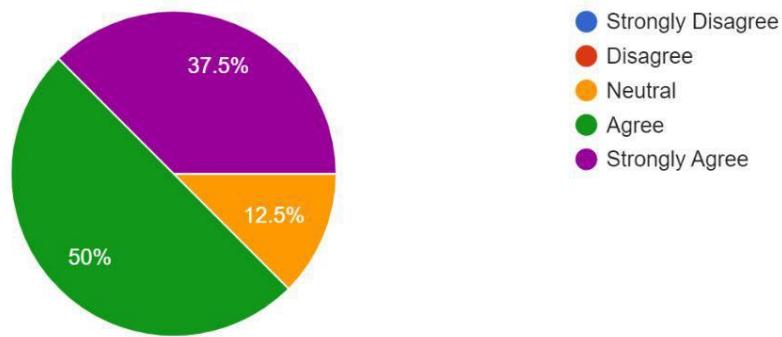


Figure5. Four of the participants (50%) agree that they will suggest the Application to other, there of the participants (37.5%) strongly agree that they may will suggest the Application to other, and one of participants (12.5%) was neutral.

12.4 Discussion:

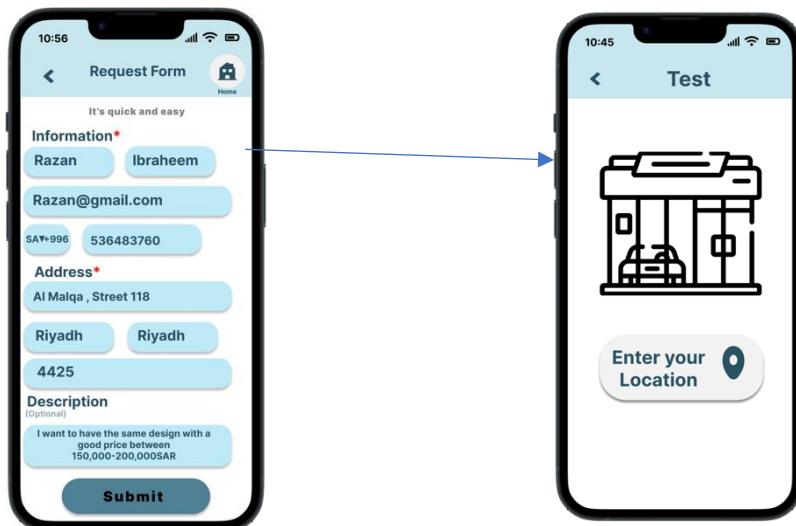
1-Critical problem:

Our application does not have any critical problems as all 8 participants successfully completed all 5 tasks, demonstrating the achievement of our intended goals. Although some participants encountered errors during the process, these were minor issues that they were able to overcome, and these errors did not prevent them from successfully completing the tasks.

2-Major problem:

During the testing phase, several users identified an issue where clicking the home button in the Request Form led them to the Test page instead of returning them to the home page. As a result, they had to press the back button multiple times to navigate back to the desired location. To rectify this problem, it is recommended that clicking the home button should directly return the user to the home page.

This issue is categorized as a major problem due to the impact it has on user interactions with the system. Failing to address this issue could lead to frustrations and a suboptimal user experience. Therefore, implementing the proposed solution is crucial to ensure smooth and intuitive navigation for all users.



3-Minor problem:

During the evaluation process, a user raised an issue regarding the unreadability of the favorite message when adding a car to the favorites. This occurred due to the insufficient time allotted for reading the message, as it appeared and disappeared too quickly. To address this concern, we recommend extending the duration of the favourite message to allow users ample time to read its contents.

Although this issue was reported by one user, it is important to note that the majority of users did not encounter any difficulties with the favorite message. Hence, we classify this as a minor problem with a limited impact on overall user experience. Nonetheless, implementing the suggested solution would enhance readability and provide a more satisfactory interaction for all users.



12.5. Recommendations

Following the interviews, application testing, and discussions with the participants, we have considered their feedback and gathered valuable insights. Based on this information, we have identified several suggestions to aid in the development of our application. These suggestions include recommended changes and justifications to facilitate the improvement process.

Upon careful examination, it is evident that the application does not have any critical problems. However, we have identified a major and a minor issue during the evaluation process. The major problem relates to the "request to agency" feature, where some participants inadvertently clicked on the home button, leading them to the wrong flow. To address this, we recommend providing clearer specifications and instructions regarding the flow of buttons to prevent confusion and guide users appropriately. The minor problem involves the favorite message, which currently appears for a very brief period, not allowing users enough time to read its contents. To enhance this aspect, we propose extending the duration of the message's presence, allowing users sufficient time to comprehend its content.

By addressing these major and minor issues, we can further improve the user experience and enhance the overall usability of the application.

13 Conclusion

In conclusion, this report provides a comprehensive overview of the UX design process, encompassing interviews, question formulation, sketch creation, and prototype development. Our project focused on creating a car application that helps users find their ideal vehicle. Through dedicated efforts, we successfully crafted a UX design that serves as a solid foundation for potential future development of a fully functional app. By adopting an iterative design approach, our aim is to transform our conceptualized solution into a tangible and user-friendly application that caters to the needs and preferences of our target audience.

Furthermore, the feedback received from the participants during interviews, application testing, and discussions has been instrumental in shaping our understanding. We have carefully considered their insights and identified valuable suggestions to enhance our application. These recommendations, supported by justifications, aim to facilitate the improvement process and ensure an even more optimal user experience. By incorporating these suggestions into our future work, we anticipate further refinement and success in delivering a highly effective and user-centric car application.

Appendix A: Interviews

- Questions:

Q1-What is the most difficult problem that you face when you buy a car?

Q2-What do you think about buying a car of your design?

Q3-Do you prefer drawing or dragging pictures to them when we add "Design your dream car"?

Q4-Do you think that feature "Take a picture of a random car or upload one, and we'll display the car or any similar car "will help you and why?

Q5-Do you have a problem with buying a used car What are your concerns about it?

Q6-If you like a car, would you prefer to show you the nearest showrooms where you can test the car?

Q7-Would you like a filter option that allows you to choose from a list of options {Price,year,. . .}?

Q8-How would you like the cars to appear to you as a list or swabbing page? And why?

Q9-Are you interested in reading people's opinions and experiences about the car?

Q10-What do you expect from an application that helps you in choosing the right car?

Appendix B: Questionnaire

- Questions:

Q1: Do you spend a lot of time in choosing a new car?

- Yes
- No
- Sometimes

Q2: What elements do you think are most important when you are buying a car?

- Brand
- Price
- Design
- Current Trends
- Product quality and safety features

Q3: How helpful do you think a feature about classifying cars based on their purpose would be?

No need for it (1,2,3,4,5) very helpful.

Q4: Are you a person who prefers to have pictures of cars displayed or a written description of a car?

- Picture
- Written
- Both

Q5: How helpful do you think a favorite feature would be?

No need for it (1,2,3,4,5) very helpful.

Q6: How helpful do you think the feature of offering your car for sale will help you?

No need for it (1,2,3,4,5) very helpful.

Q7: Would you be interested in a feature that allows you to buy your car from a foreign country?

- Yes
- No
- Maybe

Q8: Is it more convenient for you to submit a request to the car agency to implement your dream car, or would you like to see options for similar cars?

- Request to agency
- See options to similar cars
- Both

Q9: Would you be interested in contacting the owner via the application if there is a used car for sale?

- Yes
- No
- Maybe

The following link is to the raw data file:

<https://docs.google.com/spreadsheets/d/1Fx3RAsd9j4MHsAQe1IwvQPwrvmcv6xqMLwPGY6mxnBY/edit?resourcekey#gid=301133407>

Appendix C: Usability Test

• Facilitator Script.

Scenario:

Imagine that you want to buy a car, but you mostly do not like the cars that are available in the showrooms and do not provide your needs, after a long time searching for the right car while scrolling on the mobile on Instagram, a picture of The cargo application appears to you and you decide to download the application, and you will be able to buy, design and test your car in the easiest possible way.

Task:

- 1) Download CARGO Application.
- 2) Create a new account.
- 3) a-Search for a car through the available – Used Car
- 3)b-Designs his/her dream car
- 3)c-Scan the car he/she want by uploading or taking of the picture of car
- 4)Add all the cars you like to favorite.
- 5)check the favorite list and compare between the cars.
- 6)Test the car you like at the nearest showroom.

• Satisfaction Questionnaire Form.

- 1) Does the system have a similar interface to other applications?
 o Strongly Agree.
 o Agree.
 o Natural.
 o Disagree.
 o Strongly Disagree.
- 2) I think that the use of every function is easy and understandable.
 o Strongly Agree.
 o Agree.
 o Natural.
 o Disagree.
 o Strongly Disagree.
- 3) I need to learn a lot of things to use the CARGO app.
 o Strongly Agree.
 o Agree.
 o Natural.
 o Disagree.
 o Strongly Disagree.
- 4) I found the layout of the application to be well arranged.
 o Strongly Agree.
 o Agree.
 o Natural.
 o Disagree.
 o Strongly Disagree.

5) I would suggest the application to others.

- Strongly Agree.
- Agree.
- Natural.
- Disagree.
- Strongly Disagree.

- Consent Form.

EVALUATION CARGO TOOL



Goal: The goal of this evaluation is to test the usability of a CARGO tool prototype, to improve this tool in terms of user-friendliness.

Procedure: You will carry out tasks with the prototype, which will be provided by the facilitator. While carrying out the Tasks you are asked to think aloud. After completing the tasks, you will fill in a short questionnaire and the facilitator will ask you some questions. The evaluation will take around 25 minutes.

Recording:

Participation doesn't have any risks or consequences for you.

- Your answers and details will be processed anonymously.
- We judge the quality of the prototype, not your performance.

Informed consent:

By signing this form, you acknowledge to have read and understood the information in this document and agree to this information.

Name:	Do you agree with the recording?
Date:	<input type="checkbox"/> Yes, video, and sound recording.
Email:	<input type="checkbox"/> Yes, only sound recording.
Signature:	<input type="checkbox"/> No, rather not.