

BERR2243

Database and Cloud System

Chapter 4:
Use-Case Diagram

- The UML provides the application modeling language for:
 - Process modeling/ Requirement Analysis with Use-cases.
 - Static Design with Class and object modeling.
 - Dynamic Design with sequence, collaboration and activity diagrams.
 - Realtime Systems design models
 - Distribution and deployment modeling.

Unified Modeling Language

- What is a Use Case

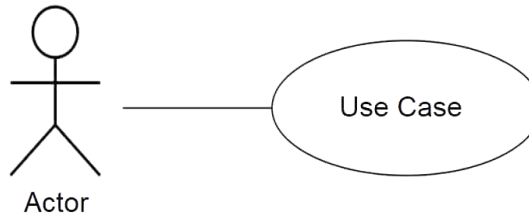
A formal way of representing how a business system interacts with its environment

Illustrates the activities that are performed by the users of the system

A scenario-based technique in the UML

A sequence of actions a system performs that yields a valuable result for a particular **actor**.

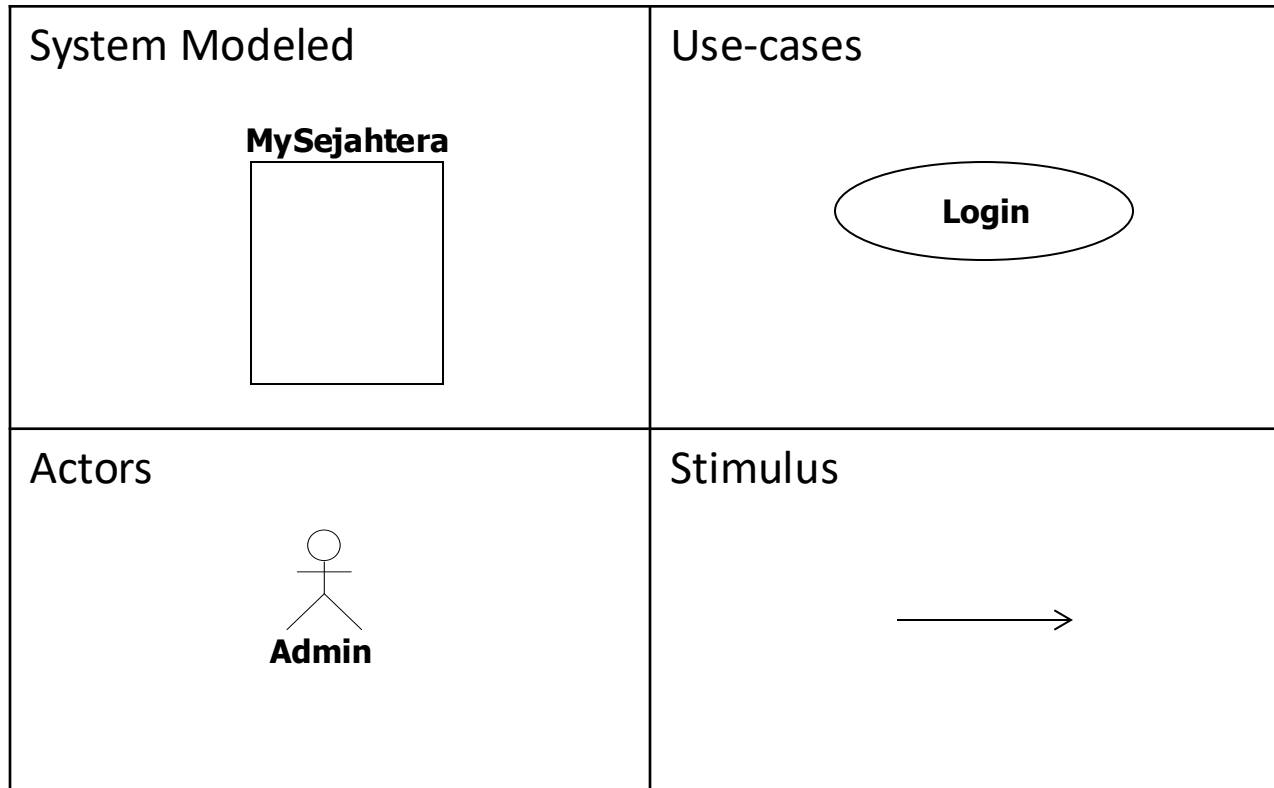
- In use-case modeling, the system is looked upon as a black box whose boundaries are defined by its functionality to external stimuli.
- The actual description of the use-case is usually given in plain text. A popular notation promoted by UML is the stick figure notation.



- Use-case diagram shows the system, the actors, the use-cases and the relationship among them.

Use-Case Modeling

- The components of a Use-case model are:



Components of Use-case Model

- As a part of the use-case modeling, the boundaries of the system are developed.
- System in the use-case diagram is a box with the name appearing on the top.
- Define the scope of the system that you are going to design

System

- Represented by stick figure
- A user or outside system that interacts with the system being designed
- Actor communicates with the system by sending and receiving messages.
- Use Cases describe scenarios that describe the interaction between users of the system (the actor) and the system itself.

Actors

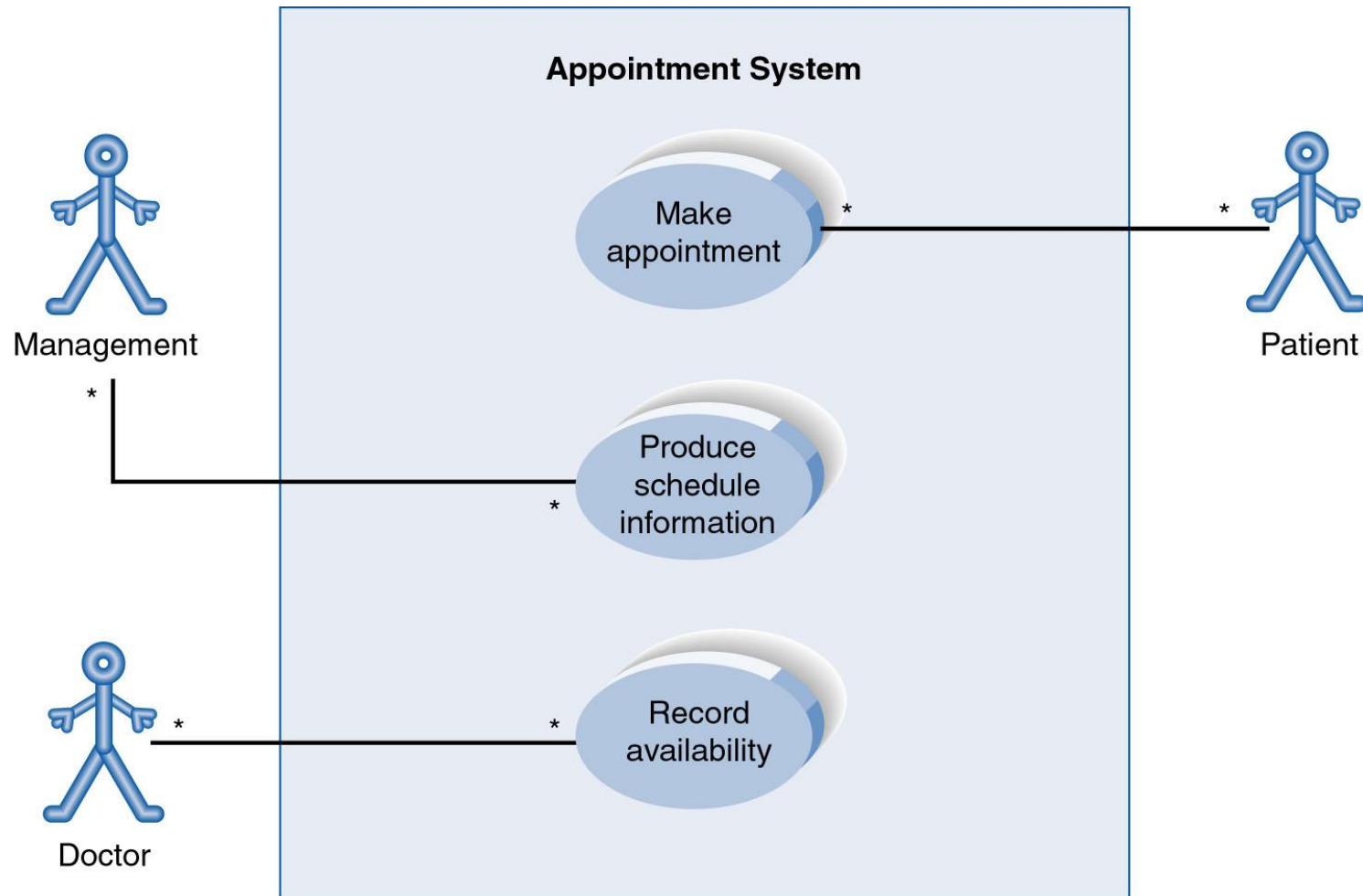
- The actors of a system can be identified by answering several questions:
 - Who will use the functionality of the system?
 - Who will maintain the system?
 - What devices does the system need to handle?
 - What other system does this system need to interact?
 - Who or what has interest in the results of this system?
 - Does one person play several different roles?
 - Do several people play the same role?

Finding Actors

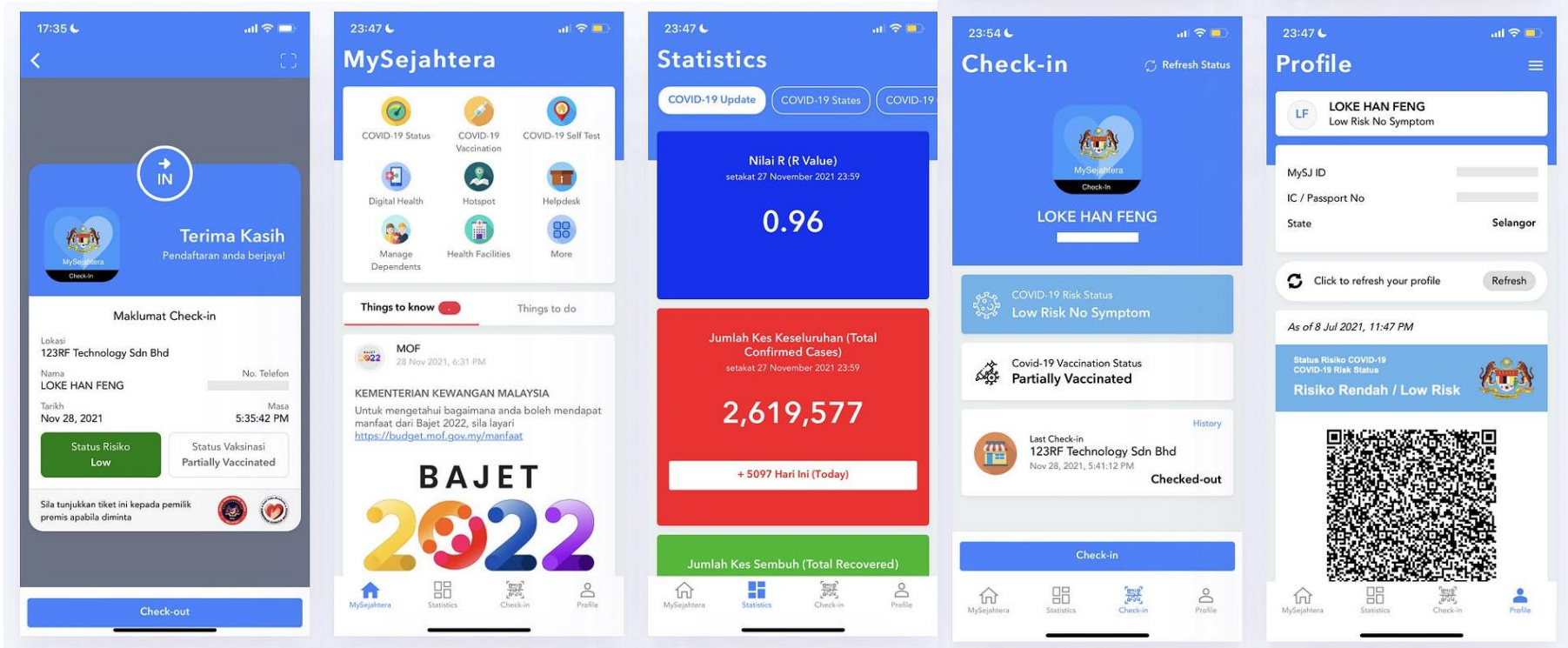
- A **use case** is a summary of scenarios for a single task or goal.
- An **actor** is who or what initiates the events involved in the task of the use case. Actors are simply roles that people or objects play.
- A Use-case
 - is always initiated by an actor.
 - provides a value to an actor.
 - must always be connected to at least one actor.
 - must be a complete description.

- For each actor ask these questions:
 - Which functions does the actor require from the system?
 - What does the actor need to do?
 - Could the actor's work be simplified or made efficient by new functions in the system?
 - What events are needed in the system?
 - What are the problems with the existing systems?
 - What are the inputs and outputs of the system?

Finding Use-cases

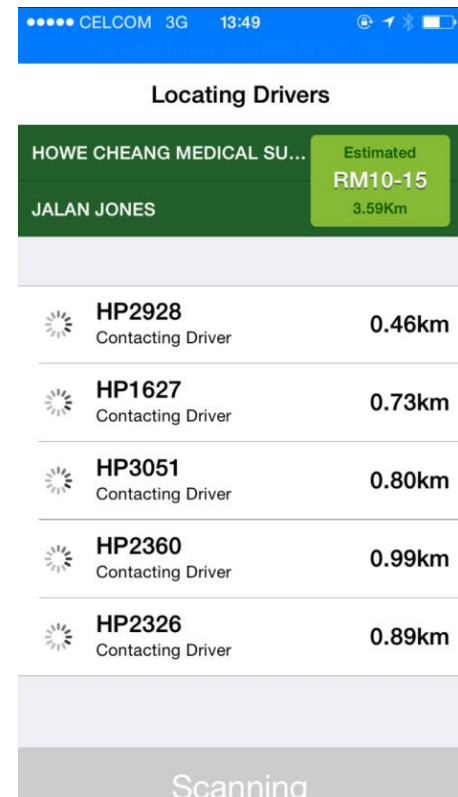
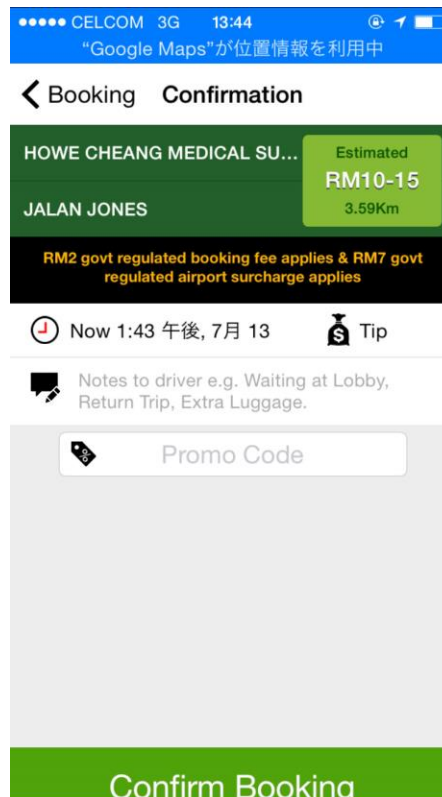
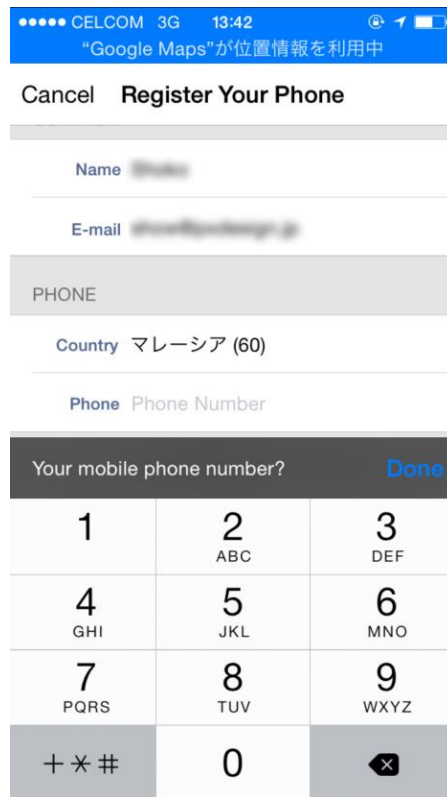


Use-Case Diagram



<https://medium.com/design-bootcamp/ui-ux-case-study-i-redesigned-the-mysejahtera-app-because-it-s-ck-62f6b9a5a8a>

Exercise



Exercise



Cancel Register Your Phone

Name

E-mail

PHONE

Country マレーシア (60)

Phone Phone Number

Your mobile phone number? Done

< Booking Confirmation

HOWE CHEANG MEDICAL SU... Estimated RM10-15 3.59Km

JALAN JONES

RM2 govt regulated booking fee applies & RM7 govt regulated airport surcharge applies

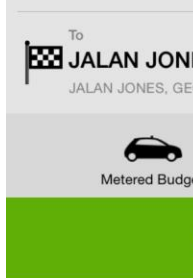
Now 1:43 午後, 7月 13 Tip

Notes to driver e.g. Waiting at Lobby, Return Trip, Extra Luggage.

Promo Code

Locating Drivers

HOWE CHEANG MEDICAL SU...	Estimated RM10-15 3.59Km
JALAN JONES	
HP2928	0.46km
Contacting Driver	
HP1627	0.73km
Contacting Driver	
HP3051	0.80km
Contacting Driver	



Driver Assigned

Yay!

We've found you a driver!

✓ HP1627 Sanjay Kumar A/L Keevac... 0.7km from you

Please pay by: **CASH**

Next

Tracking

Booking ID: IOS-4090722-1-000 13th 7月 01:49

4 MIN

HP1627 Sanjay Kumar A/L Keeva...

ESTIMATED RM10-15

HOWE CHEANG MEDICAL SUPPLY, GEORGE T...

JALAN JONES, GEORGE TOWN, PENANG

Share ETA Cancel Booking

Tracking

Booking ID: IOS-4090722-1-000 13th 7月 01:49

2 MIN

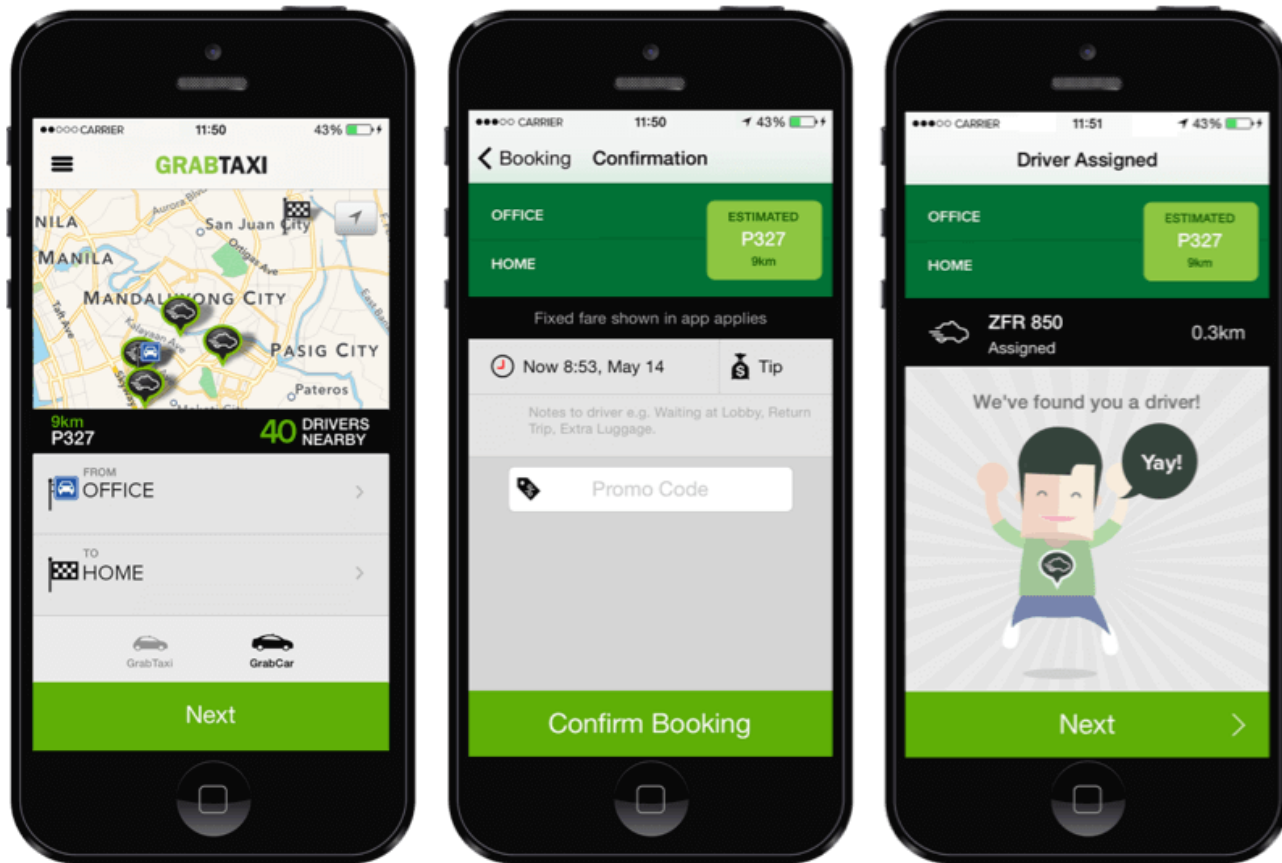
HP1627 Sanjay Kumar A/L Keeva...

ESTIMATED RM10-15

HOWE CHEANG MEDICAL SUPPLY, GEORGE T...

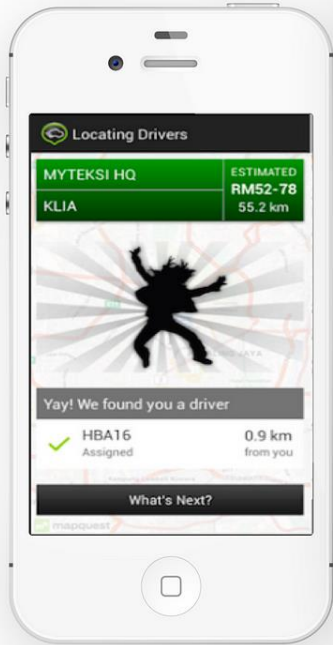
JALAN JONES, GEORGE TOWN, PENANG

Share ETA Cancel Booking

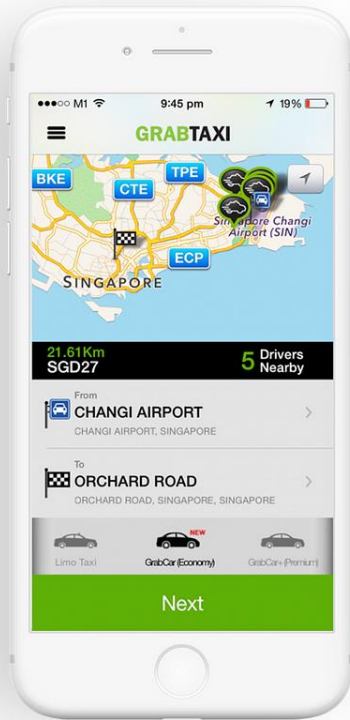


<https://woxapp.com/our-blog/how-to-build-an-app-like-grab-taxi/>

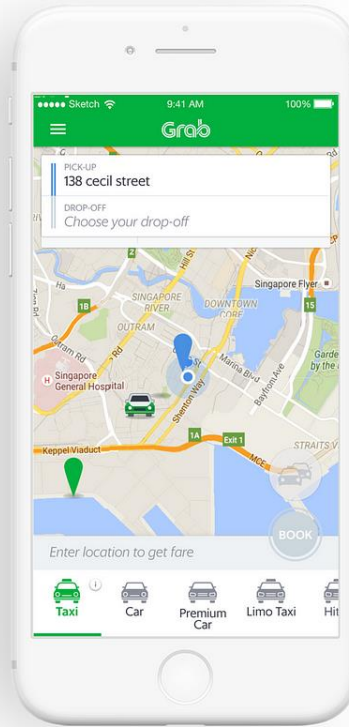
Case Study



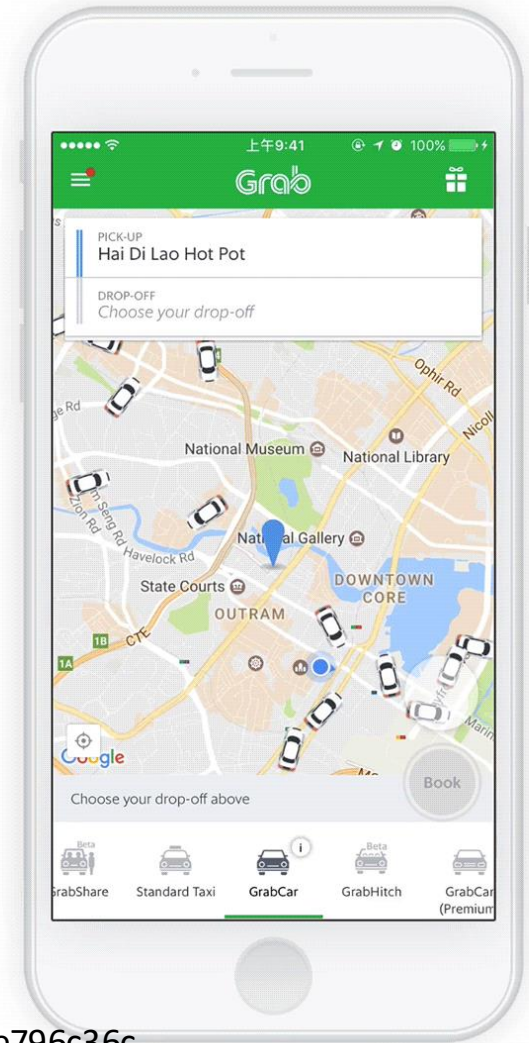
2012



2014



2016



<https://uxdesign.cc/redesigning-the-transport-booking-experience-for-grab-app-52fbe796c36c>

Case Study



Hooi Ling

MAIN

BOOKING HISTORY

PROFILE

Booking History

From

26.12.2015



To

26.01.2016



Search

View

All Bookings



Download Receipts

1 Selected



20 Total Bookings

<input type="checkbox"/>	DATE	FARE	PAYMENT	TAG	PICK UP	DROP OFF	
<input checked="" type="checkbox"/>	21.01.2016	SGD 12.00	Mastercard 3216	Personal	133, KECK SENG TOWER, CECIL STREET, 069535, SINGAPORE, SINGAPORE	LAVENDER STREET, SINGAPORE, SINGAPORE	>
<input type="checkbox"/>	20.01.2016	SGD 29.00	Visa 8888	Personal	19 Cecil St., Singapore, Singapore	21 Woodlands Crossing, Singapore, Singapore	>
<input type="checkbox"/>	20.01.2016	SGD 15.68	Mastercard 3216	Business	133, KECK SENG TOWER, CECIL STREET, 069535, SINGAPORE, SINGAPORE	LAVENDER STREET, SINGAPORE, SINGAPORE	>

Case Study