

# Virtual Assistant

(Prototype and Testing)

**Project** Deliverable 3

## Human Computer and Interaction

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**2021** 12, Dec

## Usability Principles

<b>Learnability</b>	<b>Predictability</b>	The application covers predictability by the visibility of the next available operations while performing a task. The system provides a clear indication of the operations which can be performed.
	<b>Synthesizability</b>	The application is synthesizable. The user can evaluate the effect of any past action performed. e.g., clicking on the home icon opens the home tab. The color of the home icon changes showing that pressing the home button is responsible for opening of the home tab.
	<b>Familiarity</b>	The application is easy to use for the naïve users. It provides familiarity by using familiar icons so that the user can draw conclusion of any operation before performing it.
	<b>Generalizability</b>	The application is generalizable. it contains basic operations which a virtual assistant must have. e.g., voice commands, performing different tasks.
	<b>Consistency</b>	The application is consistent for the same operations being performed in multiple ways. e.g., Setting an alarm from the pop up does the same thing as setting alarm from the home screen.

<b>Flexibility</b>	<b>Dialogue Initiative</b>	The application is dialogue initiative and gives every possible option to the user.
	<b>Multithreading</b>	The application doesn't provide multithreading. It can perform one task at a time.
	<b>Task Migratability</b>	The application supports task migratability. e.g., when setting an alarm, the application automatically opens the alarm clock sets an alarm as specified and returns to the home page without effecting the already set alarms.
	<b>Substitutivity</b>	The application provides substitutivity. The inputs can be given in multiple ways. e.g., user can give voice commands as well as can perform the same task through UI.
	<b>Customizability</b>	The application doesn't provide option of customizing the Menus.

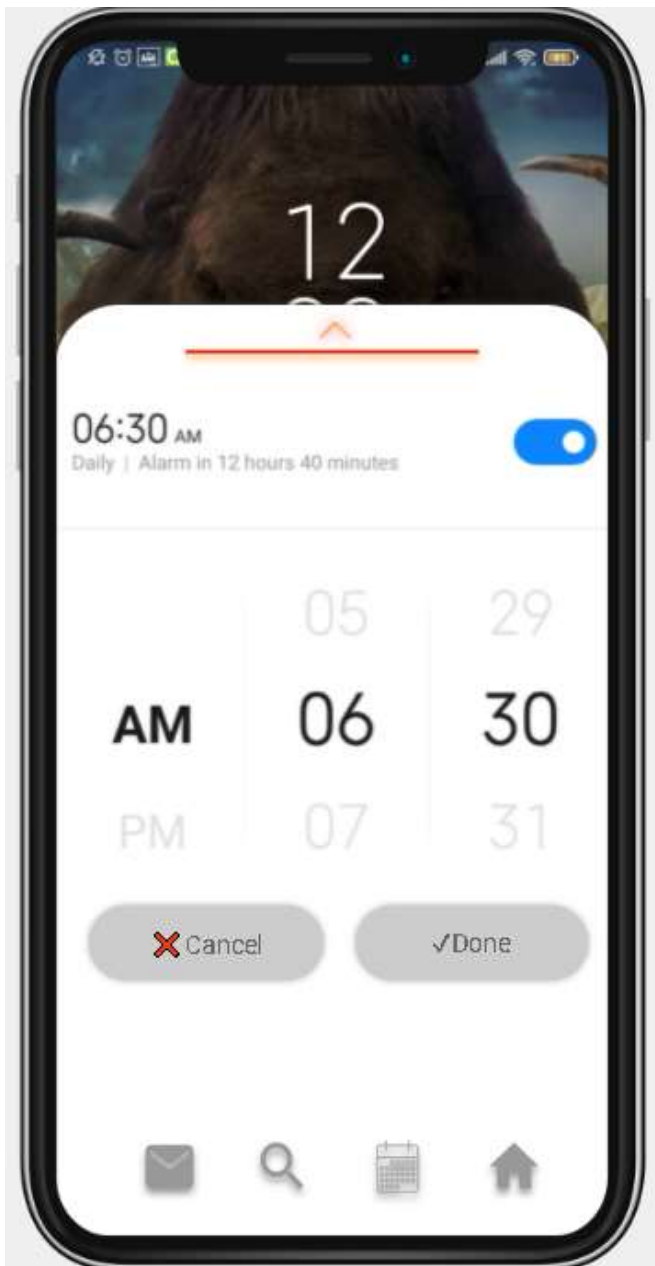
<b>Robustness</b>	<b>Responsiveness</b>	The application does not provide responsiveness.
	<b>Recoverability</b>	The application provides ability of undoing a task to the user through backward arrows. .
	<b>Observability</b>	The application doesn't provide observability.
	<b>Task Conformance</b>	Whenever user tries to accomplish a task, the application gives him feedback whether or not his/ her task is completed.

## Nelson's Heuristics analysis

### 1) Visibility of the system status.

The application provides visibility of the system status by providing proper feedback. e.g., after the completion of the task or login the application provides feedback to the user.

Moreover, it shows current state of the system by highlighting the selected options.





After Setting the Alarm, the application gives feedback of the time of the alarm

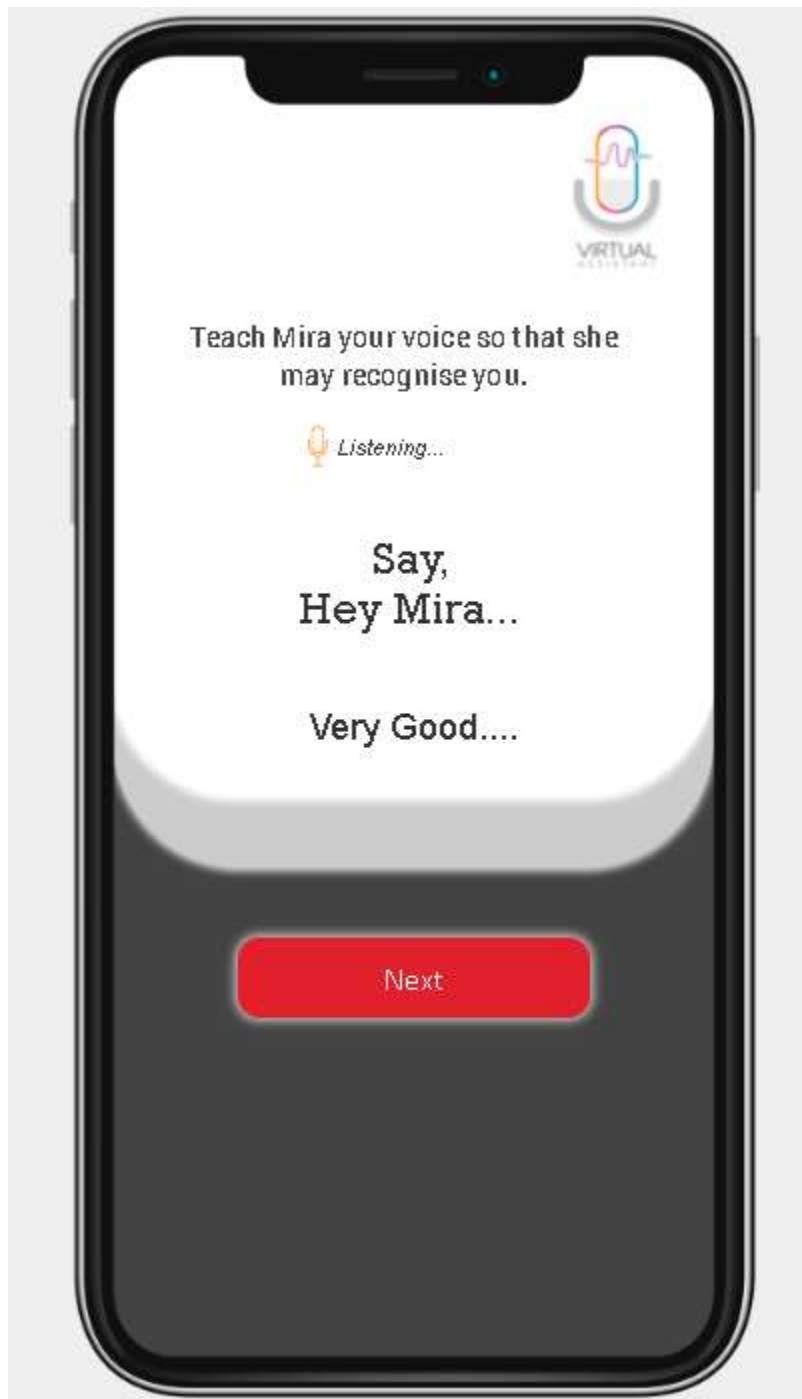


The application gives feedback on input of invalid credentials

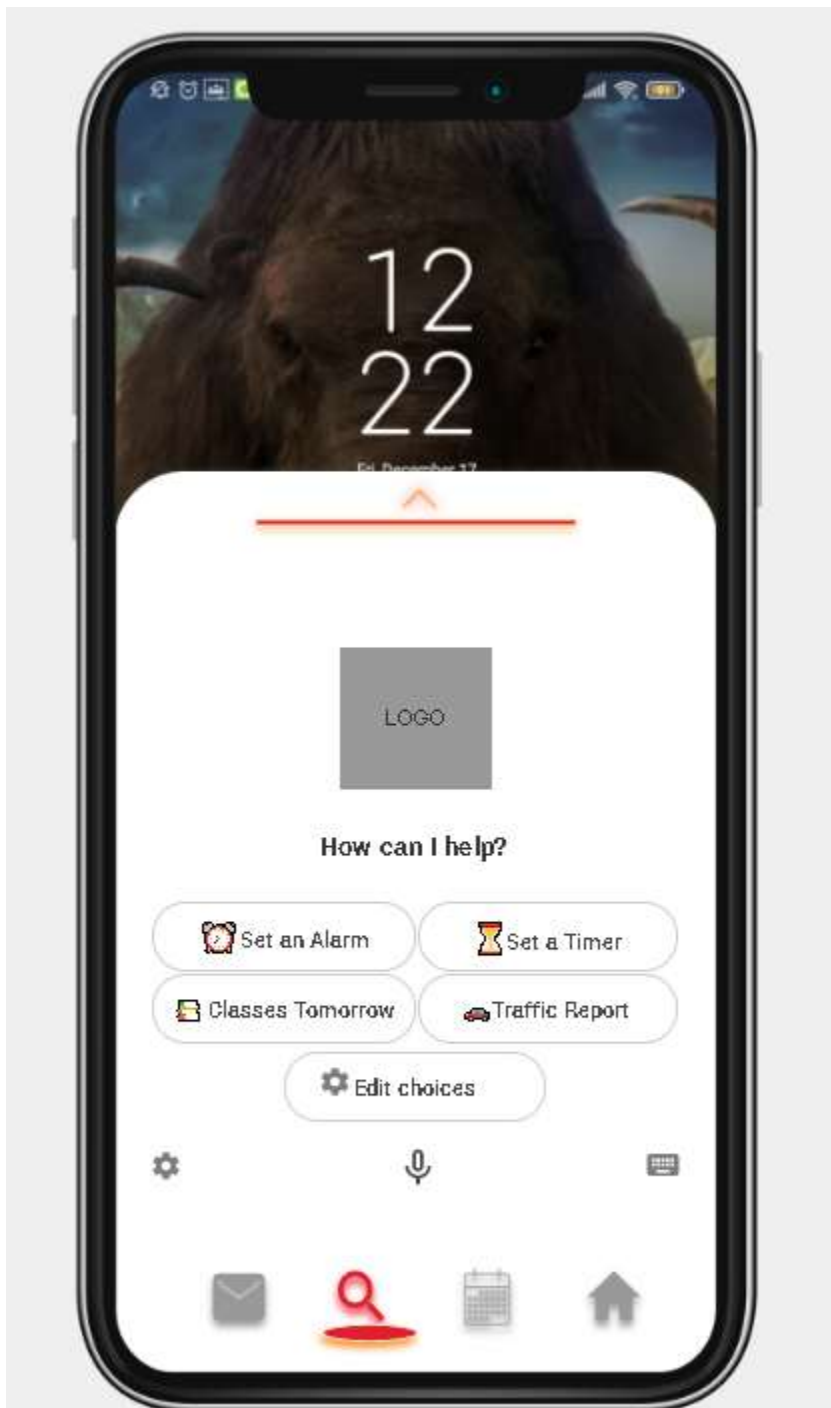
**2) Match Between the system and the real world.**

The application doesn't use any terms not understandable to the naïve user. Moreover, it displays information in a logical order for the user to understand properly.





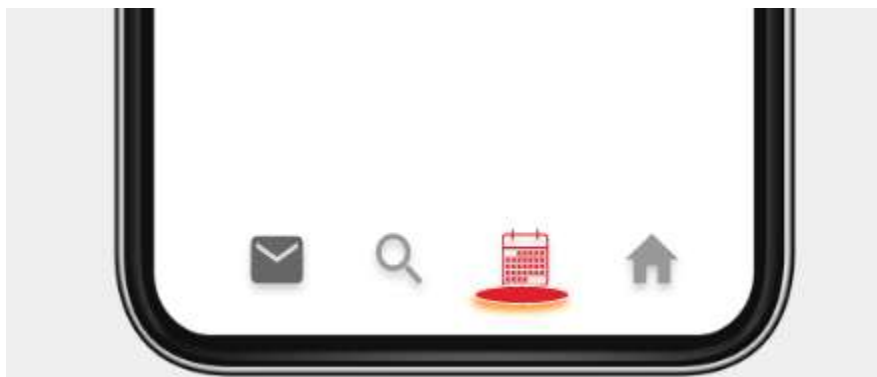
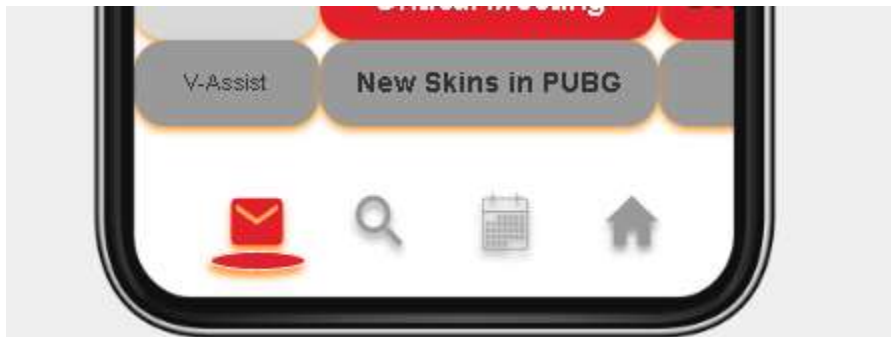
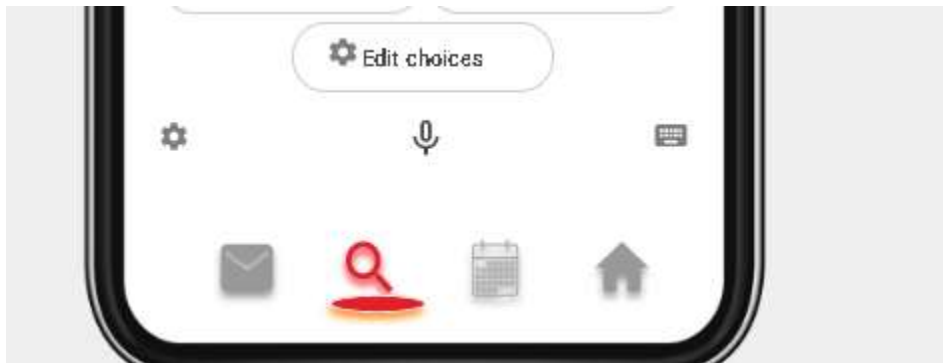


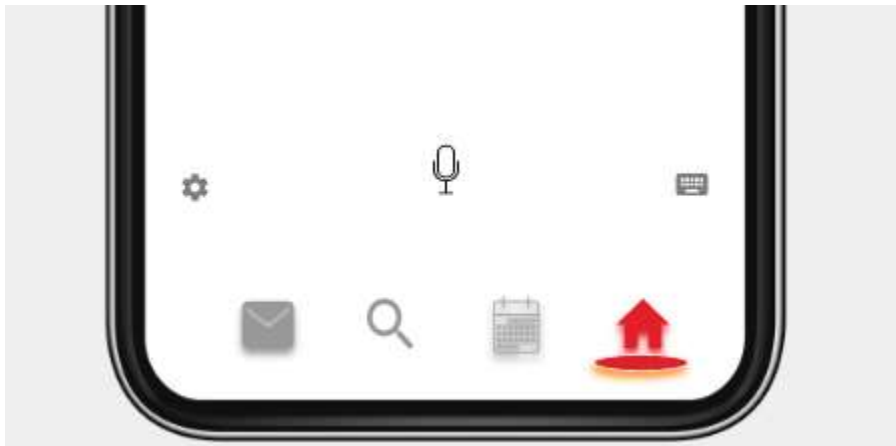


All these are basic tasks, that any naïve user can perform.

### 3) User control and freedom.

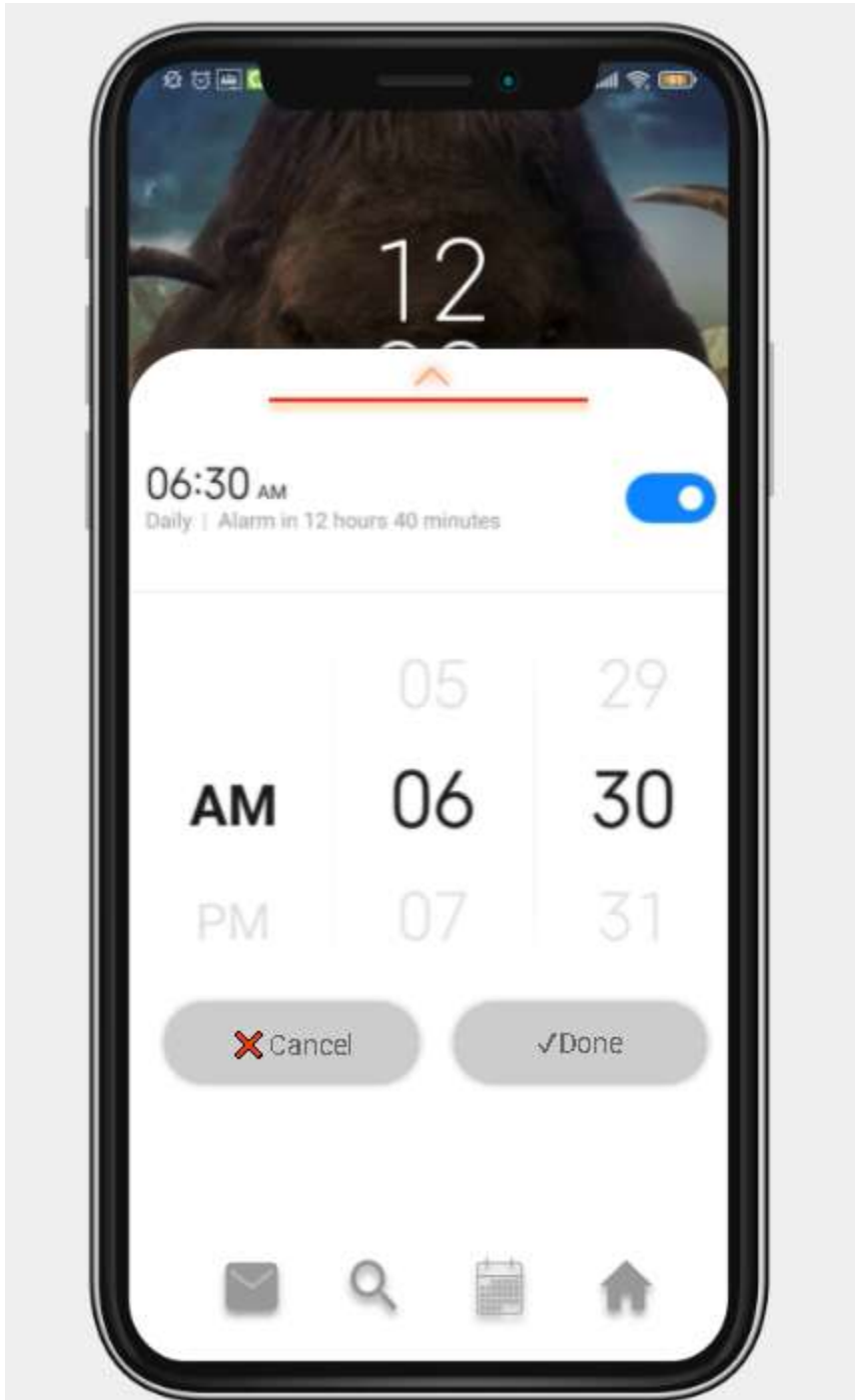
The application provides freedom to the user to undo his mistakes.





#### 4) Consistency and Standards.

The application follows the platform conventions and doesn't use any different words so that the user gets confused.

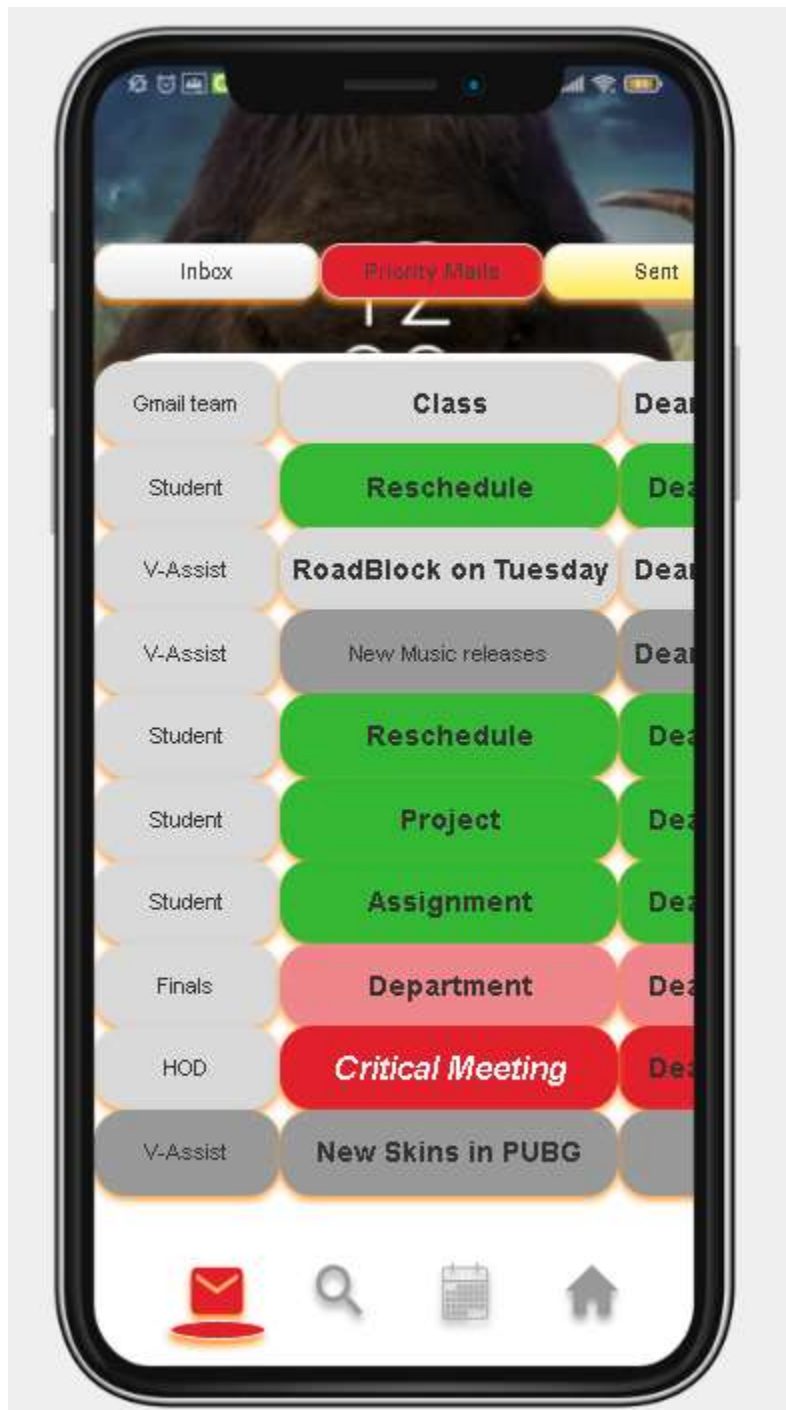


### 5) Error prevention

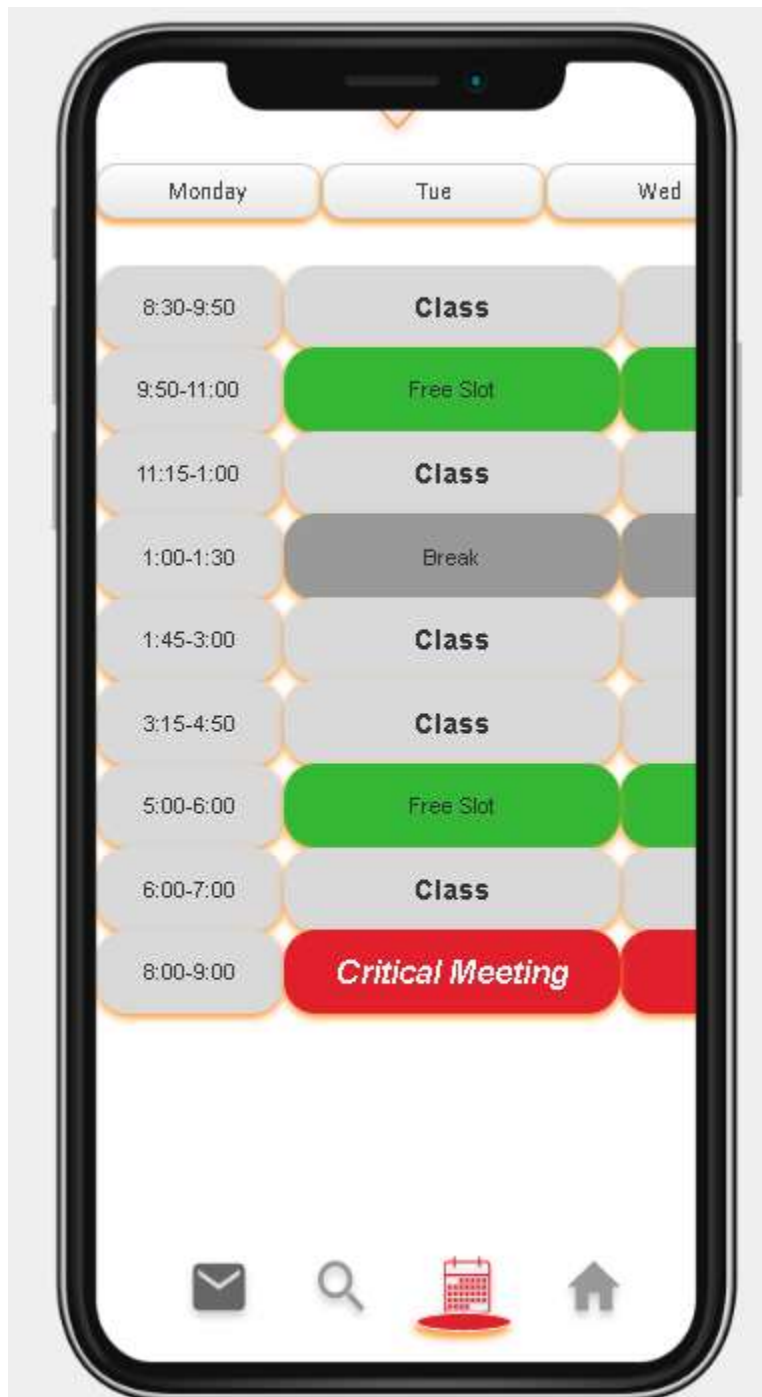
The application provides error prevention by highlighting the important message.

e.g., After the login Continue button takes the system to the home page so it is gets focused after the login.





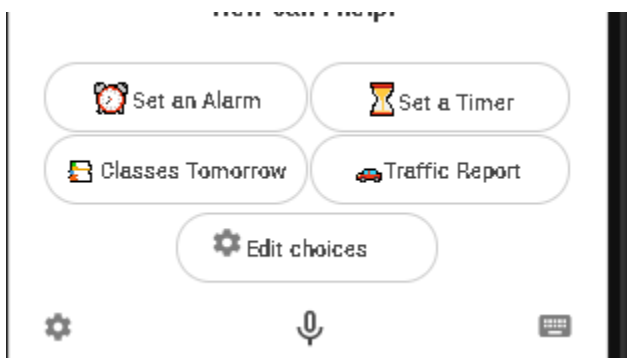
Priority Emails are Highlighted.



Critical Meetings are highlighted.

### 6) Recognition rather than recall

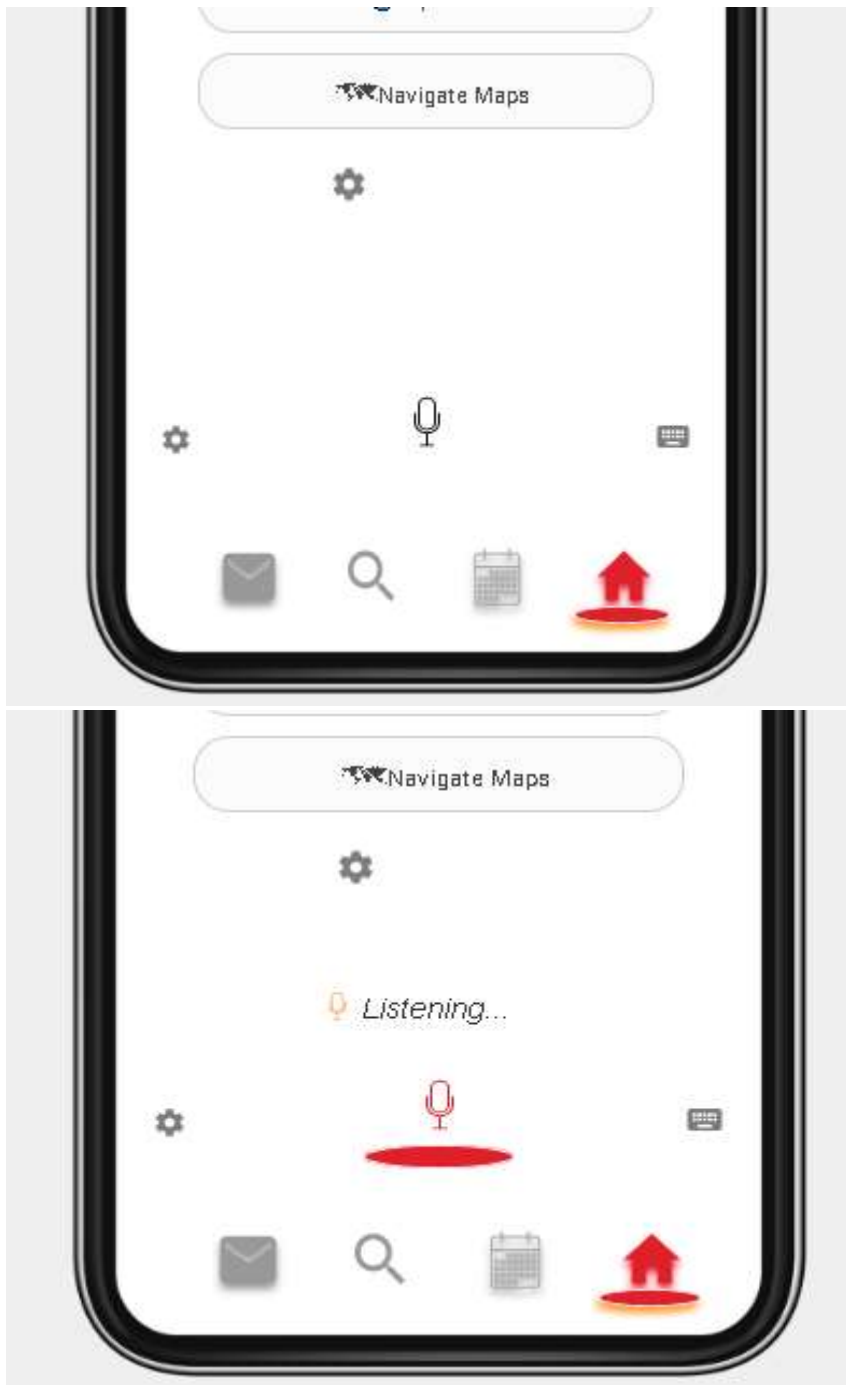
The application uses familiar icons with the operations so that the user doesn't need to recall the same operation he did last time.



### 7) Flexibility and efficiency of use

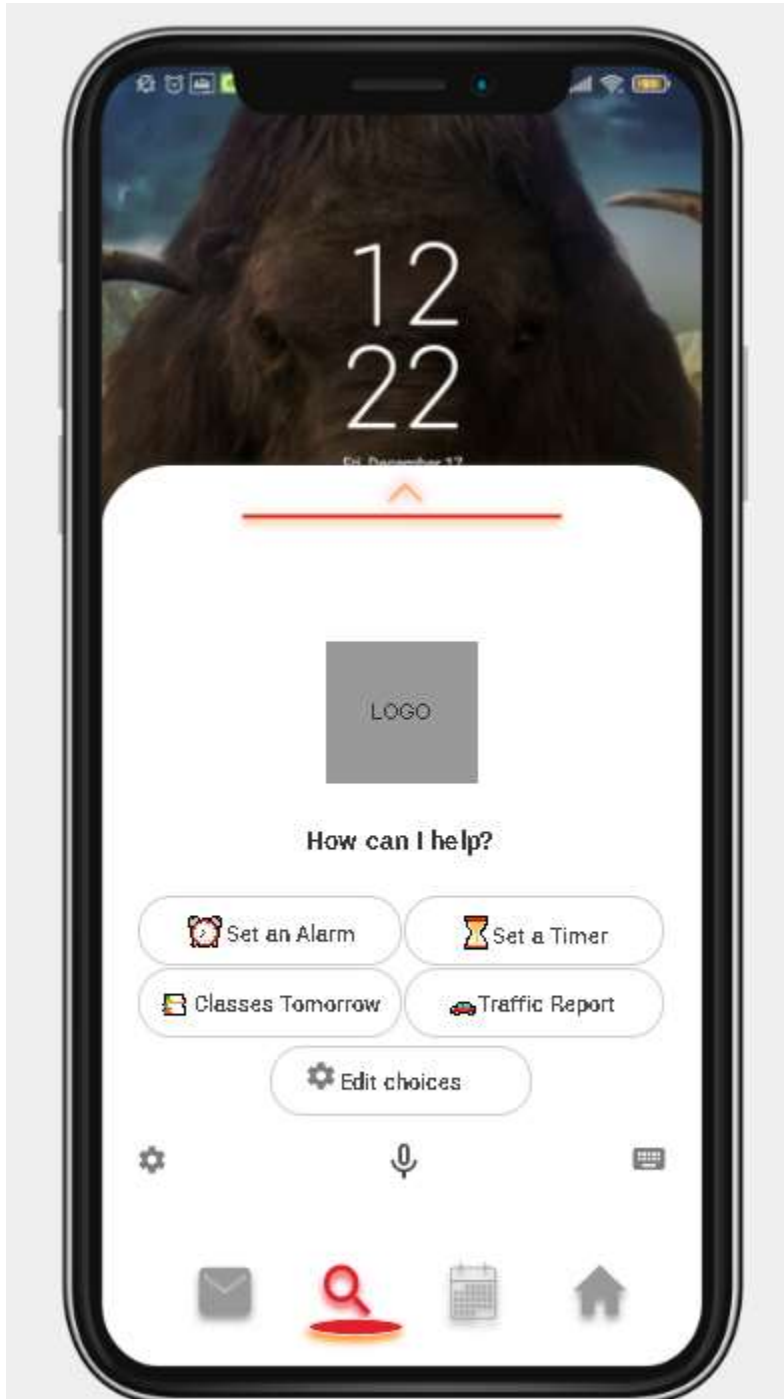
The application caters both, expert and novice users. e.g., the expert user can give voice commands to the system but for the novice user the suggestions of the operations to be performed are listed.

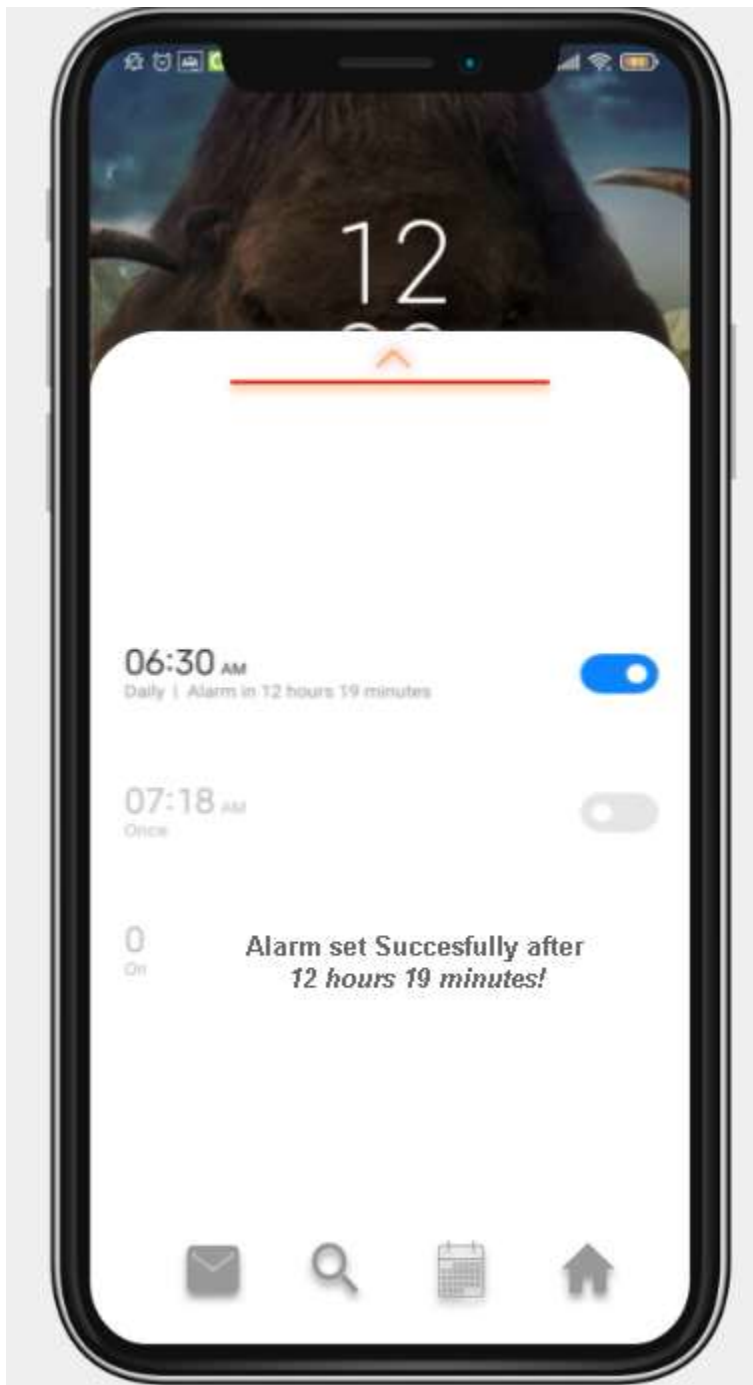




## 8) Aesthetic and Minimalist Design

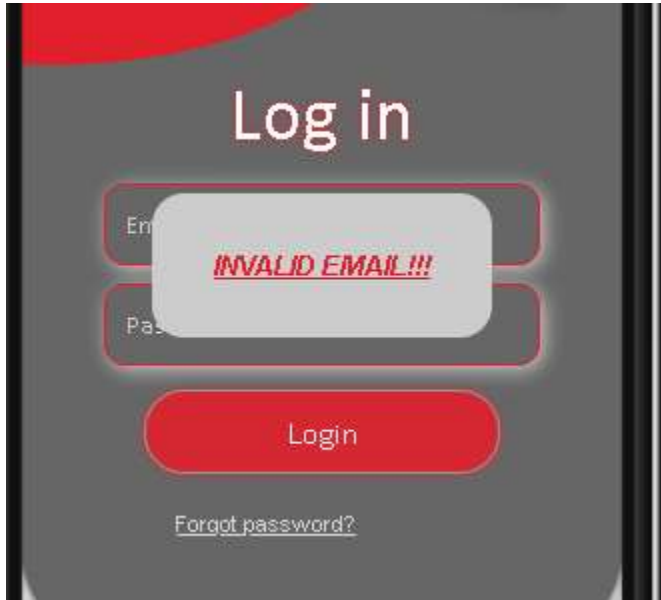
The application is simple and doesn't complicate different operations. It uses simple terms and gives simple feedback while discards the unnecessary details.





**9) Help user recognize, diagnose and recover from errors.**

The application provides proper feedback to the user in case of any error. The user can use the feedback to correct the error.

**10) Help**

The application contains a help feature where it gives a complete user manual to the user.

