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| --- | --- | --- | --- |
| Use Case ID: | 1 | | |
| Use Case Name: | User Account Registration | | |
| Created By: | Pei He | Last Updated By: | Pei He |
| Date Created: | 5/2/22 | Date Last Updated: | 5/2/22 |

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| --- | --- |
| Actor: | User, Database System |
| Description: | User registration process |
| Preconditions: | User is on the main webpage, user is not already logged in |
| Postconditions: | User completes account registration |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1. User clicks on “Create a New Account” 2. System displays a registration page, and the user is prompted to enter his email, and password to confirm his password 3. User enters the required login information and clicks on the register button 4. Database system verifies that the email address is valid, and that the passwords match and is at least 8 characters long 5. Database system checks that the email is not in the system database 6. Database System encrypts user details and logs new account into database 7. User is redirected to login page |
| Alternative Flows: | AF- 3) : User enters an e-mail that is already in database  1.      System informs User that e-mail has already been registered  2.      System returns to 2)  AF- 3) :  User enters a username that is already in database  1.      System informs User that username inputted has already been used  2.      System returns to 2)  AF- 3) : User enters a password that is not 8 characters long  1.      System informs User that password inputted has to be at least 8 characters long  2.      System returns to 2)   AF- 3) : User enters passwords that do not match  1.      System informs User that passwords have to match  2.      System returns to 2) |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 2 | | |
| Use Case Name: | User Account Login | | |
| Created By: | Holdon | Last Updated By: | Pei He |
| Date Created: | 05/02/2023 | Date Last Updated: | 06/02/23 |

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| --- | --- |
| Actor: | User, Database System |
| Description: | User login process |
| Preconditions: | User has a registered account |
| Postconditions: | User successfully logs in |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1)     User clicks on the “login” button  2)     User enters their username and password into the fields  3)     Account System validates login credentials  4)     System redirects User to main page |
| Alternative Flows: | AF - 2) : User inputs invalid credentials  1.      If User inputs a username not in the database, System will inform User that username is not in database  2.      If User inputs a username in the database but inputs the wrong password, System will inform User of error  3.      System returns to 1) unless User has failed to login 5 times  4.      User is not allowed to login to account  5.      Database System sends User an email to the email associated to that username for email verification |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 3 | | |
| Use Case Name: | Account Recovery | | |
| Created By: | Holdon | Last Updated By: | Pei He |
| Date Created: | 05/02/2023 | Date Last Updated: | 06/02/2023 |

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| --- | --- |
| Actor: | User, Database System |
| Description: | User has ability to recover account if they forget their password |
| Preconditions: | * User requests password reset * User has attempted 5 logins to 1 account unsuccessfully |
| Postconditions: | User recovers password |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) Database system sends e-mail to User’s email account after fifth unsuccessful login/requests password reset  2) User clicks on link on sent to their email to reset their password  3) System displays the password reset web page, prompting users to enter a new password and confirm it  4) User enters a new password and confirms it  5) System verifies that the passwords match and are at least 8 characters long.  6) DatabaseSystem updates user database with new password   1. 7) Account displays a “password successfully reset” message. |
| Alternative Flows: | AF - 2) : User does not click on email link   1. If user does not click on link 5 minutes after e-mail was sent, the link will expire 2. Use case terminates   AF - 4) : User’s new passwords do not match   1. System informs user that the passwords do not match and requests that the user try again 2. System returns to 3)   AF - 4): User’s passwords are less than 8 characters long   1. System informs user that the new password is not strong enough 2. System returns to 3) |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 4 | | |
| Use Case Name: | Location Service | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User |
| Description: | User must allow System to get their device location for the application to function |
| Preconditions: | None |
| Postconditions: | User returns location to System |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User enables their device’s location services  2) System records User’s current location |
| Alternative Flows: | AF - 1) : If user has not enabled/does not have device location  1. The system prompts the user to input their location details  2. User inputs their location details  3. System returns to 2) |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 5 | | |
| Use Case Name: | Home Page | | |
| Created By: | Holdon | Last Updated By: | Holdon |
| Date Created: | 05/02/2023 | Date Last Updated: | 05/02/2023 |

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| --- | --- |
| Actor: | User |
| Description: | Home page is the first thing the User sees after successful login. |
| Preconditions: | None |
| Postconditions: | User goes to the find nearest restaurants page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) Home page displays information  2) User can click on find nearest restaurants to go to the find nearest restaurants page  3) User is directed to the find nearest restaurants page |
| Alternative Flows: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 6 | | |
| Use Case Name: | View Own Reviews | | |
| Created By: | Holdon | Last Updated By: | Holdon |
| Date Created: | 05/02/2023 | Date Last Updated: | 05/02/2023 |

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| --- | --- |
| Actor: | User, Database System |
| Description: | Database system contains all the reviews left by the User for reference |
| Preconditions: | User is in the ‘Profile’ page |
| Postconditions: | User leaves “Profile” page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects “Reviews by me” on his/her user profile page  2) Database System displays reviews previously made by the User |
| Alternative Flows: |  |
| Exceptions: |  |
| Includes: | Review Making |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 7 | | |
| Use Case Name: | Review Making | | |
| Created By: | Holdon | Last Updated By: | Holdon |
| Date Created: | 05/02/2023 | Date Last Updated: | 05/02/2023 |

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| --- | --- |
| Actor: | User, Database System |
| Description: | Reviews left by Users can be edited or deleted if the User chooses |
| Preconditions: | Users click on the “View Review” on the “Profile” page or when they search for a particular restaurant. |
| Postconditions: | User makes changes to existing review |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects specific review on “View Reviews” page  2) User edits to review previously made  3) User edits rating to rating previously made |
| Alternative Flows: | AF 2): User wants to delete rating  1. User can delete review previously made  2. System returns to “View Reviews” page |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 8 | | |
| Use Case Name: | Settings Menu | | |
| Created By: | Holdon | Last Updated By: | Holdon |
| Date Created: | 05/02/2023 | Date Last Updated: | 05/02/2023 |

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| --- | --- |
| Actor: | User, Account System, E-mail System |
| Description: | User must be able to change their password or email if they wish to do so |
| Preconditions: | User is on main page |
| Postconditions: | User exits settings menu |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects “Settings” on main page  2) User must enter their password  3) Account System verifies if password entered is correct  4) System displays settings menu  5) Settings menu has “Change Password” and “Change Email” |
| Alternative Flows: | AF 3) : User enters incorrect password  1. System informs User that password entered was incorrect  2. System returns to 2)  AF 5) : User wants to change password  1. User selects “Change Password”  2. User inputs current password  3. User inputs new password, which is 8 characters or longer  4. E-mail System sends e-mail to User to inform them of password change  AF 5) : User wants to change e-mail  1. User selects “Change E-mail”  2. User inputs new E-mail  3. E-mail System sends e-mail to User’s new e-mail to confirm the change |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 9 | | |
| Use Case Name: | View Nearby Restaurants | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, Database System, API |
| Description: | System shows User all restaurants in their vicinity |
| Preconditions: | User is on the main page |
| Postconditions: | User selects the “view nearby restaurants” option on the main page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) Database System retrieves information of restaurants from the database  2) Map API displays all restaurants in a 3 kilometre radius on the map overlay  3) A list of the restaurants also displayed below the map. Clicking any food establishment in the list brings the user to the specific food establishment page  4) User selects a specific restaurant to view more information |
| Alternative Flows: | AF 1): User wants to view restaurants of certain types  1. User selects on the “cuisine”, “proximity” or “rating” filter  2. Restaurant System filters restaurant according to filters selected  AF 3): User wants to select a random restaurant  1. User selects the “random” button  2. Restaurant System accounts for any filters in place  3. Restaurant System displays a specific restaurant at random |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 10 | | |
| Use Case Name: | Restaurant Page | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, Restaurant System |
| Description: | User can see details about a specific restaurant |
| Preconditions: | User clicks “view details” button on a restaurant popup on the map  User clicks a restaurant on the restaurant list |
| Postconditions: | User exits the restaurant page  User chooses to get directions to restaurant |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects a specific restaurant  2) Restaurant System displays the restaurant’s cuisine, distance, reviews, rating and opening hours  3) User selects to “Get directions” to get directions to restaurant |
| Alternative Flows: | AF 3) : User wants to read reviews  1. User selects “Review” tab  2. Restaurant System displays reviews left by other users  AF 3) : User wants to find nearby parking space  1. User selects “View Nearby Parking”  2. System displays nearby parking information |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 11 | | |
| Use Case Name: | View Nearby Parking | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, Parking System |
| Description: | User can view parking spots near the restaurant selected |
| Preconditions: | User selects a specific restaurant |
| Postconditions: | User selects a specific parking space  User backs to specific restaurant page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects “Find Nearby Parking”  2) Parking System retrieves parking space information from database  3) Parking System shows parking spaces in a 1 kilometre radius from the specific restaurant |
| Alternative Flows: | AF 3) : User wants to find closer parking space  1. User selects on “distance” filter  2. Parking System shows parking spaces in a 0.5 kilometre radius |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 12 | | |
| Use Case Name: | View Specific Parking | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, API |
| Description: | User can view specific parking space for more information |
| Preconditions: | User is on the “Find Nearby Parking” page |
| Postconditions: | User selects “Get Direction”  User exits to “Specific Restaurant” page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects on specific parking space  2) API retrieves information from LTA database  3) API displays number of available lots and total number of lots of parking space  4) User selects “Get Direction” to get direction to parking space |
| Alternative Flows: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 13 | | |
| Use Case Name: | Pathfinding | | |
| Created By: | Holdon | Last Updated By: |  |
| Date Created: | 05/02/2023 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, Parking System, Restaurant System, Maps System, Google Maps |
| Description: | User can find a route from their current location to the specific restaurant or specific parking space they want to get to |
| Preconditions: | User selects “Get Direction” at specific restaurant page  User selects “Get Direction” at specific parking space page |
| Postconditions: | User exits application |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) Maps System gets location of restaurant or parking space  2) Maps System inputs coordinates to Google Maps on User’s device |
| Alternative Flows: |  |
| Exceptions: |  |
| Includes: |  |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | 14 | | |
| Use Case Name: | Add review | | |
| Created By: | Pei He | Last Updated By: |  |
| Date Created: | 06/02/23 | Date Last Updated: |  |

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| --- | --- |
| Actor: | User, Reviews System, Restaurants System |
| Description: | User can add a review to a restaurant they went to |
| Preconditions: | User is logged in |
| Postconditions: | User is returned to the restaurants page |
| Priority: |  |
| Frequency of Use: |  |
| Flow of Events: | 1) User selects “add review” on the restaurants page  2) System prompts the user to select a rating (1-5), as well as any comments about the food establishment  3) User inputs the rating and comments, and clicks submit  4) Review system adds the review to its database  5) Restaurant system recalculates a new average rating, and displays it accordingly  6) The message “review successfully added” is displayed to the user |
| Alternative Flows: | AF - 1)   1. User selects add a review on the sidebar 2. User chooses the restaurant to review 3. System goes to step 3) |
| Exceptions: |  |
| Includes: | Review Making |
| Special Requirements: |  |
| Assumptions: |  |
| Notes and Issues: |  |