



A light gray background featuring a repeating pattern of small, white line-art car icons, oriented in various directions.

# SMART PARKING RESERVATION SYSTEM

Group 29

# THE ONES WHO GUIDE US

*Supervisor*  
**Dr. HL Premaratne**

*Mentors*  
**Ms. PA Kariyawasam**  
**Ms. KHB Abeyrathne**

## ABOUT US

G.M.N. Perera	:	2014/CS/109
M.M. Lakmal	:	2014/CS/073
D.N. Yashodara	:	2014/CS/162
W.S.P. Chinthaki	:	2014/CS/012
L.P. Lamahewa	:	2014/IS/046
B.S. Wickramathilaka	:	2014/IS/091

# INTRODUCTION

*Icon smart parking reservation system is intended for the better and efficient management of a commercial parking lot.*

*We primarily offer 2 facilities,*

*Smart parking facility  
Parking reservation facility*

*These facilities are tightly integrated to provide better parking experience.*

# SMART PARKING SYSTEM

*Using ultrasonic sensors.*

*Detects the availability of each parking slot.*

*Aids customers in identifying parking space.*

*Aids employees in managing the parking lot.*

*Available through web application and the parking  
lot screen.*

# PARKING RESERVATION SYSTEM

*A customer can reserve parking space.*

*Will be charged at a higher than normal rate.*

*Guaranteed parking space for the reserved duration.*

*Able to reserve via the web application or by calling the receptionist.*

## NON-RESERVATION CUSTOMERS

*Aside from reservation customers, our system also caters for normal customers as well.*

*They may come into the parking lot and still park their vehicles if space is available.*

# FUNCTIONAL REQUIREMENTS

*Reserve a parking slot*

*Identify a reserved customer*

*Record and monitor non reservation customers*

*Calculate parking hours*

*Generate total sum*

*Check for available parking slots*

# NON FUNCTIONAL REQUIREMENTS

*Availability*

*Usability*

*Contingency measures*

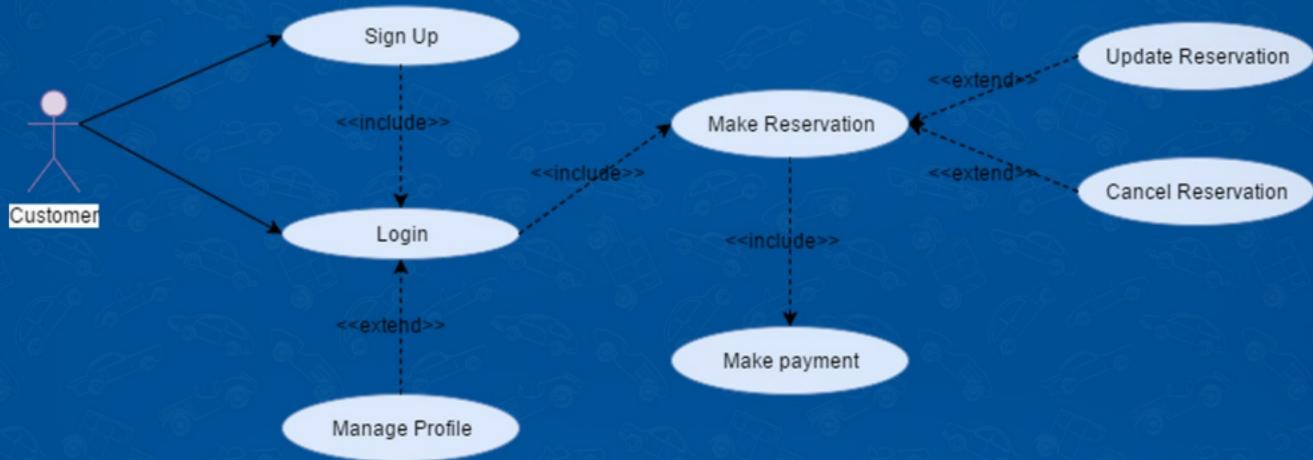
# SYSTEM ARCHITECTURE

# USE CASES

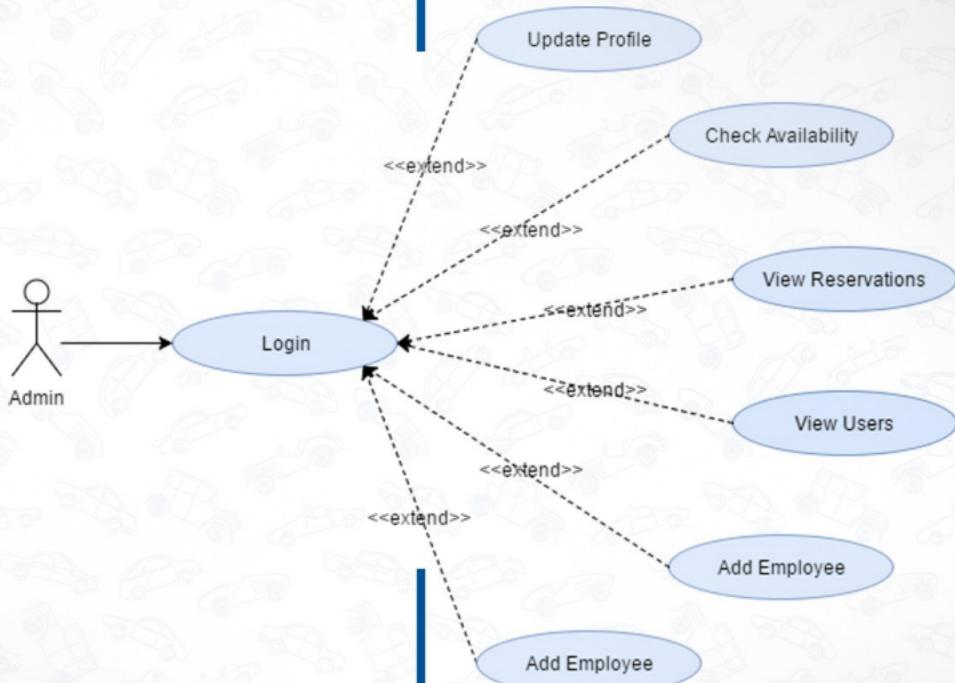
## Actors

*Customer  
Administrator  
Operator  
Receptionist*

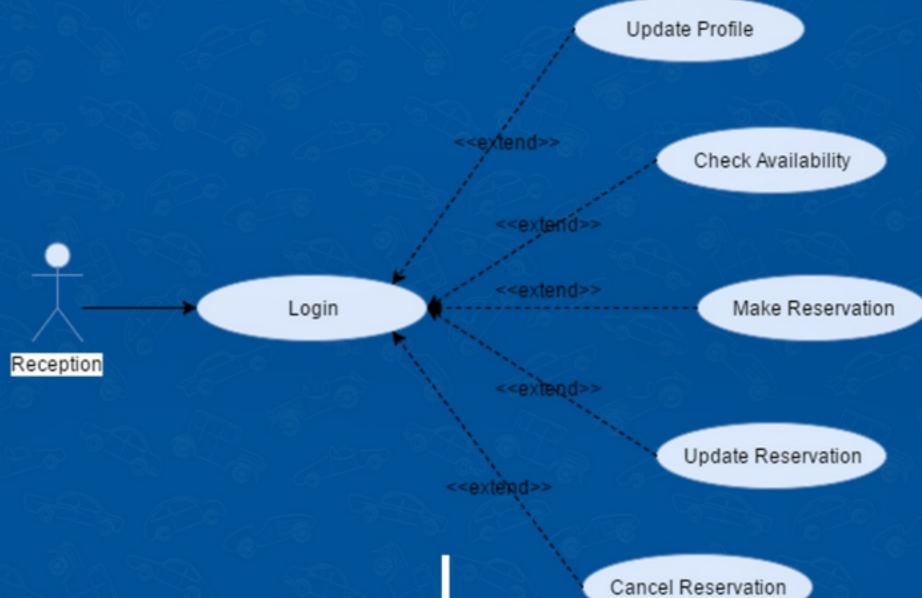
# USE CASE: CUSTOMER



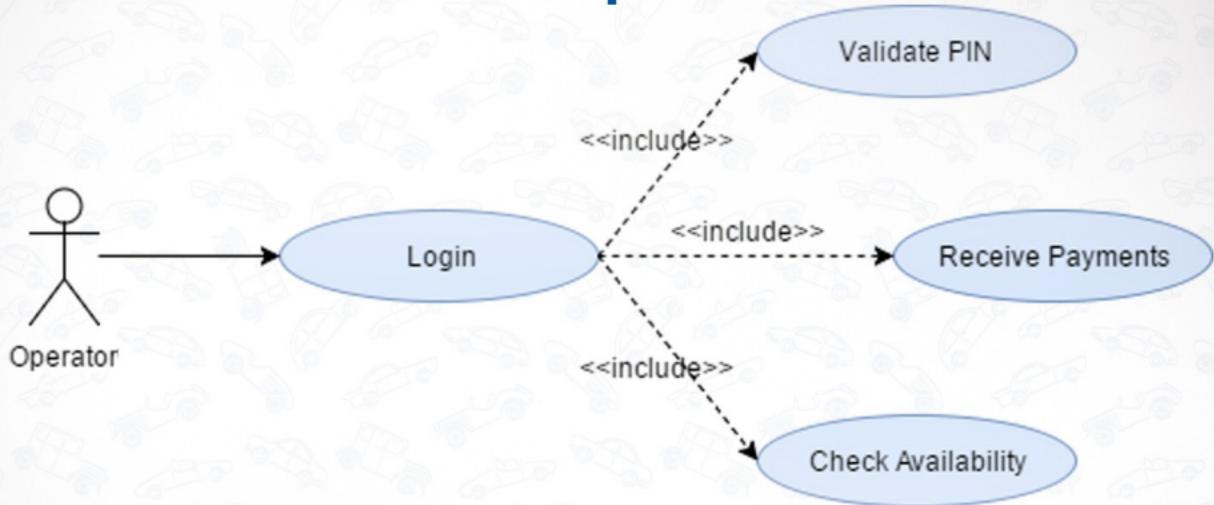
# USE CASE: ADMINISTRATOR



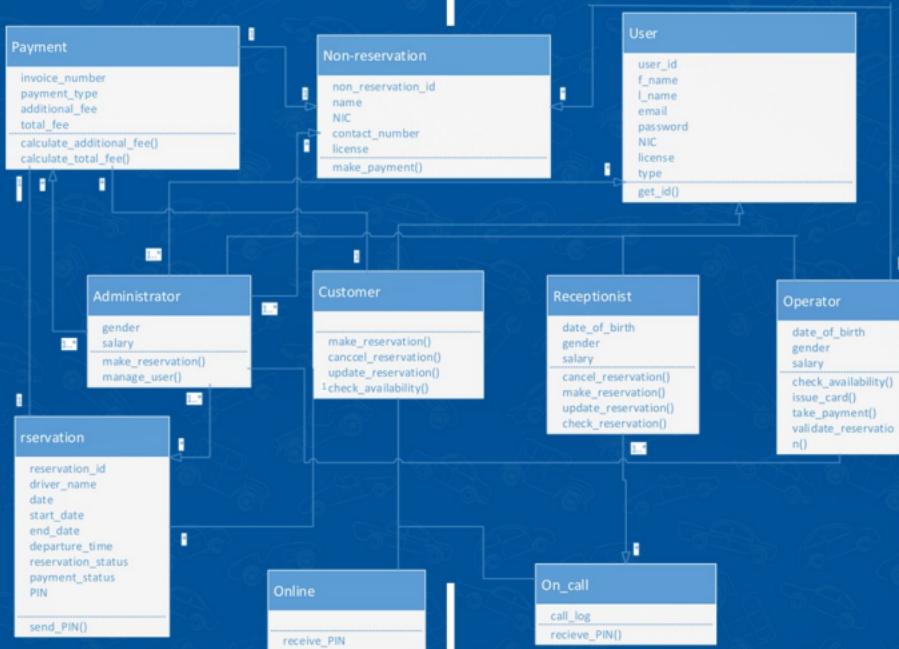
# USE CASE: RECEPTIONIST



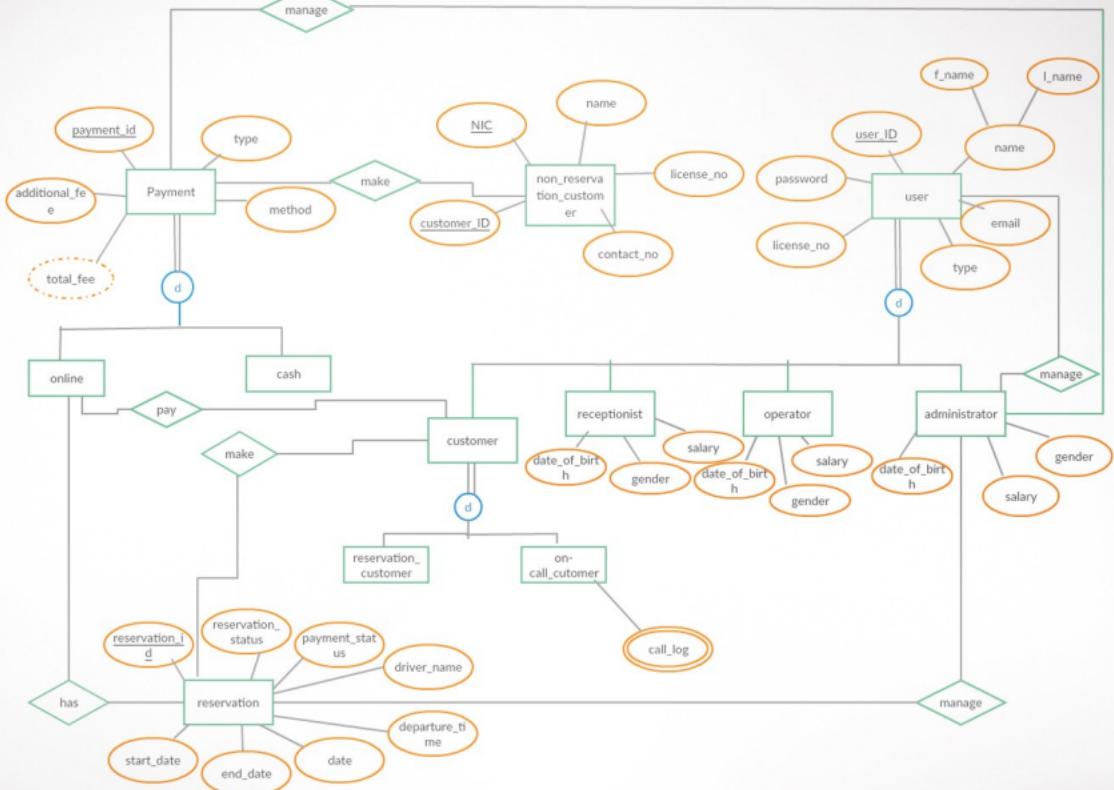
# USE CASE: OPERATOR



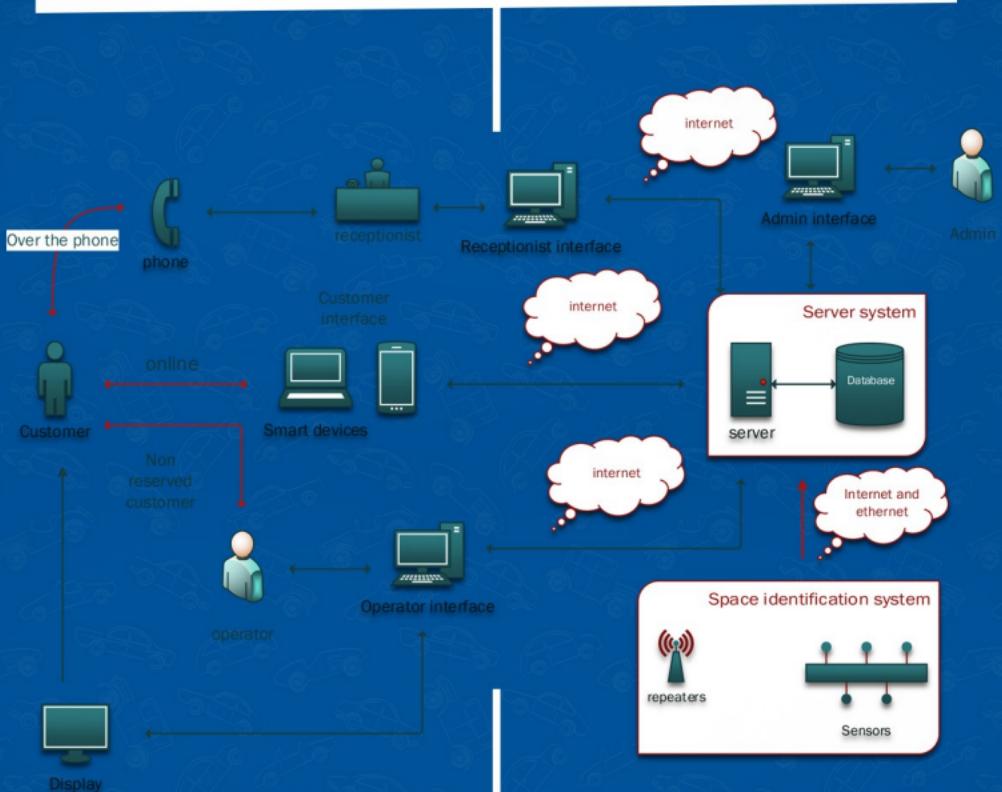
# CLASS DIAGRAM



# ERD



# SYSTEM ARCHITECTURE DIAGRAM



# USER EXPERIENCE

*Minimalistic design*

*User friendliness*

***Manuals and guidelines are included in the application***

# TESTING

*Unit testing*

*Incremental integration testing*

*Interface testing*

*Automated testing*

## BEST PRACTICES

*Selection of suitable programming language*

*Continual testing and drafting of test cases*

*Keeping conditional logic as simple as possible*

*Meaningful variable names*

# SYSTEM COMPLETENESS

*A proper payment gateway to be integrated.  
Security certificate addition*

# TECHNICAL EXPOSURE

## TECHNOLOGIES USED

**PHP**  
*JavaScript*  
**CSS**  
**HTML**  
**AJAX**  
*Jquery*  
**Bootstrap**  
**Arduino**

## TECHNICAL KNOWLEDGE GAINED

*Understanding on actual software development projects*

*Understanding on technologies and tools available*

*Interface design and impact of users*

*Design and implementation aspects of a software development project*

**DEMO**

**Q&A**