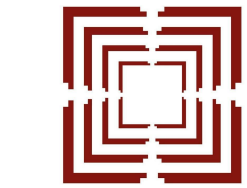

Ahmedabad University

CSE519 - Human Computer Interaction

Project Report - 3

Section 1

Date of Submission: 23rd March, 2022

Group 20: **Bug Smashers**

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2022 Winter Semester

Table of Contents

1. Login/Registration **3**
- Functionality 3
- Photos of the implementation 3
- Universal Usability 4
- Design Principles 4
- Interaction Style 4

2. Add Driving Licence **5**
- Functionality 5
- Universal Usability 6
- Design Principles 6
- Interaction Style 6

3. View Driving Licence **7**
- Functionality 7
- Photos of the implementation 7
- Universal Usability 8
- Design Principles 8

4. Add RC book **9**
- Functionality 9
- Photos of the implementation 9
- Universal Usability 10
- Design Principles 10
- Interaction Style 10

5. View RC book **11**
- Functionality 11
- Photos of the implementation 11
- Universal Usability 12
- Design Principles 12

6. E-challan Payment **13**
- Functionality 13
- Photos of the implementation 13
- Universal Usability 14
- Design Principles 14
- Interaction Style 14

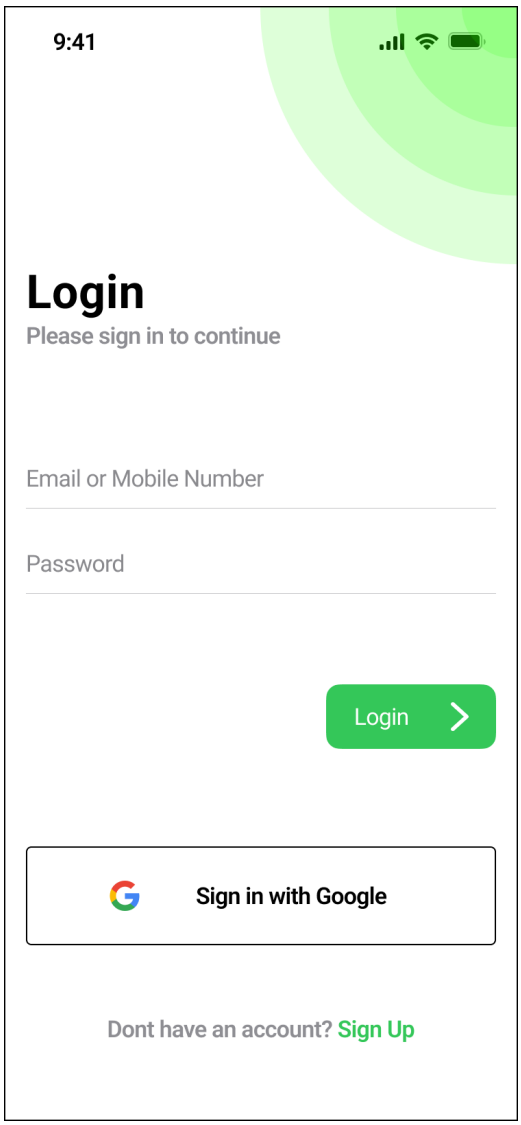
Figma Link **14**

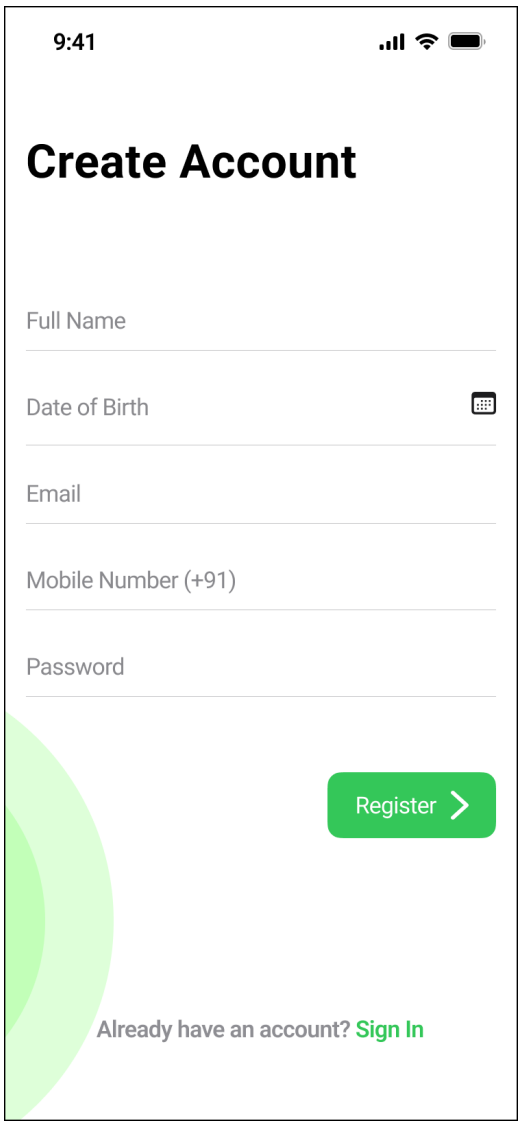
1. Login/Registration

Functionality

It will allow new users to create an account in “DigiWheels” mobile app by providing basic details like Full Name, Date Of Birth, Email , Mobile Number and Password. Registered users can directly login through Email/Mobile Number and password or through the gmail account which was used at the time of registration.

Photos of the implementation





Universal Usability

- **Diverse Cognitive and Perceptual Abilities** : If the user has already registered for the “DigiWheels” application then for the next time user will be able to Log In through mobile number/Gmail id. It will help users to save time and it will reduce the mental load of the user. If not, then the user may need to register once (to create account) then the application remembers the details so the user may not need to login every time he/she opens the application

Design Principles

- **Consistency**
    - Similar fields are provided to enter similar data
    - Buttons and their design are kept rectangular in shape with curved edges and placed at end of form on the right end side
    - Relevant hyperlinks are placed at bottom along with a sense of what they lead to.
    - Green colour is used to signify themes or any primary or secondary action elements.

Interaction Style

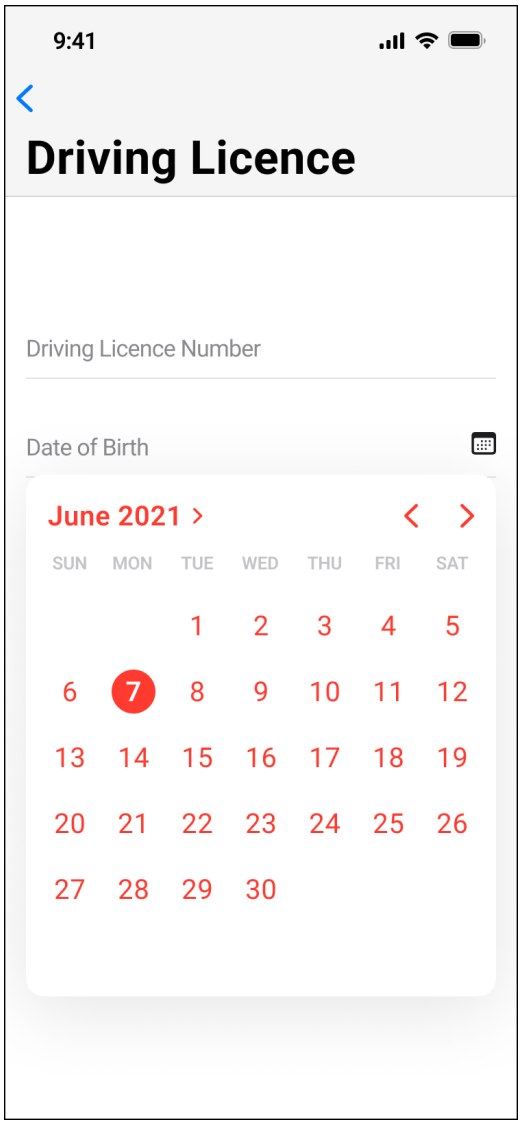
Form Fill-in by filling 3 text boxes of Full Name, Email and Password and a numeric input for Mobile Number..
Menu Selection for selecting date of birth from a calendar table.

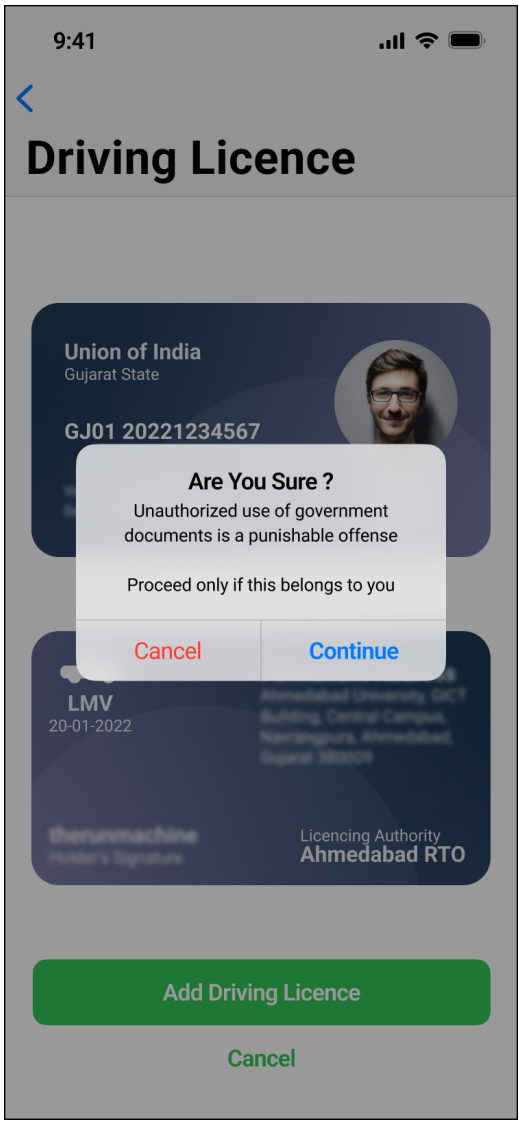
2. Add Driving Licence

Functionality

Users can search his driving licence by entering vital details like licence number and his date of birth. If matching are found, one can view the driving licence in the application page in masked form. After confirming that it belongs to him/her, one can permanently link it to their account.

Photos of the implementation:





Universal Usability

- **Diverse Cognitive and Perceptual Abilities**: We have provided the option to select date of birth from the calendar so that there won't be an issue of date format. Here we are providing the information in the English language which is widely used all over the world and also it will help in better language communication.

Design Principles

Prevent Errors - Even after obtaining correct details and displaying the masked document, it confirms once again from the user if he owns and wishes to add it in his account to prevent him from using someone else's data by mistake.

Interaction Style

- **Form Fill-in** by filling a textbox for alphanumeric Driving Licence Number.
- **Menu Selection** for selecting date of birth from a calendar table.

3. View Driving Licence

Functionality

After creating a virtual licence by using the “Add Driving Licence”, the user can view the digital version of his licence anytime in the presence of internet connectivity. This will present data from a government authorised database and will free the user from carrying the physical copy of his licence. A DigiWheels verified licence can be shown for verification purpose and will hold equal value according to the IT Act 2000.

Photos of the implementation

Universal Usability

- **Cultural and International Diversity**: The licence details are provided in the numeric data, in the date format as well as in the symbolic representation so that anyone can recognise the driver identity and its validity by looking at the driving licence.
- **Diverse Cognitive and Perceptual Abilities**: It will free the user from carrying the physical copy of his licence. It will solve the problem of carrying it in the wallet.

Design Principles

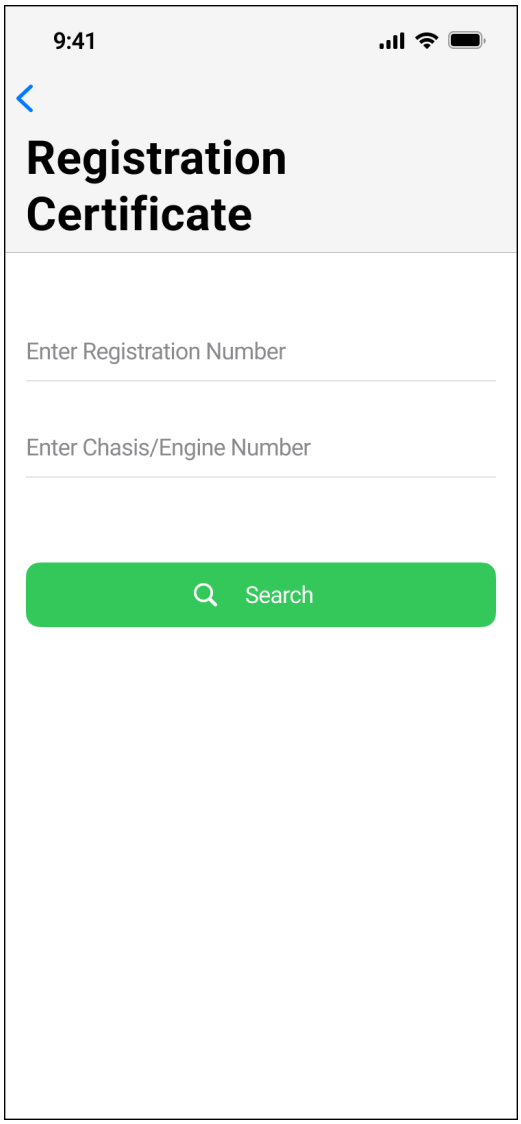
Reduce Short Term Memory Load - Once the licence is added by filling required details, the user just visits his virtual dashboard and fetches his document without the need of remembering any information.

4. Add RC book

Functionality

User can search his registered book of the vehicle by entering vital details like vehicle registered number plate and Chassis number/Engine number. If matching records are found, one can view the RC book in the application page in masked form. After confirming that it belongs to him/her, one can permanently link it to their account.

Photos of the implementation



Universal Usability

- **Diverse Cognitive and Perceptual Abilities**: The application uses various typographies to indicate the hierarchy. This way even a user who is not well versed in technology or people who have some perceptual disabilities can easily get accustomed to the minimalist and spacy yet informative interface without any significant mental load.

Design Principles

Prevent Errors - Even after obtaining correct details and displaying the masked document, it confirms once again from the user if he owns and wishes to add it in his account to prevent him from using someone else's data by mistake.

Interaction Style

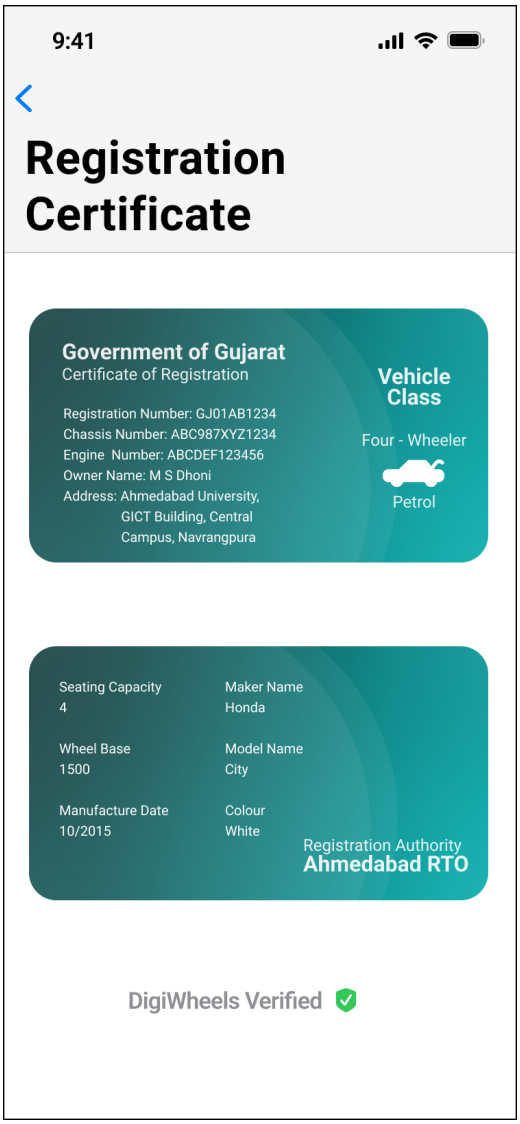
Form Fill-in by filling 2 textboxes for alphanumeric Vehicle Registration Number and either of Chassis or Engine Number.

5. View RC book

Functionality

After creating a virtual RC book by using “Add RC Book”, a user can view the digital copy of his registration certificate anytime in the presence of internet connectivity. It will be authorised from a government database and eventually help users be free from carrying the physical copy of the Registered Certificate of his vehicle. A DigiWheels verified RC will be a valid document for verification purpose.

Photos of the implementation



Universal Usability

- **Cultural and International Diversity**: The RC book details are provided in the numeric data,in the date format as well as in the symbolic representation so that anyone can recognise the driver identity by looking at the driving licence.
- **Diverse Cognitive and Perceptual Abilities**: It will free the user from carrying the physical copy of his RC book. It will solve the problem of carrying it in the wallet.

Design Principles

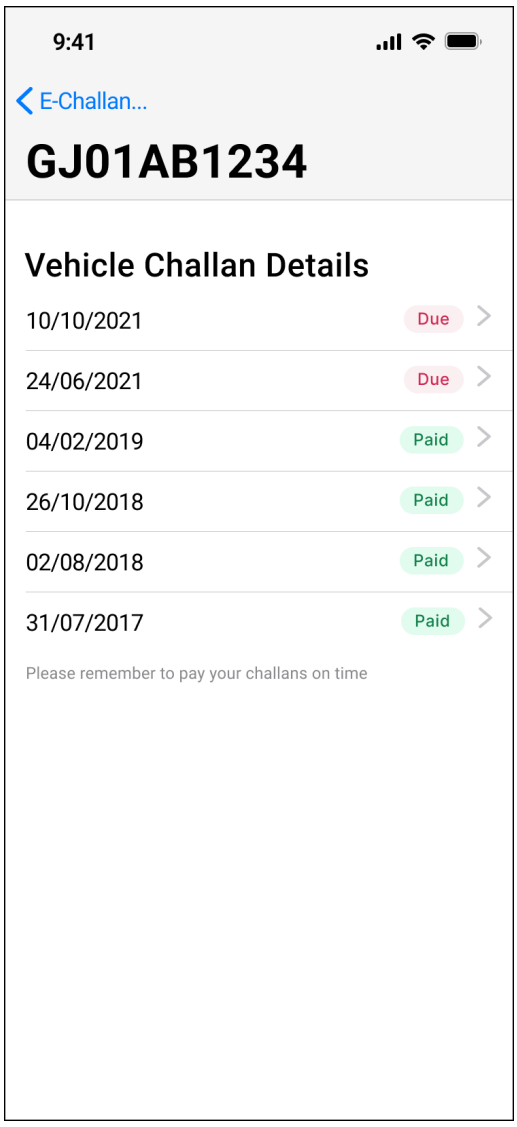
Reduce Short Term Memory Load - Once the registration certificate is added by filling required details, the user just visits his virtual dashboard and fetches his document without the need of remembering any information.

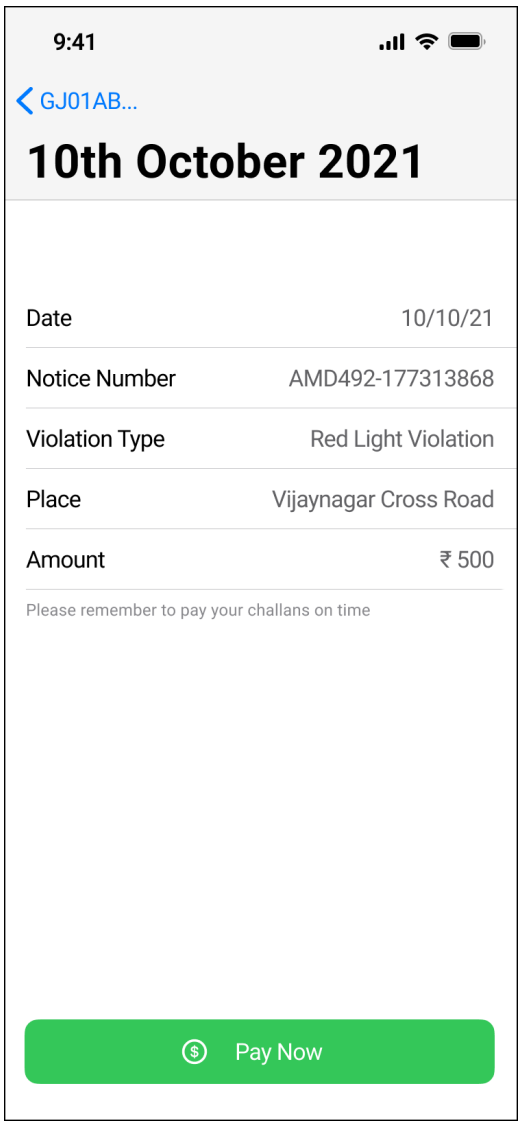
6. E-challan Payment

Functionality

Users can view and pay the e-challan of the vehicle after entering the details like the registration number of the vehicle and the vehicle's registered state. Here the data will be fetched from the traffic department. After entering the useful information of the vehicle user will be displayed the paid as well as unpaid e-challans. Users can select any number of unpaid challans and pay them together or users can pay the e-challans individually as well.

Photos of the implementation





Universal Usability

- **Cultural and International Diversity**: Here the date format and currency format is provided for the better understanding of the E-challan and easiness of the user. Provided the option of “Pay Now” button in a very attractive light green colour so that user attention directly goes to that button.

Design Principles

- **Offer Informative Feedback**: The application offers informative feedback. If a user clicks an item in a list of challans, then the app moves on the next i.e. detail view and vice versa on touching the back button. Secondly, the chip indicates the status of challan payment i.e. paid or due. Red colour gives an altering feedback i.e. user should pay those due fines in the list at their earliest. Green colour gives feedback that challans have been successfully paid and no more action is required..
- **Easy Reversal of Actions**: Application provides easy reversal of actions. If a user decides to pay a fine, but on the details screen he wants to go back and not pay the fine, the application has a back button which directs back to the list view. This way a user has peace of mind that accidental actions can be undone.

Interaction Style

Form Fill-in by filling a textbox for alphanumeric Vehicle Registration Number.
Menu Selection for selecting a specific challan from a list of challans

Figma Link

https://www.figma.com/file/F7DCzEMGs17EA10IySuPza/HCI-Project-3?node-id=0%3A1