

# CarKing

User Interface Design Project Phase2





Supervised By  
Dr. Asmaa Al-Aied

A large, stylized blue icon depicting three overlapping human figures, representing a group or team.

# Group Members

*SAHAR ALI HAKAMI (439000278)*

*SARA MANSOUR AL-WITHINANI (439006737)*

*NEBRAS ABDULLAH AL-SHAREEF (439005667)*

*ALAA ABDULRAHMAN AL-HARAZI (439002660)*

*AMAL ALI AL-YATIMI (439008504)*



# Agenda

## *TOPICS COVERED*

- Establishing Requirements
- Pre-Design
- Prototyping
- Usability Testing

01

## Establishing Requirement



# 1. Evaluation Questions

بناءً على ملاحظتك ، كم خطوة أحتاجت لحجز موقف في التطبيق؟	عند البحث عن الموقع في الخريطة كم عطلا واجهت في النظام؟	ما الوقت المستغرق لتسجيل معلومات المركبة في التطبيق وحفظها ؟	هل تعتقد أن فكرة التطبيق مفيدة وتلبي احتياجاتك كسائق مركبة؟	المستخدم
4	3	0.5-1 دقيقة	نعم	1
3	1	1-2 دقيقة	نعم	2
3	1	1-2 دقيقة	نعم	3
3	1	1-2 دقيقة	ربما	4
2	1	0.5-1 دقيقة	ربما	5
3	0	0.5-1 دقيقة	نعم	6
3	3	3-2 دقيقة	نعم	7
4	+3	1-2 دقيقة	ربما	8
3	1	1-2 دقيقة	نعم	9
3	1	1-2 دقيقة	نعم	10
3	2	0.5-1 دقيقة	نعم	

## 2.Draft Questions

في اعتقادك ما هي الأماكن التي تحتاج منك لحجز موقف قبل الذهاب إليها؟	10	الجنس	1
هل قمت بإستخدام تطبيق لحجز مواقف السيارات من قبل؟	11	العمر	2
ما هي ابرز العيوب او المميزات التي واجهتك خلال تجربتك للتطبيق الذي ذكرته اعلاه؟	12	المستوى التعليمي	3
اذا أجبت بـ لا فبإمكانك الاطلاع على التطبيق	13	المهنة	4
هل تعتقد أن فكرة التطبيق مفيدة وتلبي احتياجاتك كسائق مركبة؟	14	ما مستوى خبرتك في استخدام التقنية	5
ما الوقت المستغرق لتسجيل معلومات المركبة في التطبيق وحفظها ؟	15	هل تملك مركبة؟	6
عند البحث عن الموقع في الخريطة كم عطلا واجهت في النظام؟	16	هل تشكل لك مواقف السيارات مشكلة تؤثر على حياتك؟	7
بناءً على ملاحظتك ، كم خطوة أحتاجت لحجز موقف في التطبيق؟	17	هل يهمك تسهيل عملية حجز الموقف لك ولمن حولك؟	8
ما هي الخدمات التي تتوقع وجودها في تطبيقنا؟	18	هل تؤيد وجود تطبيق يساعدك في حجز موقف؟	9

## 3.Pilot Test

#	<b>Draft Questions</b>	<b>Modified Questions</b>	<b>Justification</b>
1	Age (18 - older than 33)	Age (younger than 18 - older than 33)	Some users are younger than 18
2	Education level (primary - college)	Education level (primary - college) + other	It wasn't covering all categories
3	Career (choose one)	Career (choose multiple)	User might be both student and employee
4	Do you have a vehicle?	Do you drive a vehicle?	User might have one but don't drive it
6	Do you support having an application that helps you book a parking spot?	Do you support having an application that helps you book a parking spot before or during your arrival at your destination?	To make it clearer
7	What services do you expect to have in our application?	What services do you expect to have in our application to improve your experience as a user?	To draw the user's attention and clear the idea of the application

# 4. Final Questionnaire

<https://forms.gle/nQuicD1o81HurKdt5>

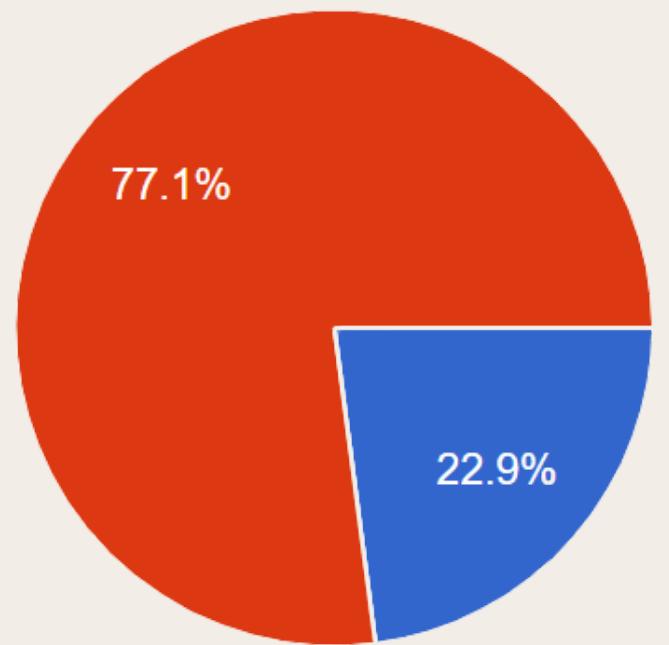
في اعتقادك ما هي الأماكن التي تحتاج منك لحجز موقف قبل الذهاب إليها؟	10	الجنس	1
هل قمت بإستخدام تطبيق لحجز مواقف السيارات من قبل؟	11	العمر	2
ما هي أبرز العيوب أو المميزات التي واجهتك خلال تجربتك للتطبيق الذي ذكرته أعلاه؟	12	المستوى التعليمي	3
إذا أجبت بـ لا فيإمكانك الاطلاع على التطبيق	13	المهنة	4
هل تعتقد أن فكرة التطبيق مفيدة وتلبي احتياجاتك كسائق مركبة؟	14	ما مستوى خبرتك في استخدام التقنية	5
ما الوقت المستغرق لتسجيل معلومات المركبة في التطبيق وحفظها ؟	15	هل تقود مركبة؟	6
عند البحث عن الموقع في الخريطة كم عطلا واجهت في النظام؟	16	هل تشكل لك مواقف السيارات مشكلة تؤثر على حياتك؟	7
بناءً على ملاحظتك ، كم خطوة أحتاجت لحجز موقف في التطبيق؟	17	هل يهمك تسهيل عملية حجز الموقف لك ولمن حولك؟	8
ما هي الخدمات التي تتوقع وجودها في تطبيقنا لتحسين تجربتك كمستخدم؟	18	هل تؤيد وجود تطبيق يساعدك في حجز موقف قبل أو أثناء وصولك لوجهتك؟	9

## 5. Tabulated Results

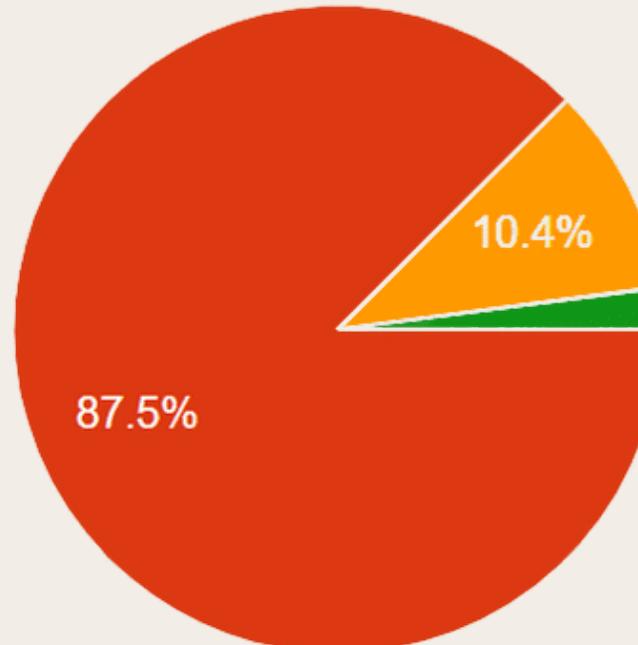
طابع زمني	الجنس	العمر	المستوى التعليمي	المهنة	خبرتك في استخدام التقنية	هل تفود مركبة؟
5:36:50 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	4	د
7:29:11 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	4	د
8:58:23 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	4	د
9:13:35 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	5	عم
9:37:15 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	5	عم
10:40:58 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	5	د
10:57:18 2022/05/17 ص	أ Shi	من 18 إلى 25		طالب	4	د
12:19:56 2022/05/17 م	أ Shi	من 26 إلى 33		طالب	5	د
12:34:23 2022/05/17 م	أ Shi	من 18 إلى 25		طالب	4	د
12:40:05 2022/05/17 م	ذكر	من 18 إلى 25	طالب, موظف	5	عم	
12:52:15 2022/05/17 م	ذكر	أكبر من 33	موظف	4	عم	
12:56:53 2022/05/17 م	ذكر	من 18 إلى 25		طالب	5	عم
1:05:10 2022/05/17 م	أ Shi	من 18 إلى 25		طالب	3	د
1:24:42 2022/05/17 م	أ Shi	من 18 إلى 25		طالب	3	د
1:26:31 2022/05/17 م	ذكر	من 18 إلى 25		طالب	5	عم
1:43:52 2022/05/17 م	ذكر	من 18 إلى 25		غير موظف	5	عم
1:44:07 2022/05/17 م	ذكر	من 18 إلى 25		موظف	4	عم
1:48:22 2022/05/17 م	أ Shi	من 18 إلى 25		طالب	5	د
2:00:58 2022/05/17 م	أ Shi	من 18 إلى 25		طالب	3	د
2:37:53 2022/05/17 م	أ Shi	من 26 إلى 33		موظف	5	د
5:10:03 2022/05/17 م	أ Shi	من 18 إلى 25		موظف	5	د
6:55:57 2022/05/17 م	ذكر	من 26 إلى 33		طالب	4	عم
7:17:33 2022/05/17 م	ذكر	من 18 إلى 25		طالب	5	د
9:25:53 2022/05/18 ص	أ Shi	من 18 إلى 25	جامعي	طالب, غير موظف	4	د
9:29:57 2022/05/18 ص	أ Shi	من 18 إلى 25	جامعي	طالب	5	د
9:31:48 2022/05/18 ص	أ Shi	من 18 إلى 25	جامعي	طالب	4	د
9:31:52 2022/05/18 ص	أ Shi	من 18 إلى 25	ثانوي	طالب	5	د
9:32:04 2022/05/18 ص	أ Shi	من 18 إلى 25	جامعي	طالب	4	د
٥٢٦٠٢٥ ٢٠٢٢/٠٥/١٥		٢٥	١١ ١٥	١١	١١	١١
ردود النموذج ١						

## 6.Results Analysis

الجنس

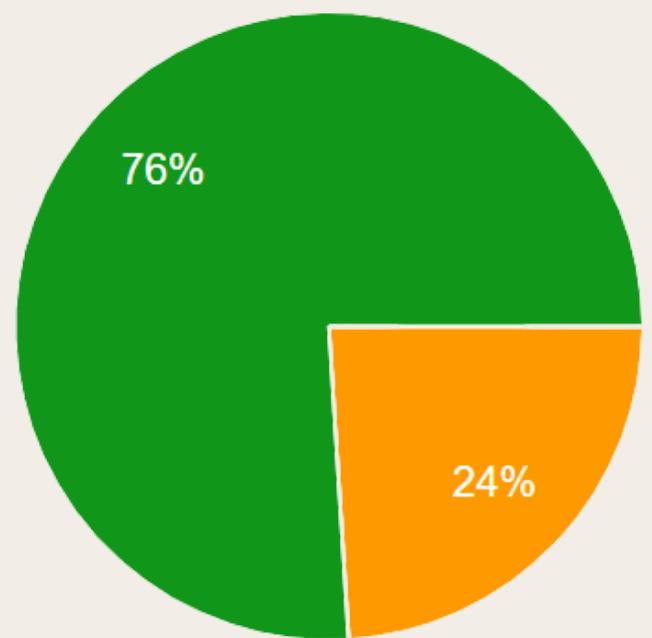


العمر



- أقل من 18
- من 18 إلى 25
- من 26 إلى 33
- أكبر من 33

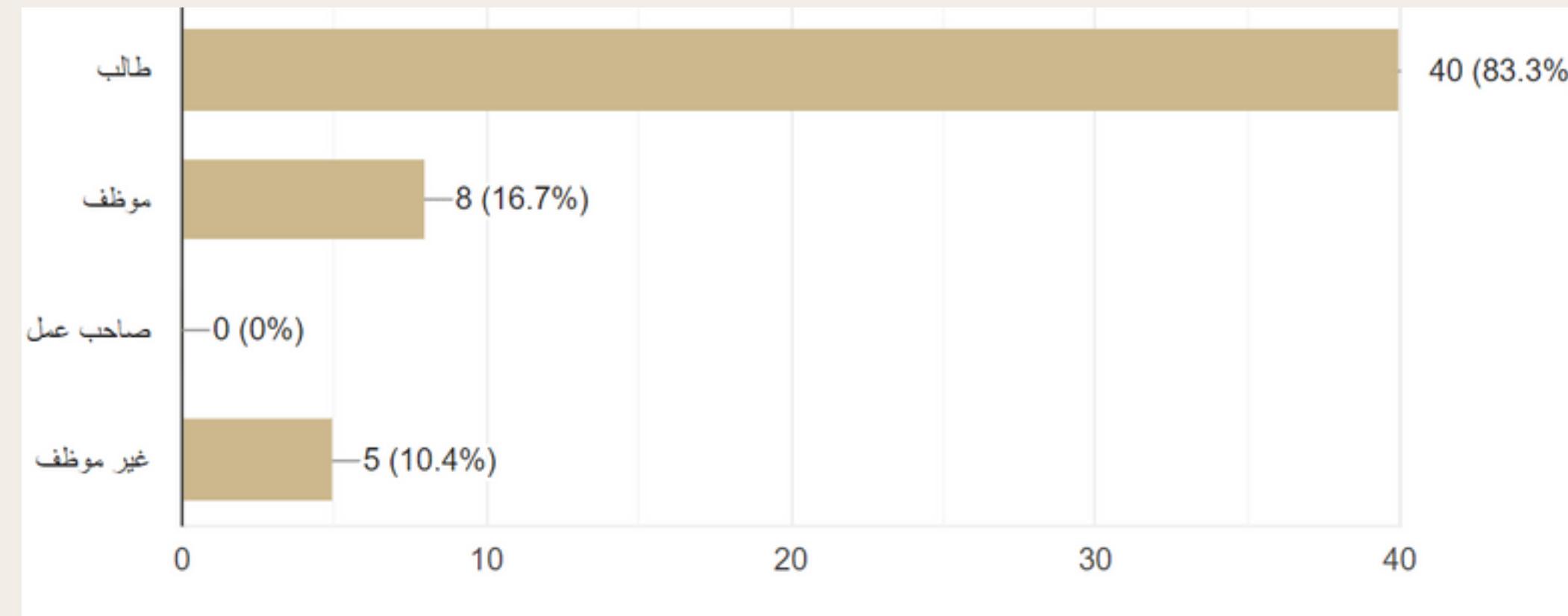
التعليم



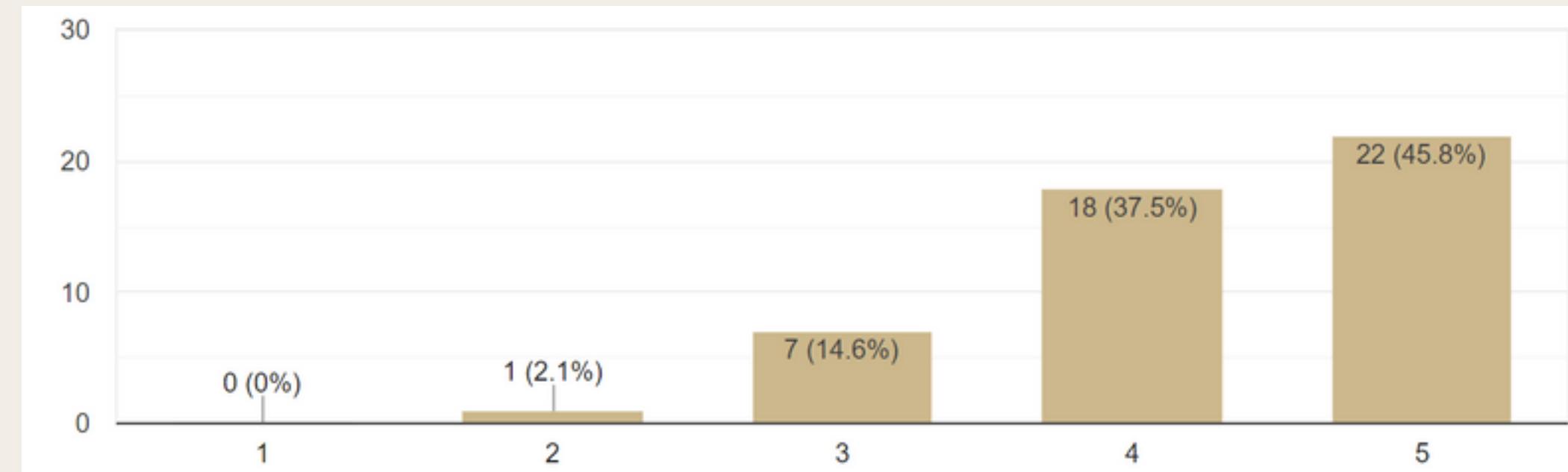
- ابتدائي
- متوسط
- ثانوي
- جامعي
- غير ذلك

## 6. Results Analysis

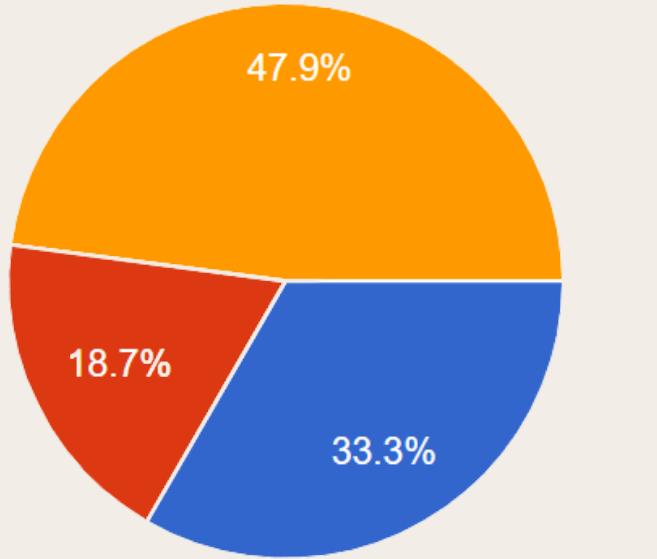
المهنة



الخبرة في  
استخدام  
التقنية

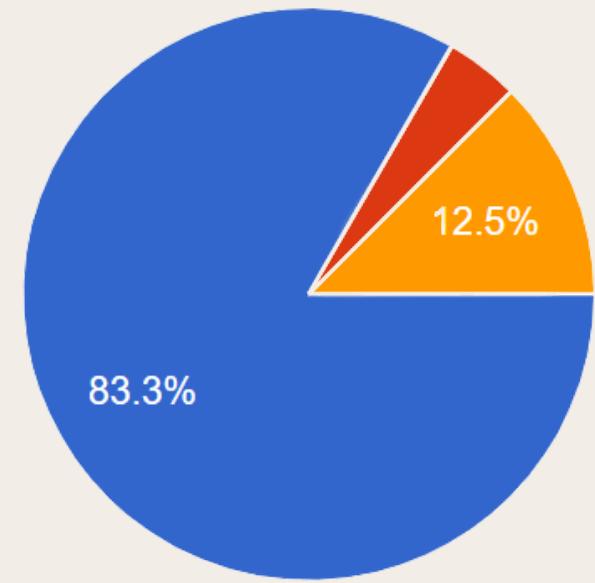


## 6. Results Analysis



هل تشكل لك مواقف السيارات مشكلة تؤثر على حياتك؟

نعم  
لا  
ربما



هل يهمك تسهيل عملية حجز المواقف لك ولمن حولك؟

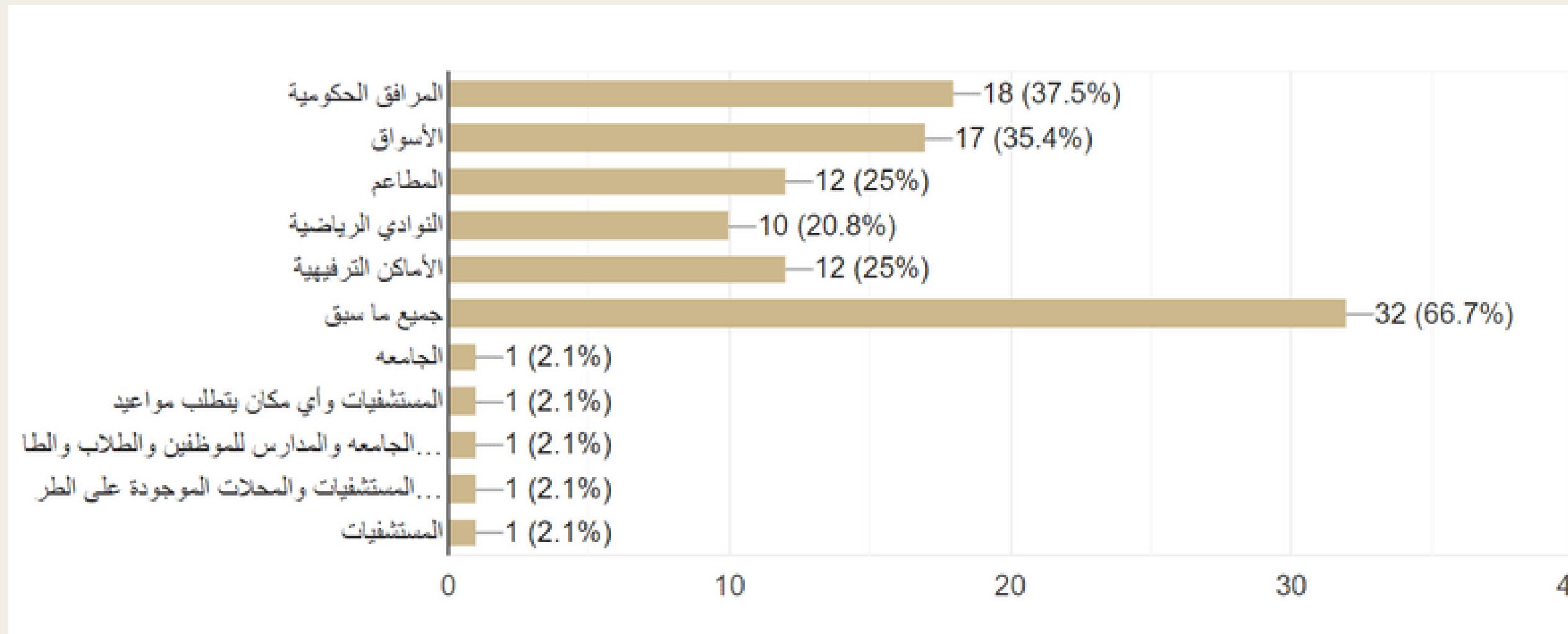
نعم  
لا



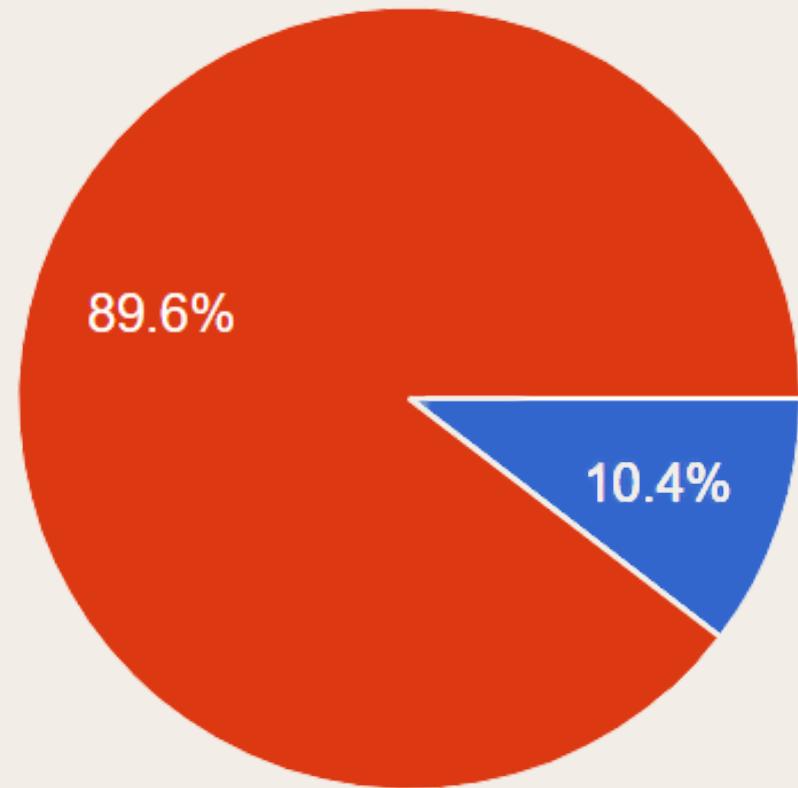
هل تؤيد وجود تطبيق يساعدك في حجز موقف قبل أو أثناء وصولك لوجهتك؟

## 6. Results Analysis

في اعتقادك ما هي الأماكن التي تحتاج منك لحجز موقف قبل الذهاب إليها؟



## 6. Results Analysis



هل قمت بـاستخدام تطبيق لحجز موافق السيارات من قبل؟



هل قمت بـاستخدام تطبيق لحجز موافق السيارات من قبل؟



## 6.Results Analysis

ما هي الخدمات التي تتوقع وجودها في تطبيقنا لتحسين تجربتك كمستخدم؟

ما هي ابرز العيوب او المميزات التي واجهتك خلال تجربتك للتطبيق الذي ذكرته اعلاه؟

معرفة وجود موقف شاغر ام لا
تنوع خيارات طرق الدفع
وجود مكان لتعبئة الوقت المقدر في استعمال الموقف
يكون سهل في تحديد الموقع، التطبيق يكون فيه اللغة العربية
سرعة الاستجابة نقطة مكان الموقف والتحقق من انه فارغ الدفع بطرق الدفع الالكترونية
عمل التطبيق بدون اتصال بالنت
سهولة استخدام ووضوح التطبيق
حفظ بيانات البطاقة

**تصميم الواجهات جذابه**

**المميزات سهلة الاستخدام والوصول السريع للخدمات**

**العيوب عدم وجود خاصية إضافة سيارات متعددة**

## 6. Results Summarization

We received answers from 59 people. 81.4% of them were females and 18.6% of them were males.

The majority were between the ages of 18 to 25, representing 88.1%. 10.2% were from 26 to 33, and the last group was 1.7% who were over 33 years old.

88.6% had a university education. 19.4% had a high school education. 84.7% were students, 15.3% were employees and 10.2% have no job.

47.5% are experts in technology while 39% see themselves with the least degree, 7% consider themselves normal users, and only 1.7% with very limited knowledge of technology.

67.8% were people who aren't driving cars, and ONLY 32.2% do.

45.8% of people think of car parking as a possible problem that could affect their daily lives. WHILE 39% already see it as a major problem, and ONLY 15.3% consider it "not a problem".

86.4% care about facilitating the car parking process for themselves and people around them, 10.2% may care about certain conditions, And 3.4% don't care at all.

100% of people want to have an application that helps them book a parking spot before or during their arrival at any destination.

We also received different answers to the "what places you need to reserve a parking spot before going to it" question. 69.5% vote for all the above which are {Government facilities, markets, restaurants, sports clubs, and recreational places}. 33.9% vote for government facilities, 30.5% vote for markets, 22% for restaurants, 18.6% for sports clubs, and 23.7% vote for recreational places. On the "Other" section, multiple people wrote {Hospital, university, School, airport}.

89.9% of people never used a parking app, and ONLY 10.2% do. Those 10.2% people used parking apps called "Mawgif" and "Thaki" and they describe them as having a unique graphical user interface, ease of use, and quick access to different services. But the cons were the disability of adding multiple cars.

## 6. Results Summarization

69.5% of people think that the parking app is useful for the car driver. 28.8% of people think the app may be useful. ONLY 1.7% think it is not useful.

The first evaluation question was "How long does it take to record and save vehicle information in the application?" 54.5% of people took from 1min to 2min. WHILE 36.4% took from have a min to 1min. And only 9.1% of people took 2min to 3min maximum.

The second evaluation question was "When searching for a location on the map, how many errors did you encounter in the system?". 54.5% of people faced only one error, WHILE 18.2% faced 3 errors, And 9.1% faced no errors. The same percentage faced 2 errors, and also faced more than 3 errors.

The third and last evaluation question was "Based on your observation, how many steps did it take to reserve a parking spot in the app?". 72.7% of people took 3 steps to reserve parking, WHILE 18.2% took 4 steps, and 9.1% took only 2 steps.

the last question on the questionnaire was "What services do you expect to have in our application to improve your experience as a user?". We received 45 answers, And the most common were { adding multiple cars, saving different payments methods, adding apple pay on the payment method, ease of use, and quick access to services}.



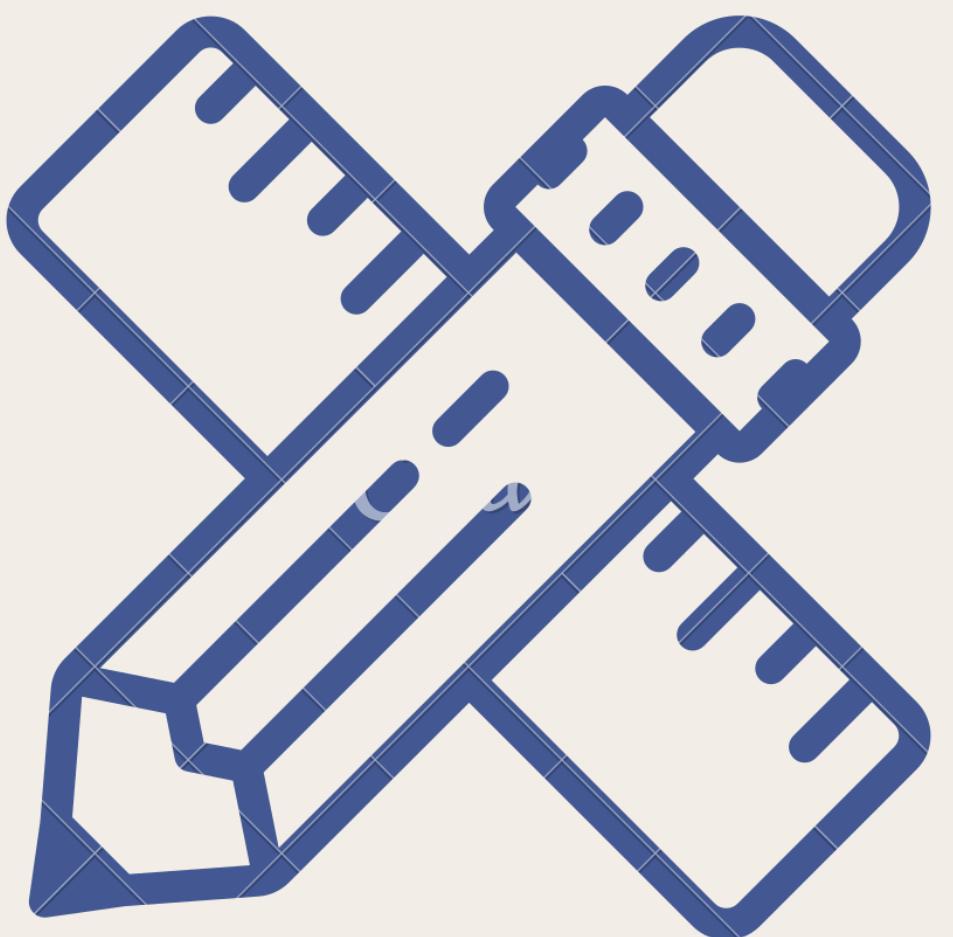
## 7. Define Requirements

As a result of what the user expects from our application.  
The following services will be performed:

Locate on  
the map

Add car

pre  
reservation



02

## Pre-Design

# Attention

Meaning for Target Users	Design Implications
<ul style="list-style-type: none"><li>- The design of interfaces is simple to reduce distractions to be able to find what they need and to concentrate on one task at a time to accomplish specific task.</li><li>- The layout of user interface from left-aligned (left to right) in English and right-aligned (right to left) in Arabic, so users have an easy time understanding the content.</li><li>- Make important information highlighted, clear, bold to reduce the cognitive overload on the user for more usability and better user experience.</li></ul>	<ul style="list-style-type: none"><li>- All essential information will be on the same page and break down the complex tasks into steps such as using progress bar to increase user attention on current task.</li><li>- Design the registration forms in a way that user's attention towards the fill of each field of the form and allows to submit after it complete.</li><li>- highlighted the important information and images and make it stand out and use strong font weight to increase contrast.</li></ul>

# Perception

Meaning for Target Users	Design Implications
<ul style="list-style-type: none"><li>- Using effective visual ways of grouping information, such as white spacing or empty spacing to grouping information, and it helping the user attend to relevant information.</li><li>- Groups the important and related pieces of information together so that the user attention remains intact.</li><li>- Balance the colors and make it fully contrast to the rest of the page to appeal to the eye, and to differentiate some design elements.</li></ul>	<ul style="list-style-type: none"><li>- Grouping the main function in tab bar to make it easier to find when needed, and group related object close to each other with associated button to increase user attention by minimize the details.</li><li>- Use consistent and engaging icons with labels, adding gradient overlay on the image to enhance the text contrast on images, and use a consistent color scheme.</li></ul>

# Memory

Meaning for Target Users	Design Implications
<ul style="list-style-type: none"><li>- Design memorable experience interfaces that promote recognition method and reduce recall method.</li><li>- limitation of short-term memory to process information that make users cannot</li><li>- use visuals and images that convey all the information to the users but not more than needed.</li></ul>	<ul style="list-style-type: none"><li>- instead of design the form with using recalling method to remember lot of information, such as input field, writing time or date, we reduce it by using select from a list of options and menu.</li><li>- Use categories to display different service in the applications that make it easy to remember</li><li>- using familiar icon and pattern for common tasks so that users would know which function associated with them.</li><li>- Designing an interface like “search history” page and view “last viewed services” page to help users follow what they previously done.</li></ul>

## Planning and Decision-Making

	<b>Meaning for Target Users</b>	<b>Design Implications</b>
	<ul style="list-style-type: none"><li>- The application provides three main services to select from and monthly subscription plan in addition to them.</li><li>- Each plan has a series of procedures user must decide which is best option to follow to get the services.</li></ul>	<ul style="list-style-type: none"><li>- Designing the options of the services in a way that shows the differences between them to make it easy to decide which one to choose.</li></ul>

03

## Prototyping





Proto.io is an application prototyping platform launched in 2011 and developed by PROTOIO Inc. Originally designed to prototype on mobile devices, Proto.io has expanded to allow users to prototype apps for anything with a screen interface, including Smart TVs, digital camera interfaces, cars, airplanes, and gaming consoles. Proto.io utilizes a drag and drop user interface (UI) and does not require coding.

## CarKing Interfaces

The image displays three vertical screenshots of the CarKing mobile application. The first screenshot shows the home screen with the CarKing logo and a brief description: "CarKing It's an application that helps users reserve parking by displaying notifications to the user of available parking's. Also, It provides other services such as hiring someone to park the cars and wash them. In addition, provide a monthly parking subscription to regular users". Below this is a "Let's Start" button and an illustration of a car entering a parking space. The second screenshot shows the "Sign up" screen with fields for First name, Email\*, Choose Password\*, and Repeat Password\*. It also features a "Sign up" button and links for "Already have an account? Log In" and "Forgot Password?". The third screenshot shows the "Welcome Back" screen with a large user icon, a "Sign in" button, an "OR" link, a "Sign in with Facebook" button, and links for "New in CarKing?" and "New Account".



12:42

Reset Password

Enter your email  
We are going to send you a link to reset your password there.

Email\*

Reset password

Having problems? Contact support

12:43

Edit Profile

Username

Car Plate

English Arabic

Language

English Arabic

Bills and Point

Go

Save

15:50

Search

Let's park

Discounts %

Available parking

Available parking with car washing

Available parking with Valet parking

Home Active order Subscription Wallet More

16:02

Where are you going?

Active Parking spot

SUPER MARKET A-2

HOSPITAL F-8

Washing order



16:07

Select Car

Car1

Next >

16:07

Wash Services

Body Wash 30SR      Interior Wash 50SR

Next >

16:07

When Do You Want us to come?

9 AM      june 1  
10 AM      june 2

On June 1 at 9 AM

Next >

16:07

Where are you?

Map with location markers

Next >

Cancel

Cancel

Cancel

Cancel



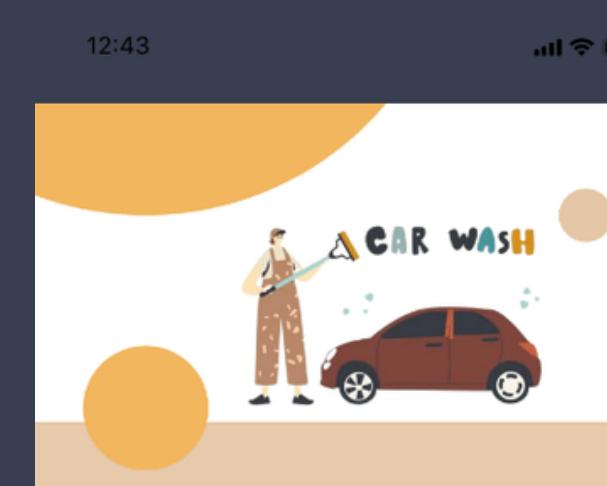
12:42

Pick a card

+ Add new card

VISA  
\*\*\*\* \* \* \* \* 1234  
Card holder Name EXP Date  
12/23

Next >



Your Order

Car1 Body Wash June 10:00AM

30 SR Mecca- Alawali

Home

```
graph TD; A(( )) --> B(( )); B --> C(( )); C --> D(( )); D --> E(( )); E --> F(( )); F --> G(( )); G --> H(( )); H --> I(( )); I --> J(( )); J --> K(( )); K --> L(( )); L --> M(( )); M --> N(( )); N --> O(( )); O --> P(( )); P --> Q(( )); Q --> R(( )); R --> S(( )); S --> T(( )); T --> U(( )); U --> V(( )); V --> W(( )); W --> X(( )); X --> Y(( )); Y --> Z(( )); Z --> Cancel(( ));
```

Cancel

Add Card

VISA  
\*\*\*\* \* \* \* \* 1234  
Card holder Name EXP Date  
12/23

Full Name  
Placeholder

Card Number  
1234 5678 908

Expiry Date  
12/23

CVV  
974

Save this Card

Pay Now

12:43

VISA  
\*\*\*\* \* \* \* \* 1234  
Card holder Name EXP Date  
12/23

Full Name

Card Number  
1234 5678 908

Expiry Date  
12/23

CVV  
974

Save this Card in my wallet



21:21

CAR INFORMATION

Type  
Car  
Van

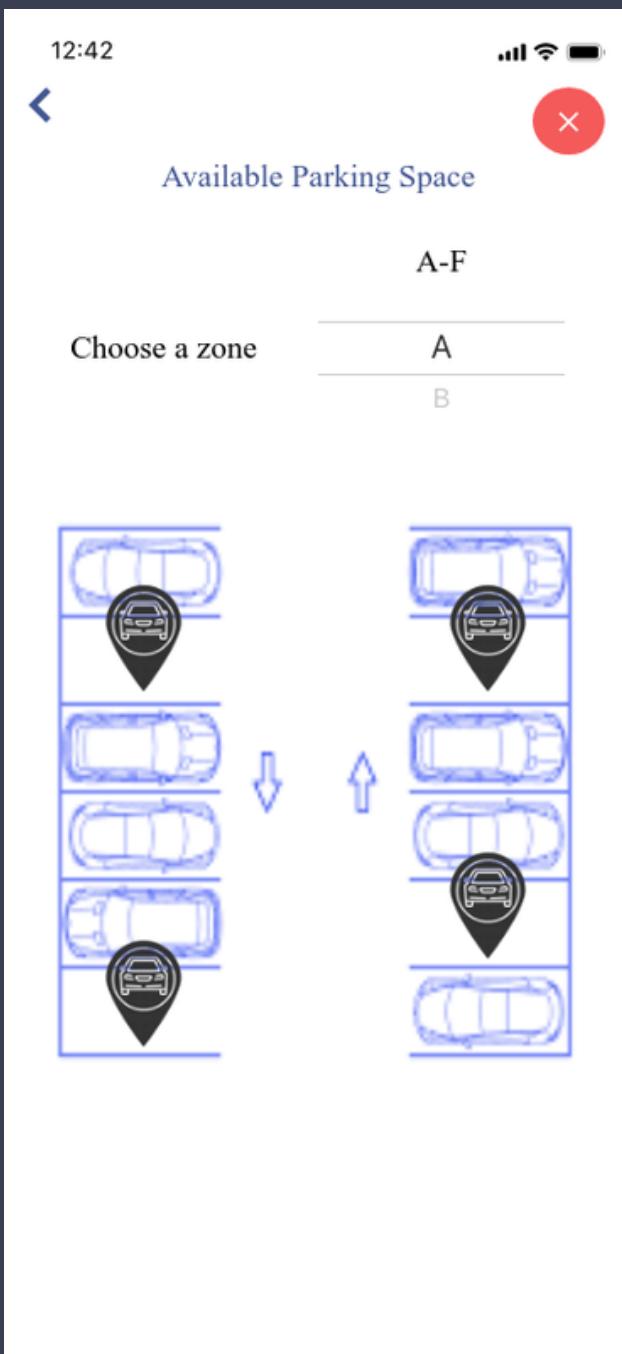
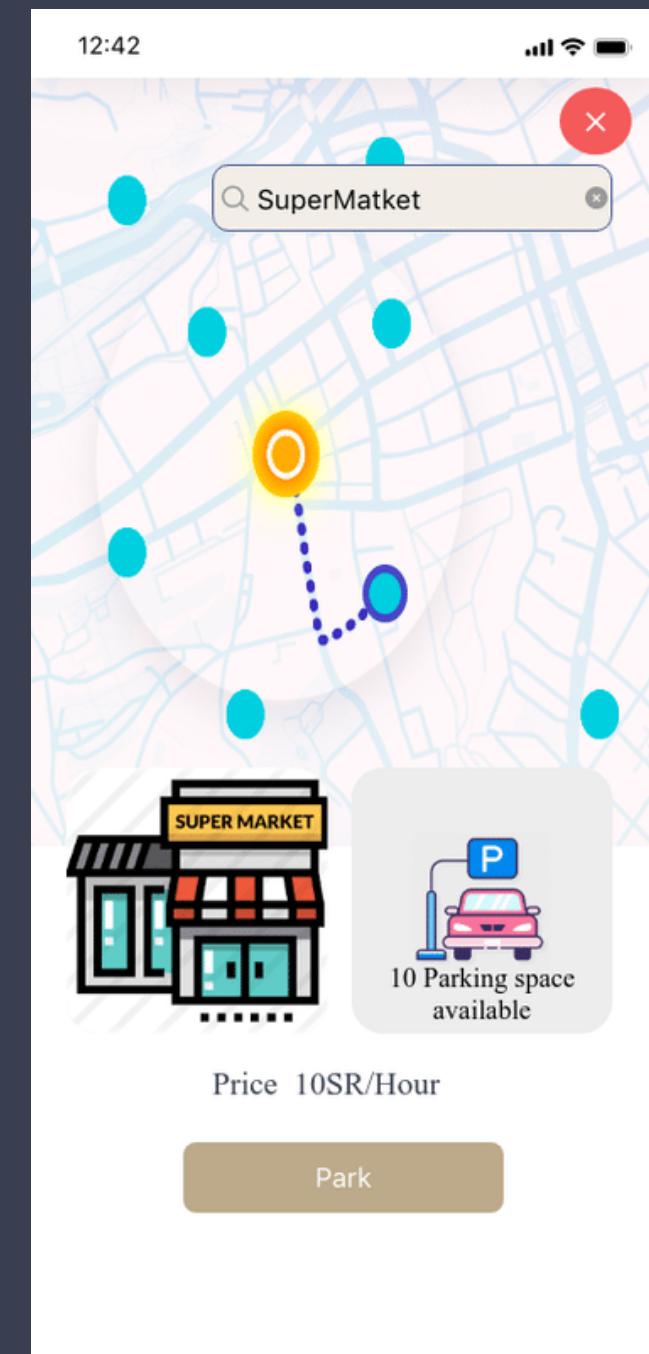
Brand  
TOYOTA  
HYUNDAI

Color  
Black  
White

Plate number  
Placeholder

**+**

- 12:42
- Where are you going?
- SuperMarket Parking 20sr**  
friday  
from: 5:20 pm to: 6:30 am
  - Mall Parking 30sr**  
wednesday  
from: 10:30 pm to: 12:00 am
  - Hospital Parking 30sr**  
monday  
from: 8:40 pm to: 9:30 pm
  - University Parking 50sr**  
sunday  
from: 7:30 am to: 10:30 am





00:45

Which Car?

Price 10SR/Hour

How long you are going to park?

1 Hour    2 Hours    3 Hours    4 Hours

When do you want to start your parking?

10:00 AM    11:00 AM

[Pay Now](#)

12:42

**20SR** for 2 Hours

SuperMarket Parking

**Duration**    2 Hours    [Update!](#)

**Car**    CAR1    [Update!](#)

**Parking Spot**    A2    [Update!](#)

**Parking Ticket**

Parking spot A2    Vehicle code #A04

Date from May 27/10:00 AM    Date to May 27/12:00 PM

[Pay Now](#)

12:42

**Pick a card**

\*\*\*\* \* \* \* \* 1234  
Card holder Name    EXP Date  
12/23

[+ Add new card to pay](#)

[Pay Now](#)

21:15

**Subscription**

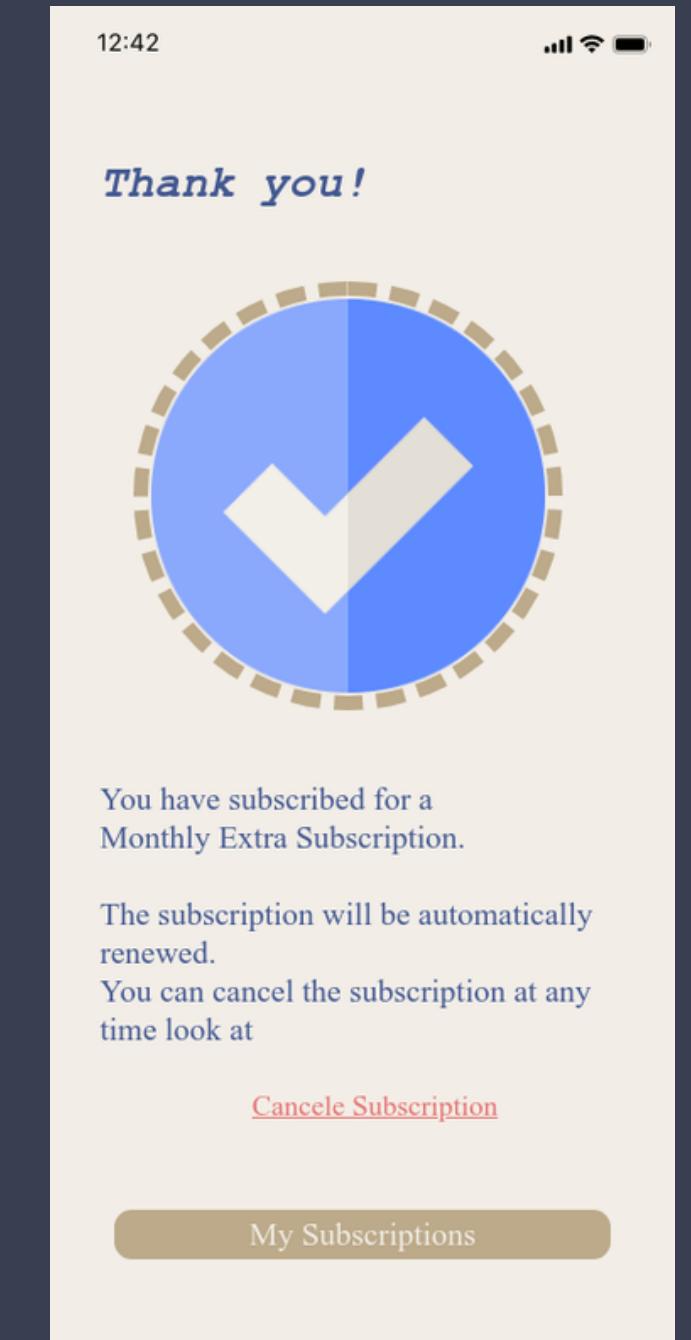
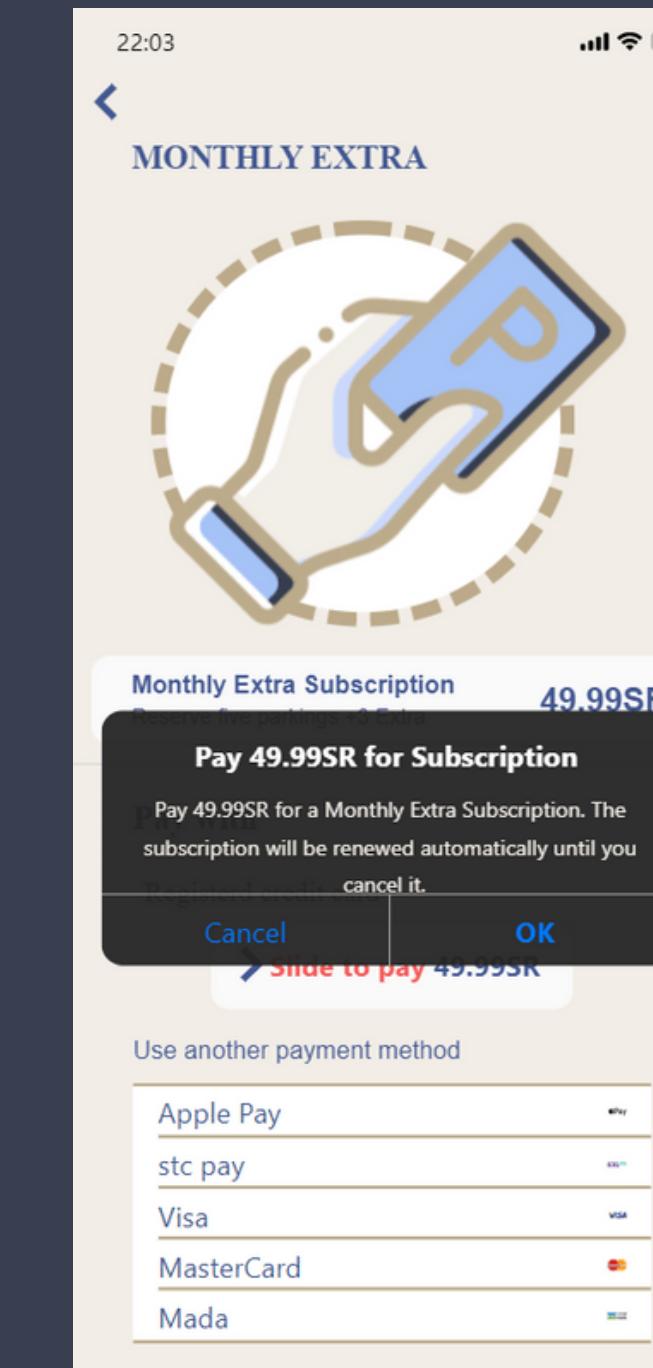
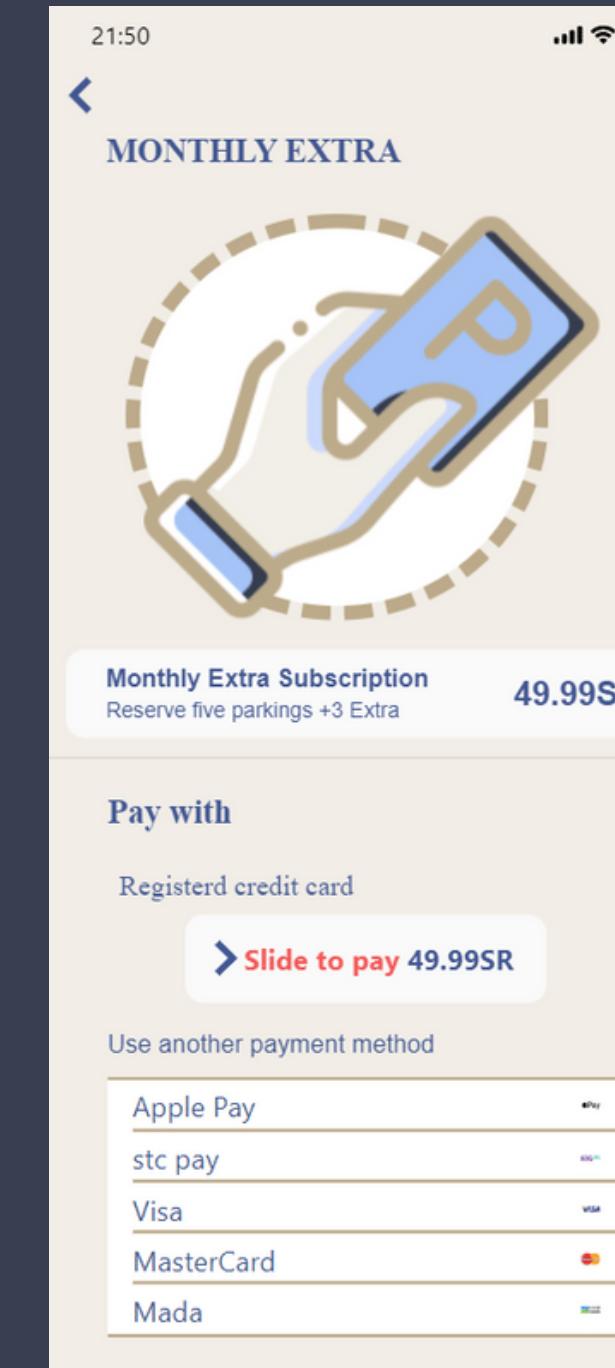
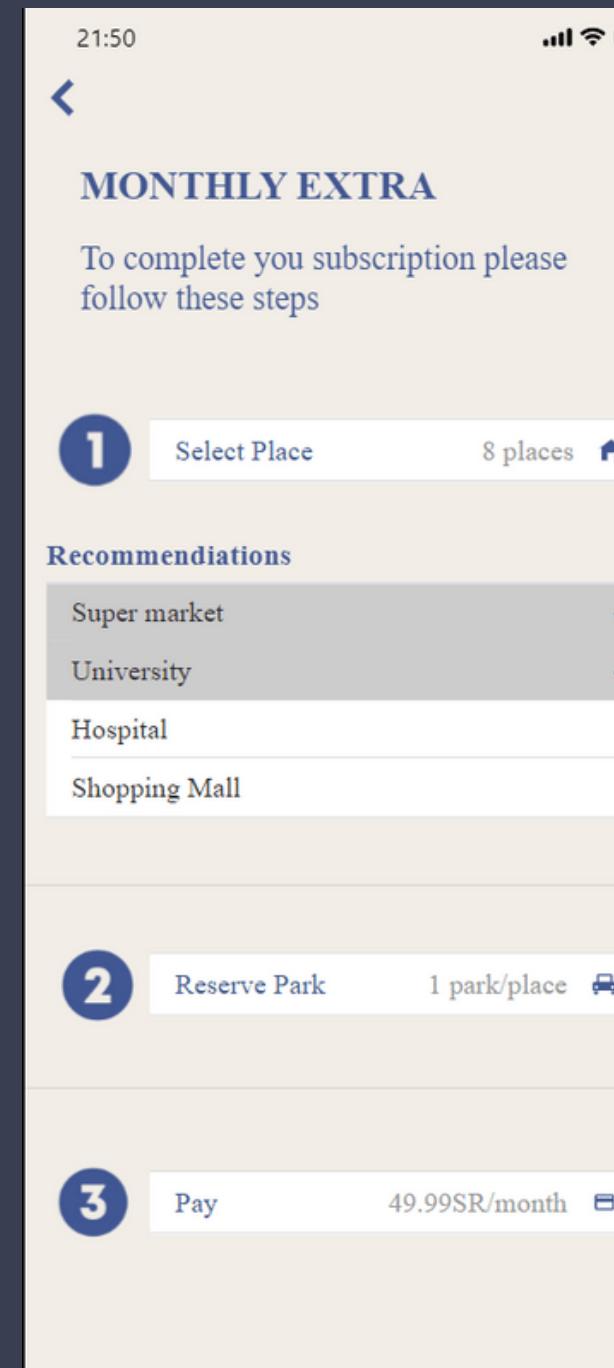
subscribe to reserve a static park for your car in your FAVORITE places

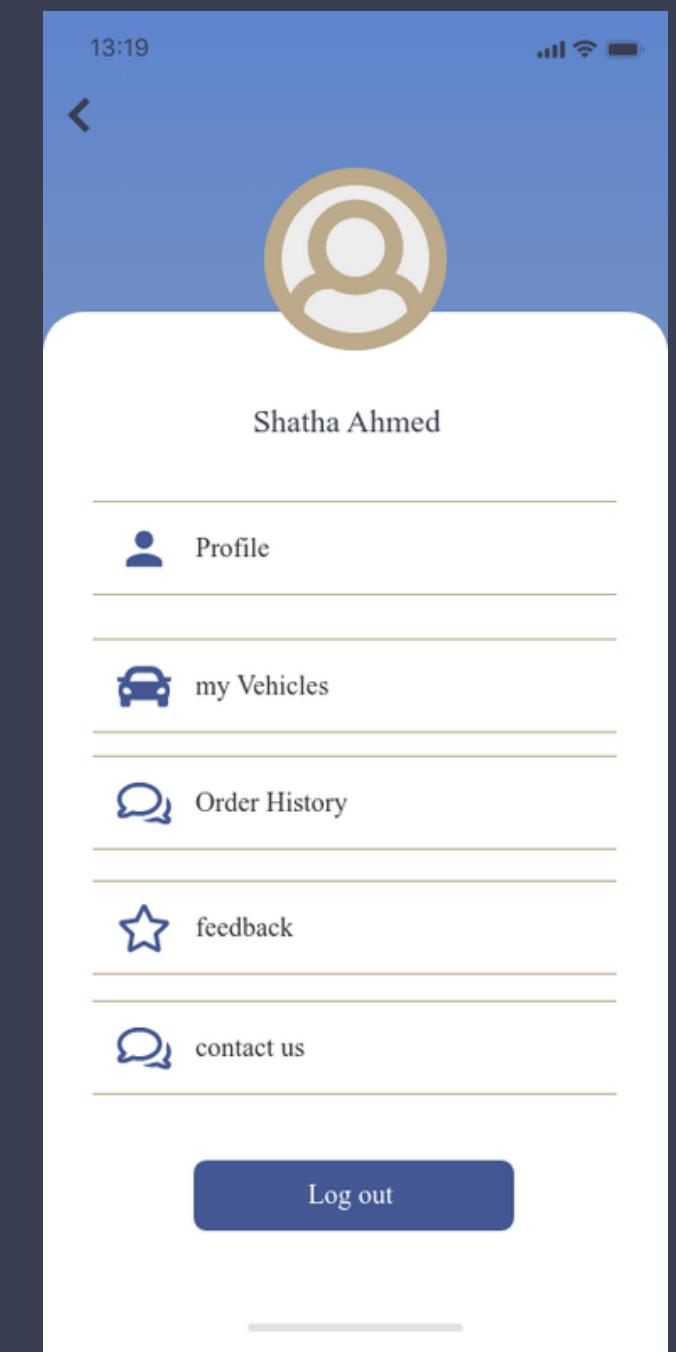
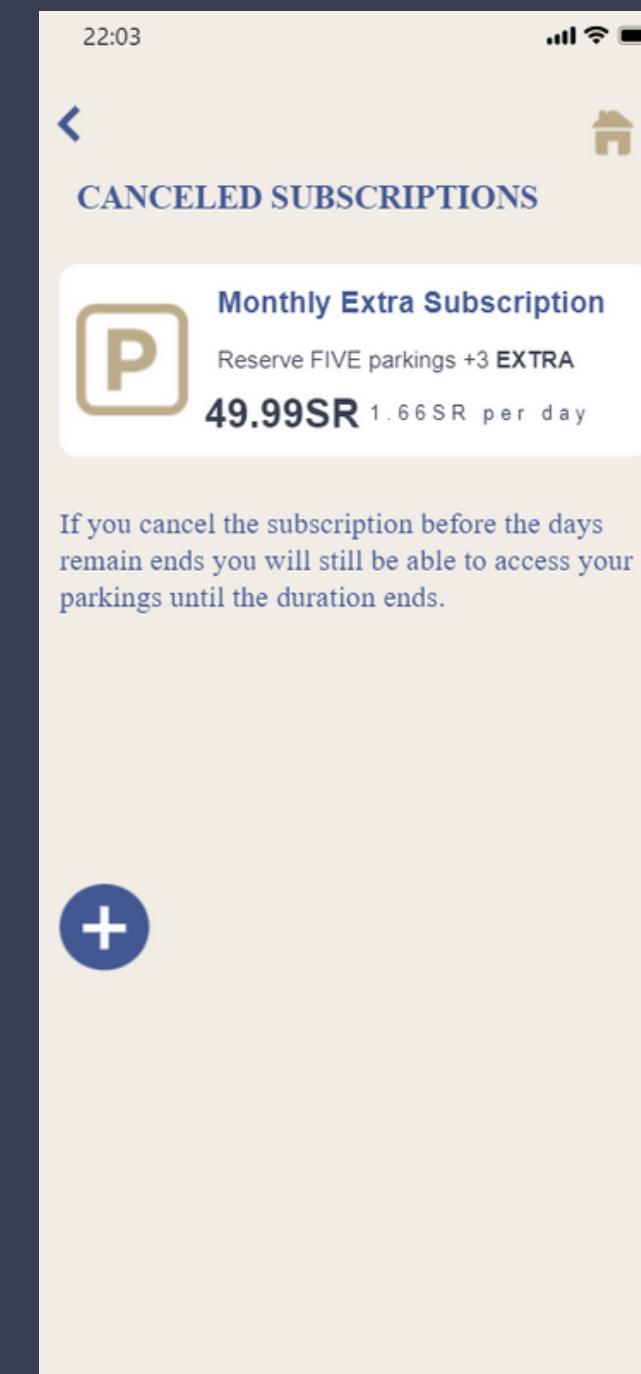
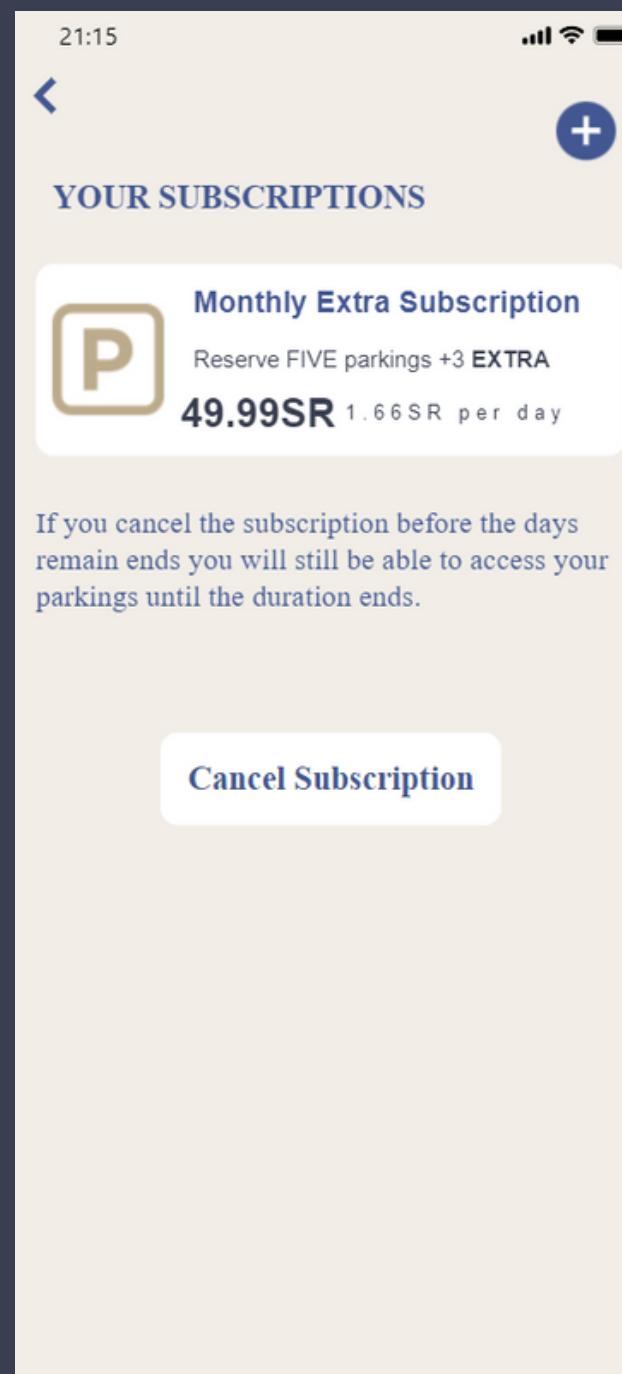
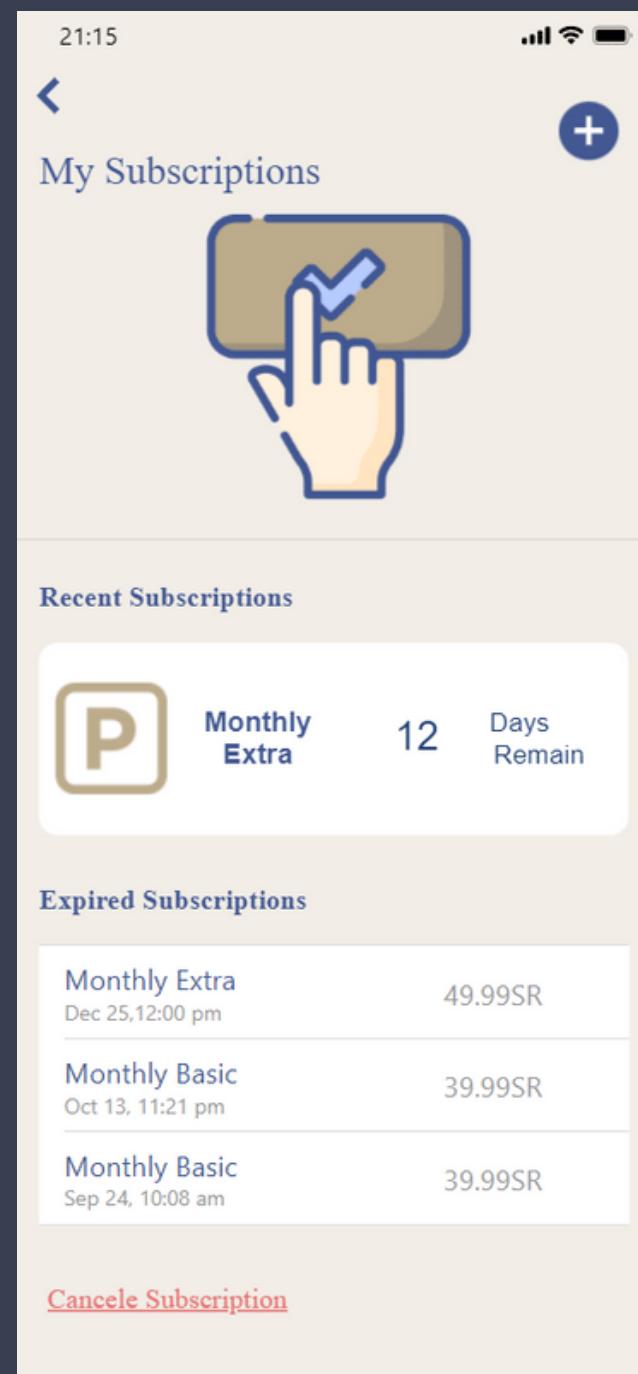
I've already subscribed

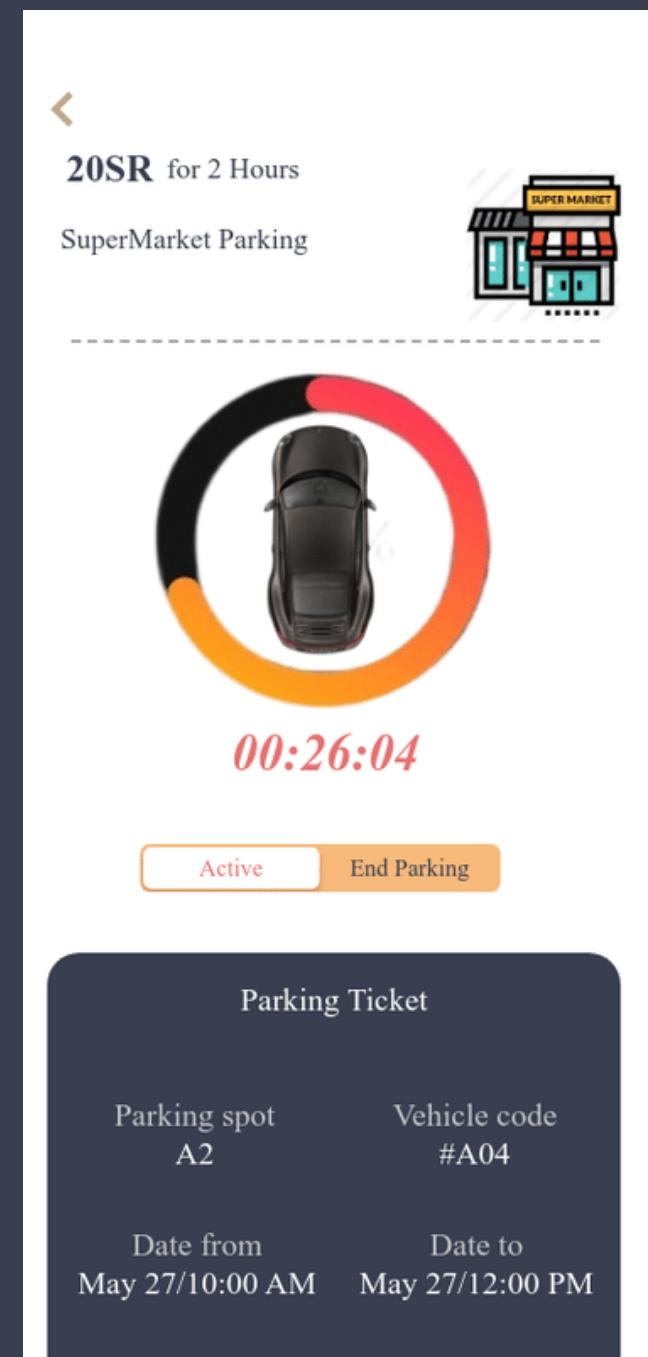
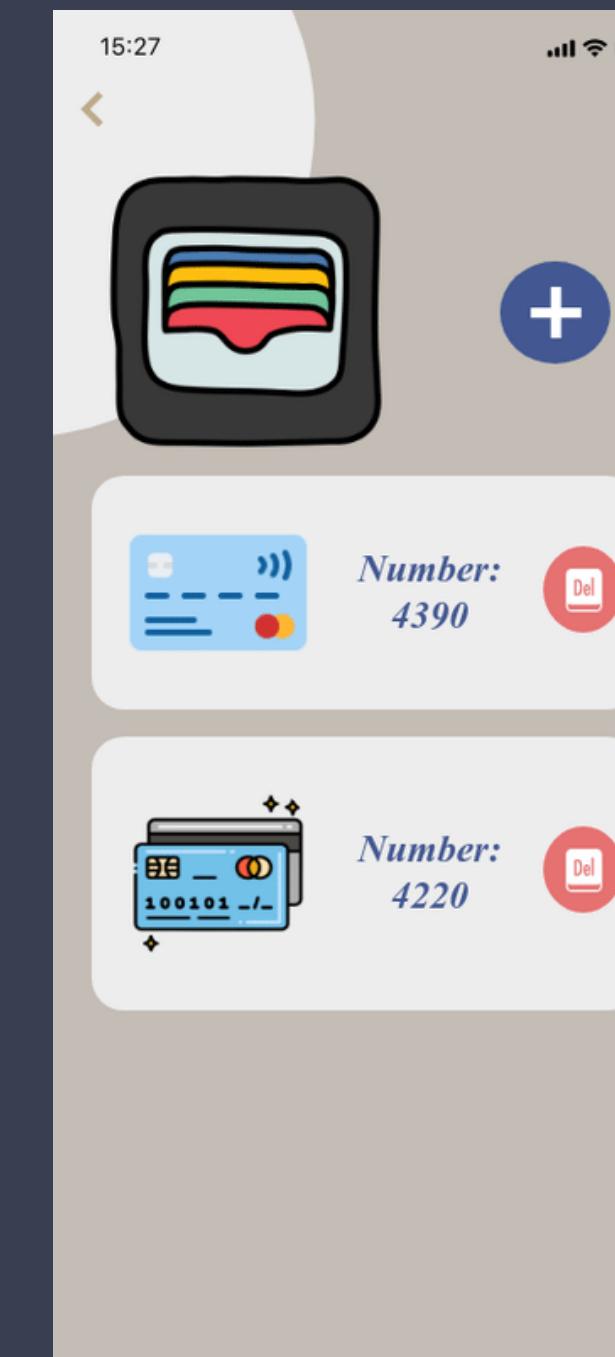
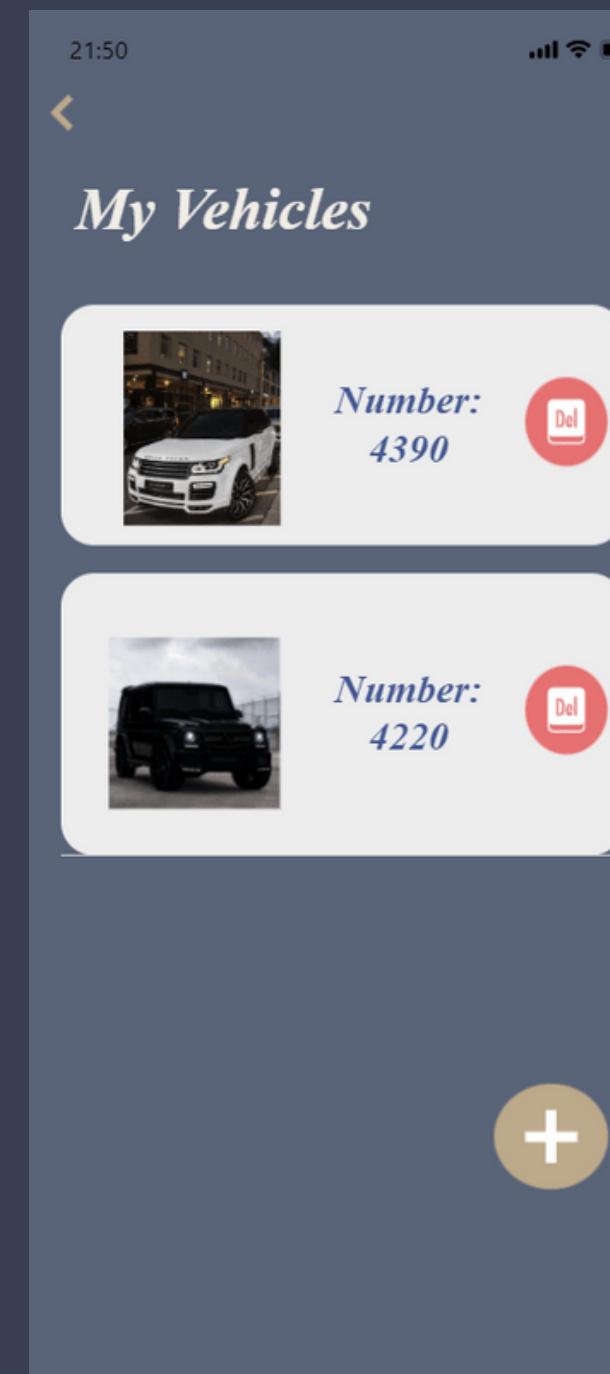
**Best Offer**  
MONTHLY EXTRA  
Reserve FIVE parkings +3 EXTRA  
**49.99SR**  
1.66SR per day

**MONTHLY BASIC**  
Reserve FIVE parkings  
**30.99SR**  
1.33SR per day

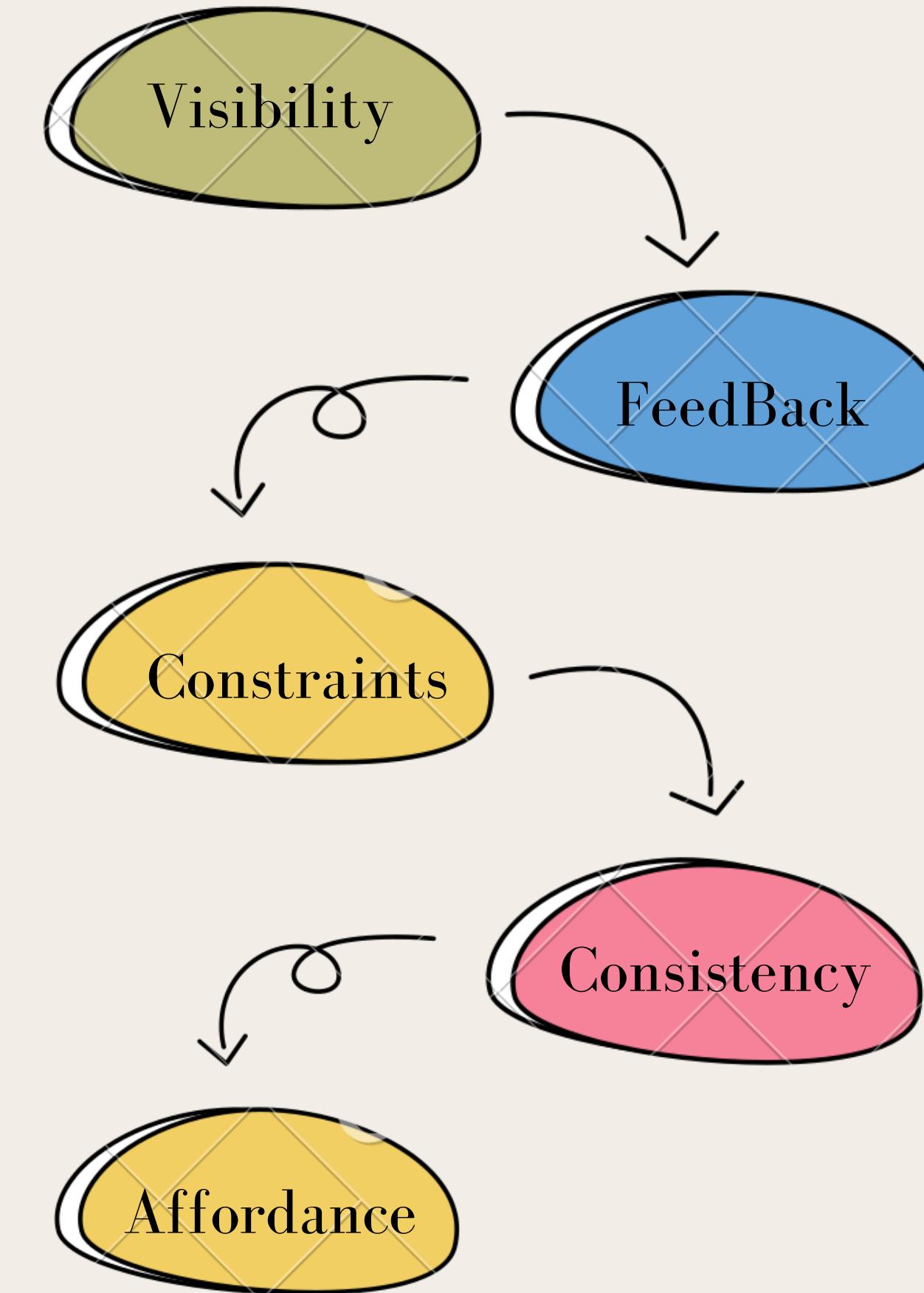
**YEARLY BASIC**  
Reserve FIVE parkings + Monthly car wash  
**719.99SR**  
50.99SR per month





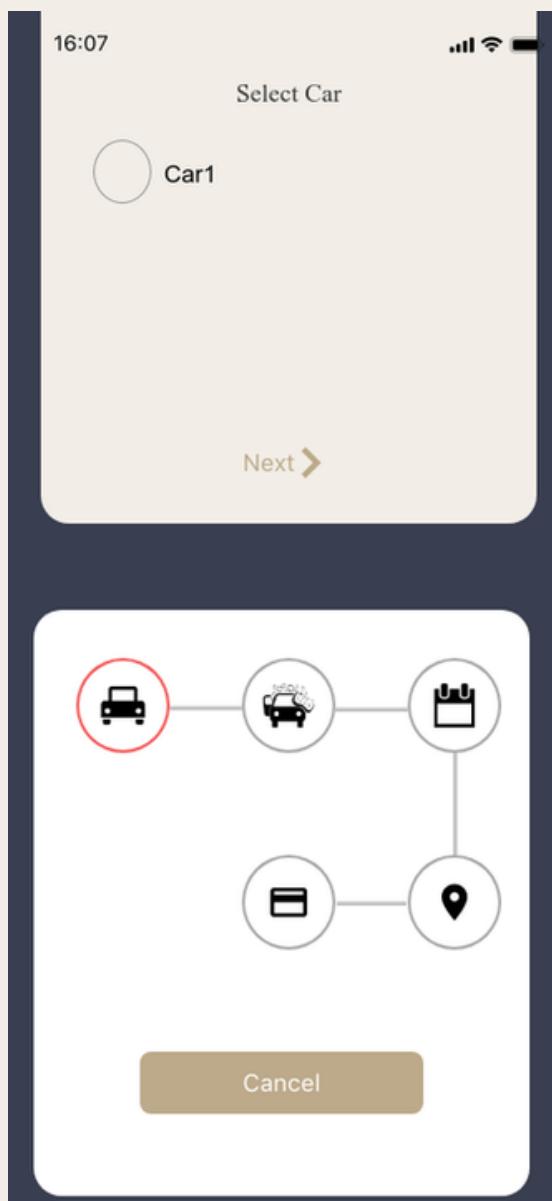


# Design Principles





Interfaces



How Did we achieve  
"Visibility"?

Good designs don't overwhelm users with alternatives or confuse with unneeded information.

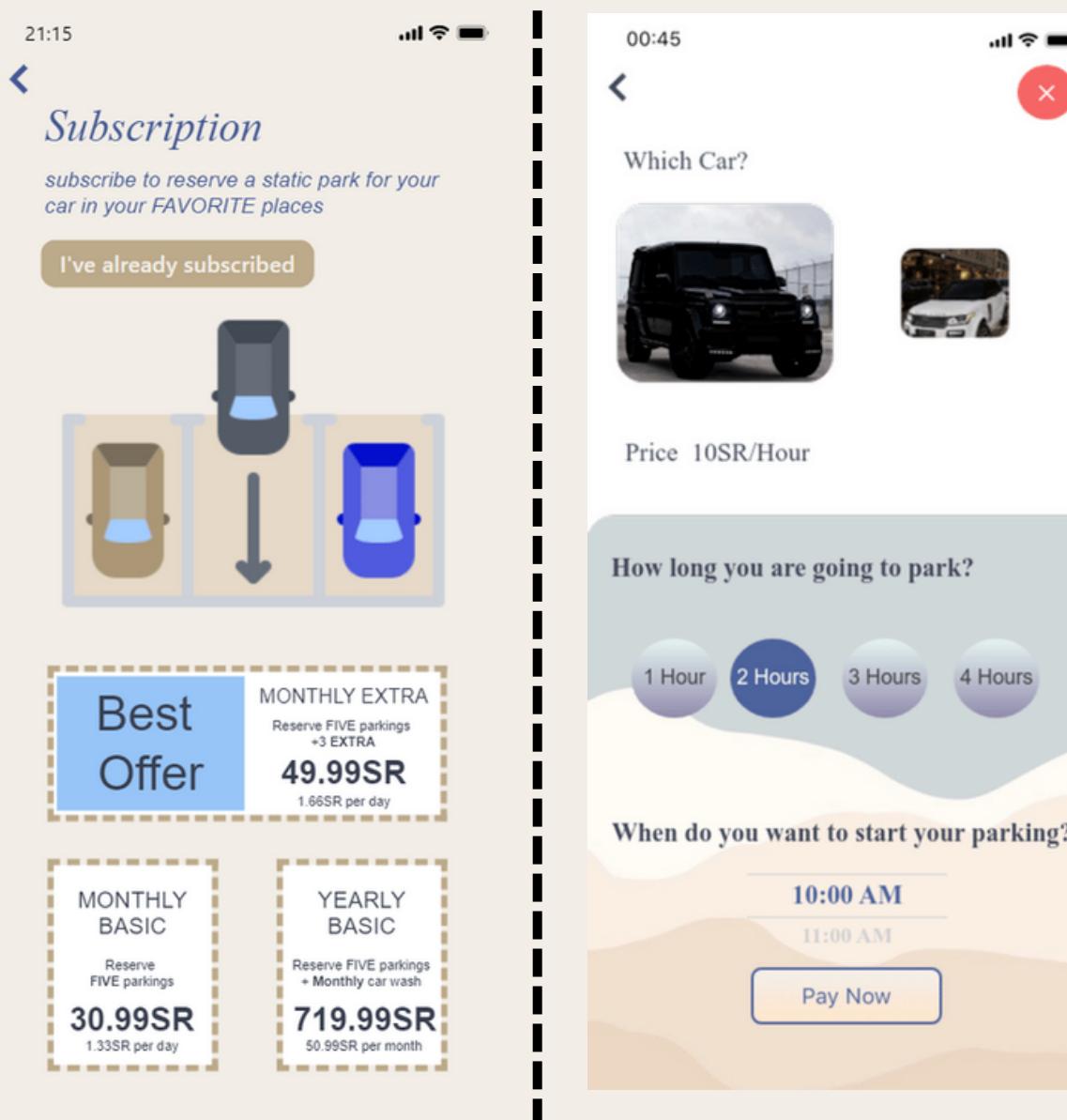
That achieved when the user about to reserve parking he will know immediately what to do next and he did't confuse, also in the subscription and in the other task the user will know directly what to do



Interfaces



How Did we achieve  
"Consistency"?



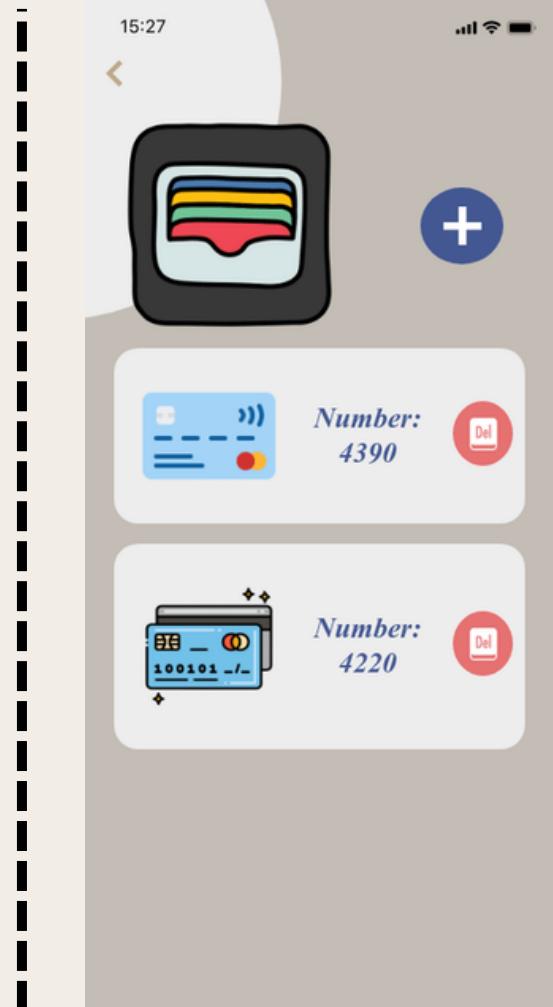
Main benefit in Consistency that the interfaces are easier to learn and use. That achieved with the unified currency which is riyal Saudi because the app specified for KSA. also the app use the 12 hour format.



## How Did we achieve "Affordance"?

Affordances make our life easier as they support our successful interactions with the world of physical things and virtual objects.

That achieved with the buttons, every button are highly symbolic and mostly use the hints taken from the real world so that users could understand them quickly

A mobile application screen titled "Add Card". It shows a placeholder for a VISA card with the number 1234. Below it are fields for "Full Name" (Placeholder), "Card Number" (1234 5678 908), "Expiry Date" (12/23), and "CVV" (974). A "Save this Card" toggle switch is on, and a "Pay Now" button is at the bottom.

## Interfaces



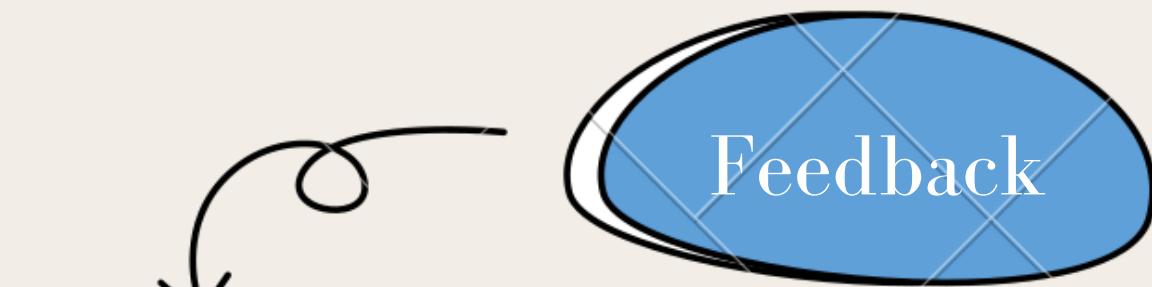


## How Did we achieve "Feedback"?

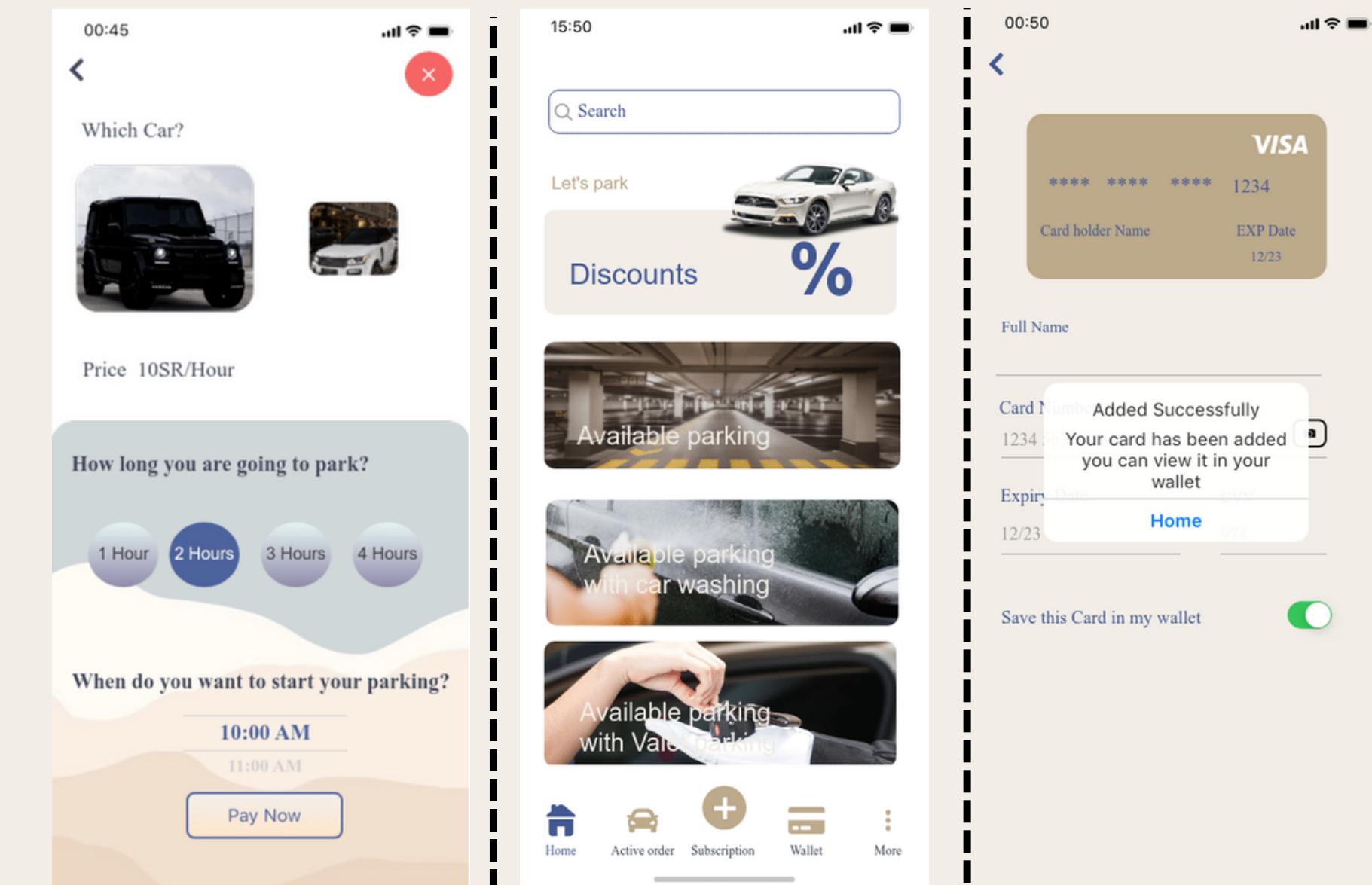
Giving relevant feedback through tasks, conforming success, and providing useful feedback in case of error.

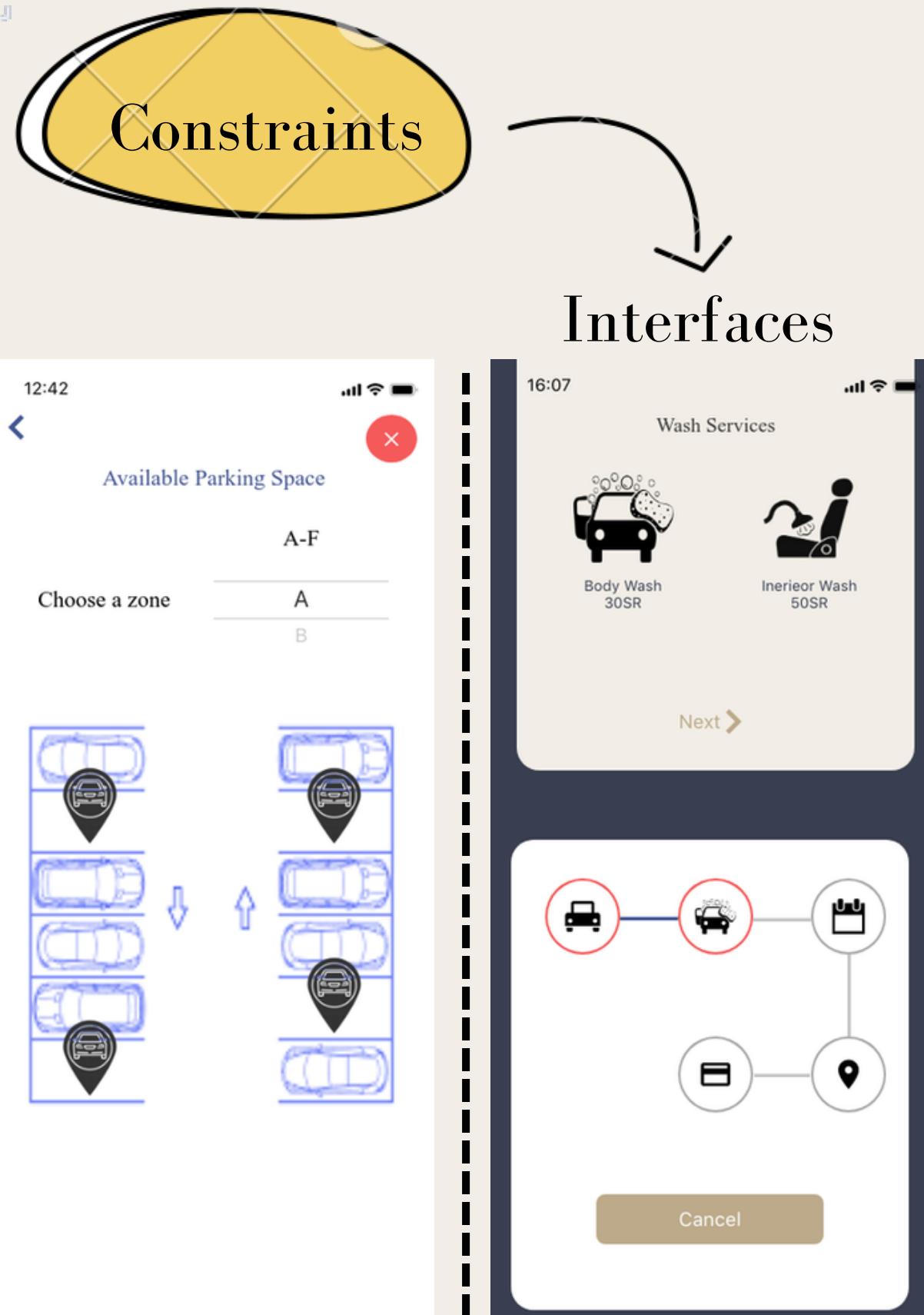
This is done by giving them a notification message about whether their payment process has been done successfully or not.

In addition, if the user selects a time period or the duration he wants to use the parking spot, then the selected option will be in a different color and a click sound



## Interfaces





## How Did we achieve "Constraints"?

restricts, a user from performing a certain action until he performs some action, an example of the constraint in our app, is that the user will be able to see the sequence of actions he should take and enter the desired information to lastly confirm the booking and payment processing. This helps in booking a parking spot or car washing with all information entered and not skipped to avoid any mistake.

# EXPERIENCE GOALS

Helpful

Satisfying

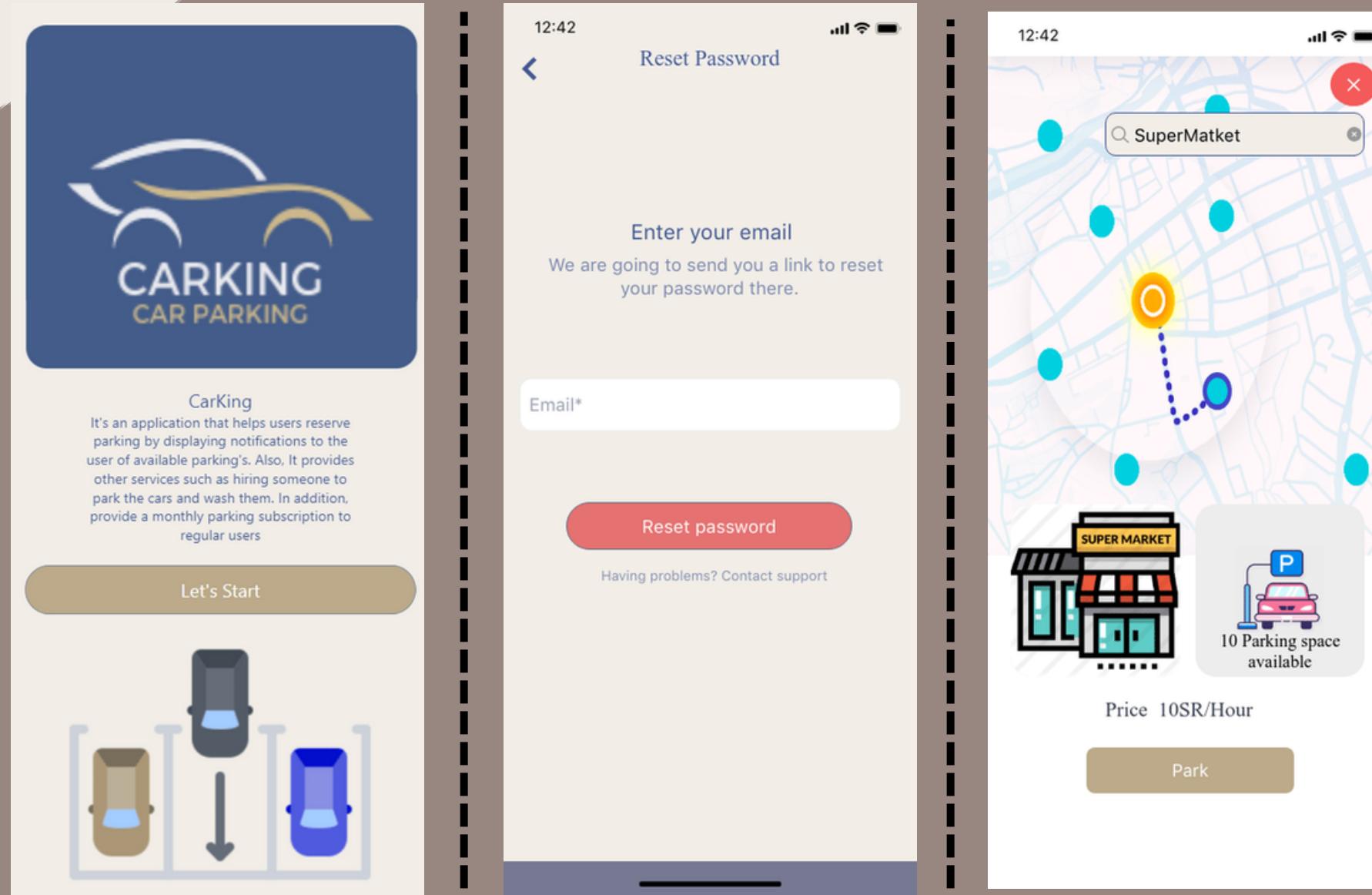
Enhancing the society

Clear Language



# HELPFUL

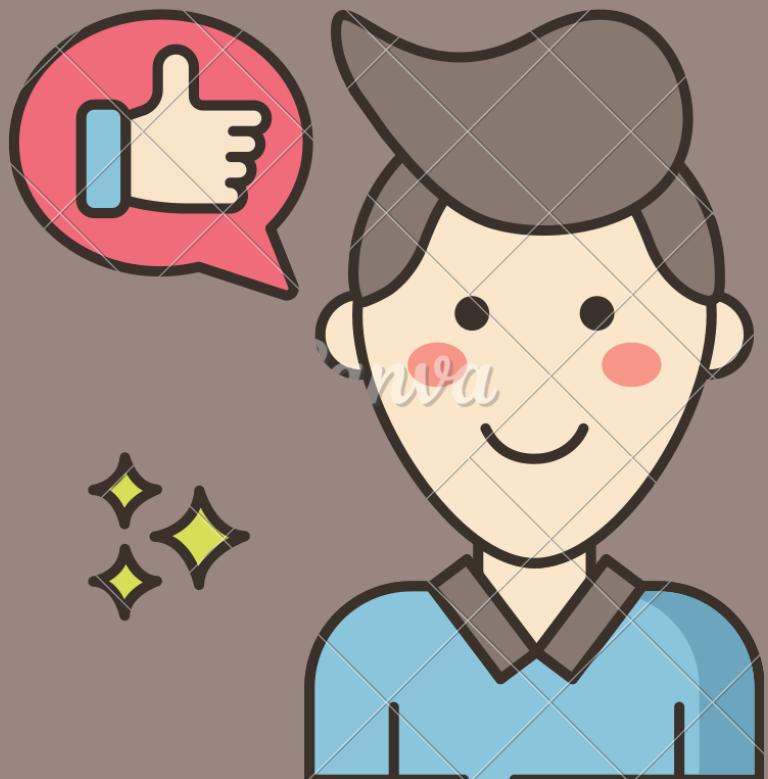
## Supported interfaces



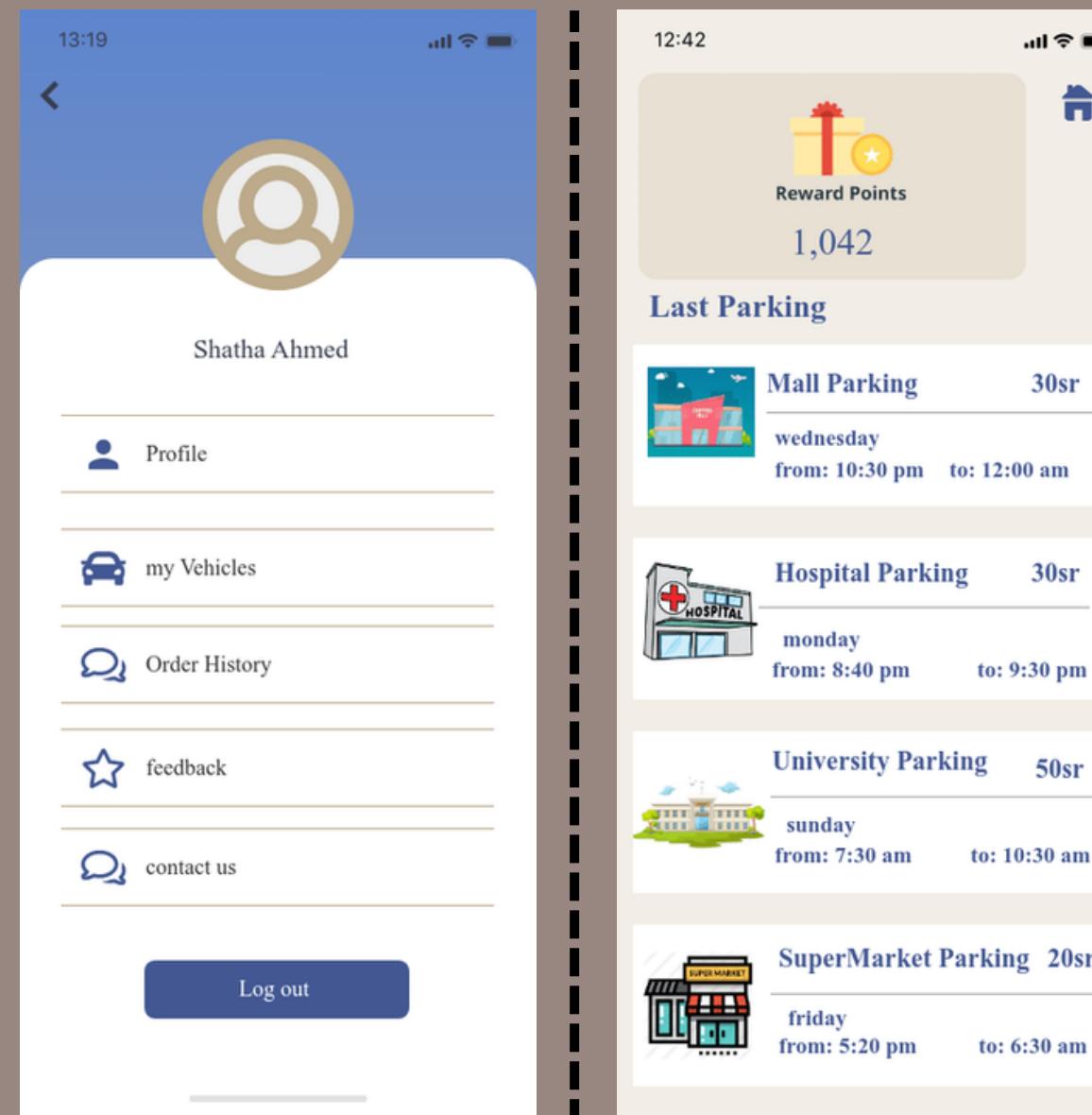
## Justification

The users are able to search for the place they are going to and show its location and then display the parking spot and show the available spots to book. It also offers other services to users that help them in their daily life routines such as car washing and parking.

# SATISFYING



## Supported interfaces



## Justification

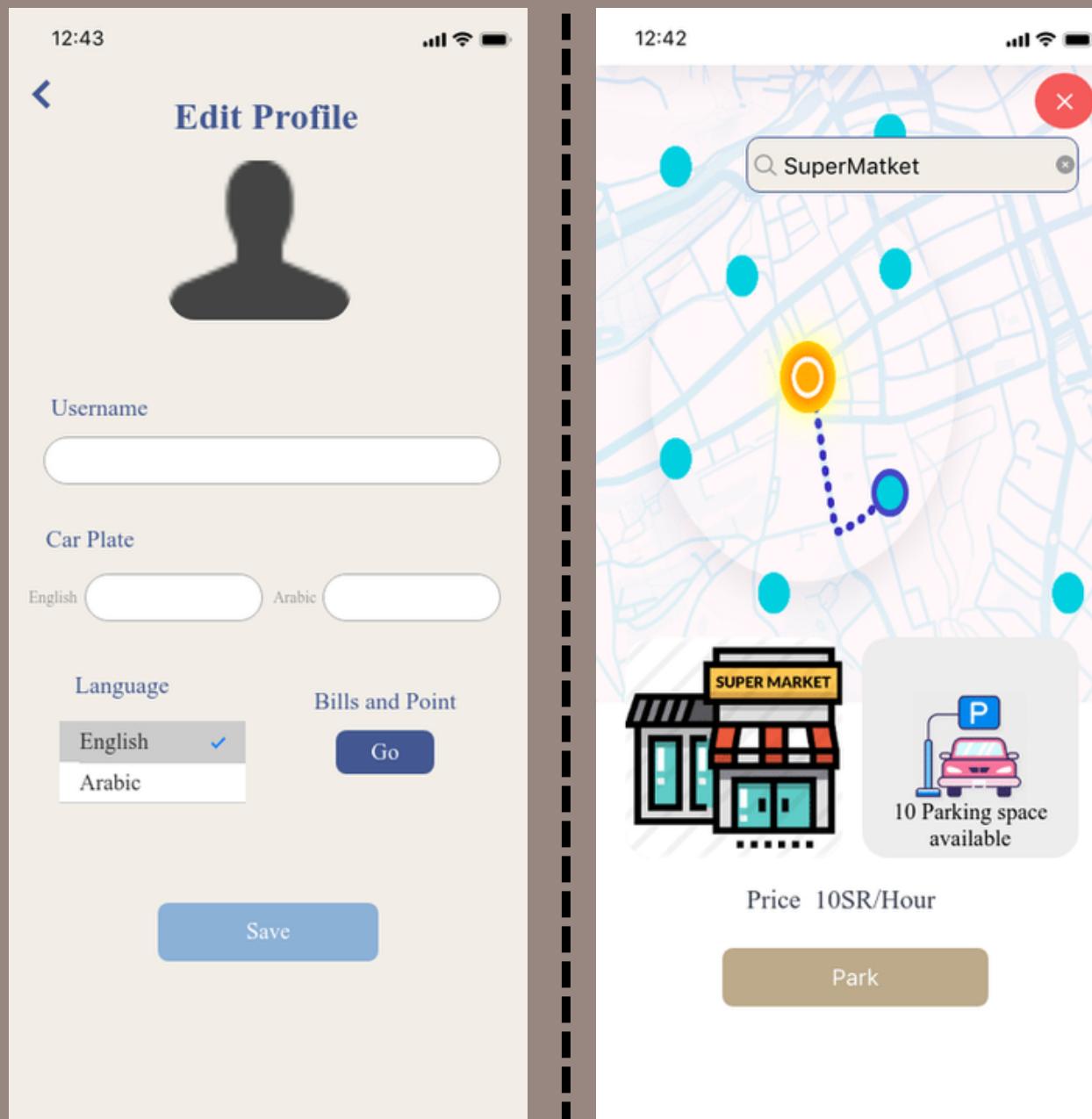
We tried to create a user experience that is satisfying, easy, pleasant, and natural for the user as much as possible to be able to book a parking spot early and quickly.

we are making sure that the app performs the right functionality and the intended ones and this is done by seeing the user reaction to our app, thus we provide a rating and communication through emails services in the app that helps us to improve our app in the places that the users found the problem and errors in the app. Also reward points for each time the user ends the parking before expirations

# ENHANCING THE SOCIETY



## Supported interfaces



## Justification

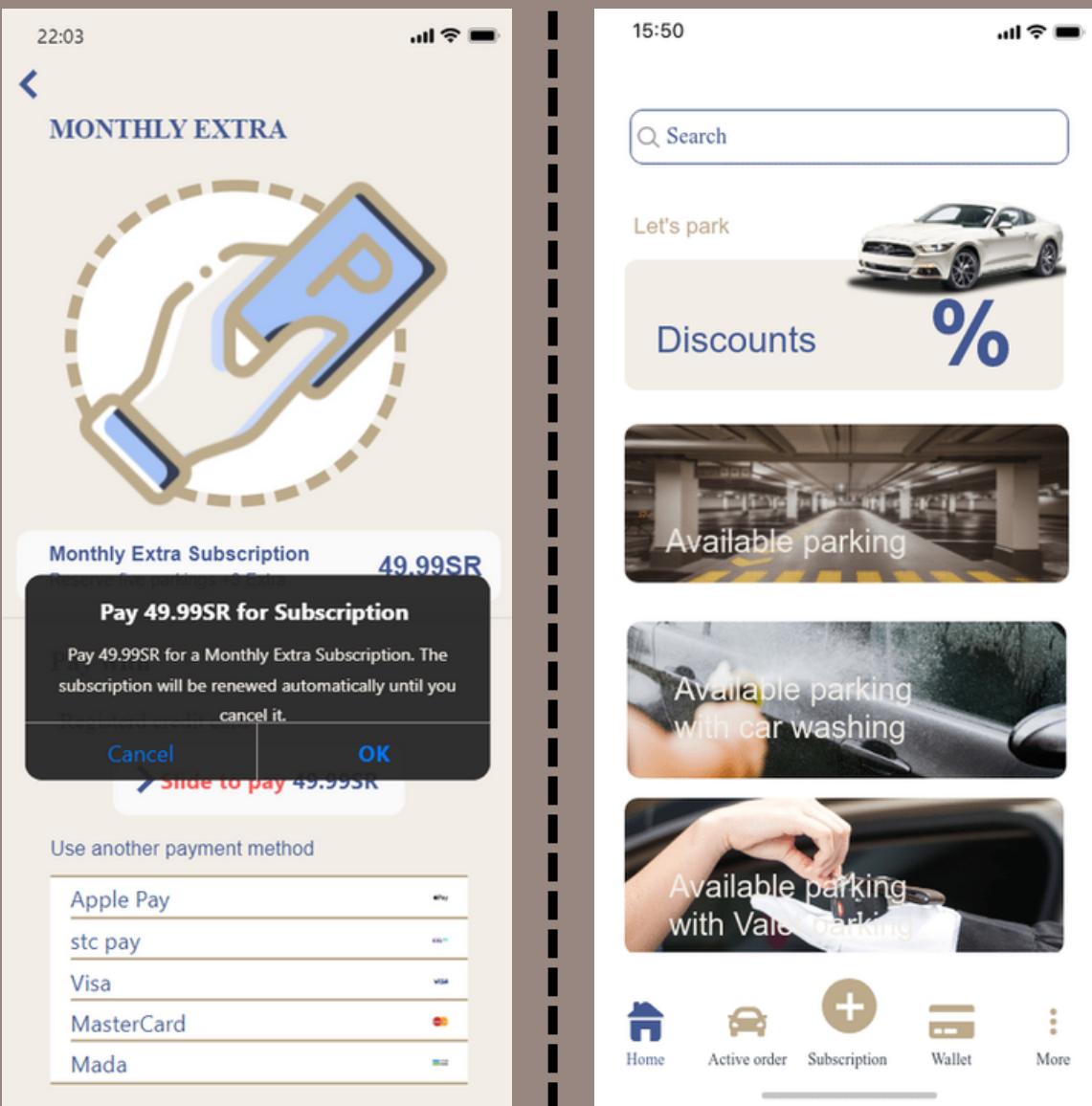
The users know in advance if there are any free or available spaces to park in and how many available ones are in that place that you are going to, and pre-book.

Additionally, there are 2 languages supported by the app

- Arabic
- English

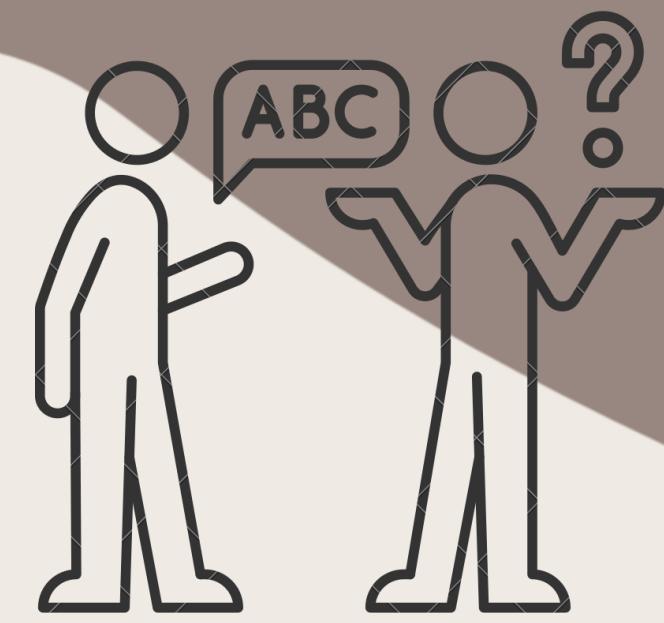
# CLEAR LANGUAGE

## Supported interfaces



## Justification

The app uses an easy and clear language by using terminologies that are not ambiguous or abusive and the user can get the meaning directly and quickly using short sentences .



# USABILITY GOALS

Effectiveness

Learnability

Safety

Efficiency

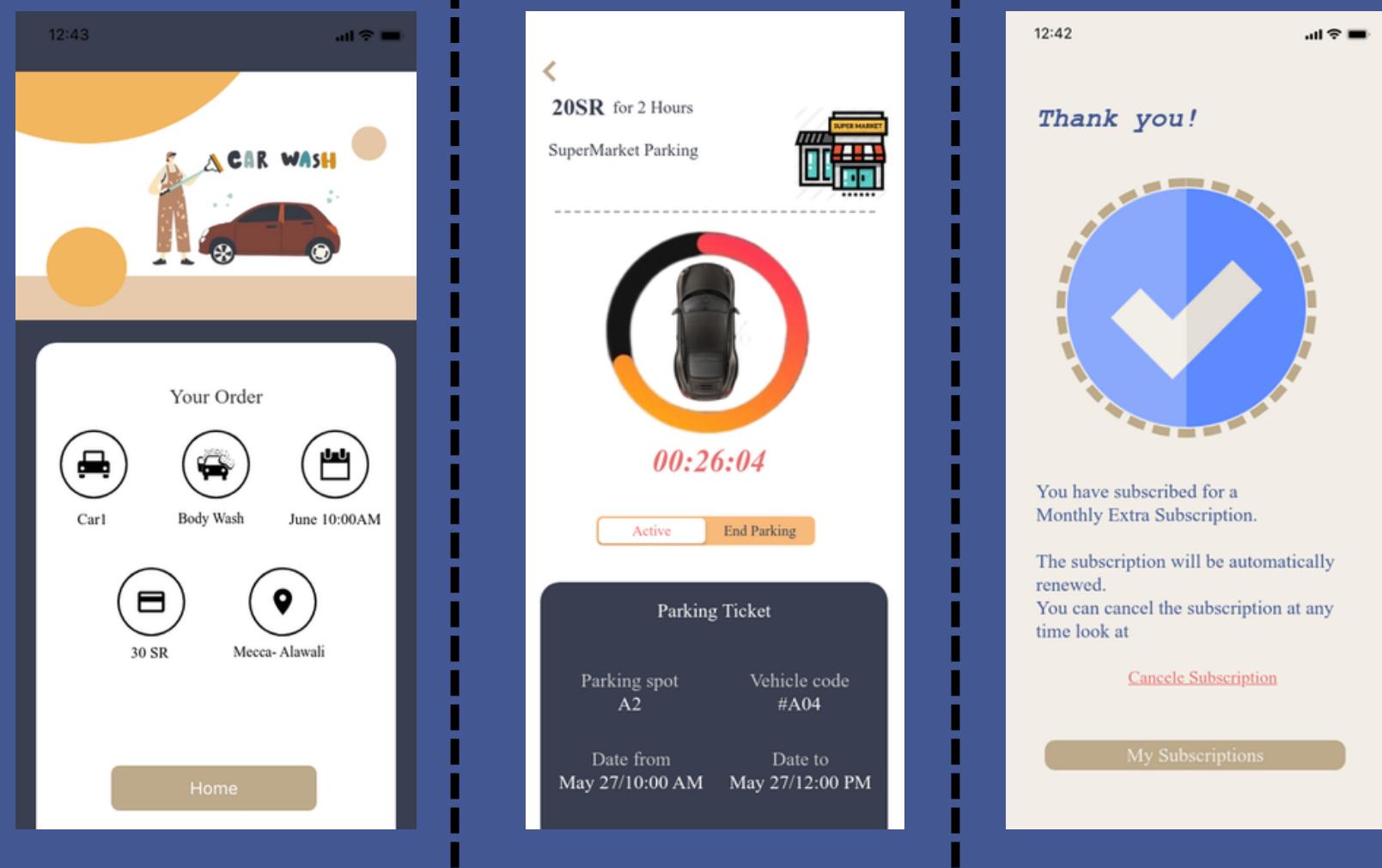
Utility





## EFFECTIVENESS

### Supported interfaces



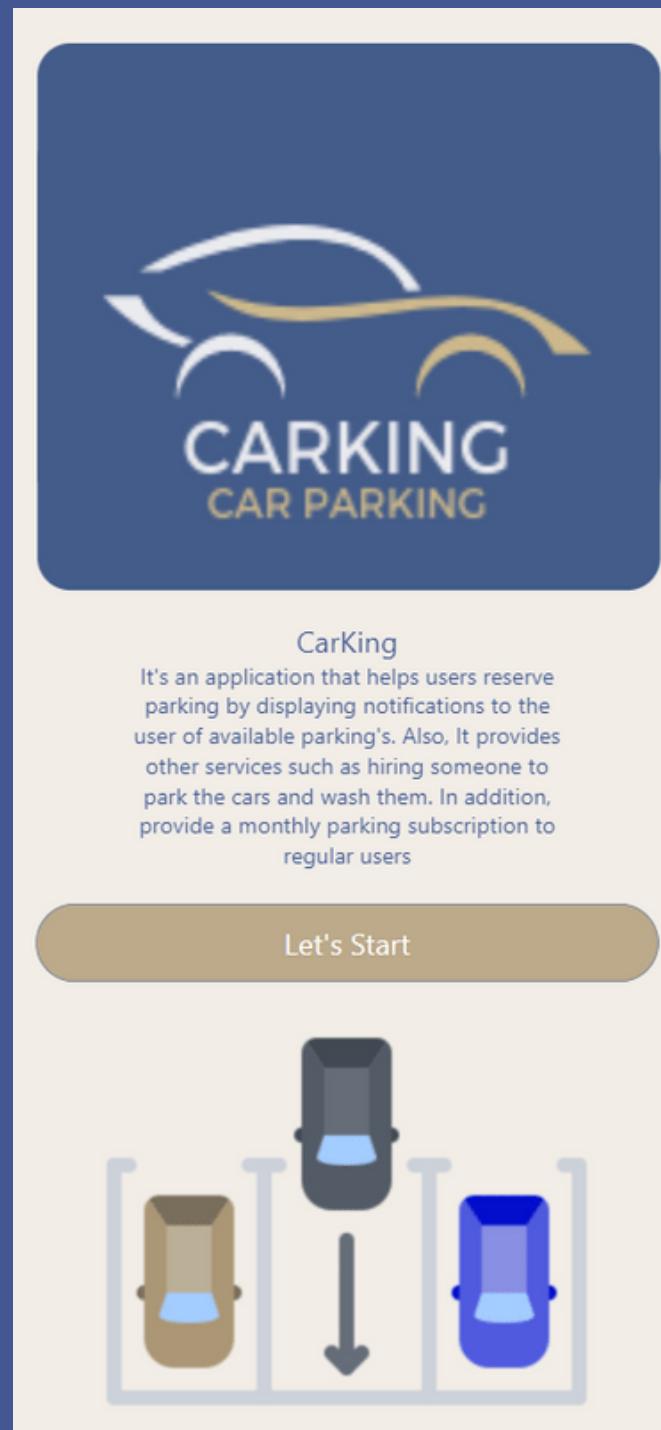
### Justification

Effectiveness is a measure of how well the app does what it is designed to do. This is achieved when the user completes the task of reserving the parking, and is also achieved when other tasks are completed such as payment or adding a card even when the user chooses any service such as car wash or subscription.

## Supported interfaces



## LEARNABILITY

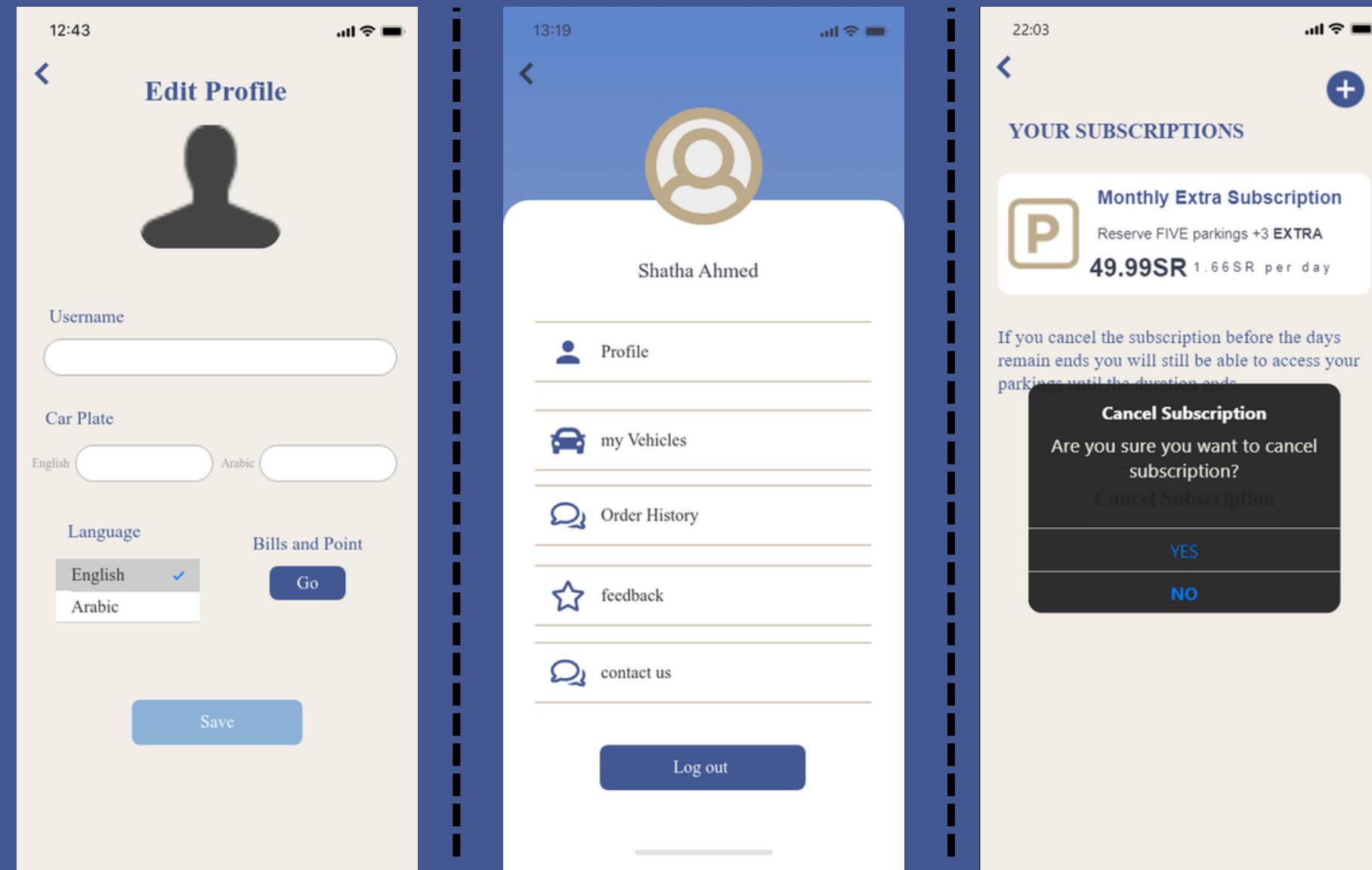


## Justification

The app provides interface include simple brief about the app to facilitate the use of the application to the user



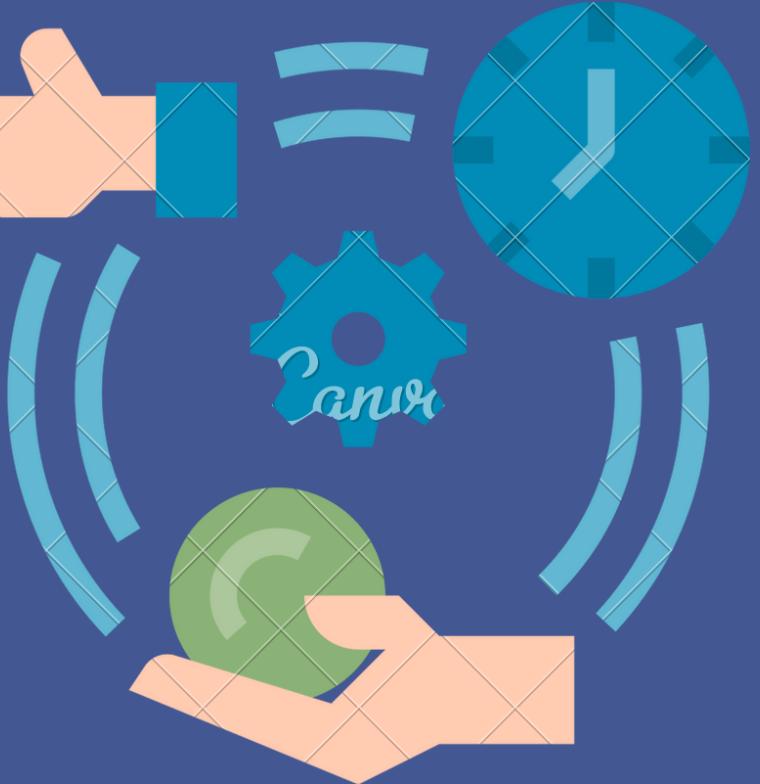
# SAFETY



## Supported interfaces

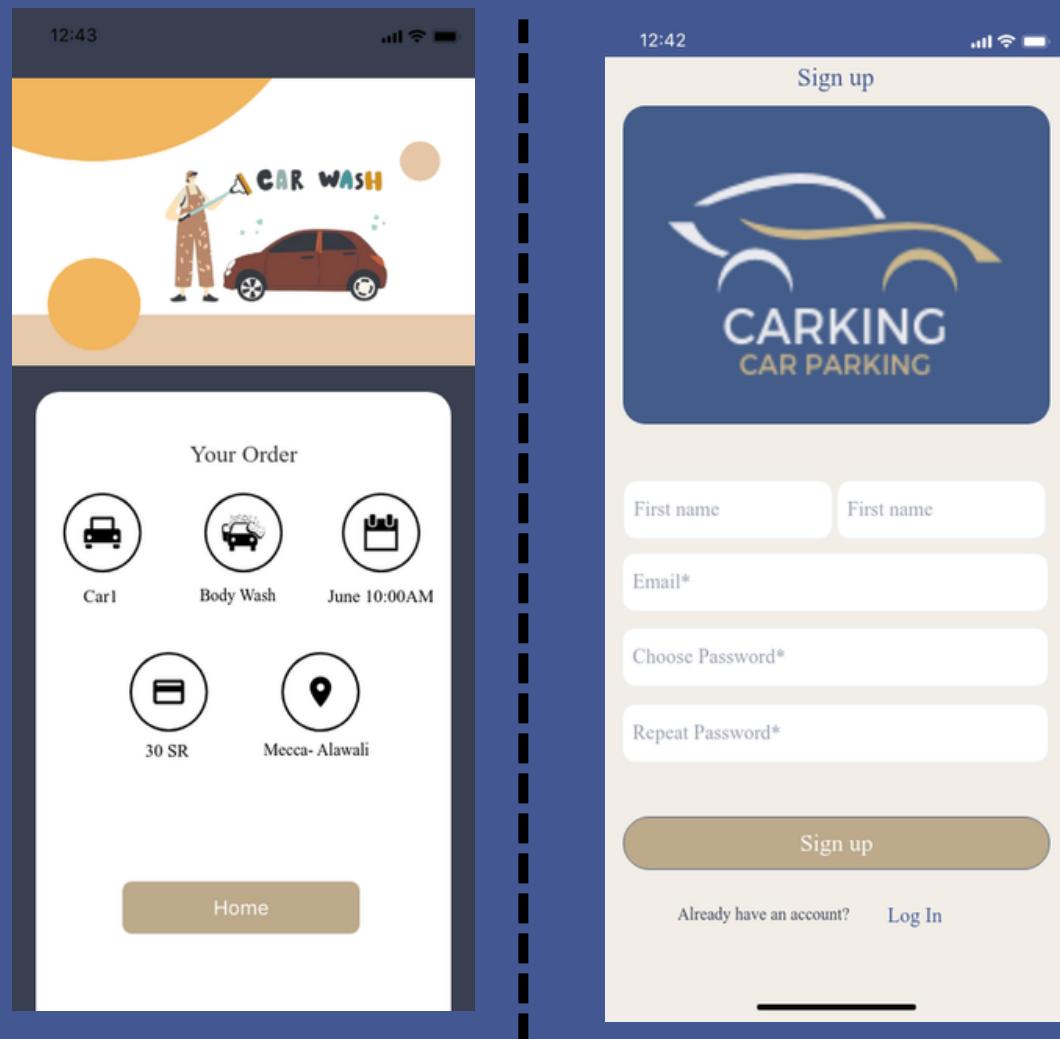
## Justification

To protect the user from any dangerous condition and undesirable situations, the app achieved the safety with log out button. we separate the log out button from save info button and if the user choose to cancel the subscription a notification will appear to confirm his choice



# EFFICIENCY

## Supported interfaces



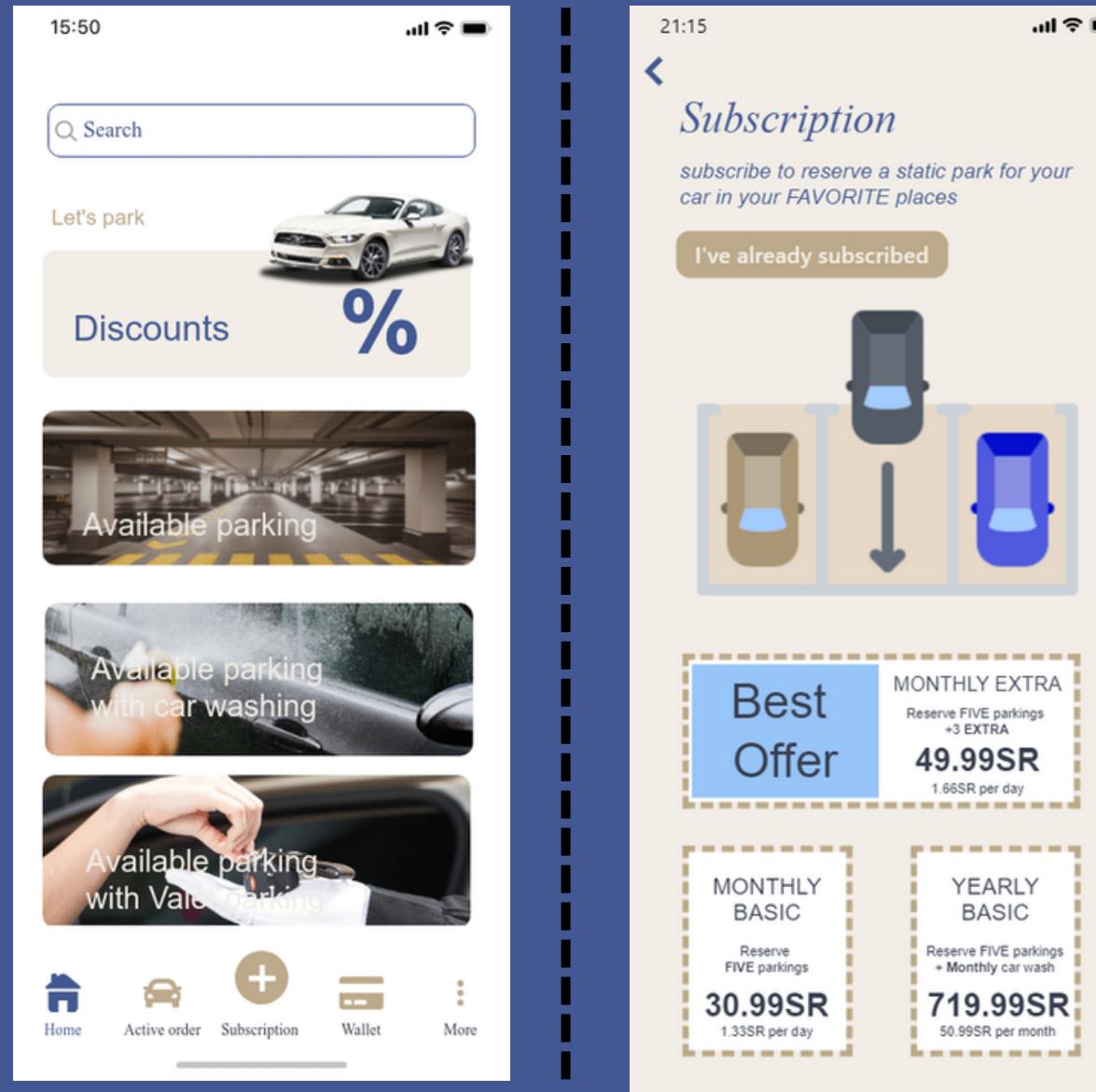
## Justification

because the user interact with the app that means the user want to do the task quickly and in the right way, so every task will not take more than 1 minute and the task will be completed in the right way

# Supported interfaces



## UTILITY



# Justification

Utility is about providing functions that users need in the first place. so the app provide all the requirements and task that suppose to be in the app such as reserve parking space or hire someone to wash the car and the subscription service.

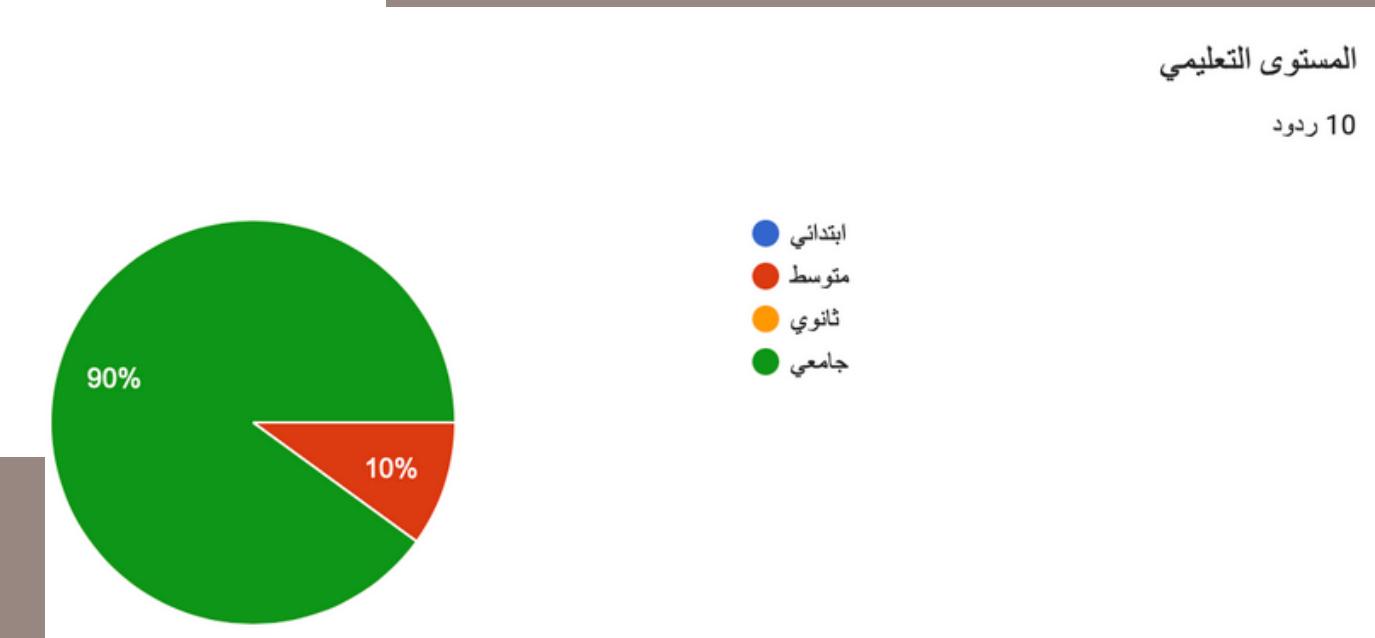
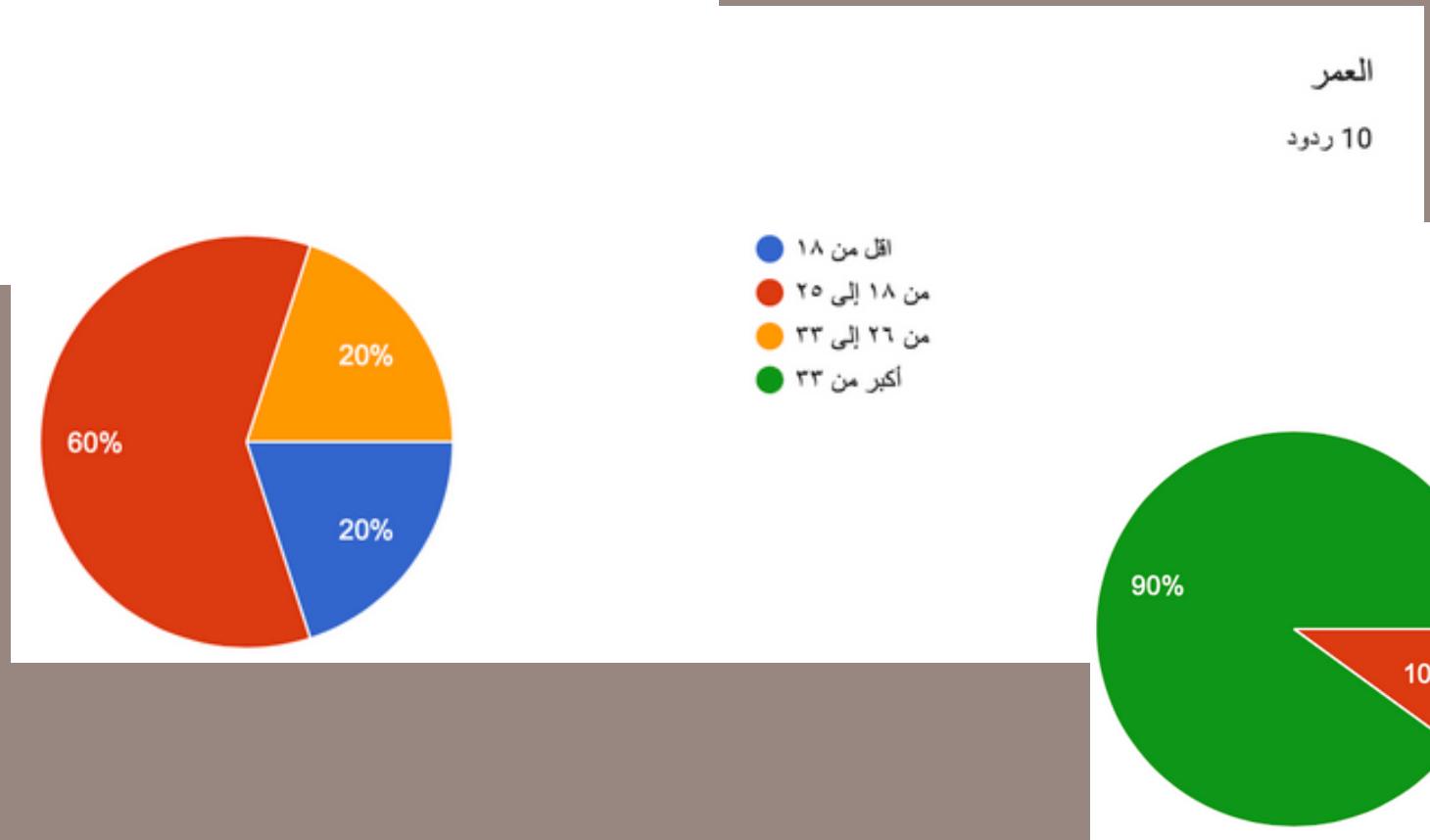
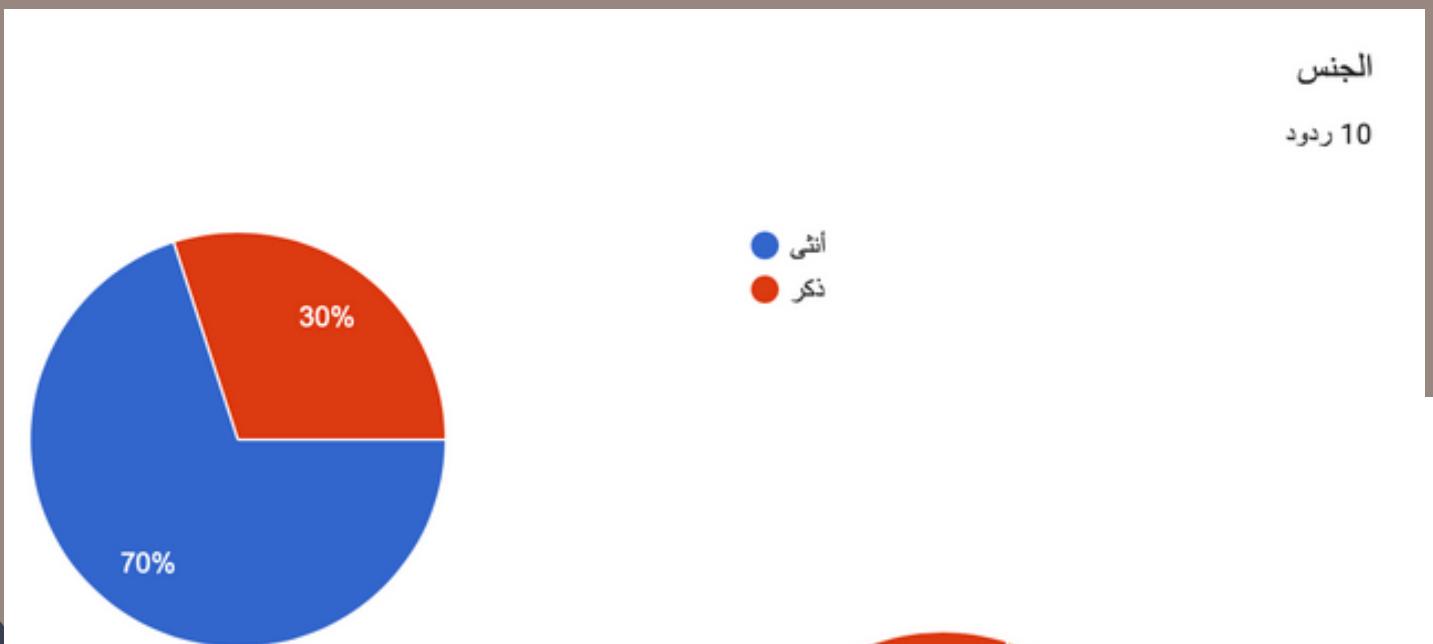
04

## Usability Testing



# Participants Description

10 participants involved in the evaluation of the prototype where most of them female university student and their agers range between 18 to 25 years old.



# Environment Describe

All participants were tested in their homes, the prototype link was sent with the questionnaire that explains the tasks they have to perform in addition to the test questions

# Tasks

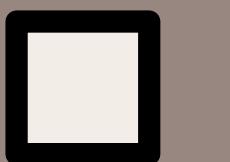
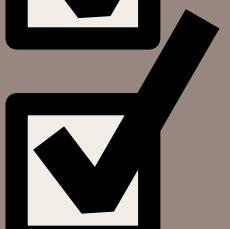
## Description

1  
2  
3

Record vehicle information in the application  
and save it

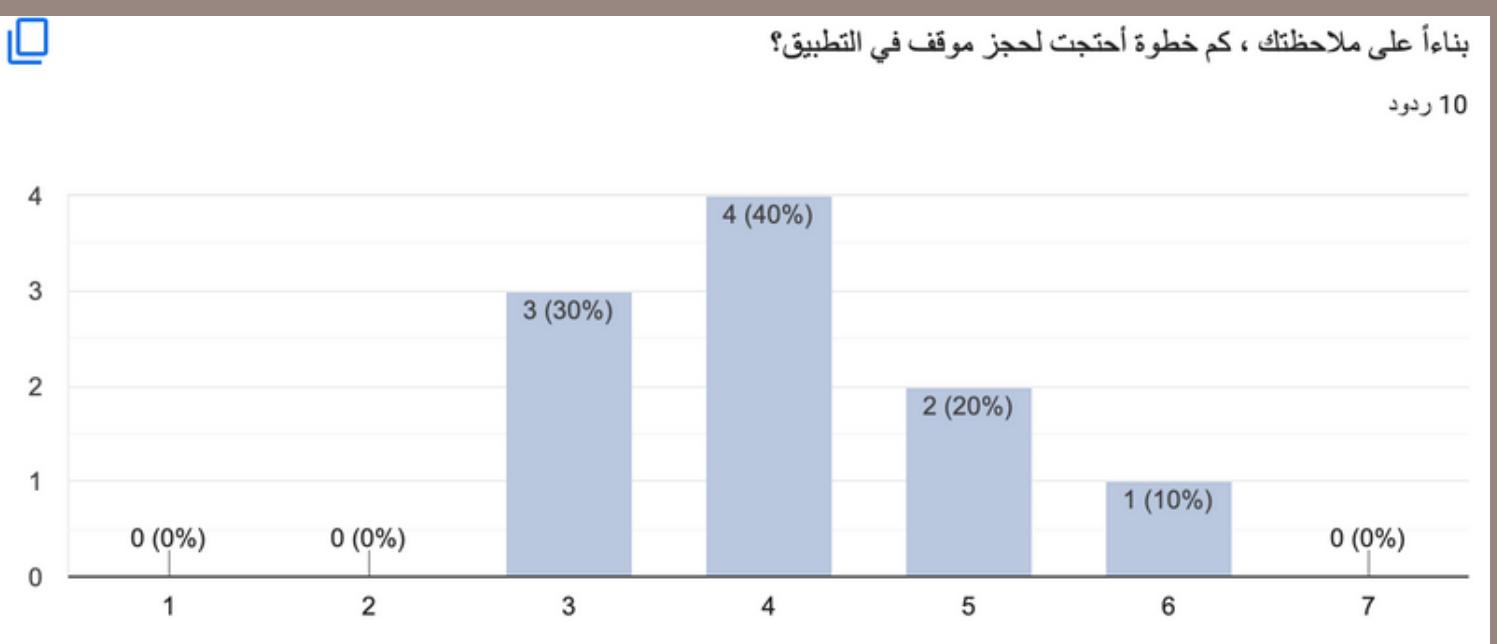
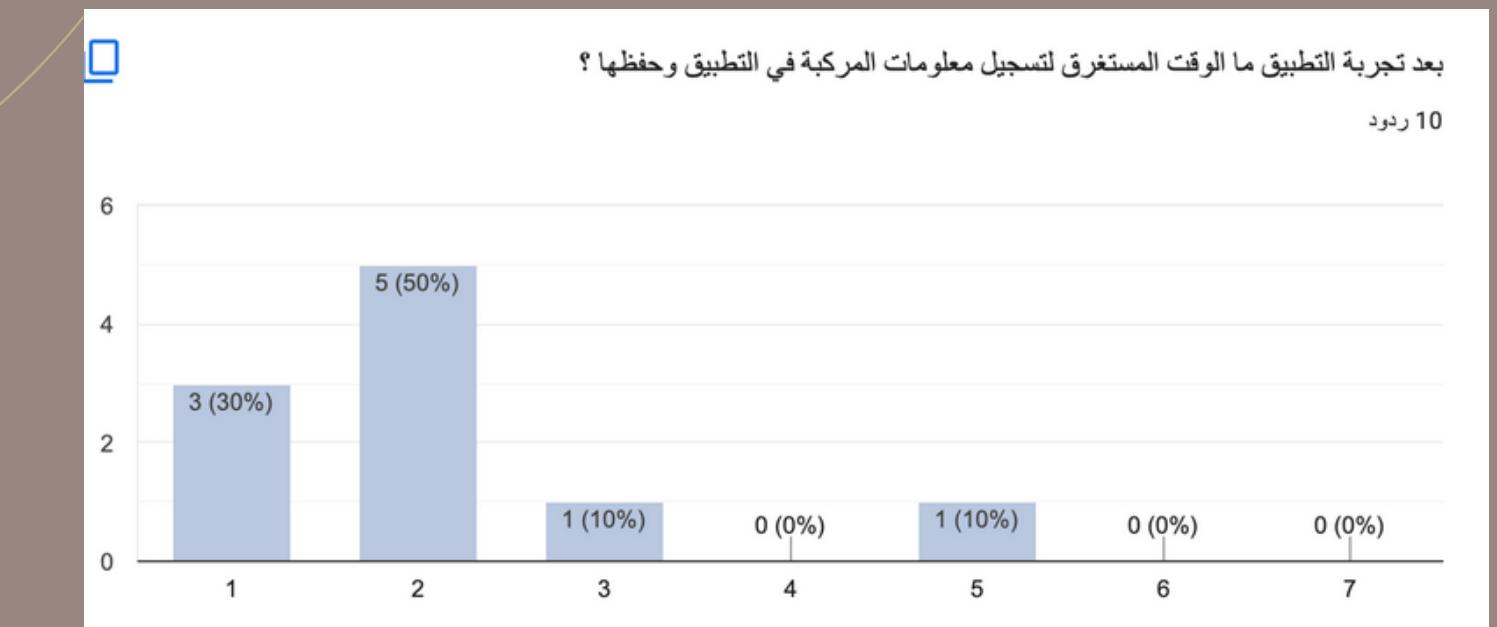
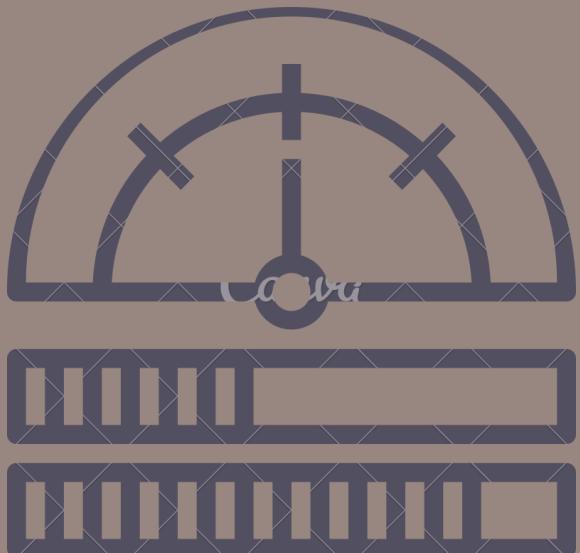
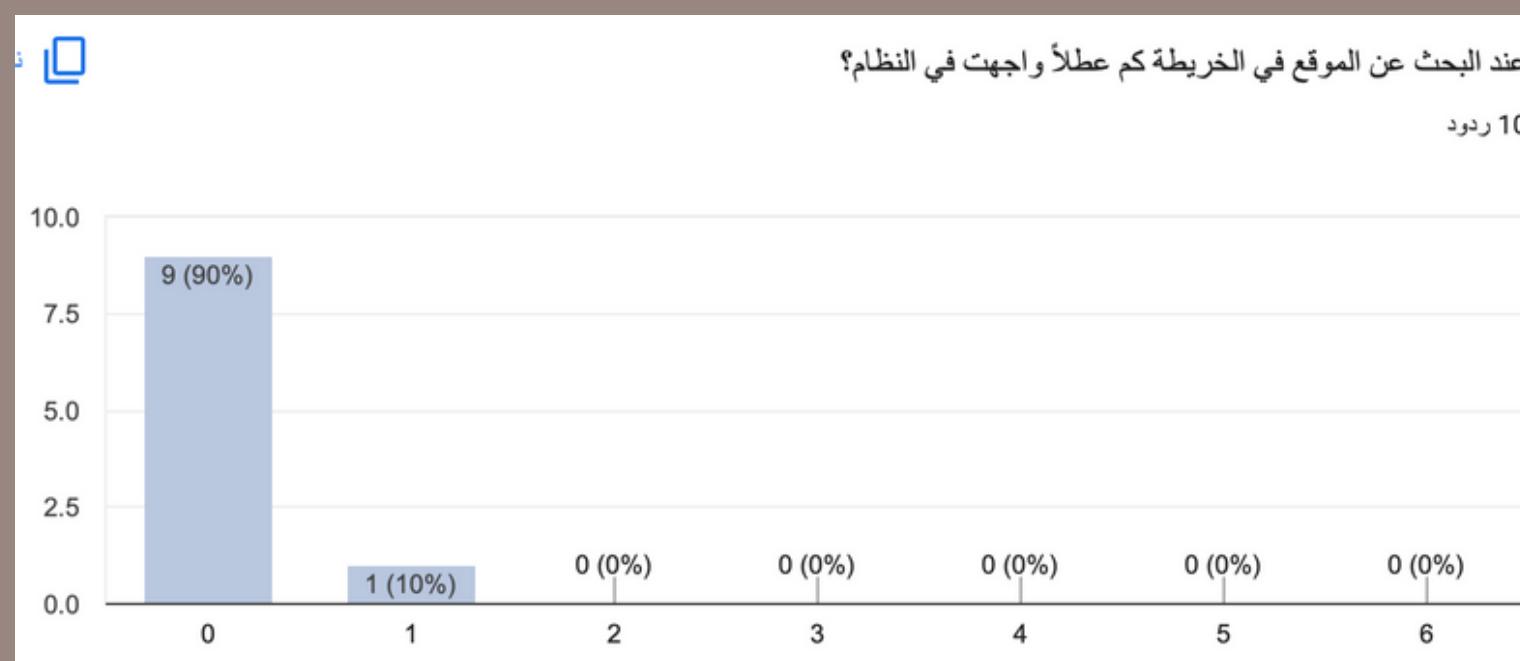
Find a location using the map

reserve a parking



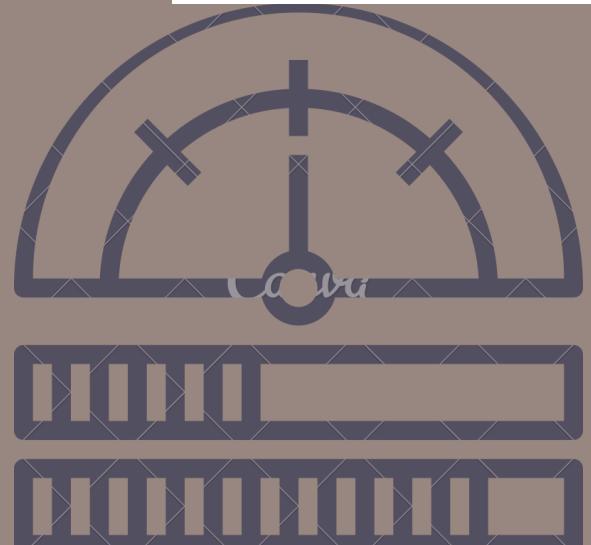
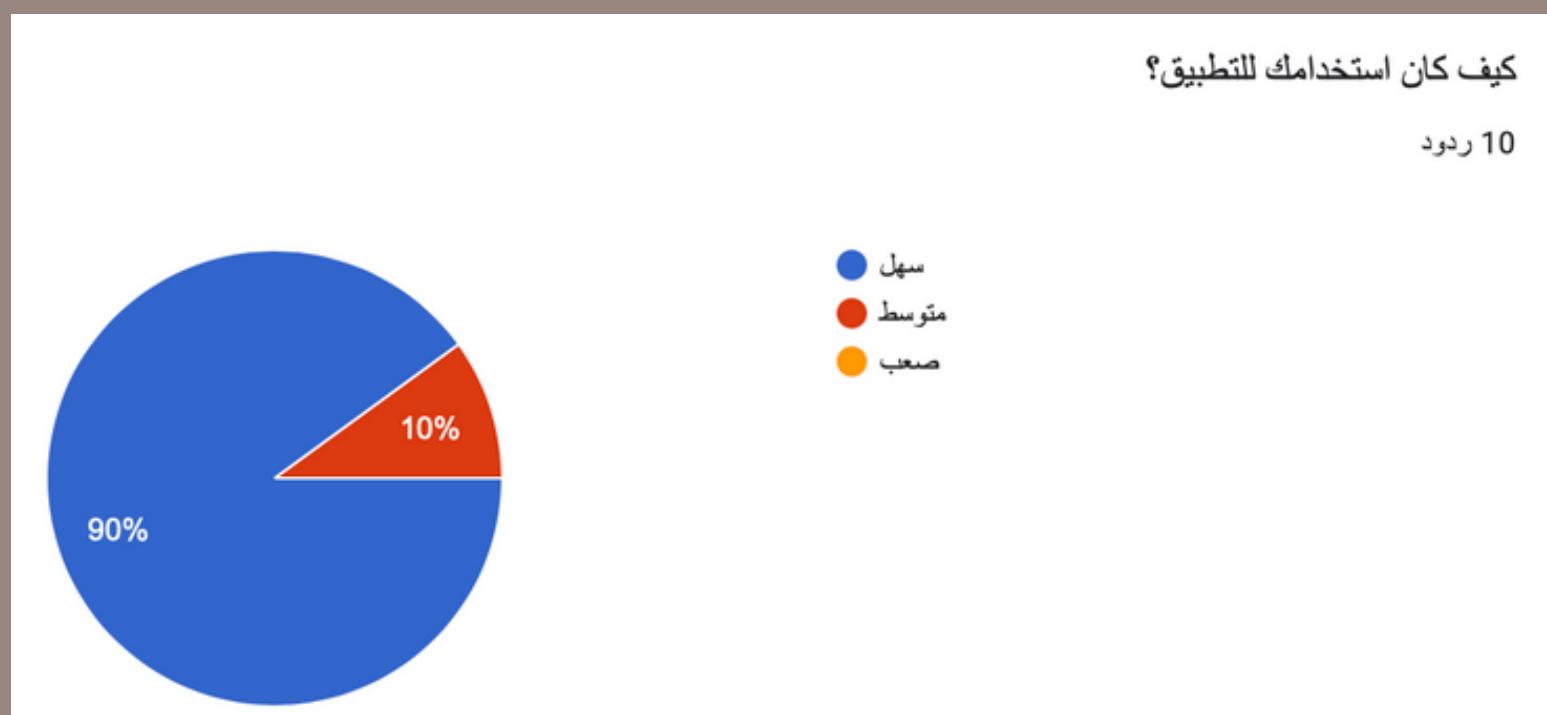
# Prototype Evaluation

## objective measure



# Prototype Evaluation

subjective measure



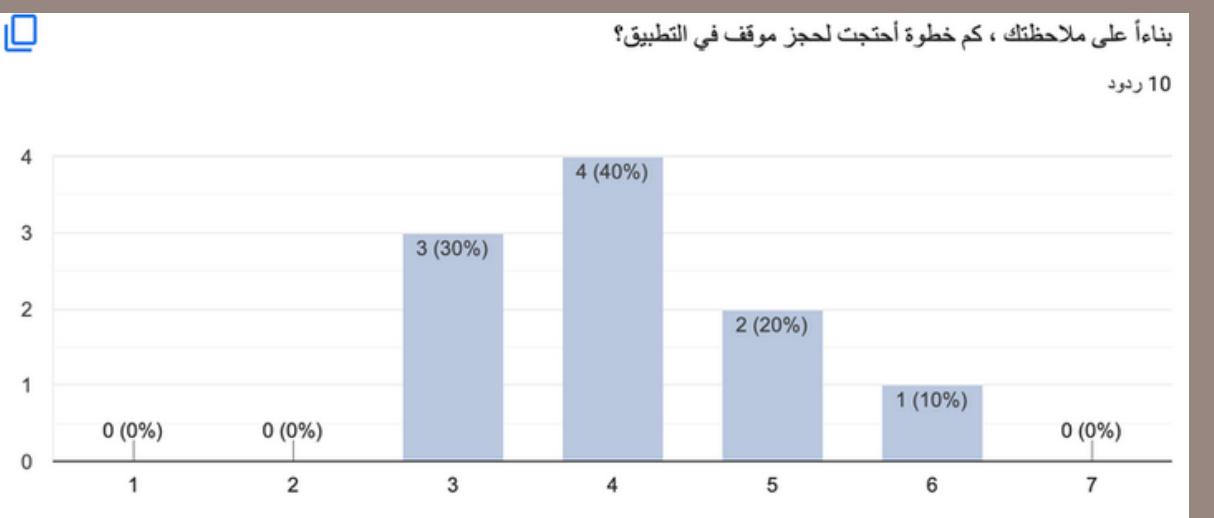
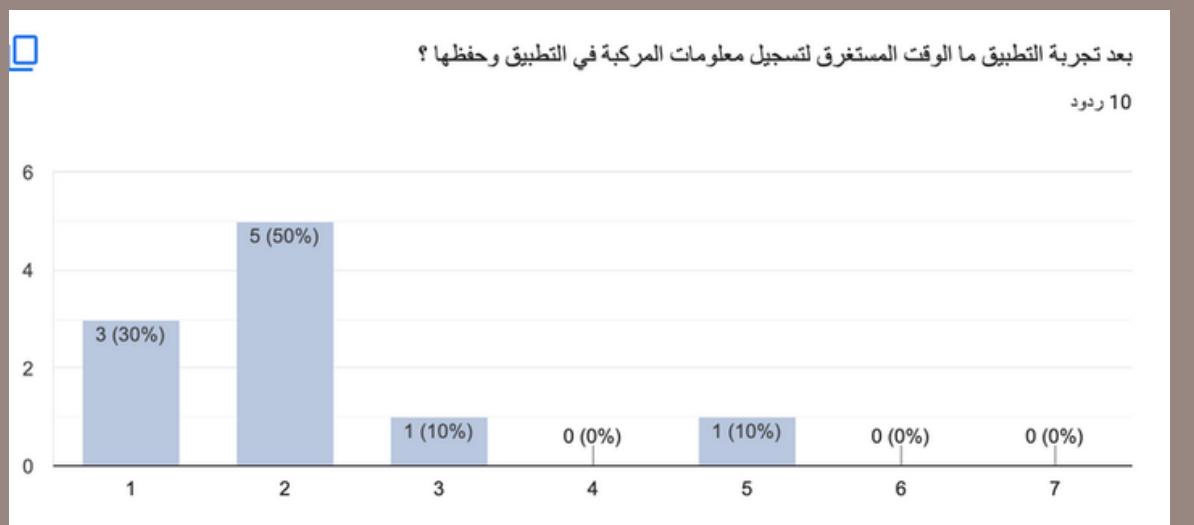
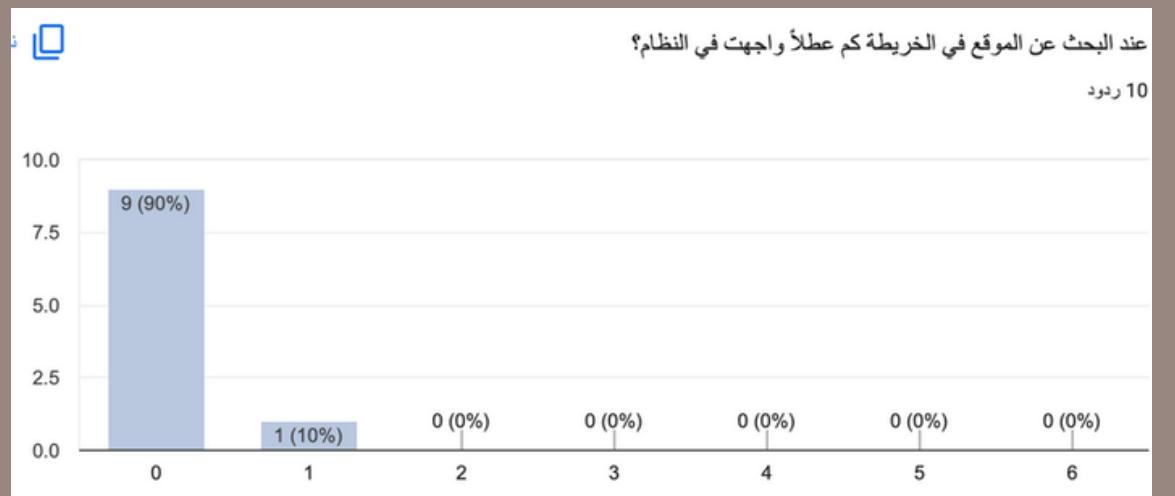
# post-test questionnaire



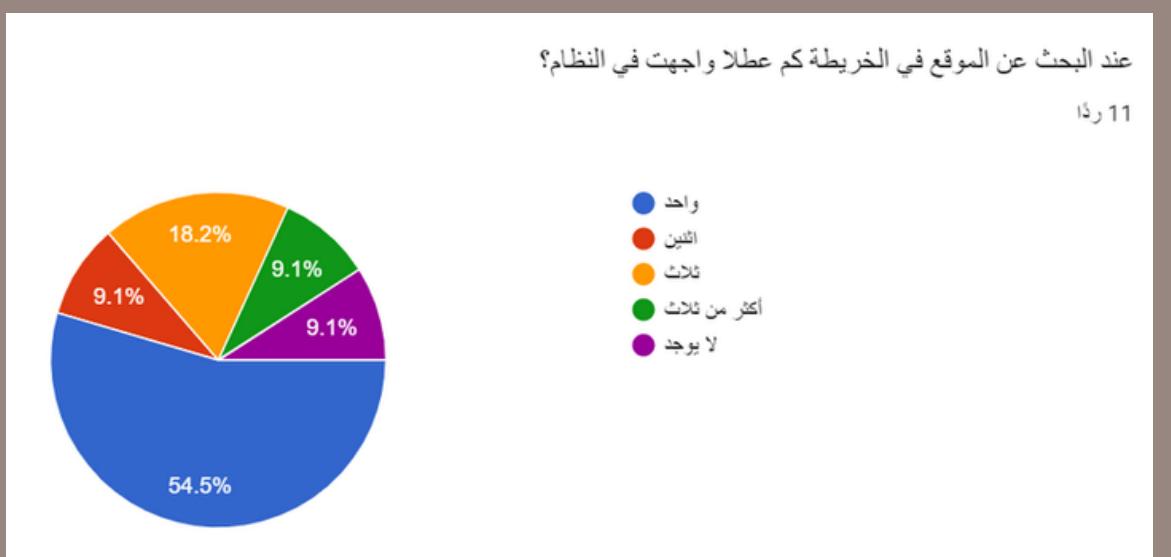
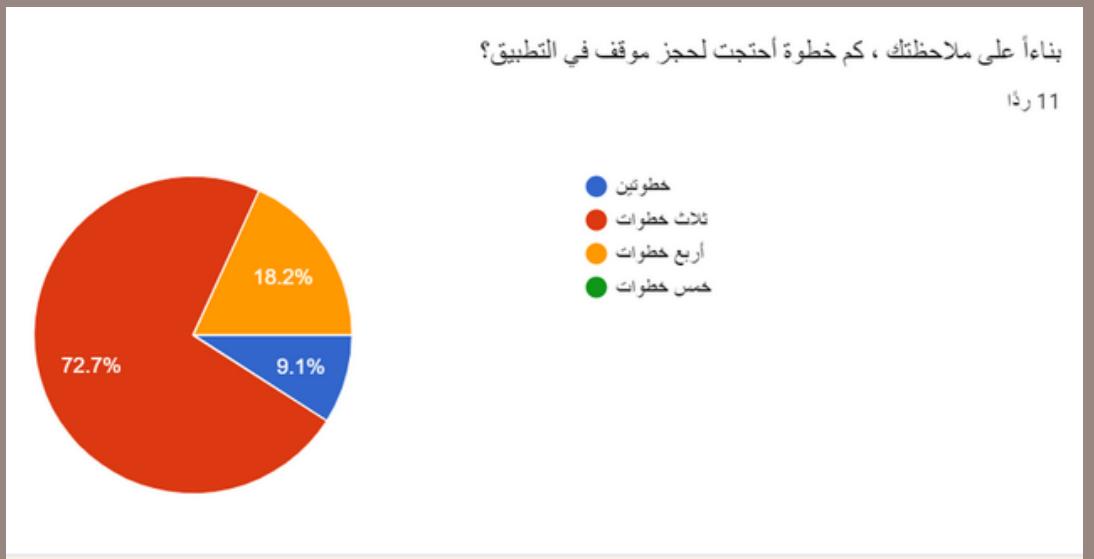
- The estimated average time the participants took to complete adding vehicle information in the application and save the task is 31.4 sec.
- 40% that is 4 of 10 of the participants took 5 steps to reserve parking and 10% of the participants took 3 steps to reserve parking and 30 % took 6 steps to reserve parking and 10 % took 4 steps to reserve parking while 10% took 7 steps to reserve parking.
- 30%(3 of 10) of the participants face two errors while looking to find his/her location using the map and 10%(1 of 10) of the participants face an error while looking to find his/her location using the map.
- Most of the participants found the app's services easy to use and the design of the interfaces comfortable and harmonious.
- Also, All the participants found that The idea of the app is useful and meets their needs as drivers.

# Result analysis and comparison

## Test result



## Evaluation results





THANK YOU

