

CPBS



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المملكة العربية السعودية
وزارة التعليم العالي
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كلية العلوم بالزلفي
قسم علوم الحاسب والمعلومات

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CSI 520

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Chapter 1: Introduction

1.0. Abstract:

It was found that it is difficult to reserve a car parking in a large, crowded locations and that search process would take a long time, especially if the customer had an important appointment such as the take-off time of the plane or others.

We proposed a solution, which is a web site that gives the user the opportunity to book a car parking location through a website where the place and the time duration is determined.

Moreover, when the user arrives at the specified location, he passes the ID card to the barcode scanner to verify the validity of his data recorded in the database.

Finally, the expected results are:

1. Reduce traffic congestion when searching for a position.
2. Organizing parking lots and reduce the time when searching for a parking, especially if the client has an important date, travel or otherwise.
3. Using modern means Technology making society in evolution.



1.1. Problem statement:

- Most of the times in public we take more time to find a parking place and this procedure often disturbs people.
- The effect of problem is:

1. Wasting of time.
2. Make people suffer to find a suitable place to park.
3. Automation of the parking process.



1.2. Project aims (Objectives):

1. Helping specific people like "handicapped and old men".
2. Making parking in public places appear to systematically.

1.3. Applications:

1. The CPBS system can be implemented in commercial areas for employee parking.
2. The CPBS system can be utilized by companies and organizations such as : (hospitals, malls and university) to automated their parking system
3. The CPBS can also be used in public places for public parking like in malls, stations and so on.



1.4. Where can the CPBS system applied?



1. Airports.
2. Supermarkets.
3. Universities.
4. Hospitals.
5. Organizational governments.





Chapter 2: REQUIREMENT ANALYSIS





2.0. Feasibility study:



Car Parking Booking System



1. Does the CPBS system should be presence in public places?							
						Response Percent	Response Total
1	1.Strongly agree					50.00%	1
2	2.Agree					50.00%	1
3	3.I agree to some extent					0.00%	0
4	4.Don't agree					0.00%	0
Analysis	Mean:	1.5	Std. Deviation:	0.5	Satisfaction Rate:	16.67	answered
	Variance:	0.25	Std. Error:	0.35			skipped

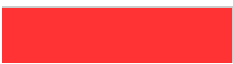

2. Does the CPBS system shorten the time and effort for user to find car parking?							
						Response Percent	Response Total
1	1.Strongly agree					0.00%	0
2	2.Agree					50.00%	1
3	3.I agree to some extent					50.00%	1
4	4.Don't agree					0.00%	0
Analysis	Mean:	2.5	Std. Deviation:	0.5	Satisfaction Rate:	50	answered
	Variance:	0.25	Std. Error:	0.35			skipped

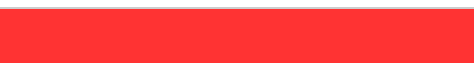



3. Are you going to use the CPBS after it's publish?							
						Response Percent	Response Total
1	1.Strongly agree					0.00%	0
2	2.Agree					0.00%	0
3	3.I agree to some extent					50.00%	1
4	4.Don't agree					50.00%	1
Analysis		Mean:	3.5	Std. Deviation:	0.5	Satisfaction Rate:	83.33
		Variance:	0.25	Std. Error:	0.35		
						answered	2
						skipped	0

4. Do the crisis and lack of parking a real problem for you?							
						Response Percent	Response Total
1	1.Strongly agree					50.00%	1
2	2.Agree					0.00%	0
3	3.I agree to some extent					50.00%	1
4	4.Don't agree					0.00%	0
Analysis		Mean:	2	Std. Deviation:	1	Satisfaction Rate:	33.33
		Variance:	1	Std. Error:	0.71		
						answered	2
						skipped	0

5. How much do you use the system if it is available at a nominal fee?							
						Response Percent	Response Total
1	1.High					50.00%	1
2	2.Medium					0.00%	0
3	3.Low					0.00%	0
4	4.Don't know					50.00%	1
Analysis		Mean:	2.5	Std. Deviation:	1.5	Satisfaction Rate:	50
		Variance:	2.25	Std. Error:	1.06		
						answered	2
						skipped	0

6. Do you prefer that the CPBS system would be in a form of application?							
						Response Percent	Response Total
1	1.Strongly agree					50.00%	1
2	2.Agree					0.00%	0
3	3.I agree to some extent					0.00%	0
4	4.Don't agree					50.00%	1
Analysis		Mean:	2.5	Std. Deviation:	1.5	Satisfaction Rate:	50
		Variance:	2.25	Std. Error:	1.06		
						answered	2
						skipped	0

7. Do you encourage the students to establish such a system?							
						Response Percent	Response Total
1	1.Strongly agree					50.00%	1
2	2.Agree					50.00%	1
3	3.I agree to some extent					0.00%	0
4	4.Don't agree					0.00%	0
Analysis	Mean:	1.5	Std. Deviation:	0.5	Satisfaction Rate:	16.67	answered
	Variance:	0.25	Std. Error:	0.35			skipped

8. What are the places that the CPBS system should be applied?							
						Response Percent	Response Total
1	1.Hospitals					100.00%	2
2	2.Markets					50.00%	1
3	3.Universities					100.00%	2
4	4.Else					100.00%	2
Analysis	Mean:	9	Std. Deviation:	12.23	Satisfaction Rate:	183.33	answered
	Variance :	149.5	Std. Error:	8.65			skipped

2.1. Project Scheduling:

The project is divide into two parts:

1. Designing requirements and gathering information to report them and it will be finish in the second term of the year.
2. Creating and developing the system and start with it at the beginning of the year.

CPBS Gantt chart

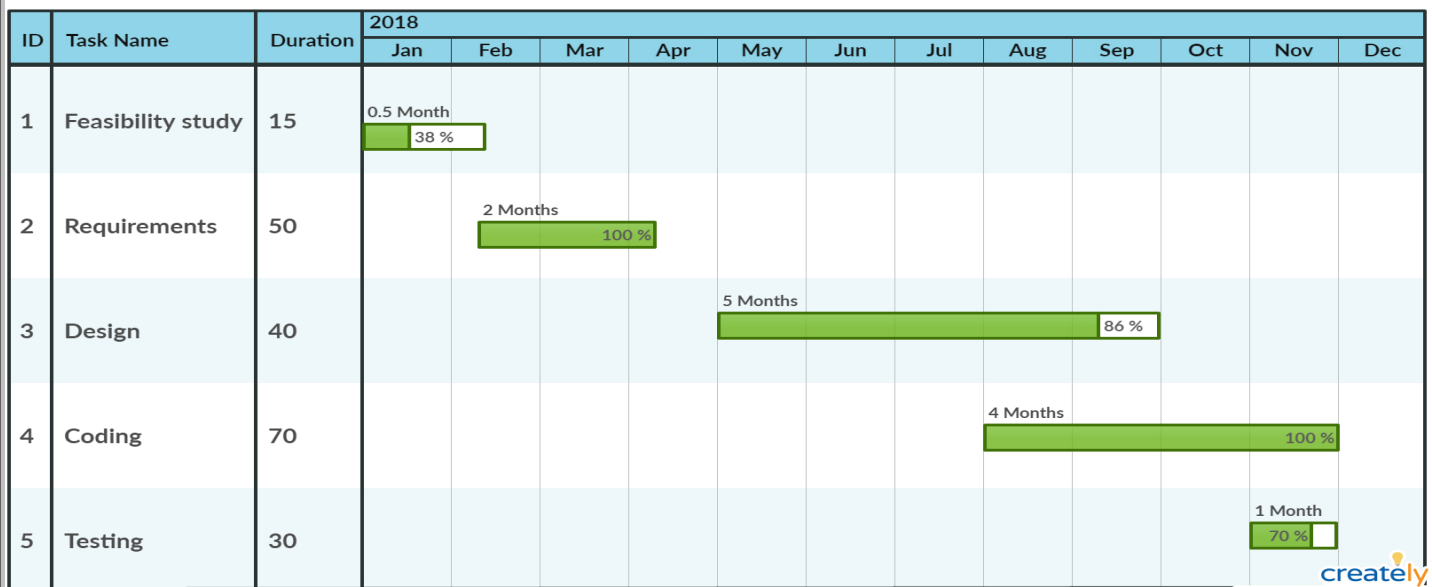


Figure 2.1. Gantt chart.

2.2. Purpose:

The purpose of this document is to present a detailed description of the CPBS Web System. It will explain the purpose and features of the system, what the system will do, the interfaces and the UML of the system, the constraints under which it must operate and how the system will react to external stimuli.

This document is intend for both the stakeholders and the developers of the system.

2.3. Scope of project:

This software system will be a Car Parking Booking System for a local editor of the society.

This system will be designed to make users register their information on the system by adding, updating or deleting car parking to reserve a parking area location, and when the users come to the parking location the users will pass their ID card to a barcode reader and when the barcode recognize the user by comparing the number on the ID card with the information that has registered on the website the gate will be open for them.

Finally, the process model that will be use is prototype model.

2.4. Glossary:

Term	Definition
CPBS	Car Parking Booking System. CPBS is a system that allows the user to reserve a car parking online.
Booking	Is to reserve or make a reservation for (hotel room or car park, etc.).
SRS	Software Requirement Specification.
Barcode scanner	Is a pattern scanner device that read the pattern on a product and transform it from stage to another.

2.5. Overview of Document:

This document has other two chapters, the first providing a full description of the project.

It lists all the functions performed by the system.

The final chapter concerns details of each of the system functions and actions in full for the software developer's assistance. These two sections are cross-referenced by topic; to increase understanding by both groups involved.

2.6. Prototyping model:

The goal of a prototyping-based development process is to counter the first limitation of the waterfall model.

The basic idea here is that instead of freezing the requirements before any design or coding can proceed, a throwaway prototype is built to help understand the requirements.

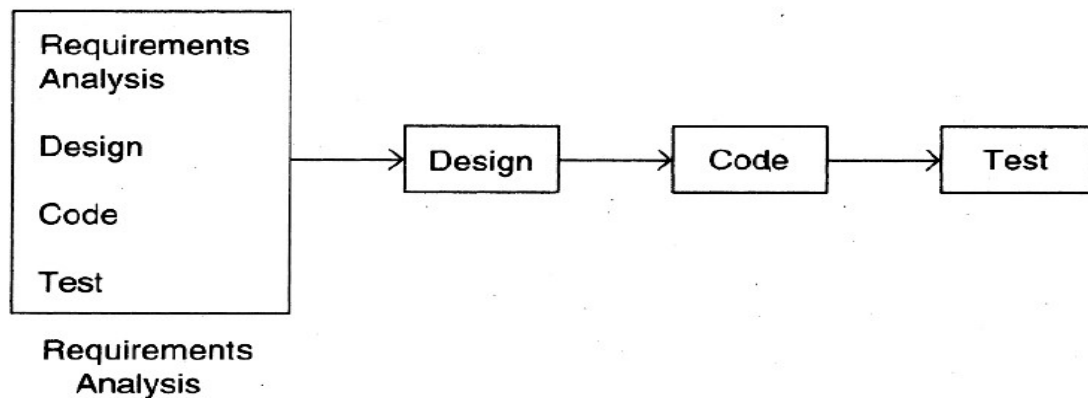


Figure 2.6. Prototyping model process

2.7. Advantages of prototype model:

1. Suitable for large systems for which there is no manual process to define the requirements.
2. User training to use the system.
3. Quality of software is good.
4. Requirements are not frozen.

2.8. Disadvantages of prototype model:

1. It is slow process.
2. Too much involvement of the client is not always preferred by the developer.
3. Too much changes and that's disturb the rhythm of the development team.

2.9. Overall description:

The CPBS will be an internet-based and will be interfaced with the existing parking system.

2.10. Functional requirements:

Functional requirements are those requirements that refer to the functionality of the system, i.e. what services it will provide to the user. Such as manage client reservation information like adding new booking, deleting, view and searching.

1. The system will save customer details like:
 1. Email address.
 2. Phone number.
 3. Name.
 4. User ID.
5. The system must save reservation details.
6. The CPBS must allow the user to make changes to their original booking and information.

2.11. Non-functional requirements:

Nonfunctional requirements are the requirements that specify criteria that can be used to judge the operation of system. Those constraints under which system will be operate, is called nonfunctional requirements.

1. The system will draw information from main parking database, which contain basic information about parking spaces or availability.
1. The system require individual log in for each user in order to access their accounts.
2. The system will be accessible via web browser.
3. The system will store information that is entered by the user when making the online booking.

2.12. Performance requirements:

1. The CPBS shall be available 24/7
2. The CPBS shall be able to accommodate 50 simultaneous users at a time.

Chapter 3: SYSTEM DESIGN

3.0. System environment:

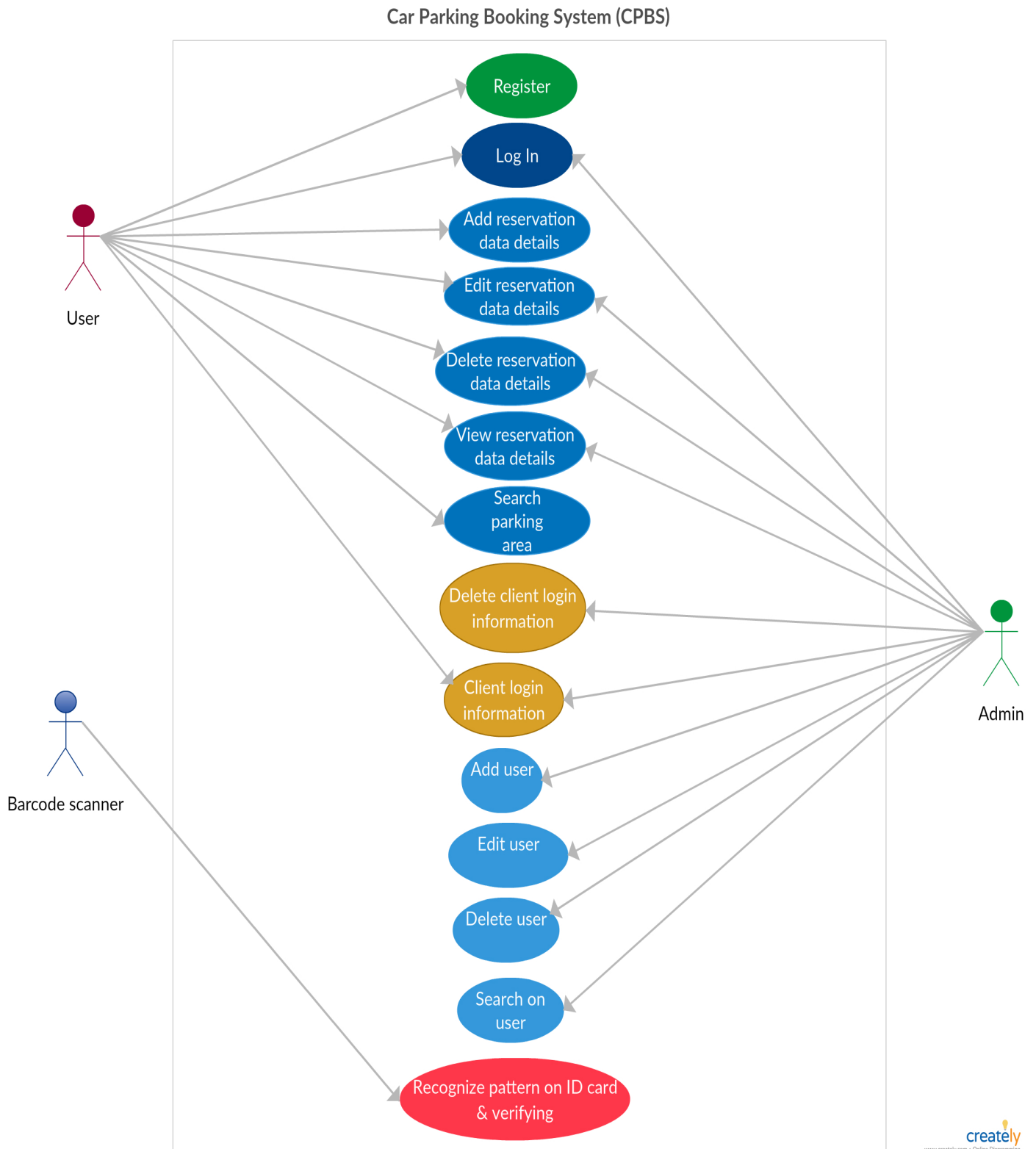


Figure 3.0. Use case diagram

3.1. Use case diagram:

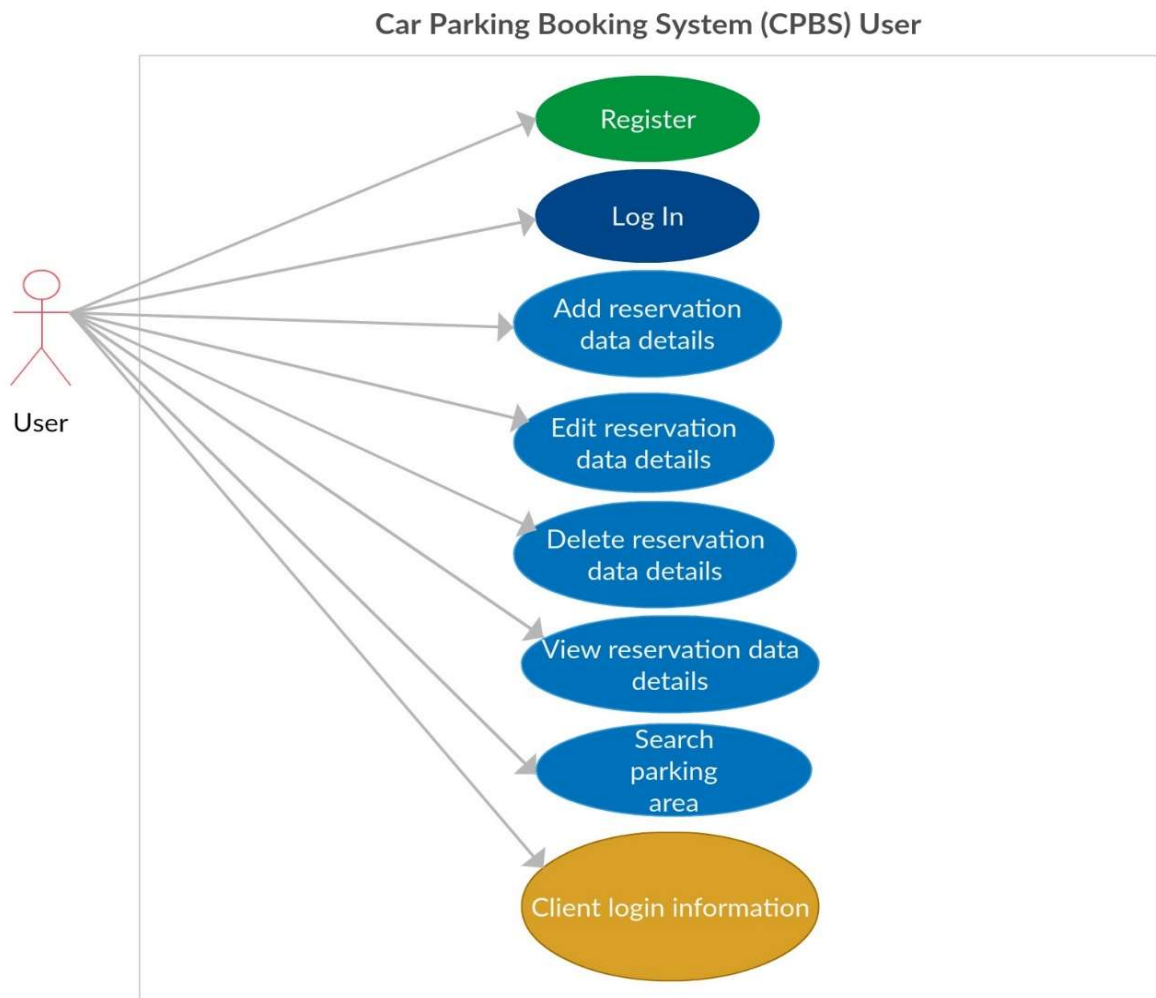


Figure 3.1. Use case diagram (User)

Use case name: CPBS manage booking.

Primary actors: User.

User – want to reserve, edit, delete and view a car parking.

Database (CPBS) – ensures that users are able to book parking places.

Brief description: this use case describes how the user manage his reservation by add, edit, delete, view and search for it,

In addition, the user can access to his log in information.

Trigger: the customer uses the CPBS website to book a parking space.

Normal flow of events:

1. User open to the CPBS website.

2. User shall register his information and his car information to the CPBS.
3. User can log in to the CPBS.
4. User access to the CPBS website
5. User chooses what parking area based on list of locations that has registered if it is available.
6. User inserts his information regarded to the reservation such as time duration, date duration and the location.
7. User confirm his order.
8. User receives verification of booking.
9. User can access his log in information to modify it.





Figure 3.1.0 Use case diagram (Admin)

Use case name: CPBS manage user.

Primary actors: Admin.

Admin – want to edit, delete and view a car parking.

Database (CPBS) – ensures that admin are able to confirm, check and modifies some parts of the system.

Brief description: this use case describes how the admin to administers permissions by add, edit, delete, view and search for users or reservations if the system allow for it.

In addition, the admin can access to the client log in information if something happened to the CPBS.

Trigger: the admin uses the CPBS website to manage client information or the client booking.

Normal flow of events:

1. Admin shall register his information to the CPBS.
2. Admin can log in to the CPBS.
3. Admin access to the CPBS website.
4. Admin manage the user reservations and check for user information.



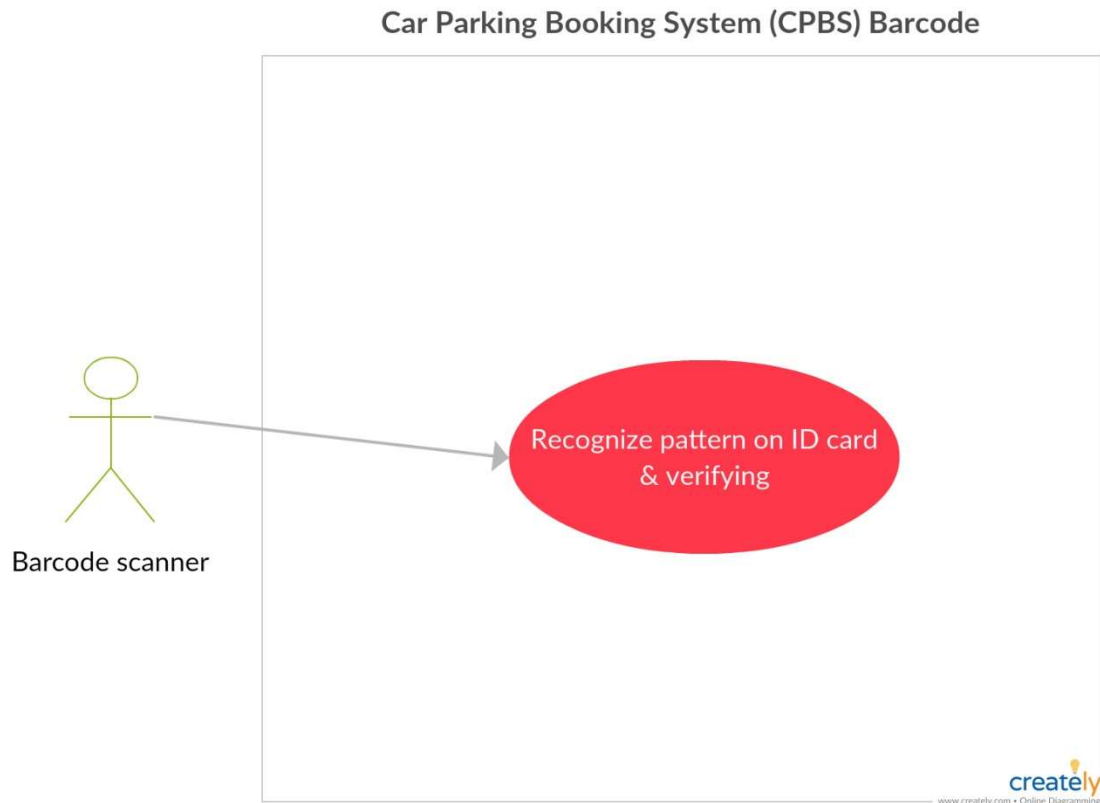


Figure 3.1.1 Use case diagram (Barcode)

Use case name: CPBS Barcode.

Primary actors: Barcode scanner.

Database (CPBS) – check the ID number that has scanned on the barcode and compare it with the data on the website.

Brief description: when the user pass his card on the device and when it read the ID number the barcode will compare it to the information on the database and when comparing is done and verified the user it will give the user permission to go.

Trigger: The barcode should be to identify the user.

Normal flow of events:

1. Barcode recognize the number on the ID card.
2. Barcode compare the ID number with information that entered in the website.
3. Barcode should give permission to the user that has verified.

3.2. Use case description:

Use case name	CPBS booking parking.
Trigger	Selection menu.
Precondition	User – wants to book a parking online.
Basic path	<ol style="list-style-type: none">1. User access to CPBS.2. User chooses what place he want to park in based on a list of available slots.3. User chooses the date and time duration to reserve a paring place.4. User confirm the order.5. User receives verification of booking.
Alternate path	N/A
Exception	If there is a connection failure the departemental server returns to the wait state.



3.3. Sequence Diagram:

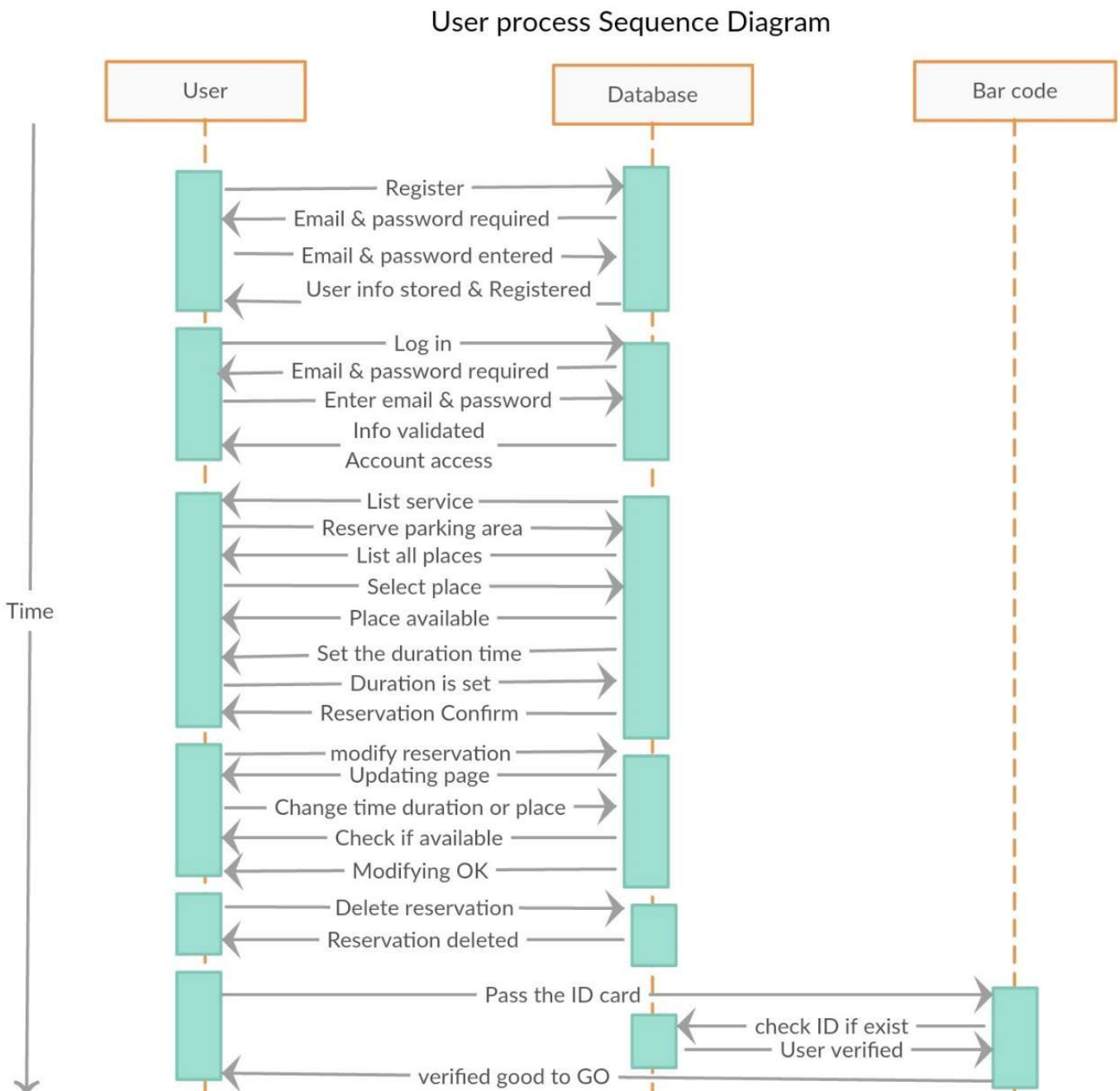


Figure 3.3. Sequence diagram (User)

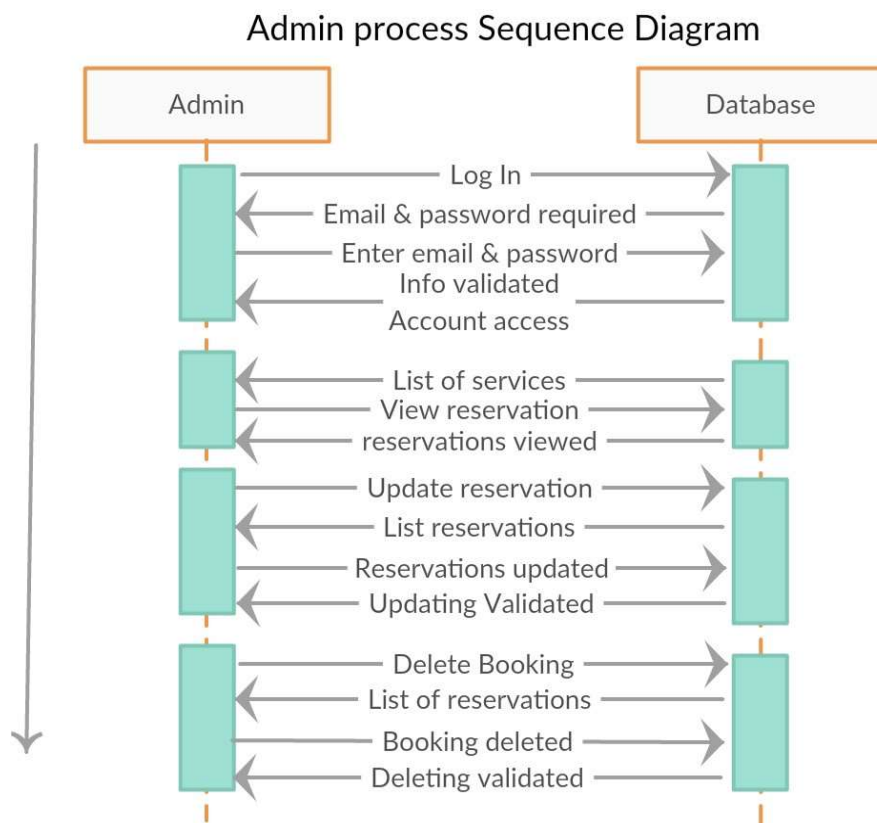


Figure 3.3.0 Sequence diagram (Admin)

3.4. Activity diagram:

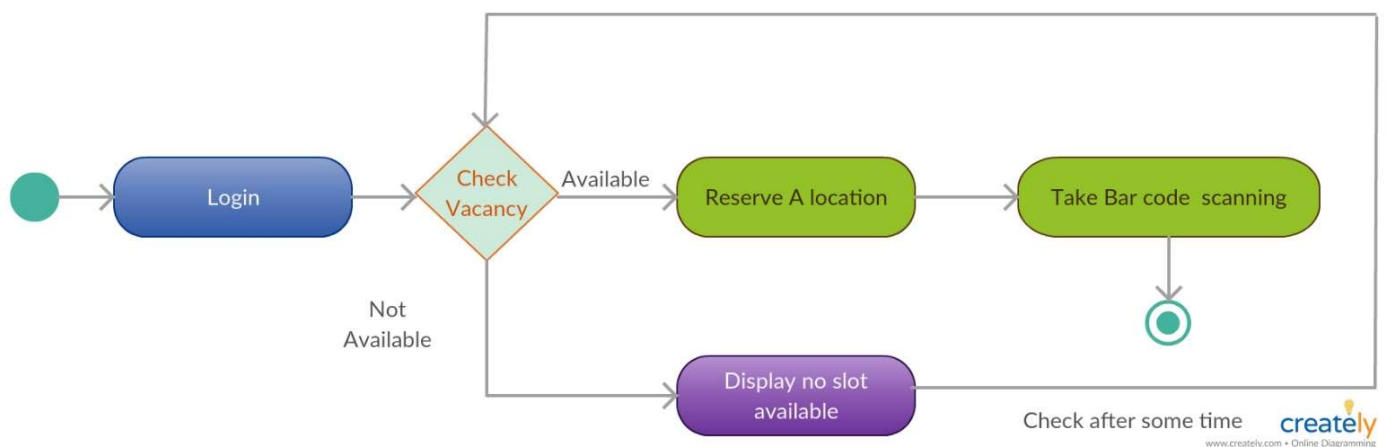


Figure 3.4. Activity diagram

3.5. Entity relationship diagram (ERD):

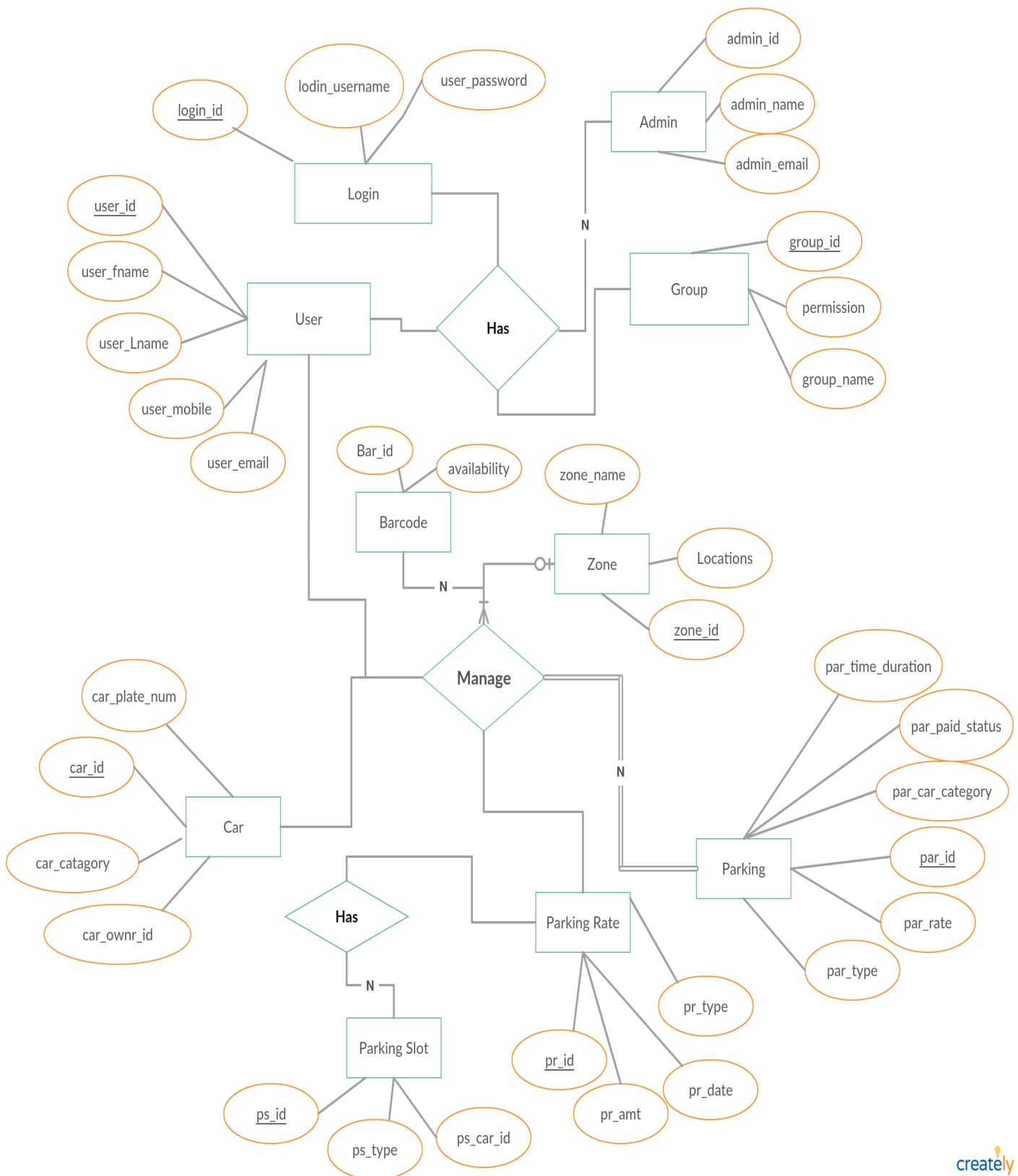


Figure 3.5. Entity Relationships diagram (ERD)

3.6. Class diagram:

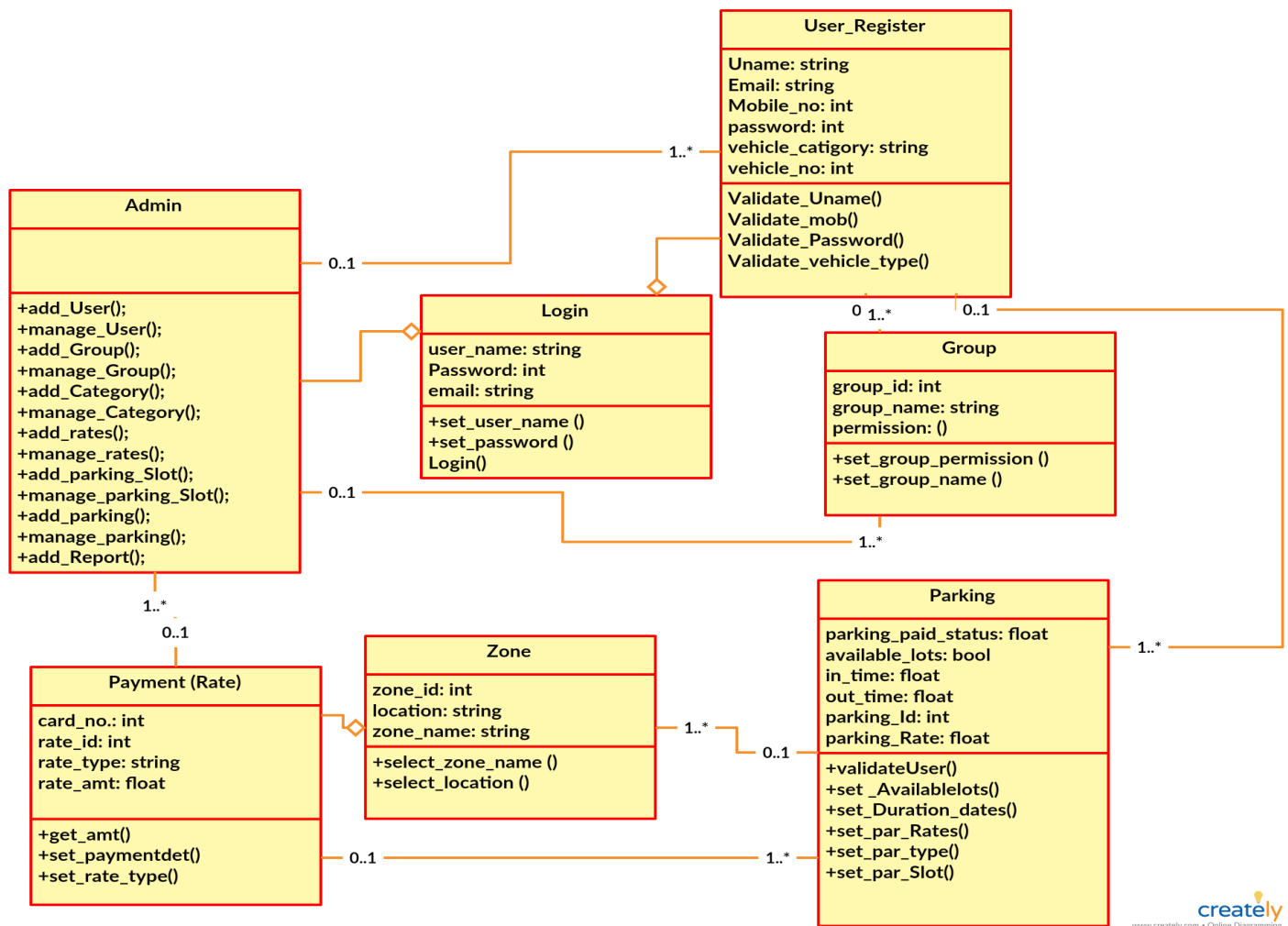


Figure 3.6. Class diagram

3.7. Data flow diagram (DFD):

DATA FLOW DIAGRAM

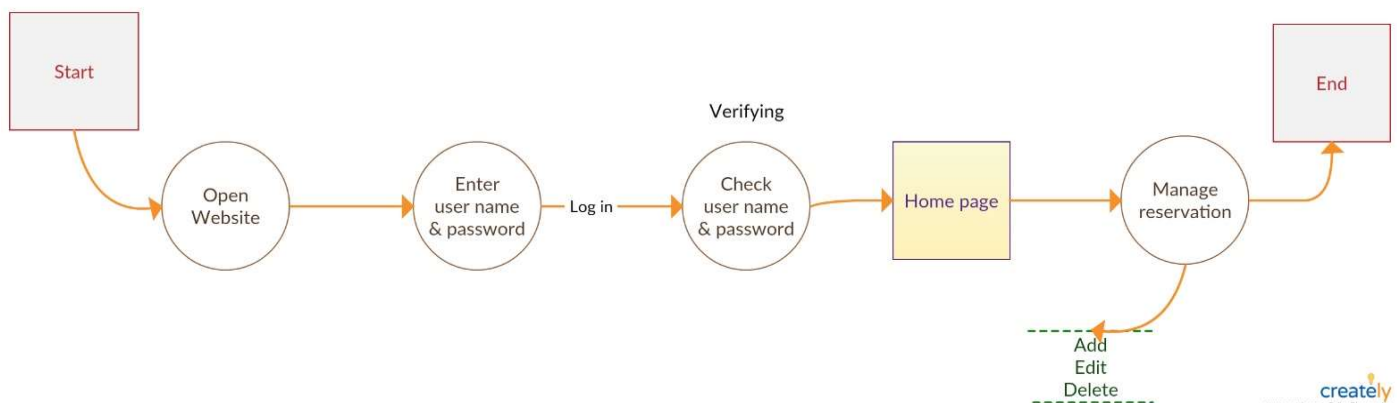
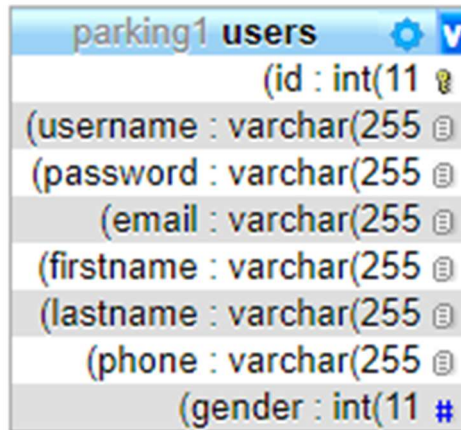


Figure 3.7. Data flow diagram (DFD)

Chapter4: WEBSITE DESIGN

4.0. Design of CPBS Database:

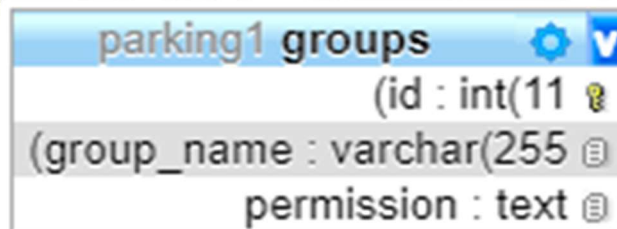
4.1. Database tables:



parking1 users	
(id : int(11	
(username : varchar(255	
(password : varchar(255	
(email : varchar(255	
(firstname : varchar(255	
(lastname : varchar(255	
(phone : varchar(255	
(gender : int(11	#

Figure 4.1.0. Users DB table

This table describes users and how register their information.



parking1 groups	
(id : int(11	
(group_name : varchar(255	
permission : text	

Figure 4.1.1. Groups DB table

This table is about making a group for identifying if the employee belongs to staff or administrator, and have their permissions. And this table if I have group staff. (Dividing users).

parking1 user_group	
(id : int(11)	
(user_id : int(11)	#
(group_id : int(11)	#

Figure 4.1.2. User group DB table

This table is for user who belongs to what group wither administrator or staff.

parking1 vechile_category	
(id : int(11)	
(name : varchar(255)	
(active : int(11)	#


Figure 4.1.3. Vechile category DB table

This table describes how many vehicle categories will be registered.

parking1 company	
(id : int(11)	
(name : varchar(255)	
(address : varchar(255)	
message : text	
(currency : varchar(255)	

Figure 4.1.4. Company DB table

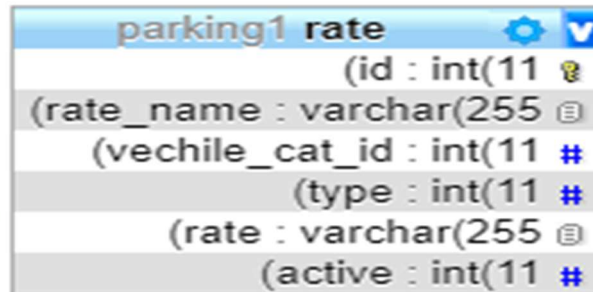
This table will describes the company that deals with the CPBS project.



parking1 slots
(id : int(11) ?)
(slot_name : varchar(255) ?)
(active : int(11) #)
(availability_status : int(11) #)

Figure 4.1.5. Slots DB table

The table discuss about the parking spaces.



parking1 rate
(id : int(11) ?)
(rate_name : varchar(255) ?)
(vechile_cat_id : int(11) #)
(type : int(11) #)
(rate : varchar(255) ?)
(active : int(11) #)

Figure 4.1.6. Rate DB table

In rate table it shows how different of the rate or value of payment, such as private cars, trucks or if their events to increase the price or decrease it.



parking1 parking
(id : int(11) ?)
(parking_code : varchar(255) ?)
(vechile_cat_id : int(11) #)
(rate_id : int(11) #)
(slot_id : int(11) #)
(in_time : varchar(255) ?)
(out_time : varchar(255) ?)
(total_time : varchar(255) ?)
(earned_amount : varchar(255) ?)
(paid_status : int(11) #)

Figure 4.1.7. Parking DB table

In this table, it will show you the process of parking and what it's attribute.

parking1 transactions
street : text
plot : text
status : text
model : text
vehicle : text
platenumber : text
email : text
account : text
d1 : text
d2 : text
charge : text
(id : int(5))

Figure 4.1.8. Transactions DB table

This table addresses the process of reservation, while it stores receipts after the booking with names of street, car model, email, account and date.

parking1 zones
street : text
plot : text
status : text
model : text
vehicle : text
platenumber : text
email : text
account : text
d1 : text
d2 : text
charge : text
(id : int(5))

Figure 4.1.9. Zones DB table

This table is similar to parking table, it shows how the distribution of parking locations in detail, vehicle category and parking rates.

4.2. Design of CPBS interface:

4.3. Admin interface:

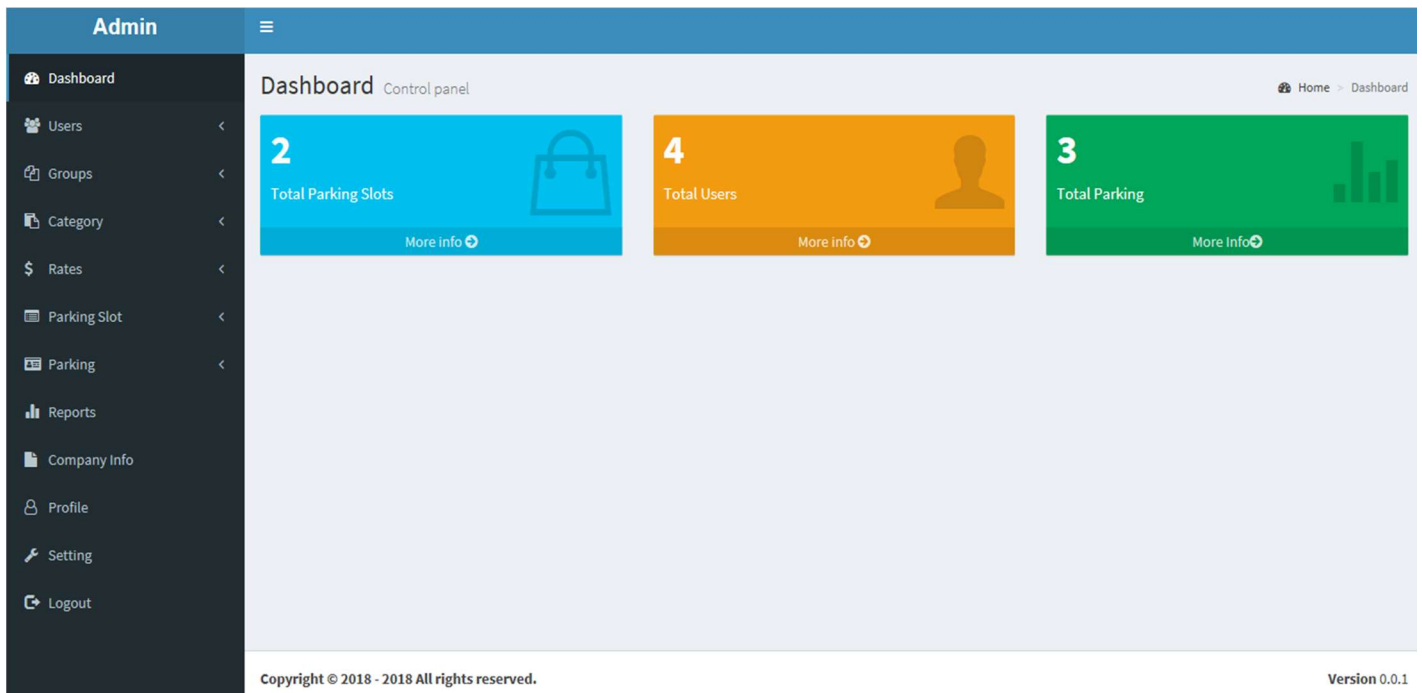


Figure 4.3.0. Dashboard interface.

This page shows the dashboard control panel it describes a brief or information about how many parking reserved and users that have been register.

Figure 4.3.1. Add users interface.

This page shows how the admin registering users or staff their information and assign them in which group.

Username	Email	Name	Phone	Group	Action
messi	leo@messi.com	leo messi	55757575	Staff	
osama123	os.aljamal1@gmail.com	osama aljamal	2541369874	Customers	
rakan_jij	wantedv4@gmail.com	rakan jijakli	0501220120	employee	

Figure 4.3.2. Manage users interface.

This page called manage users, it allow the admin to modify, view and delete user some information.

Dashboard
Users
Groups
Add Group
Manage Groups
Category
Rates
Parking Slot
Parking
Reports
Company Info
Profile
Setting
Logout

Manage Groups

Add Group

Group Name

Enter group name

Permission

	Create	Update	View	Delete
Users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Category	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company	-	<input type="checkbox"/>	-	-
Setting	-	<input type="checkbox"/>	-	-
Profile	-	-	<input type="checkbox"/>	-

Save Changes
Back

Figure 4.3.3. Add group interface.

This page called add group for users like classifying them in staff, super admin or costumer. After that, given the users permission.

Dashboard
Users
Groups
Category
Rates
Parking Slot
Parking
Reports
Company Info
Profile
Setting
Logout

Manage Groups

Edit Group

Group Name

Staff

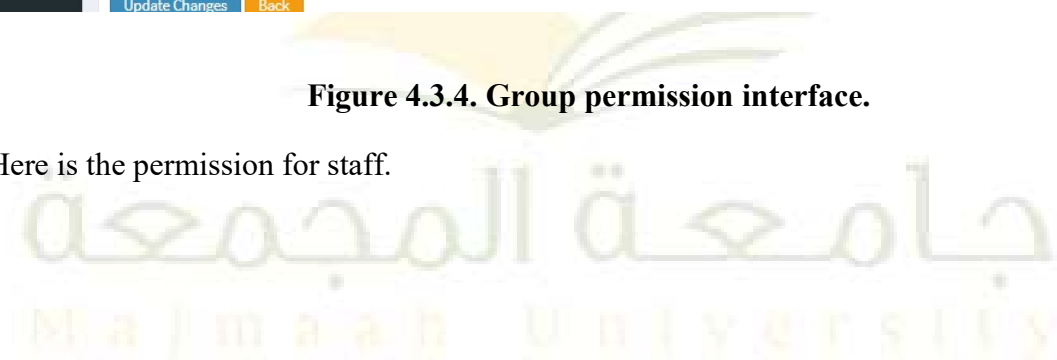
Permission

	Create	Update	View	Delete
Users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Category	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rates	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Slots	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parking	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Company	-	<input type="checkbox"/>	-	-
Setting	-	<input type="checkbox"/>	-	-
Reports	-	-	<input checked="" type="checkbox"/>	-
Profile	-	-	<input type="checkbox"/>	-

Update Changes
Back

Figure 4.3.4. Group permission interface.

Here is the permission for staff.



Dashboard

Users

Groups

Category

Rates

Add Rate

Manage Rates

Parking Slot

Parking

Reports

Company Info

Profile

Setting

Manage Rates

Add Rate

Rate name

Rate name

Category

Select Category

Type

Select Rate

Rate

Rate

Active

Active

Save Changes

Back

Figure 4.3.5. Add rates interface.

In rates page it can be add a rate or price for each parking area or parking slot, and it can be determine name of the rate, and what is the rate for each car category and what type of rate with it's hourly or fixed, and what is the cost.

Dashboard

Users

Groups

Category

Rates

Add Rate

Manage Rates

Parking Slot

Parking

Reports

Manage Rates

+ Add Rate

Manage Rates

Show 10 entries

Search:

Rate name	Type	Rate	Category	Status	Action
jjj	Fixed	\$ 888	jjjj	Active	
kkkkkkkkkkkk	Hourly	\$ 99	nnn	Active	

Showing 1 to 2 of 2 entries

Prev

Figure 4.3.6. Manage rates interface.

Managing the rate by changing or delete some of rates names.

Dashboard

Users

Groups

Category

Rates

Parking Slot

Parking

Add Parking

Manage Parking

Reports

Manage Parking

Add Parking

Slot

~~Select~~

Category

~~Select~~

Rate

~~Select Category~~

Save Changes

Back

Figure 4.3.7. Add parking interface.

The parking webpage is about selecting which slot should taken and determine the vehicle category along with rates.

Dashboard

Users

Groups

Category

Rates

Parking Slot

Parking

Add Parking

Manage Parking

Reports

Company Info

Profile

Manage Parking

+ Add Parking

Show 10 entries

Search:

Parking code	Check-in	Check-out	Vechile type	Rate name	Rate	Slot	Total time	Total Amount	Paid Status	Action
PA-3AB755	2018-10-10 10:39 am	-	jjjj	jjj	\$ 888	kkkk	hour	\$	Not Paid	<div> <div></div> <div></div> </div>
PA-D79DA7	2018-09-23 06:15 am	-	nnn	kkkkkkkkkkkk	\$ 99	nnn	hour	\$	Not Paid	<div> <div></div> <div></div> </div>
PA-FAFA48	2018-09-23 06:13 am	2018-09-23 06:13 am	jjjj	jjj	\$ 888	kkkk	1 hour	\$ 888	Paid	<div> <div></div> <div></div> </div>

Figure 4.3.8. Manage parking interface.

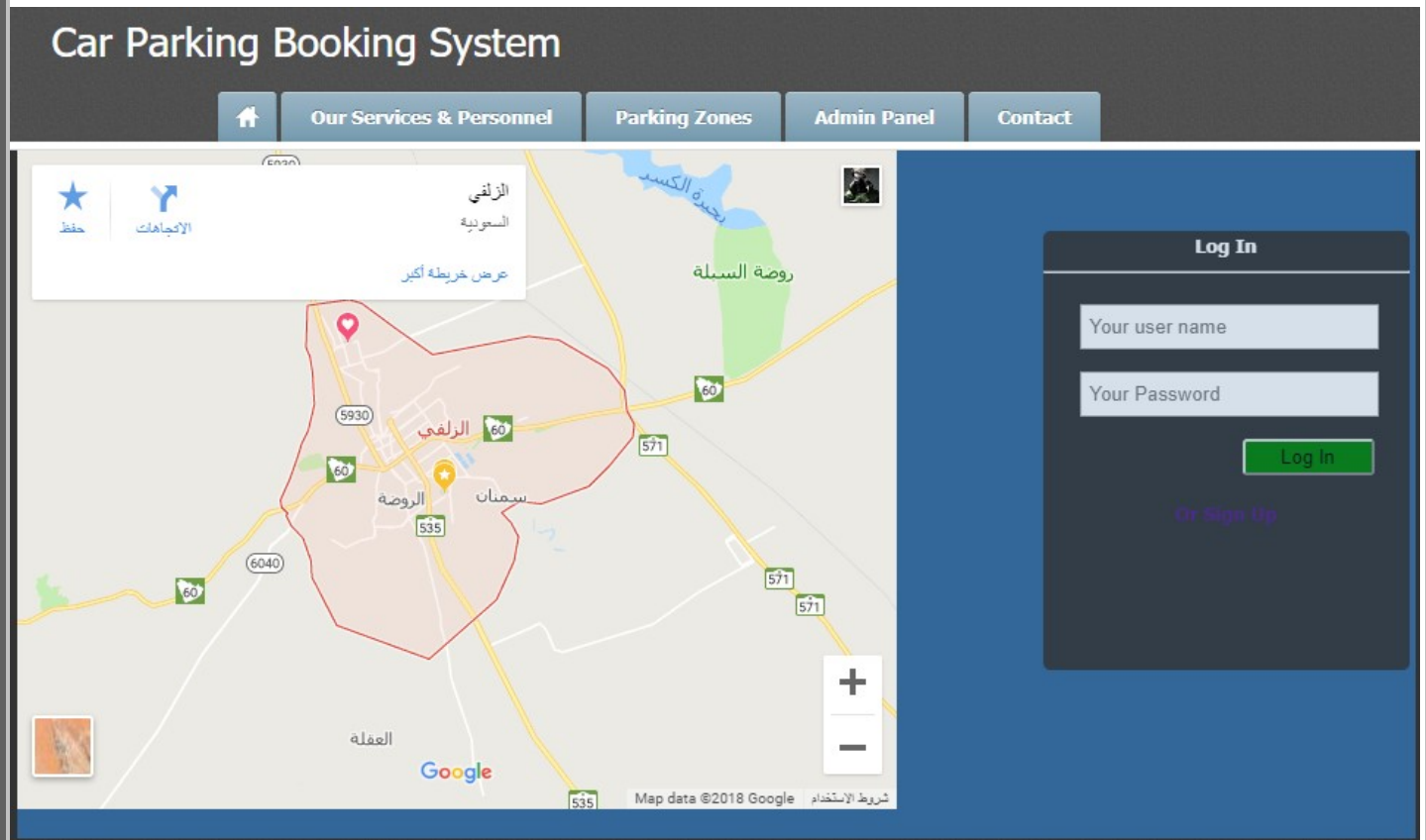
This webpage shows managing the parking area and shows some details about parking spaces.

4.4. User interface:

The screenshot displays the 'Car Parking Booking System' web application. The header features a dark blue bar with the system name in white. Below the header is a navigation menu with five items: 'Our Services & Personnel', 'Parking Zones', 'Admin Panel', and 'Contact'. The main content area is split into two sections. On the left, there is a Google Map of Riyadh, Saudi Arabia, with a red outline indicating a specific parking zone. The map includes labels for 'الرياض' (Riyadh), 'الروضة' (Roudha), and 'القصبة' (Al-Qasba). On the right, there is a 'Sign Up' form with the following fields: Username, Email, Password, Confirm Password, First name, Last name, and Phone. Below these fields are radio buttons for 'Male' and 'Female', and a 'Sign Up' button. A 'Back' link is also present. At the bottom of the page, there is a banner with the text 'Safe Park in any place of KSA' and a link 'Or Log In'.

Figure 4.4.0. User registering interface

First webpage it's about user registering information.



Safe Park in any place of KSA

Figure 4.4.1. User logging in interface

This page is about login and sign up process.

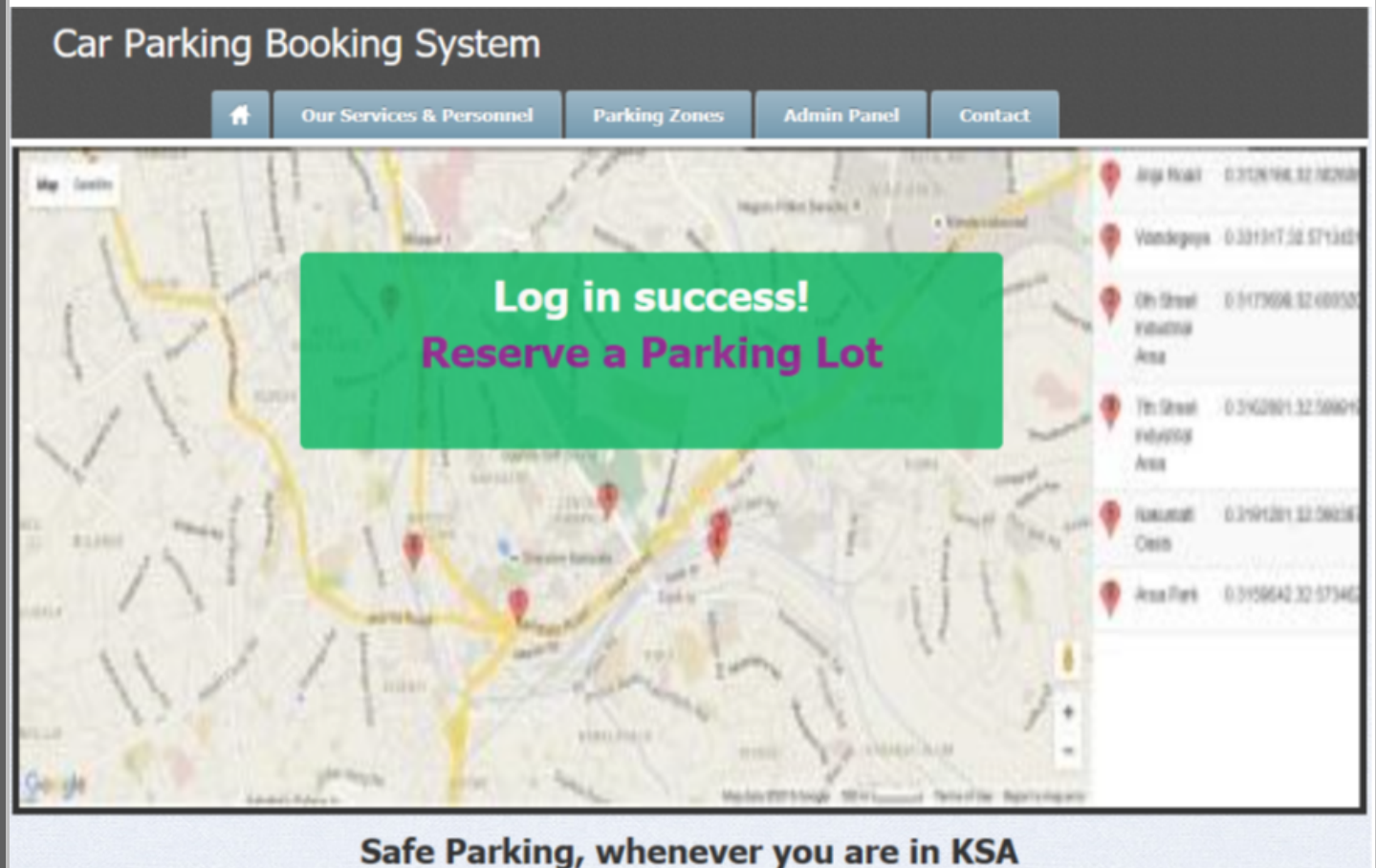


Figure 4.4.2. User confirmation interface

After the user logging in success the user is able to reserve a parking slot.

Car Parking Booking System

[Our Services & Personnel](#)[Parking Zones](#)[Admin Panel](#)[Contact](#)

Parking Lots Status

Red -> Reserved/Occupied , Yellow -> Available

PL 001	PL 010
PL 002	PL 011
PL 003	PL 012
PL 004	PL 013
PL 005	PL 014
PL 006	PL 015
PL 007	PL 016
PL 008	PL 017
PL 009	PL 018

Safe Parking, whenever you are in KSA

Figure 4.4.3. Slots status interface

The user can check his reservation and slots status before and after booking.

The screenshot shows the 'Car Parking Booking System' header with navigation links: Home, Our Services & Personnel, Parking Zones, Admin Panel, and Contact. The main content area features a form titled 'Describe your Vehicle'. It includes a 'Model' text input field containing 'nissan GT-R' and a 'Vehicle Type' dropdown menu set to 'Car'. A blue 'Proceed' button is at the bottom of the form.

Figure 4.4.4. Booking interface

When user click on the link regarding to booking the website transmit user to register his car information and car type.

The screenshot shows the 'Car Parking Booking System' header with navigation links: Home, Our Services & Personnel, Parking Zones, Admin Panel, and Contact. The main content area features two forms. The first form, 'Parking Details', includes a 'Recommended Region For You - as per your vehicles body size' section with two dropdown menus: 'Crowne Plaza Riyadh Minhal - Cars Only' and 'PL 010'. Below these is a 'Plate Number' text input field containing '123456lkj'. The second form, 'Billing Information', includes an 'Enter Credit Card Number:' text input field containing '14poo1255'. Below this, it states 'Amount to be charged: UGX. 1000/-'. A blue 'Proceed to Date & Time' button is at the bottom of the forms.

Figure 4.4.5. Booking interface 2

On the next page the user must select the location or area, then he select the parking slot and car plate number, after that the user insert the credit card number.

Car Parking Booking System

Home | Our Services & Personnel | Parking Zones | Admin Panel | Contact

Specify Date and time to book

From:

12/12/2018 11:05AM

To:

12/26/2019 12:05AM

Amount to be charged: UGX. 1000/-

Book

Figure 4.4.6. Booking interface3

Finally, the user choose the proper date for his parking or date and time duration.

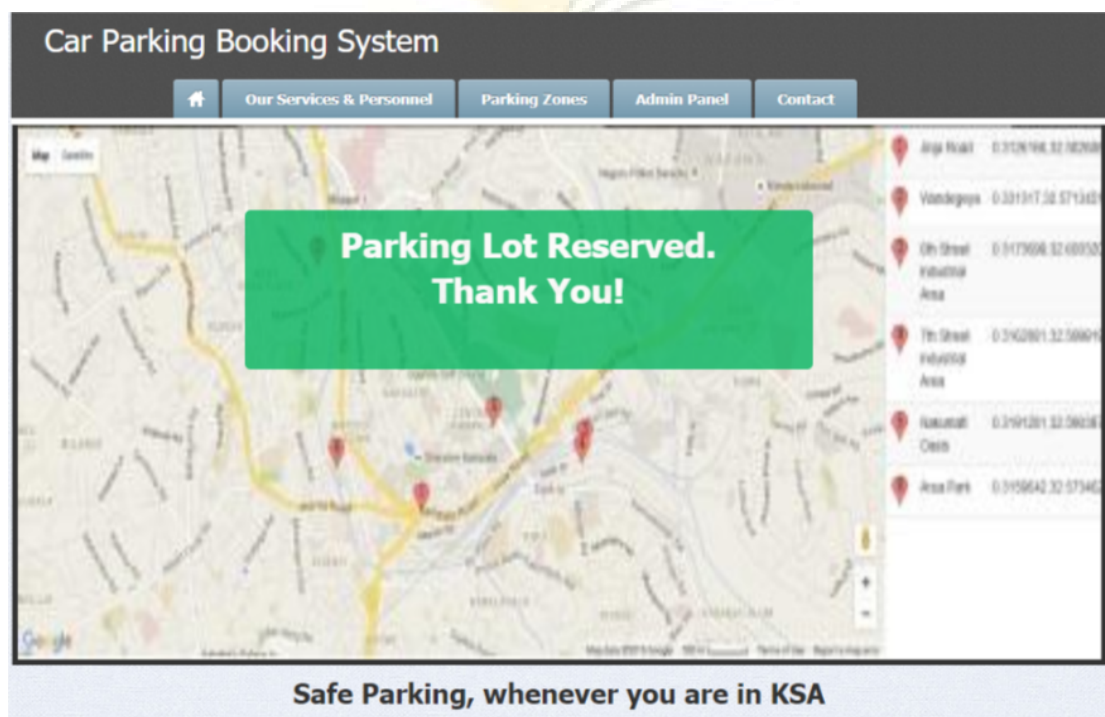


Figure 4.4.7. Booking confirmation interface

When parking reservation succeeded, the website will confirm it with thanking message that the booking is accepted.

4.5. Generating barcode source code:

```
use Picqer\Barcode\Exceptions\BarcodeException;
use Picqer\Barcode\Exceptions\InvalidCharacterException;
use Picqer\Barcode\Exceptions\InvalidCheckDigitException;
use Picqer\Barcode\Exceptions\InvalidFormatException;
use Picqer\Barcode\Exceptions\InvalidLengthException;
use Picqer\Barcode\Exceptions\UnknownTypeException;

abstract class BarcodeGenerator
{
    const TYPE_CODE_39 = 'C39';
    const TYPE_CODE_39_CHECKSUM = 'C39+';
    const TYPE_CODE_39E = 'C39E';
    const TYPE_CODE_39E_CHECKSUM = 'C39E+';
    const TYPE_CODE_93 = 'C93';
    const TYPE_STANDARD_2_5 = 'S25';
    const TYPE_STANDARD_2_5_CHECKSUM = 'S25+';
    const TYPE_INTERLEAVED_2_5 = 'I25';
    const TYPE_INTERLEAVED_2_5_CHECKSUM = 'I25+';
    const TYPE_CODE_128 = 'C128';
    const TYPE_CODE_128_A = 'C128A';
    const TYPE_CODE_128_B = 'C128B';
    const TYPE_CODE_128_C = 'C128C';
    const TYPE_EAN_2 = 'EAN2';
    const TYPE_EAN_5 = 'EAN5';
    const TYPE_EAN_8 = 'EAN8';
    const TYPE_EAN_13 = 'EAN13';
    const TYPE_UPC_A = 'UPCA';
    const TYPE_UPC_E = 'UPCE';
```



```

const TYPE_MSI = 'MSI';

const TYPE_MSI_CHECKSUM = 'MSI+';

const TYPE_POSTNET = 'POSTNET';

const TYPE_PLANET = 'PLANET';

const TYPE_RMS4CC = 'RMS4CC';

const TYPE_KIX = 'KIX';

const TYPE_IMB = 'IMB';

const TYPE_CODABAR = 'CODABAR';

const TYPE_CODE_11 = 'CODE11';

const TYPE_PHARMA_CODE = 'PHARMA';

const TYPE_PHARMA_CODE_TWO_TRACKS = 'PHARMA2T';

/**
 * Get the barcode data
 *
 * @param string $code code to print
 * @param string $type type of barcode
 * @return array barcode array
 * @public
 */

```

This source code show how the barcode scanner is programmed by generating barcode, each barcode read in different way and specific way with a different language.

And each barcode what is the language that read from. Such as: some barcode read in Arabic language and other is reading English.

```

const TYPE_CODE_128_A = 'C128A';

const TYPE_CODE_128_B = 'C128B';

const TYPE_CODE_128_C = 'C128C';

```

for example this code to identify the languages that the barcode must read from.

4.6. Source code:

```
<?php
$connection = mysql_connect('localhost', 'root', '');
if (!$connection){
    die("Database Connection Failed" . mysql_error());
}
$select_db = mysql_select_db('parking1');
if (!$select_db){
    die("Database Selection Failed" . mysql_error());
}
```

This code is about database connection.

```
<li class="dropdown">
    <a href="">Parking Zones</a>
    <ul class="large">
        <li><a href="region-1.php">Majmaah University - Cars Only</a></li>
        <li><a href="region-2.php">Mena Grand Khaldia Hotel Riyadh- Cars Only</a></li>
        <li><a href="region-3.php">Riyadh Palace Hotel - Cars and Lorries</a></li>
        <li><a href="region-4.php"> Olaya General St - Cars Only</a></li>
        <li><a href="region-5.php">King Khalid University - Cars
Only</a></li>
        <li><a href="region-6.php">King Khalid Airport - Cars
Only</a></li>
    </ul>
</li>
```

This code shows the dropdown list of some parking locations

```
<?php
require('inc\dbcon.php');
session_start();
```

```

$email = $_SESSION["email"];

$model = $_SESSION["model"];

$vehicle = $_SESSION["vehicle"];

$status="RESERVED";

$platenumber = $_SESSION["platenumber"];

$plot = $_SESSION["plot"];

$account = $_SESSION["account"];

$street = $_SESSION["street"];

$from = $_SESSION["from"];

$to = $_SESSION["to"];

$charge = "60";

/*CHECK IF RESERVED */

$sql="SELECT * FROM zones WHERE street='$street' and plot='$plot'";

$result=mysql_query($sql);

// Mysql_num_row is counting table row
$count=mysql_num_rows($result);

// If

if($count==1){

    header('location:error-book.php');

}

else

{

    $query = "INSERT INTO `zones` (status, email, model,
vehicle,street,plot,platenumber,account,charge,d1,d2) VALUES ('$status', '$email', '$model',
'$vehicle' , '$street', '$plot', '$platenumber', '$account','$charge','$from','$to')";

```

```

$result = mysql_query($query);

$var = $_SESSION["from"];

$date = str_replace('/', '.', $var);
echo date('Y.m.d', strtotime($date));

if($result){

    //REDIRECT

    header('location:success-book.php');

exit;

    }

}

?>

```

This code shows how booking process is done

```

<body>

<section class="HomeKisii">

<section class="success">
<br/>

<p>Parking Lot Reserved.<br/><br/>Thank You!</p>

</section>

</section>

```

This block describe the success of the reservation.

```

<section class="success">

<br/>

<p>Log in success! <br/><br/><a href="your-car.php">Reserve a Parking Lot</a></p>

</section>

```

This code for log in success.

```

<?php

    require('inc\dbcon.php');

    // If the values are posted, insert them into the database.

    if (isset($_POST['fname']) && isset($_POST['password'])){

        $fname = $_POST['fname'];

        $lname = $_POST['lname'];

        $email = $_POST['email'];

        $password = $_POST['password'];

        $phone = $_POST['phone'];

        $username = $_POST['username'];

        $gender = $_POST['gender'];

        //check existence

        $sql="SELECT * FROM users WHERE email='$email'";

        $result=mysql_query($sql);

        // Mysql_num_row is counting table row
        $count=mysql_num_rows($result);

        // If result matched $myusername and $mypassword, table row must be 1 row

        if($count==1){

            echo "User exists, please use log in.";

            exit;

        }

        else

        {

            $jdate=getdate();

            $status="Active";

```

```

$query = "INSERT INTO `users` ( `username`, `password`, `email`, `firstname`,
`lastname`, `phone`, `gender`) VALUES ('$username', '$password', '$email', '$fname', '$lname',
'$phone', '$gender')";

echo( $query );

$result = mysql_query($query);

if($result){

    //REDIRECT

    header('location:success-sign-up.php');

exit;

}

}

}

?>

```

This code describe the sign up process.

```

<td <?php

    $sql="SELECT * FROM zones WHERE street='$street' and plot='PL 004'";
    $result=mysql_query($sql);

    $count=mysql_num_rows($result);

    if($count==1){

        echo "style=\"background: red;\"";

        ?>>PL 004</td><td <?php

            $sql="SELECT * FROM zones WHERE street='$street' and plot='PL 013'";

            $result=mysql_query($sql);

            $count=mysql_num_rows($result);

            if($count==1){

                echo "style=\"background: red;\"";

                ?>>PL 013</td>

```

This source code shows the parking region.

Chapter 5: Finality

5.0. Conclusions:

From this concept, I conclude that CPBS will help many people to find empty space in large parking area without wasting the time, and it will organize the parking area.

This website is easily accessible and easy to use.

Hence, this is the best alternative to Car Parking Booking System.

5.1. References:

1. <https://creately.com/>
2. https://en.wikipedia.org/wiki/Software_requirements_specification
3. <https://www.youtube.com/watch?v=QpdhBUYk7Kk>
4. <https://app.smartsurvey.co.uk/login?g=1&r=%2fsurvey%2fcollect%2fid%2f431045%3flive%3d1>
5. https://www.google.com.sa/search?safe=strict&ei=p9HbWq70IMfb6QSH8bv wCA&q=how+to+write+conclusion+srs+document&oq=how+to+write+conclusion+srs+document&gs_l=psy-ab.3...870136.878463.0.878767.13.13.0.0.0.0.527.2954.2-5j2j0j2.9.0....0...1c.1.64.psy-ab..4.1.302...35i39k1.0.eaWn5KAqUMo