You will turn in a final copy of your [Prioritized Feature List](https://iu.instructure.com/courses/1824073/assignments/9468832). Use the information and feedback you have gained from the other assignments you have completed for the project to ensure this feature list contains an accurate reflection of what is required for your project.

You must turn this in as a PDF *and then* meet with one of the course instructors in order to be graded. This must be done **before** you leave for break. Instructors will not make individual appointments - you and at least half of your team must come to your scheduled meeting. Scheduling is done in Canvas.

You must turn in your finalized feature list to this assignment no later than the **night before** your meeting.

This final list, once approved by the instructor and graded in Canvas, will be a contract for what we expect you to produce in the spring semester.

What we did in past assignment:

**2.** **Prioritized Feature List**

The various user classes identified the following use cases and primary actors for the car sharing app CarMa:

|  |  |
| --- | --- |
| User class | Use Case |
| All | 1. Register as new user 2. Login 3. Reset password |
| User | 1. Put in credit card information 2. Put in the driver's license information 3. Use a map to locate a vehicle 4. Choose the type of vehicle 5. Give a time frame for pick up and drop off 6. Reserve vehicle 7. Summary of reservation 8. Modify reservation 9. Take photo of the car |
| Administration | 1. Verify license 2. Give refunds 3. Modify vehicle options and information 4. Suspend users 5. Generate reports 6. Generate payment request 7. Infrastructure maintenance |

**Full Use Case (User, Original Format)**

**UC-C-1: Register as new user**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-1** | | |
| Use Case Name: | Sign Up/register | | |
| Created By: | emioneal | Last Updated By: | arifdian |
| Date Created: | November 5, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | The user will create an account with CarMa. The user will enter a series of information in exchange for a profile. | | |
| Preconditions: | 1. The User has the CarMa app on their device 2. The user does not already have an account | | |
| Postconditions: | User is registered and has an account | | |
| Normal Flow: | 2.0 Create an account   1. User open the app 2. User will have the option to login or create an account 3. User taps create an account 4. User is required to enter the email as username 5. System checks if the username (email) is taken 6. User is required to enter a password 7. User has to retype password 8. User is required to enter a birthday 9. User is required to enter phone number 10. User checks if the user is at least 18 11. User picks a security question 12. User answers the question 13. The user taps the box to agree to terms 14. The user taps create 15. The system has saved the users information 16. The user is registered | | |
| Alternative Flows: | 2.1 email / username is taken   1. User is prompted to enter a different email 2. User continues process   2.3 User stops the process   1. User decides to not create an account 2. User taps "cancel" 3. User is taken back to main page | | |
| Exceptions: | 2.0.E.1 User is not eligible due to age  If user is not at least 18 to sign a contract then they will not be able to create an account  2.0.E.2 User is already registered   1. System will notify user that account already exists 2. The user ends registration and logs in | | |
| Priority: | High | | |
| Frequency of Use: | Once per user and administration | | |
| Special Requirements: | 1. User must enter all fields of the registration  2. User must have a unique email (username)   1. User must tap the box to agree to term before signing up | | |
| Assumptions: | 1. The user has the app 2. The user does not already have an account | | |
| Notes and Issues: | 1. Users must be 18 years old or older to use the app because they have to agree to our terms which are a contract. Also, the user must be old enough to drive.  2. One issue is that a user could lie about their age and create an account but preventable by license check on the later stages. | | |

**UC-C-2: Login as registered user**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-2** | | |
| Use Case Name: | Login | | |
| Created By: | emioneal | Last Updated By: | arifdian |
| Date Created: | November 3, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | The user will be asked to enter their already created information in order to enter their account, this allows the user to proceed with their action of requesting a car. | | |
| Preconditions: | 1. The user has previously made an account  2. The user is not already logged into the system | | |
| Postconditions: | 1. The user will then be logged in  2. The user will be able to see the features that are offered  3. The user can request a vehicle | | |
| Normal Flow: | **1.0 Login to the system**  1. The user opens the application  2. The user is prompted to put in their username  3. The user is prompted to enter their password  4. The system will check if this information is valid | | |
| Exceptions: | **1.0.E.1 User enters the wrong information**  1. The system will notify the user of the error  2. The user will be able to try again  **1.0.E.2 User is already logged in**  1. User will see their account  **1.0.E.1 User does not have an account**  1. User will tap "create an account"  2. User will start use case 2 | | |
| Priority: | High | | |
| Frequency of Use: | When the user is not logged in.  The user is never automatically signed out | | |
| Special Requirements: | None | | |
| Assumptions: | 1. The user already has an account  2. The user knows their information | | |
| Notes and Issues: | None | | |

**UC-C-3: Reset Password**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-3** | | |
| Use Case Name: | Reset password | | |
| Created By: | emioneal | Last Updated By: | arifdian |
| Date Created: | November 5, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | If the user already has an account and needs to login but has forgotten their password there is an option to retrieve or change a password. | | |
| Preconditions: | 1. User already has an account 2. User has forgotten password | | |
| Postconditions: | 1. User has changed password 2. User has access to account | | |
| Normal Flow: | **3.0 Reset Password**   1. User open app 2. User enters username (Email) 3. User enters password 4. User gets an error about the wrong password 5. User taps "forgot password?" 6. User is prompted to enter either email or phone number 7. User enters email or phone number 8. User goes to their email and opens the email from CarMa or User receives text message with the link to reset password 9. User taps the link in the email or text 10. The link leads to a page 11. User enters a new password 12. User enters the new password again 13. System updates password 14. User goes to the app and enters the new password 15. User has access to account | | |
| Alternative Flows: | **3.1 User forgot email**   1. User taps "forgot password?" 2. Prompted to enter email 3. User forgot email used 4. User taps "security question" 5. User enters username 6. User is prompted with their security question 7. User answers the question 8. User can resume to account   **3.2 User does not have an account**   1. User is prompted to log in 2. User enters username and password 3. Error message that the account does not exist 4. User realizes they do not have an account 5. User then taps "create an account" | | |
| Exceptions: | **3.0.E.1 User has too many attempts**   1. User enters the wrong password 4 times 2. Account is frozen   **3.0.E.2 User does not open email within a certain time**   1. User requests an email to be sent 2. User has 10 minutes to open the email and use the link 3. Link expires after 10 minutes | | |
| Priority: | High | | |
| Frequency of Use: | Whenever user forgets their password, could be more than once per user but also could happen 0 times | | |
| Special Requirements: | 1. The security question is based on username since each one is unique  2. User must have an account in order to use this | | |
| Assumptions: | 1. User already has an account  2. Only the user knows the answer to the security question | | |
| Notes and Issues: | 1. An issue could be that the wrong person gets into the account | | |

**UC-C-4: Enter / add payment methods (Credit card information)**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-4** | | |
| Use Case Name: | Enter / add payment methods (credit card information) | | |
| Created By: | emioneal | Last Updated By: | arifdian |
| Date Created: | November 5, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | In order for the user to rent a vehicle, they must pay for it. This will be done by the system storing the user's card information. There has to be a system to take payments for the service. | | |
| Preconditions: | 1. User has an account 2. User is logged in 3. User has a credit/debit card | | |
| Postconditions: | User will be able to use the service because they provided a payment | | |
| Normal Flow: | **4.0 Enter credit card information**   1. User opens app 2. User goes to settings 3. User goes to payment options 4. User taps "add payment" 5. User enters the name on the card 6. User enters the card numbers 7. User enters the expiration date 8. User enters the CVC 9. User taps "save card" 10. User taps "confirm" 11. System authorizes payment | | |
| Alternative Flows: | **4.1 User pays when requesting vehicle**   1. User open app 2. User request vehicle 3. A message pops up to add payment before it can continue 4. Return to step 4 5. User receives verification for service | | |
| Exceptions: | **4.0.E.1 User has insufficient funds**   1. The user requests a vehicle 2. User does not have payment saved 3. User is prompted to enter payment 4. The user enters payment method 5. System processes 6. User does not have the amount in their account 7. System denies user 8. User is prompted to enter a new method   **4.0.E.2 User cannot provide CVC**   1. User request ride 2. Payment is saved    1. User has payment saved 3. System requests user to enter CVC 4. User does not know CVC 5. System denies payment method 6. System prompts the user to enter a new method   **4.0.E.3 User cancels request**   1. User does not want the vehicle and the time requested 2. User cancels transaction | | |
| Priority: | High | | |
| Frequency of Use: | At least once per user but could be as frequent as every time the user uses the service | | |
| Special Requirements: | 1. User can choose to enter payment every time or save it 2. User must confirm CVC before every use | | |
| Assumptions: | 1. User has an account 2. User is logged in | | |
| Notes and Issues: | 1. User can have more than one payment type 2. Will be using PayPal's API | | |

**UC-C-5: Enter driver's license information**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-5** | | |
| Use Case Name: | Enter drivers licence information | | |
| Created By: | emioneal | Last Updated By: | arifdian |
| Date Created: | November 5, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | Since this is a service that provides a vehicle the user must enter their driver's licence in order to use and rent the vehicle. | | |
| Preconditions: | 1. User has an account 2. User is logged in 3. User has a valid driver's licence | | |
| Postconditions: | User will be eligible to use service and licence information will be confirmed | | |
| Normal Flow: | **5.0 Enter driver's licence information**   1. User open app 2. User goes to settings 3. User taps "licence information" 4. User taps "add information" 5. User enters name on licence 6. User enters licence name 7. User enters address on licence 8. User will take a photo of licence 9. User will tap "confirm information" 10. System will verify licence and driving record   from a specialized license database   1. User will be notified if they are approved | | |
| Alternative Flows: | None | | |
| Exceptions: | **5.0.E.1 Users licence becomes invalid**   1. User tries to reserve vehicle 2. Their licence becomes invalid from database check 3. System runs information 4. System will notify the user that their account has been suspended   **5.0.E.2 Users allows another person to use account**   1. User allows someone besides themselves to use their account and information 2. If CarMa is alerted of this user will be notified that their account is suspended | | |
| Priority: | High | | |
| Frequency of Use: | Each person is required to enter one licence number | | |
| Special Requirements: | 1. One licence per account 2. No learners permits 3. No major violations on record | | |
| Assumptions: | 1. The licence will match the driver every time | | |
| Notes and Issues: | 1. Issue: as of now we have no way to confirm this 2. Issue: another person without a licence could use the user's account | | |

**UC-C-6: Use map to locate vehicle**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-6** | | |
| Use Case Name: | Use a map to locate a vehicle | | |
| Created By: | gprabowo | Last updated  By: | arifdian |
| Date Created: | November 6, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | The user will use the map to locate themselves and look for a vehicle nearest to them. | | |
| Preconditions: | 1. User has an account 2. User is logged in 3. User has their location on | | |
| Postconditions: | User will be able to locate the nearest vehicle to them. | | |
| Normal Flow: | **6.0 Use a map to locate a vehicle**   1. User logs in 2. Map is on main screen 3. Alerts user if location is not turned on 4. User taps the map to locate where they are 5. Zoom in to find the nearest vehicle in the area | | |
| Alternative Flows: | None | | |
| Exceptions: | **6.0.E.1 Unable to locate their current location**   1. User has difficulty locating their current location 2. Make sure the internet is working 3. Quit the application and open it up again   **6.0.E.2 Users location is not on**   1. User does not have the location on in their phone settings 2. User turns on the location on their phone | | |
| Priority: | High | | |
| Frequency of Use: | Every time a user is looking to rent/book a car, they need to use the maps in order to see which location nearest to them have a car available for them to rent/book | | |
| Special Requirements: | 1. Location must be on in the user's phone in order for the maps to work | | |
| Assumptions: | 1. There will be no problem locating the cars available on the maps | | |
| Notes and Issues: | 1. Issue: as of right now, we still do not know how to let the users see (from the maps) if there are cars available at the location | | |

**UC-C-7: Choose the type of vehicle**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-7** | | |
| Use Case Name: | Choose the type of vehicle | | |
| Created By: | gprabowo | Last updated  By: | arifdian |
| Date Created: | November 6, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | After locating the nearest location, users are able to choose the type of vehicles that they are looking to book | | |
| Preconditions: | 1. User has an account 2. User is logged in 3. User has their location on | | |
| Postconditions: | User will be able to locate the nearest vehicle to them. | | |
| Normal Flow: | **7.0 Use a map to locate a vehicle**   1. User logs in 2. Map is on main screen 3. User taps the map to locate where they are 4. Zoom in to find the nearest vehicle in the area 5. User has the option to choose the different vehicle types and sizes with respect to availability. 6. User tab on the image of the desired vehicle type and size | | |
| Alternative Flows: | None | | |
| Exceptions: | **7.0.E.1 Unable to locate their current location**   1. User has difficulty locating their current location 2. Make sure the internet is working 3. Quit the application and open it up again   **7.0.E.2 Users location is not on**   1. User does not have the location on in their phone settings 2. Alerts user if location is not turned on 3. User turns on the location on their phone | | |
| Priority: | High | | |
| Frequency of Use: | Every time a user is looking to rent/book a car, they need to use the maps in order to see which location nearest to them have a car available for them to rent/book | | |
| Special Requirements: | 1. Location must be on in the user's phone in order for the maps to work | | |
| Assumptions: | 1. There will be no problem in choosing the vehicle. | | |
| Notes and Issues: | 1. Issue: as of right now, we still do not know what type of vehicles are available | | |

**UC-C-8: Give a time frame for pick-up and drop-off**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-8** | | |
| Use Case Name: | Give a time frame for pick-up and drop-off | | |
| Created By: | gprabowo | Last updated  By: | arifdian |
| Date Created: | November 6, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | After choosing the vehicle, users are able to pick up the car during the time that is available | | |
| Preconditions: | 1. users logged in 2. users picked the location for where they are going to pick up the car | | |
| Postconditions: | User will be able to set pick-up and drop-off time | | |
| Normal Flow: | **8.0 Set the time to pick up the vehicle**   1. users log in 2. go to maps and pick the location 3. set the time to pick-up and drop-off the car 4. the time is fixed for 30 minutes interval for example, 10:30 - 11:30. hence a minimum of 30 minutes rent. | | |
| Alternative Flows: | None | | |
| Exceptions: | **8.0.E.1 Unable to set the pick up time**   1. users are not able to set the pick up time 2. one of the reasons could be someone reserve the car ahead of time (conflict) 3. pick another car that is available in the nearest area. 4. user’s pick up time and drop off time adds up to more than 7 days. | | |
| Priority: | Low | | |
| Frequency of Use: | Every time a user is looking to rent/book a car, they need to pick the car that they are planning to book/reserve. | | |
| Special Requirements: | 1. make sure to book/reserve the car quickly so someone won't reserve the car first and drop-off | | |
| Assumptions: | 1. There will be no problem setting the pick-up and drop-off time | | |
| Notes and Issues: | 1. Issue: user might not return the car on time when the other user want to pick up the car | | |

**UC-C-9: Reserve a vehicle**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-9** | | |
| Use Case Name: | Reserve a vehicle | | |
| Created By: | gprabowo | Last updated  By: | arifdian |
| Date Created: | November 6, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | After setting up the pick up time, users are able to reserve the vehicle for them to pick up | | |
| Preconditions: | 1. users logged in 2. users picked the location for where they are going to pick-up and drop-off the car 3. users reserve the car | | |
| Postconditions: | User will be able to reserve the vehicle that they have chosen | | |
| Normal Flow: | **9.0 Set the time to pick up the vehicle**   1. users log in 2. go to maps and pick the location 3. set the time to pick-up and drop-off the car 4. user confirm the total price 5. user reserve the car | | |
| Alternative Flows: | None | | |
| Exceptions: | **9.0.E.1 Unable to reserve the vehicle**   1. users are not able to reserve the vehicle 2. another users may have reserved it a few minutes quicker 3. users will need to choose another vehicle or in a different location 4. User’s bank transaction/payment gets declined 5. Driver’s license expired | | |
| Priority: | High | | |
| Frequency of Use: | Every time a user is looking to rent/book a car, they are required to reserve the car ahead of time. | | |
| Special Requirements: | 1. make sure that the vehicle that you reserve is the vehicle that you originally wanted | | |
| Assumptions: | 1. There will be no problem reserving the vehicle. | | |
| Notes and Issues: | 1. Issue: user might not be able to reserve the car as someone else reserved it ahead of time. | | |

**UC-C-10: Summary of reservation**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | **UC-C-10** | | |
| Use Case Name: | Summary of reservation | | |
| Created By: | gprabowo | Last Updated By: | arifdian |
| Date Created: | November 6, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | Admin | | |
| Description: | After reserving the car, users are given the summary of reservation. | | |
| Preconditions: | 1. users logged in 2. users picked the location for where they are going to pick-up and drop-off the car 3. users reserve the car 4. reservation summary is given | | |
| Postconditions: | User will be given the reservation summary of the vehicle that they reserved | | |
| Normal Flow: | 10.0 Summary of reservation   1. users log in 2. go to maps and pick the location 3. set the time to pick-up and drop-off the car 4. user reserve the vehicle 5. summary of reservation is given to the users | | |
| Alternative Flows: | None | | |
| Exceptions: | None | | |
| Priority: | Low | | |
| Frequency of Use: | Every time a user reserve a vehicle, they will be given the reservation summary | | |
| Special Requirements: | 1. make sure that the summary indicated the correct information for your reservation | | |
| Assumptions: | 1. There will be no problem with the summary. | | |
| Notes and Issues: | 1. Issue: the reservation summary might be different from what the user originally reserved | | |

**UC-C-11: Edit / Cancel a reservation**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | 11 | | |
| Use Case Name: | Modify reservation | | |
| Created By: | tianhuan | Last Updated By: | arifdian |
| Date Created: | November 9, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | Users make choices about their reservation. Either changing contents in the reservation, or cancelling a reservation of vehicle. | | |
| Preconditions: | 1. User has an account 2. User is logged in 3. User has a valid driver's licence 4. User has placed a reservation | | |
| Postconditions: | Reservation will update once user confirmed to change. | | |
| Normal Flow: | **11.0 Modify reservation**   1. User already has a reservation 2. User click on button “modify reservation” 3. User reenters the information in reservation 4. User confirms changes applying to the reservation | | |
| Alternative Flows: | None | | |
| Exceptions: | **11.0.E.1 User reservation failed**   1. User modified reservation 2. The current type of vehicle/time is not available 3. System replies to users “Change failed”   **11.0.E.2 Users input wrong information**   1. User modified reservation again 2. User confirmed the new request for reservation | | |
| Priority: | High | | |
| Frequency of Use: | Every time when user is changing location/ car model/ reservation time | | |
| Special Requirements: | 1. User must input all information which is in the required areas from the form | | |
| Assumptions: | 1. Every time when users are trying to make changes to their reservation, they are going to modify their reservation. | | |
| Notes and Issues: | 1. We can accept the same information while modifying the reservation. | | |

## 

**UC-C-12: Report car’s condition (upload photos of the car)**

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | 12 | | |
| Use Case Name: | Take photos of the car before and after operating the vehicle | | |
| Created By: | tianhuan | Last Updated By: | arifdian |
| Date Created: | November 9, 2019 | Date Last Updated: | November 22, 2019 |
| Actors: | User | | |
| Description: | Users take photos of the car in front, left, right and back before unlocking and after locking the car to record the car's condition | | |
| Preconditions: | 1. User logged in account 2. User made a reservation 3. User arrived at the car pool 4. User clicks “unlock car button” in the application | | |
| Postconditions: | 1. Users will then be required to take photos of current car condition 2. Users operate the car 3. User lock the car after operation 4. Users take photos again 5. User successfully finished the trip | | |
| Normal Flow: | **12.0 Take photos of the car before and after operating the vehicle**   1. Users logged into their account 2. Users make a reservation 3. Users arrived at the car pool 4. Users unlock the car 5. Users take photos of the current car’s condition 6. Users start their trip 7. Users lock the car 8. Users take photos of the current car’s condition 9. Users end their trip | | |
| Alternative Flows: | None | | |
| Exceptions: | **11.0.E.1 User upload photo failed**   1. User takes photos of the car’s current condition 2. User upload photo failed, and the system returns “failed to upload photo” 3. User takes photos of the car’s current condition again   **11.0.E.2 Users take photos of other objects instead of the car they are using**   1. User takes photos of other objects 2. System returns “Wrong car/value in the photo” 3. User takes photos of the car’s current condition again | | |
| Priority: | High | | |
| Frequency of Use: | Every time when users are unlocking / locking the car before and after their trip | | |
| Special Requirements: | None | | |
| Assumptions: | 1. Users phone has a camera | | |
| Notes and Issues: | None | | |