# Shneiderman's Eight Golden Rules of Interface Design

We decided to use Shneiderman's Eight Golden Rules of Interface design in order to design a good user interface for the application to ensure the users have the best possible experience. These rules were proposed by Shneiderman as they were derived heuristically from experience.

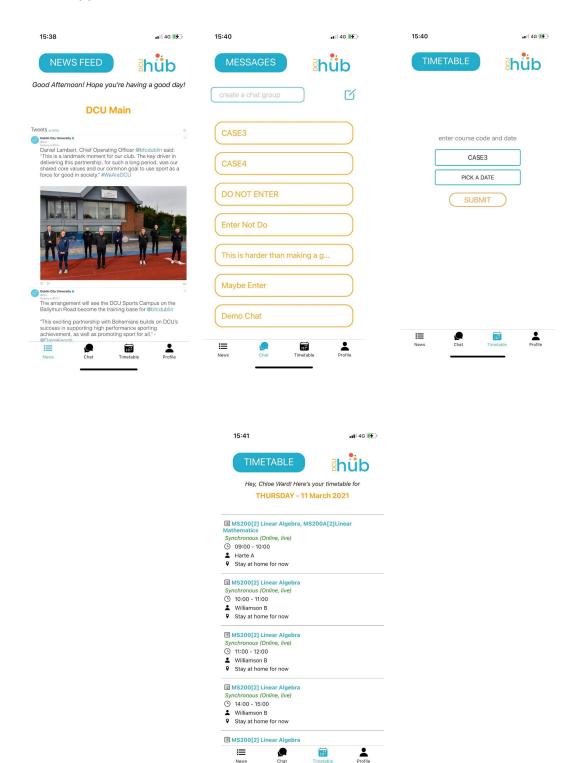
The following rules we followed and applied in our application are:

#### 1. Strive for consistency.

We established a common theme for the application in regards to colour use. We planned on using the colours blue, orange and pink and the background white throughout the application as we thought they would all equally compliment each other combined into the single application. We made sure to be consistent with the colours throughout the application as each page two or more of these colour themes.



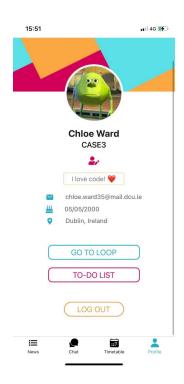
We were also consistent in adding the DCU Hub Logo on all the main pages in the application.



We wanted a minimalistic but appealing user interface theme and we were consistent with that throughout the application.

#### 2. Enable frequent users to use shortcuts.

Once a user logs into the application, they remain logged in until they press the sign out button to log out. In the screenshot below, you can see the Logout button which would sign the user out of the application.



#### 3. Offer informative feedback.

When a user wishes to delete a list or a chat, a confirmation box pops up. Asking them to confirm if they wish to delete the item. The user can then press the delete to continue or the cancel button to abort the deletion. We have added more feedback throughout the app.



Confirmation alerts

#### 4. Design dialog to yield closure.

When a user first opens our application, they can either sign up, log in or opt to recover their password with our "Forgot Password" page. The users know exactly what to do.

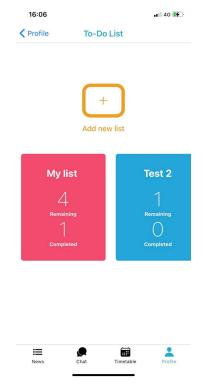
We have a fixed bottom bar navigation when a user first logs into the application. This stays the same throughout the users whole experience and each icon corresponds to what page it will lead you to. So the chat icon means the chat page etc.

This makes it easy for the users to understand what they are doing which creates an easy and uncomplicated environment for the user.



Fixed bottom bar navigation in application

We have also implemented this rule in regards to the To-Do list page. When a user adds tasks or completes tasks in their To-Do lists, on the dashboard it shows the user how many tasks are remaining and how many need to be completed.



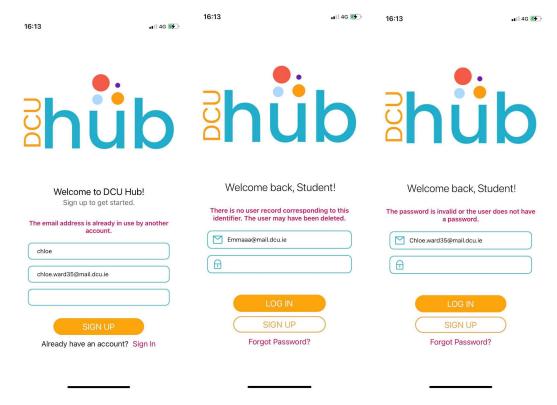
To-Do List dashboard

This ultimately allows the users to be guided through the process in regards to their goals and feedback as the application is giving feedback on what's left to do and what needs to be completed.

### 5. Offer simple error-handling.

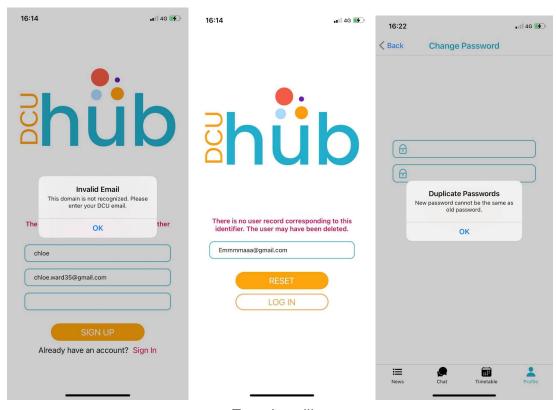
On the users first visit to the application, it is clear what to do, as a user can either sign up, log in or opt to recover their password.

Firebase error messages appear regularly in regards to if a user enters an account that already exists in the database, if the password is incorrect or if the user does not exist in the database.



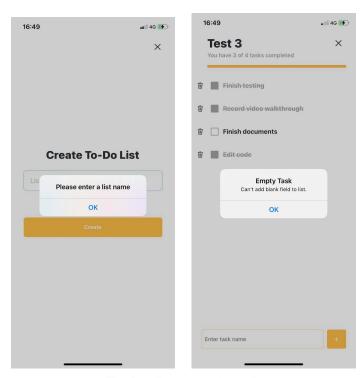
Error Handling

Error Handling is also implemented on registration, if the email domain does not match that of a DCU student, or if the email does not exist in the database when trying to reset password and when trying to change password.



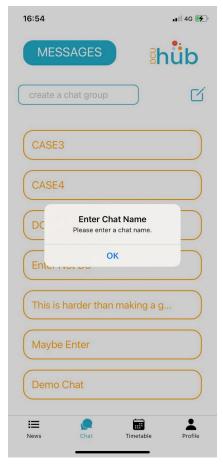
Error handling

We also implemented simple error handling when creating a list, so that a user can't accidentally or deliberately make a blank To-Do list or task.



To-Do list error handling

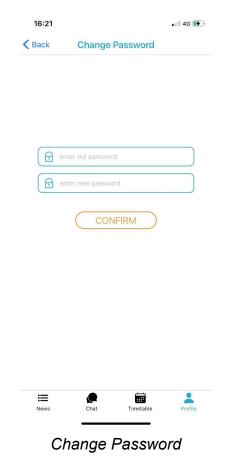
Simple error handling was also implemented in the chats page, so that a user can't create a blank group chat name.



Group chat name error handling

## 6. Permit easy reversal of actions.

If a user wishes to edit their password as they entered the wrong one or if they simply want to change it then we have made it easy for the users to do so. As the users just have to navigate to the Change Password button in the Edit Profile page.



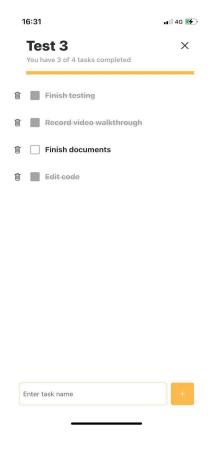
If a user also wants to change their account details, they just have to navigate to the Edit Profile page and change the details. Once the user presses the save button these new details will automatically be saved in our database. Then the other pages that use the details such as Course Code etc will be automatically updated too.



Edit Profile page

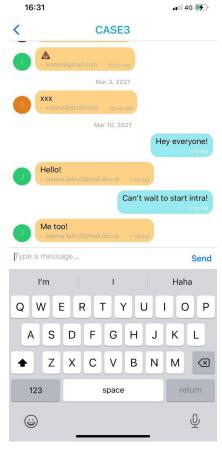
## 7. Support internal locus of control.

A user may opt to create as many To-Do lists on their dashboard as they want. They can then delete individual tasks and mark these individual tasks as completed by pressing the square box icon. This will then cross the task out.



Users To-Do List

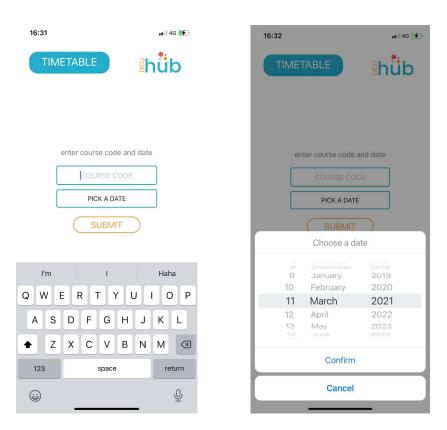
A user can also opt to go into any of the chats in the group chat dashboard. Where they can send or reply to any messages as much as the user wants.



Chat Screen

A user can also choose what course code to enter in the Timetable. The course code in their profile is automatically entered for the students but they can opt to change that by just pressing the pre filled course code.

A user can also pick the date for the day's timetable that they want to look at.



Changing timetable code and date

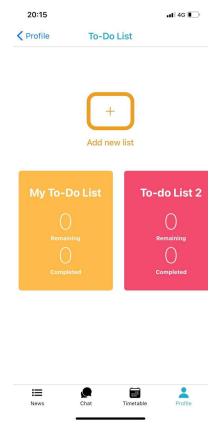
### 8. Reduce short-term memory load.

The fixed bottom bar navigation follows each user to each page that they visit as you can see above from the previous screenshots that are shown of the user interface. The use of icons in this navigation bar means that users don't have to remember what's on each page because the icon corresponds to what is on each page as each page contains exactly what the icons and texts say.



When a user also edits their profile, this profile information is used in other pages, such as the TimeTable page etc.

The use of the To-Do lists also reduces short term memory load as all the lists a user created are listed in a horizontal scrollable dashboard.



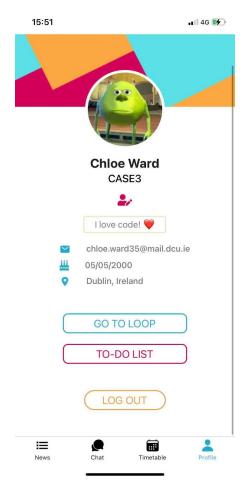
Scrollable dashboard

A user can also choose the colour of their To-Do list.



Pick To-Do list colour

When a user navigates to the Profile page the log out button is clearly visible For the user to know where to log out. The Edit Profile page is indicated by an An edit avatar icon which the user will know what it means.



Edit profile icon

On the Profile page, there are clear buttons which indicate what each button to do and what pressing each button would entail.