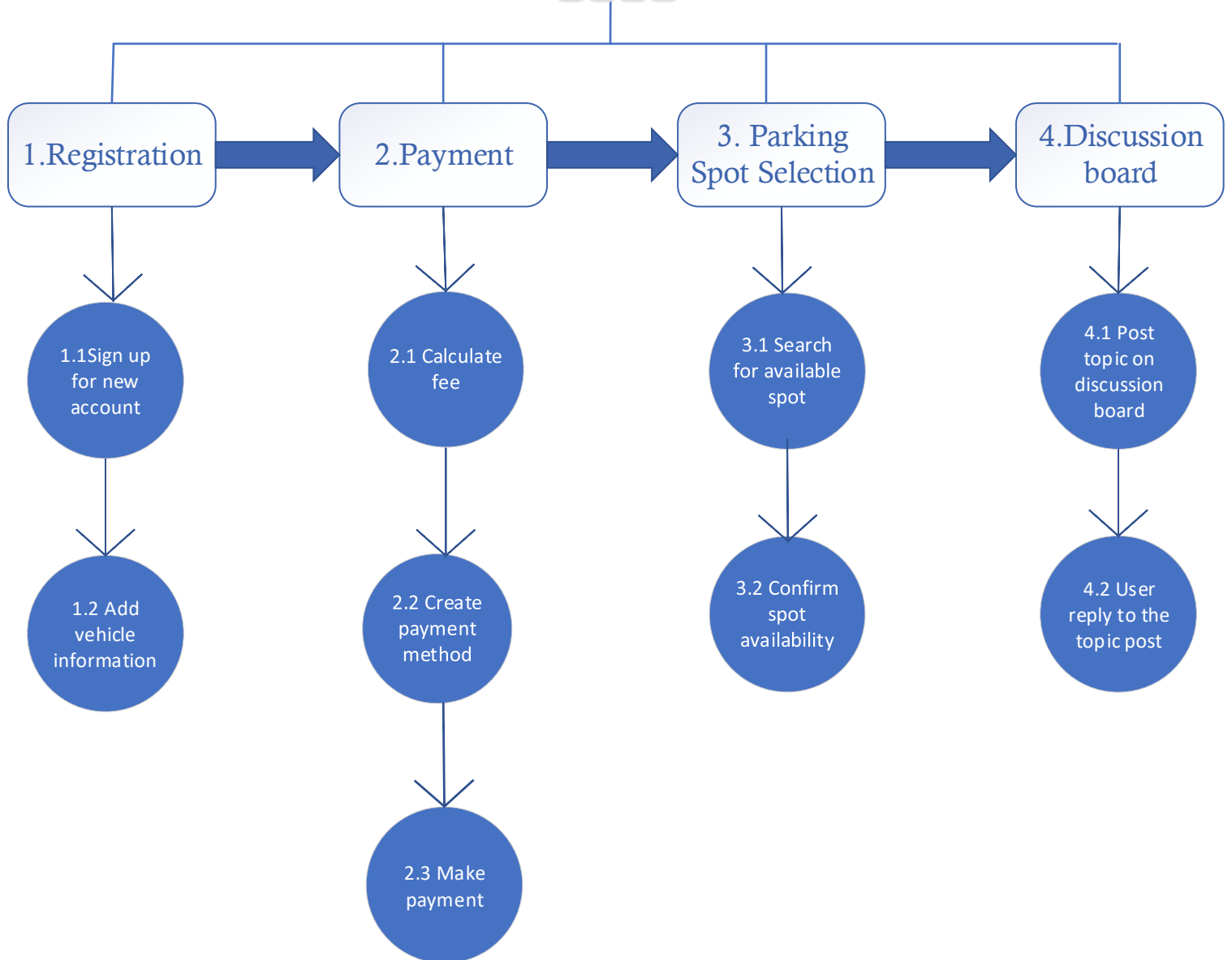


Decomposition diagram

Pasinee Mosby





Requirements document

Date: December 8, 2018

By: Pasinee Mosby

1. Scope statement

- Allow users to register/edit their profile and their vehicle information to use the app
- Allow users to use the app to help finding parking spots near their home
- Allow users to create discussion topics on the app discussion board where they can exchange ideas about the parking situation
- Allow administrators to remove inappropriate topics or comments on the discussion board

2. Out of scope

- System will not support parking rule/regulations and send notification to users in the release. Also, the system will not support to locate the users when they are somewhere else besides home at this phase.

3. Goals

- To create an application to help car owners in New York City area to find parking spots using GPS services from a satellite that are near their home.

4. Objectives

- Build an application to help user finding parking spots that are near their home
- An application with good response time
- The app is easy to use, inviting and secure from hacking

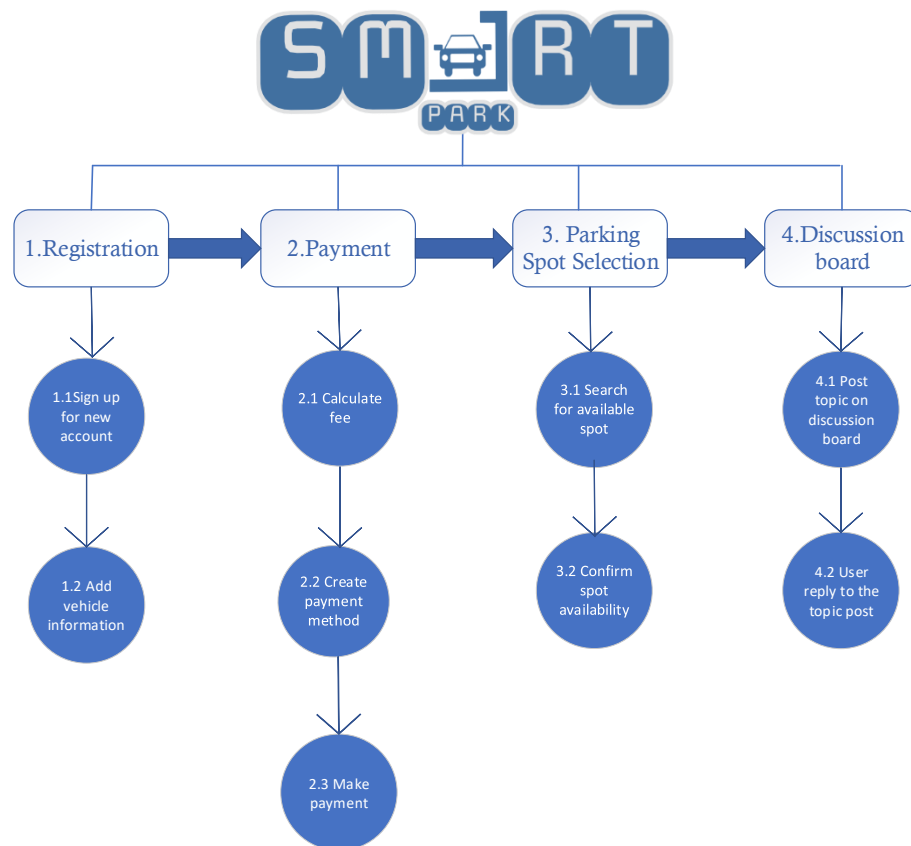
5. Risks

- There is lack of experience on technical skills of building the application and lack of resources which may affect timeline and the budget.

6. Constraints

- Budget is constrained by owner set budget of 400,000 dollars

7. Decomposition diagram



8. Functional requirements

1. Registration

1.1 Sign up for new account

1.1.1 The system will require the user to sign up by completing personal information by using names, email, phone number and address on the site.

1.1.2 The system will require the user to submit copy of identification.

1.1.3 Upon failure of validating information.

1.1.3.1 The system shall display the incorrect information status

1.1.3.2 The system shall allow the user to re-submit information

1.2 Add vehicle information

1.2.1 The system will require the user to add vehicle information including car model and license plate.

1.2.2 The user requires to update vehicle information upon changing to new vehicle

2. Payment

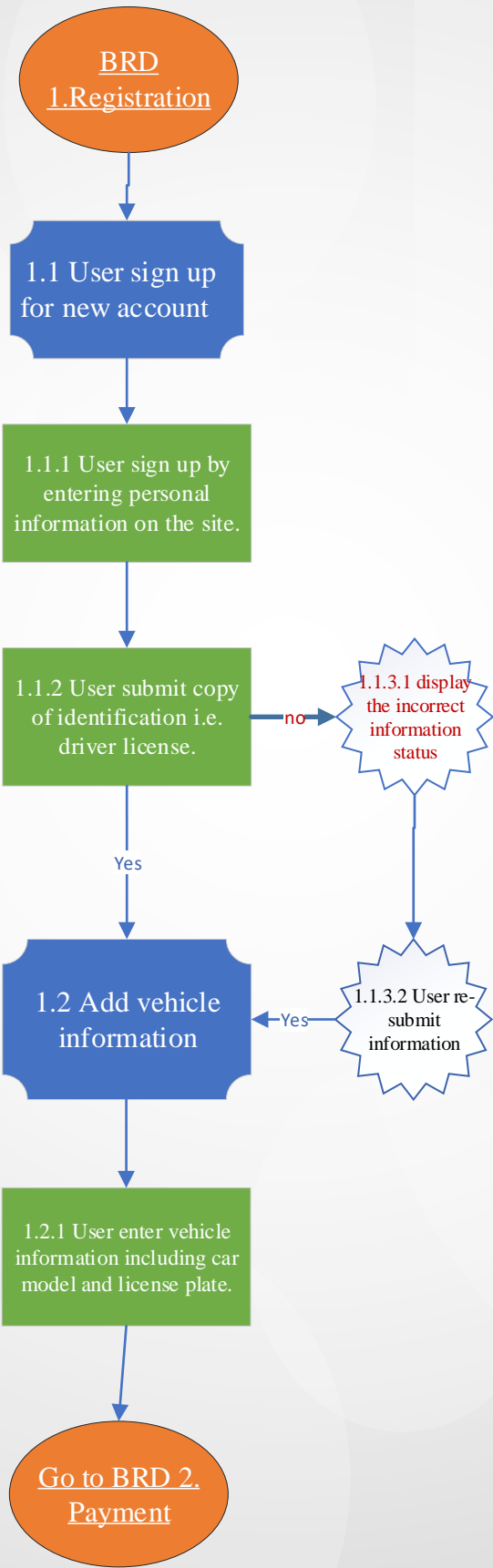
2.1 Calculate fee

2.1.1 The system will allow the user to select service options.

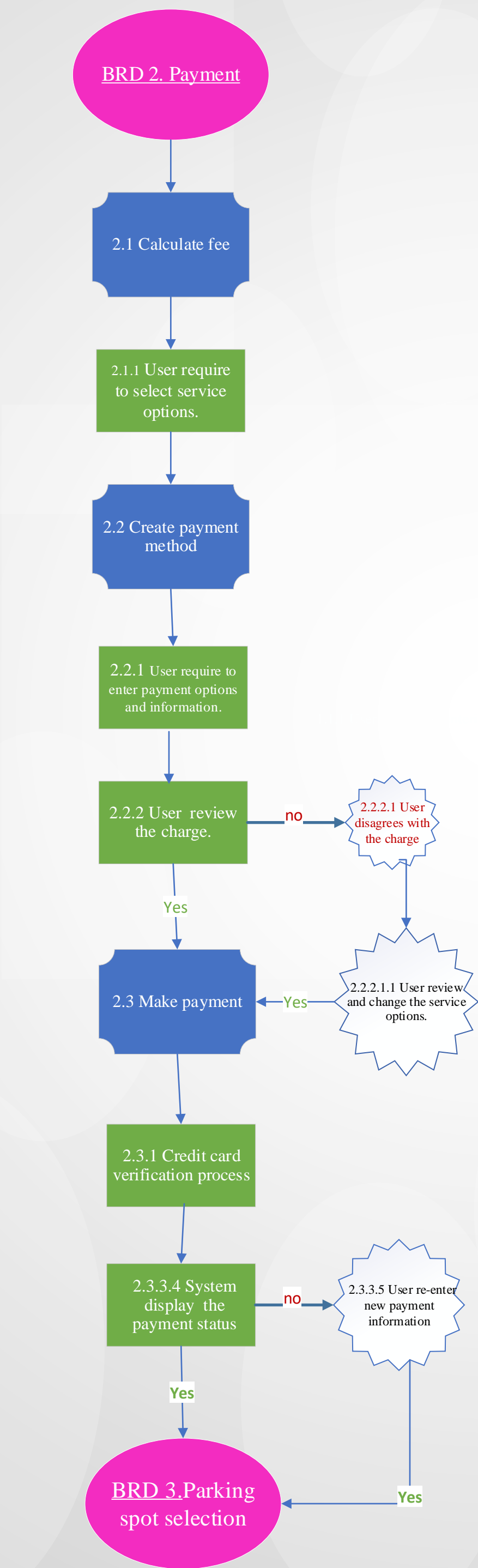
2.2 Create payment method

- 2.2.1 The system will require the user to enter payment options and information.
 - 2.2.2 The system will allow the user to review the charge.
 - 2.2.2.1 If you user disagrees with the charge
 - 2.2.2.1.1 The system will allow user to change the service options.
 - 2.3 Make payment
 - 2.3.1 The system shall contact the credit card to verify the entered information.
 - 2.3.2 The system will receive status information from the credit card processor.
 - 2.3.3 Upon failure of credit/debit card payment
 - 2.3.3.4 The system shall display the payment status
 - 2.3.3.5 The system shall allow the user to re-enter the payment information
 - 3. Parking spot selection
 - 3.1 Search for available spot
 - 3.1.1 The system shall allow users to request searching for parking spots near their home.
 - 3.1.2 The system shall find parking spots that are near their users' home (within 3-5 blocks)
 - 3.1.3 The system shall update every 5 minutes until a spot become available.
 - 3.2 Confirm spot availability.
 - 3.2.1 The system will send the location and address of the parking spot to the user via application.
 - 3.2.2 The system shall allow the user to user GPS services to take user from current location to the designated parking spot (near user's home)
 - 4. Discussion board
 - 4.1 Post topic on discussion board
 - 4.1.1 The system shall allow user to post topic on discussion board.
 - 4.1.2 The system shall allow administrator to remove inappropriate topics.
 - 4.2 User reply to the topic post
 - 4.2.1 The system shall allow user to reply to topic posted on discussion board.
 - 4.2.2 The system shall allow administrator to remove inappropriate comments and posts
9. Nonfunctional requirements
- 9.1 The system shall require adding more data storage for parking regulations that may be added to database and alerting the customers.
 - 9.2 The system shall be able to pick up the current address, for the situations where customers are somewhere else besides home.
10. Stakeholders
- Executive management, middle level management, sponsors, subject matter experts, users etc.

Process Flow 1



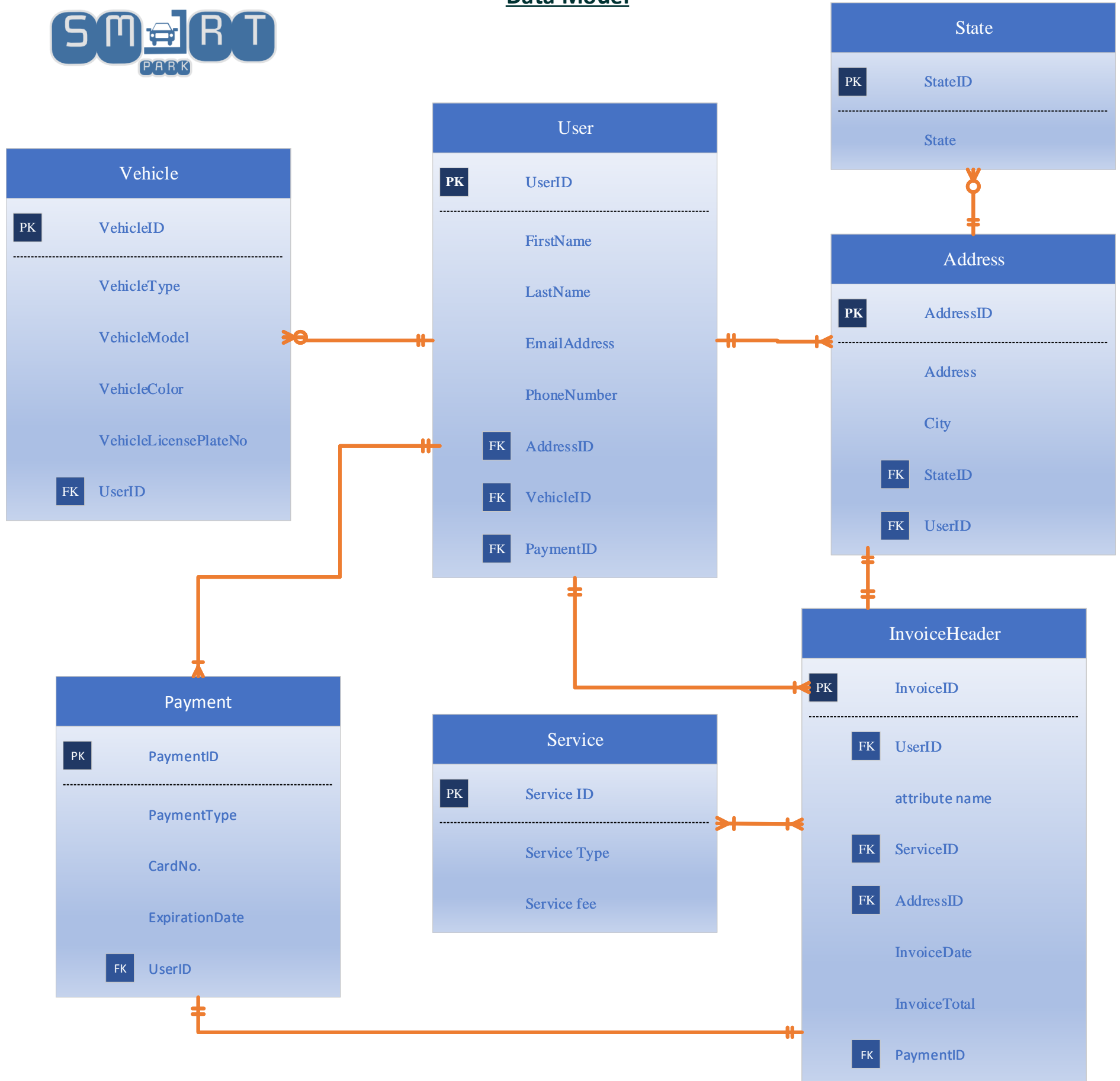
Process Flow 2





Data Model

Pasinee Mosby





SERVICE

VEHICLE

SIGN UP

PAYMENT



SIGN UP

FIRST NAME

Enter First name

LAST NAME

Enter Last name

EMAIL ADDRESS

Enter email address

ADDRESS 1

Enter address 1

ADDRESS 2

Enter address 2

CITY

Enter CITY

STATE

Select STATE



ZIP CODE

Enter ZIP CODE

PHONE NUMBER

Enter PHONE NUMBER

DATE OF BIRTH

MM/DD/YYYY



Save

Next

Cancel

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VEHICLE REGISTRATION

VEHICLE TYPE

Select Vehicle Type

▼

VEHICLE MODEL

Select Vehicle Model

▼

VEHICLE COLOR

Select Vehicle Color

▼

VEHICLE LICENSE NO.

Enter Vehicle License number

Save

Next

Cancel

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SERVICE SELECTION

SERVICE TYPE



MONTHLY
\$200



ANNUALLY
\$1,900



I agree to the Terms and Conditions

Back

Next

Cancel

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PAYMENT

PAYMENT TYPE

Select Payment type



**CREDIT/DABIT
CARD NUMBER**

Enter 16 digits Card Number

EXPIRATION DATE

Select Month



Select Year



CVV NO.

Enter 3 digits from the back of your card

Save

Next

Cancel



PAYMENT CONFIRMATION

NAME : Sara Page
EMAIL ADDRESS : Sarap@gmail.com
ADDRESS : 155 East 52nd Street, New York, NY 10022
PHONE NUMBER : 212 -754 -1234
PAYMENT TYPE : VISA
CREDIT/DABIT CARD NUMBER : xxxx xxxx xxxx 4784
SERVICE TYPE : Monthly \$200

| | |
|-----------------------------|------------------------|
| ORDER SUMMARY : | \$200 |
| PARKING TAX 18.375%: | \$36.75 |
| <u>ORDER TOTAL :</u> | <u>\$236.75</u> |

Back

Place your
Order

Cancel

1.Registration Use Case

| <u>Seq#</u> | <u>User Action</u> | <u>System action</u> |
|--------------------|---------------------------------|--|
| 1 | Select “Sign Up” from menu | Display “Sign Up” Screen |
| 2 | Enter First name | ----- |
| 3 | Enter Last name | ----- |
| 4 | Enter Email address | ----- |
| 5 | Enter Address | ----- |
| 6 | Enter City | ----- |
| 7 | Select State | ----- |
| 8 | Enter Phone number | ----- |
| 9 | Select DOB | ----- |
| 10 | Click save | System saves record |
| 11 | End Use Case | |
| 10.1 | ----- | User did not enter first name, last name, email address, address, city, state, phone number or DOB |
| 10.2 | ----- | System Displays error message |
| 10.3 | User enters missing information | Actions returns to line 10 |

2.Vehicle Registration

| <u>Seq#</u> | <u>User Action</u> | <u>System action</u> |
|--------------------|---------------------------------------|--|
| 1 | Select “Vehicle” from menu | Display “Vehicle” Screen |
| 2 | Select Vehicle Type | ----- |
| 3 | Select Vehicle Model | ----- |
| 4 | Select Vehicle Color | ----- |
| 5 | Enter Vehicle License number | ----- |
| 6 | Click save | System saves record |
| 7 | End Use Case | |
| 8 | ----- | User did not select Vehicle type, model, color or did not enter correct Vehicle License number |
| 9 | ----- | System Displays error message |
| 10 | User enter/select missing information | Actions returns to line 6 |

3.Service Selection Use Case

| <u>Seq#</u> | <u>User Action</u> | <u>System action</u> |
|--------------------|---|--|
| 1 | Select “Service” from menu | Display “Service” Screen |
| 2 | Select Service type | ----- |
| 3 | Click “I agree to the Terms and Conditions” | ----- |
| 4 | Click next | System saves record |
| 6 | End Use Case | |
| 7 | ----- | User did not select Service type, or click “I agree to the Terms and Conditions” |
| 8 | ----- | System Displays error message |
| 9 | User enter/select missing information | Actions returns to line 6 |

4.Payment Use Case

| <u>Seq#</u> | <u>User Action</u> | <u>System action</u> |
|--------------------|---------------------------------------|---|
| 1 | Select “Payment” from menu | Display “Payment” Screen |
| 2 | Select Payment type | ----- |
| 3 | Enter credit/debit card number | ----- |
| 4 | Select EXP. date | ----- |
| 5 | Enter CVV number | ----- |
| 6 | Click save or next | System display “Payment Confirmation” Screen |
| 7 | End Use Case | |
| 2.1 | ----- | User did not select Payment type, or enter incorrect credit/debit card number, EXP date, or CVV no. |
| 2.2 | ----- | System Displays error message |
| 2.3 | User enter/select correct information | Actions returns to line 6 |

5.Payment Confirmation Use Case

| <u>Seq#</u> | <u>User Action</u> | <u>System action</u> |
|--------------------|--|---------------------------------------|
| 1 | ----- | Display “Payment Confirmation” Screen |
| 2 | User review order | ----- |
| 3 | Click Place your order | System processes transaction |
| 4 | ----- | System display receipt |
| 5 | End Use Case | ----- |
| 3.1 | User disagrees with the charge. Click “Back” | ----- |
| 3.2 | ----- | Action returns to “Payment” Screen |