

CMPUT 291 Design Document

General Overview

Our program starts off with having the user either log in with an already existing email that is in the database. If they do not have an email in the database they have the option of registering as a new user by entering their email, name, phone number and password. If the user does not want to do any of these options then they can exit the program.

When the user logs in, they are prompted to enter their email and password. Once a valid email and password has been entered, they are directed to the main menu. The menu displays and messages the user may have at the top. Below the messages the user can do the following tasks: offer a ride, search for a ride, list any bookings they offer or cancel a booking, post a ride request, or search and delete a ride request.

If the user wants to offer a ride then they must first enter the date they are offering the ride and other information about the ride such as seat prices and source and destination locations. The user also has the option of adding a car number and any enroute locations if they choose to. If the user wants to search for certain rides then they can enter up to three keywords. This returns information on rides with any of the matching keyword(s). The system also gives the user an option of booking a member a ride or canceling a booking. It is important to note that in order to book for another member, their email must be in the database. If their email is not in the database then have them register as a new member. The user can also search for any ride requests they have made and can delete requests they have made.

User Guide

1. On the terminal, run the source code by entering "python3 main.py".
2. On the start page, first either log in with an already existing email and password. If you do not have an email in our system then select 'Register New User'.
3. Once you have logged in, the main menu will be displayed. Messages from other members will be displayed at the top.
4. Here are options that members are able to do:
 - a. Offer a ride - enter "1"
 - b. Search for rides - enter "2"
 - c. Book members/cancel a booking - enter "3"
 - d. Post ride requests - enter "4"
 - e. Search and/or delete ride requests - enter "5"
5. Each option will prompt the user for certain information such as emails, location, dates, etc. Make sure to enter valid information. If invalid information is inputted, the system will not move forward until the information is valid.
6. To logout, exit out of any of the options or until you have reached the main menu and select logout for entering "6"
7. To exit out of the system, logout of the system and then you have reached the start page. Select "3" to completely exit out of the program.

Detailed Design

Login/Register screen

- Login with
 - Case-insensitive username (email format and includes letters, digits and '_')
 - Case-sensitive password (can contain letters, digits and '_')
- Register a new user by entering

- Unique case-insensitive username (email not taken by another member)
- Full name (First Middle Last format which can contain spaces, '-' and '.')
- Phone Number (###-###-#### format)
- Case-sensitive password
- Exit Program
 - Member will be exited out of the program if they want to

After Login/Register screen, the now logged-in user can select the following options

- 1) Offer a ride
 - Logged in member can offer a ride by entering
 - Date of ride (YYYY-MM-DD)
 - Number of seats they offer
 - Price per seat
 - Description of luggage
 - Pickup location code or keyword (Will partial match)
 - Dropoff location code or keyword (Will partial match)
 - Optional Car Number (They must be registered to that car)
 - Optional Enroute Locations
- 2) Search for rides
 - Logged in member can search a ride by entering
 - 1 to 3 Keywords, the system will then find any partial matching location codes, cities, provinces or addresses for the keywords
 - Based on the keywords entered, the member will be shown 5 of the rides that were found. They can enter anything that isn't the ID of the ride to see the next 5 rides that matched their keyword(s)
 - They can enter 'EXIT' (case-insensitive) if they don't want to message a member
 - If they enter one of the ID number's of a ride, the member can send a message to the driver of that ride
- 3) Book members on rides/Cancel a booking
 - Book a member (Option 1)
 - They will be shown five of the rides they offer. They can choose if they want to see more of their offered rides OR book another member on the currently shown offered rides OR exit the booking section
 - Member can book another member when they can select 'BOOK' and enter
 - Pickup Location code
 - Dropoff Location code
 - Number of seats to book (Will give warning if overbooking)
 - Email of member to be booked on ride
 - Cost per seat
 - ASSUMPTION: If the member wants to book a ride but has no previous bookings, they will book a member on their first ride they offer and enter
 - Email of the member to be booked on the ride
 - Number of seats they want booked on the ride
 - Cost per seat
 - Cancel a booking (Option 2)
 - Logged in member can cancel a booking (As long as they have a booking)
 - Member can cancel a booking by entering
 - Booking Number (bno) you want cancelled
 - Reason for cancellation
 - Message will then be sent to the member who had been booked on that ride
- 4) Post Ride Requests

- Members can post a ride request by entering
 - Date of ride (YYYY-MM-DD format)
 - Pickup Location Code (Can be searched by partial location code/keyword)
 - Dropoff Location Code (Can be searched by partial location code/keyword)
 - Cost per seat you are willing to pay
- 5) Search and Delete ride requests
 - View/Delete Your Ride Requests (Option 1)
 - Member will be shown their ride requests
 - If they have none they will return to main function choices
 - Otherwise the member can enter the id of the request that they want to delete
 - Search Ride Requests (Option 2)
 - Member can search ride requests by entering
 - Pickup Location Code or City
 - This will show first 5 results (Can see more by entering anything except 'EXIT' or one of the request ids shown)
 - If member enters a request id
 - Enter the message to send to member who posted request
 - That message will be sent to the person that posted the request
- 6) Log out
 - If the member selects this option, it will log them out of the program and return them to the Login/Register new user screen

Testing Strategy

Login:

- Tested email format (must contain @ and . and letters/digits/'_' between each separator) and case-insensitive will still match with emails that are assigned to a member
- Tested password matches exact password for a member (case-sensitive)

Register new user:

- Tested email format (SAME EMAIL FORMAT AS LOGIN) and case-insensitive (i.e. ABC@123.CoM will match with abc@123.com for future logins and other functions)
- Tested Name format (Can contain letters, '.', '-' and spaces)
- Tested phone numbers missing '-', extra numbers/spaces/letters, not in ####-####-#### format
- Tested passwords that contains non-letter/digit characters (@, #, *, etc)

Booking a member:

- Logged in under member with no rides offered, member with less than 5 rides offered and member with more than 5 rides offered
- Tried to book a member on a ride that was not in the currently shown rides offered (ASSUMPTION: should not be allowed to book on ride not shown)
- Tested 'NEXT', 'BOOK' and 'EXIT' command with various upper/lowercase and various other inputs (pressing enter, 'wsigbvsv', 1, etc.)
- Entered combinations of pickup/dropoff location codes that did not match any of current rides shown
- Tested negative and non-integer values (these are disallowed) for number of seats booked and cost per seat
- Tested case-insensitive emails, emails that do not exist for member to be booked on the ride and email format
- Tested Registering a new user, then had them offer a ride. Then a bug was found that the user had no current bookings so we had to add a case where they add that specific ride as the booking they want

Cancel a booking:

- Tested with members who had no bookings

Members (CCIDs): rsarinas, doroteo, jdww2

- Entered non-integer bno

Group Work Breakdown

Coordinated work through a private GitHub repository

rsarinas - *offer a ride* and *search for rides* functionalities, logout, counter SQL injection attacks

- Total time spent: 12 hours
- Timeline
 - October 29 → Made the Github repository, added files
 - November 1 → started *offer rides*
 - November 2 → worked on *offer rides* and finished
 - November 3 → Started *search for rides* and finished, tested *offer rides* and *search for rides*
 - November 4 → finish testing *search for rides*

doroteo - *post ride requests* and *search and delete ride requests* functionalities, counter SQL injection attacks

- Total time spent: 12 hours
- Timeline
 - November 2 → started *post ride requests*
 - November 3 → finished *post ride requests*, started *search and delete ride requests*
 - November 4 → finished *search and delete ride requests* and finished testing *post ride requests* and *search and delete ride requests*

jdww2 - Login/Register new user, Book member or cancel bookings, Hide password, counter SQL injection attacks, clear terminal/command line function

- Total time spent: 12 Hours
- Timeline
 - October 29 → Started Login/Register Interface, Started booking a member queries/functionality. Finished hiding password on login
 - November 2 → Finished Login/Register Interface, checks with database, tested. Worked on booking functionality and started cancel bookings
 - November 3 → Finished booking (including showing 5 per page)
 - November 4 → Finished cancel bookings