

SCHOOL OF COMPUTING
Faculty of Engineering

UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING

SESSION 2020/2021 SEMESTER 1

SECV2113 - 07 HUMAN COMPUTER INTERACTION

PROJECT PART #4: COMPUTER PROTOTYPING & EVALUATION

GROUP NAME: WALNUT

LECTURER: NOR ANITA FAIROS BINTI ISMAIL

GROUP MEMBER :

1) NURSYAHIDATUL ASYIQIN BINTI YUSOF	A19EC0140
2) IRMA ZAFIRAH BINTI MOHD IKRAM	A19EC0054
3) IZZATUN NADIAH BINTI ABDUL RAHMAN	A19EC0056
4) NURUL SYAMIRA BINTI AMAT JIFRI	A19EC0145

TABLE OF CONTENTS

INTRODUCTION **1**

PROTOTYPE **2**

BRIEFING NOTES **14**

SCENARIO TASKS **15**

USER DEMOGRAPHICS **16**

User 1 16

User 2 16

User 3 16

User 4 16

User 5 16

User 6 16

TESTING WITH USERS **17**

OBSERVATIONS **18**

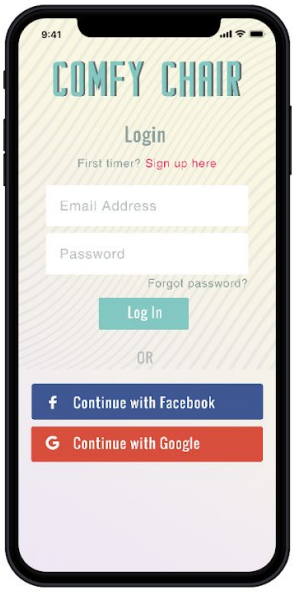
FINDINGS USABILITY PROBLEMS **19**

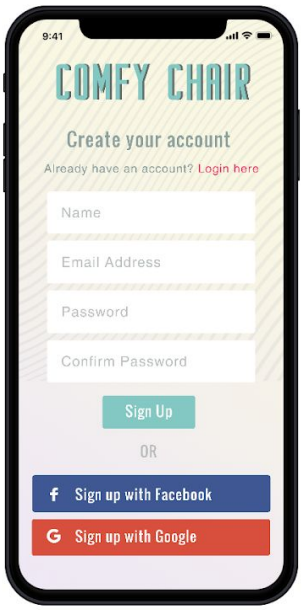
1. INTRODUCTION

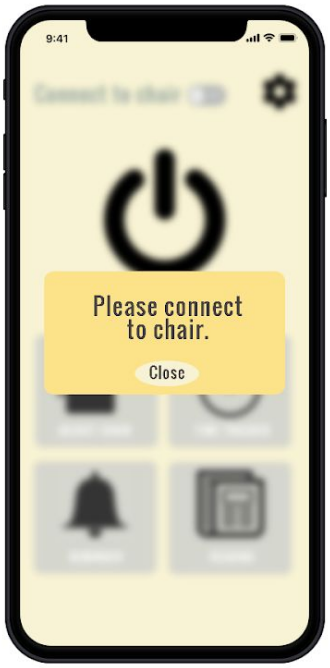
User testing is a technique used in user-centered interaction design to evaluate a product by testing it on users. It can measure the ease of using the products as in human-computer interaction. Preparing the user testing involves a realistic situation where the person performs a list of tasks using the product being tested and records the situation to observe how the user completes the task given while thinking aloud. The testing is conducted at our own house using google meet during evening hours because of the pandemic issues. Since our product is a comfy chair, equipment that is used in the testing is a phone screen as the user interface to interact with the chair. The testing involved 6 real users and each user needed to complete a total 3 tasks. The tasks are they need to unfold and fold the chair to adjust the chair, view sitting time and add the reminder.

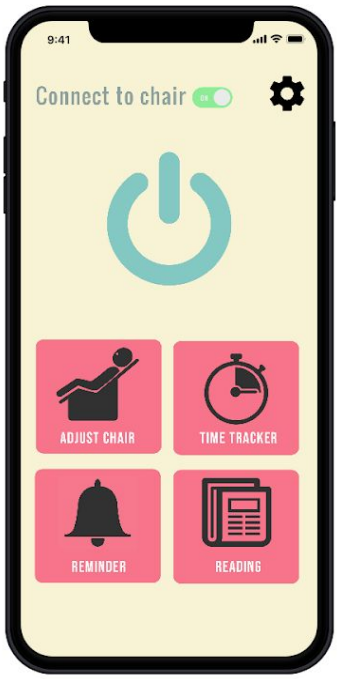
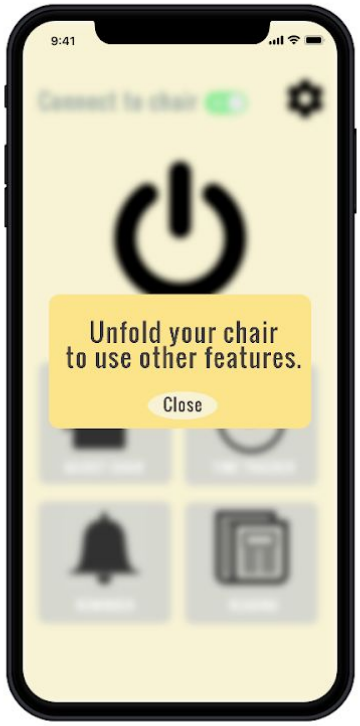
2. PROTOTYPE

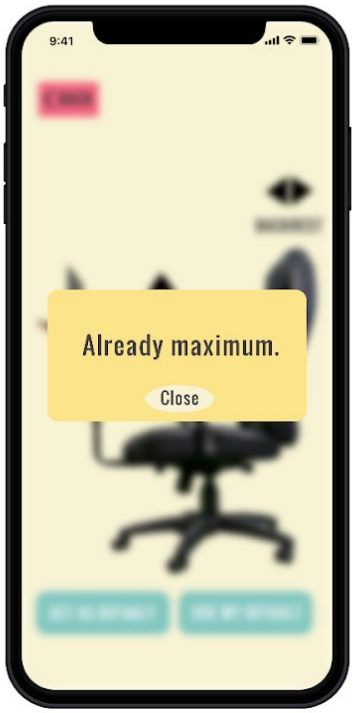
Link: https://projects.invisionapp.com/share/4RZY2R4JQPE#/screens

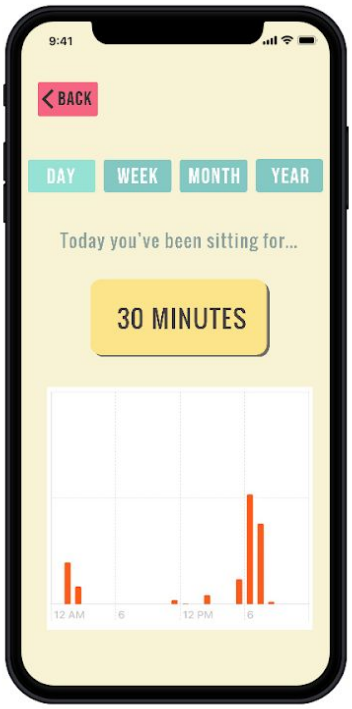
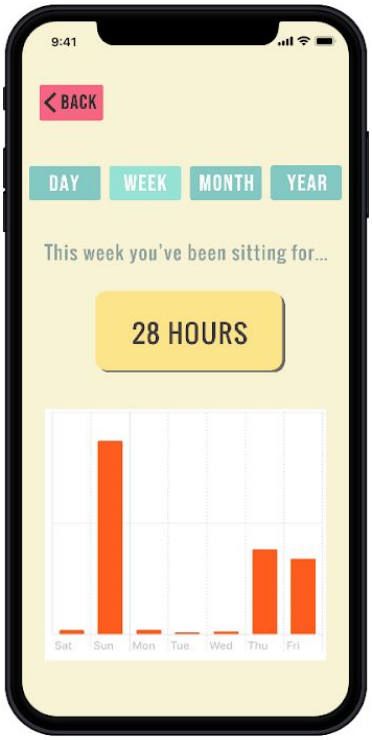
No.	Scene	Description
1.		Screen when launching the app.
2.		Login page.

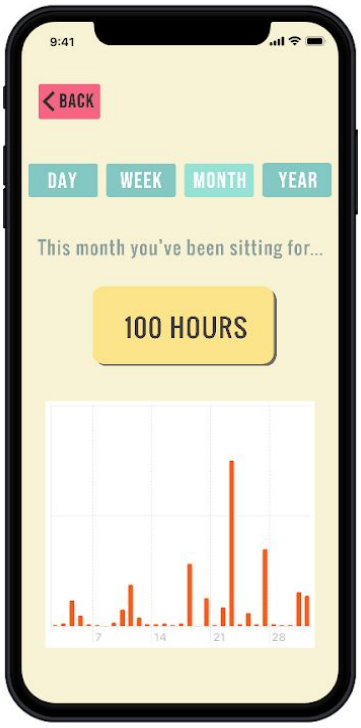
3.		Sign up page.
4.		Before the app connects to the chair.

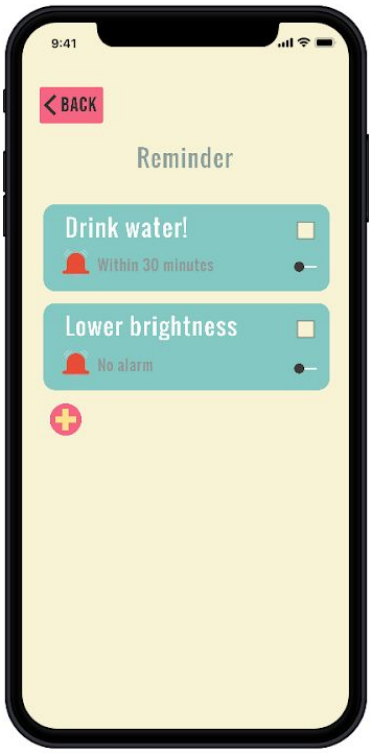
5.		After the app connects to the chair.
6.		A warning pops up when users press the power button/unfold chair or press any features in the app before connecting the app to the chair.

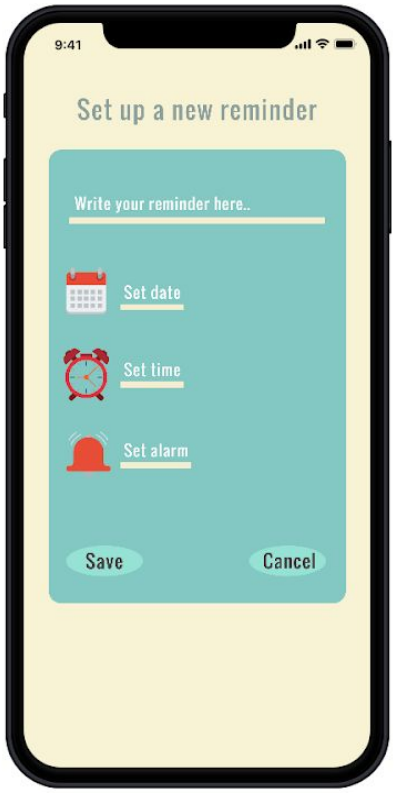
7.		Main page. After unfolding the chair (press the power button).
8.		A warning pops out when users press any features button before unfolding the chair (press the power button).

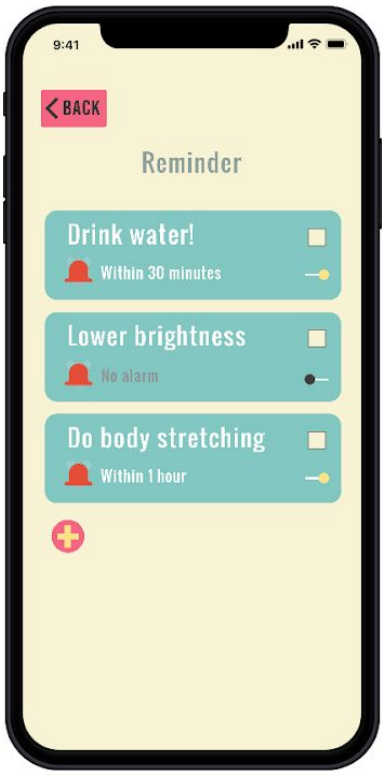
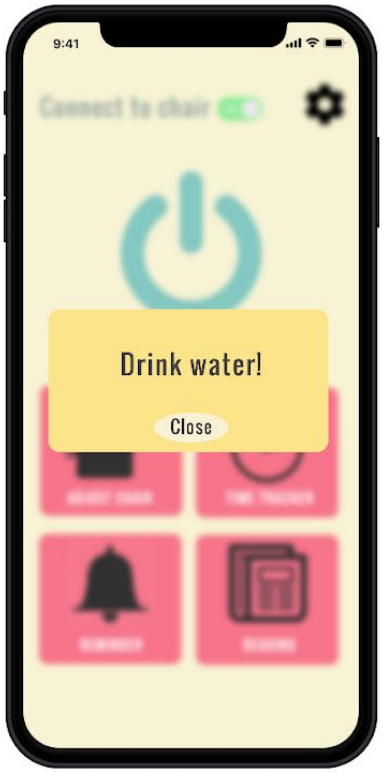
9.		Page for "Adjust Chair" feature.
10.		A warning pops out when the level for desk & armrest and backrest are at their maximum level.

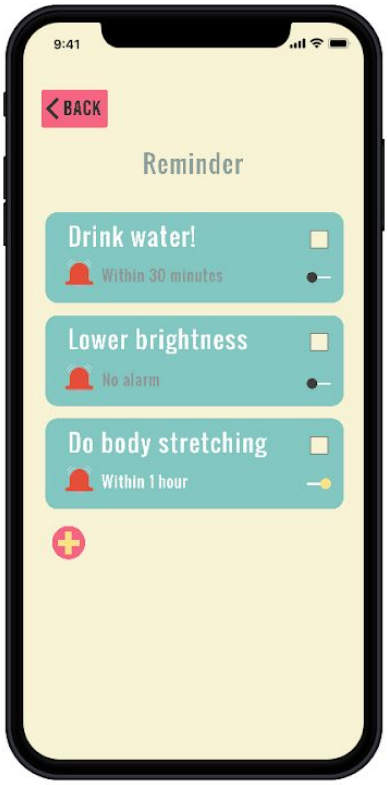
11.		Page for "Time Tracker" feature. Users can view the cumulative sitting time within a day.
12.		Page for "Time Tracker" feature. Users can view the cumulative sitting time within a week.

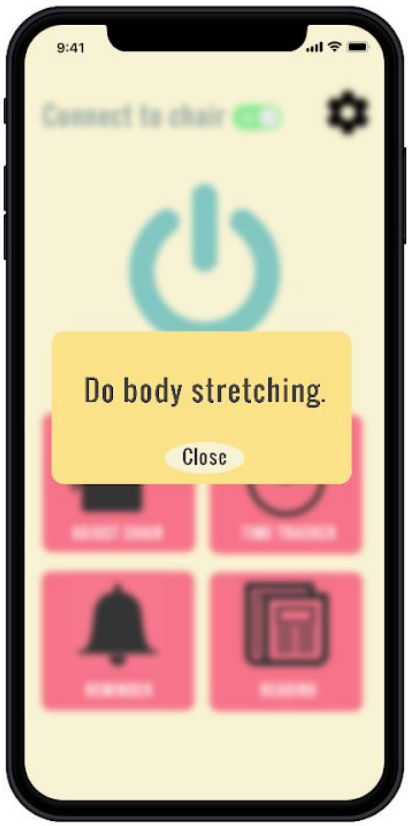
13.		Page for "Time Tracker" feature. Users can view the cumulative sitting time within a month.
14.		Page for "Time Tracker" feature. Users can view the cumulative sitting time within a year.

15.		Page for "Reminder" feature. There are existing reminders.
16.		Users turn on the "Drink water!" alarm.

17.		Users set up their own reminder.

18.		A new reminder is added.
19.		The “Drink water!” alarm pops up.

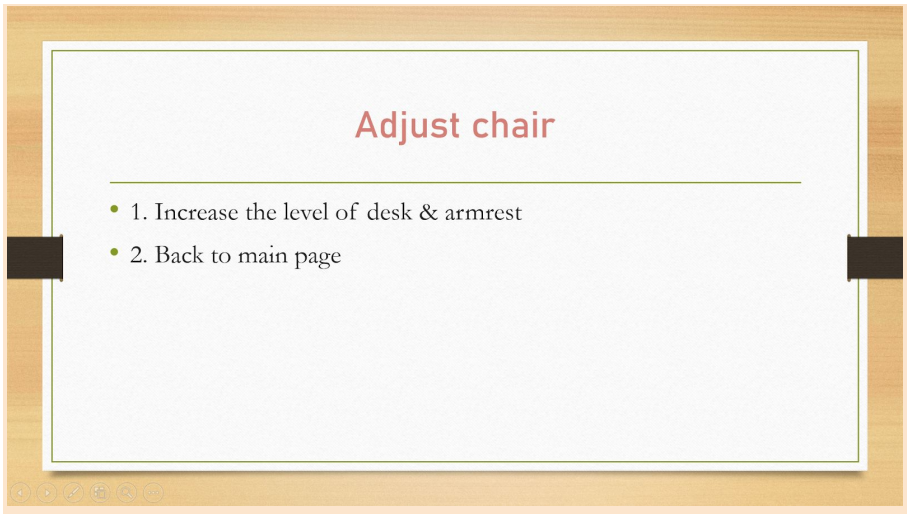
20.		A new reminder is added without turning on the "Drink water!" alarm.

21.		The new reminder alarm pops up.

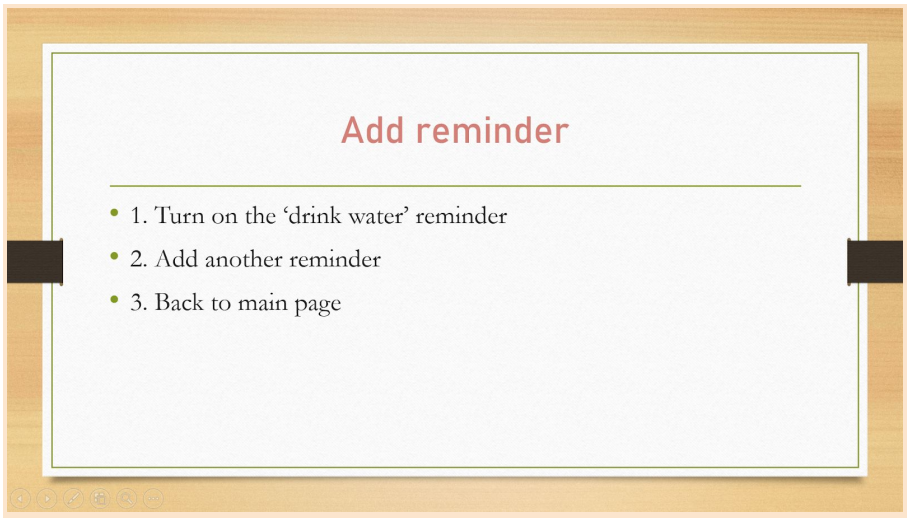
3. BRIEFING NOTES

We are going to do a user testing on our product to help us identify the possible problems in order to improve the effectiveness and usability of the product. It is a Comfy Chair application. This comfy chair is related to one of the sustainable goals which is good health and well being. The chair can be controlled by using the smart phone application linked to it. You will be needed to complete a total of 3 tasks. You will do the tasks without any guides from me but we will hand you cards containing a brief manual. If you cannot complete the task, you need to say "TERMINATE" so that we can move to the next task. The first task is you want to unfold or fold the chair. Then, you want to adjust the level of desk and armrest. The second task is you want to view the time tracker. The last task is you want to set a reminder.

4. SCENARIO TASKS







5. USER DEMOGRAPHICS

User 1

Farahaneesa Mia Irina binti Zahari, 21 years old. A malay student from Universiti Kebangsaan Malaysia (UKM).

User 2

Nur Fatihah binti Aliasak, 21 years old. A malay student from Universiti Malaya (UM).

User 3

Natasha Julis, 21 years old. A kadazandusun student from Universiti Malaya (UM).

User 4

Fatin Nadia binti Khairul Anuar, 21 years old. A student of UITM Dungun Terengganu in investment Analysis course. Currently on her last year's study.

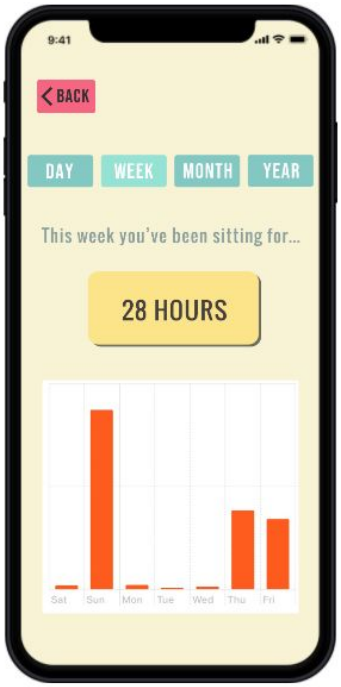
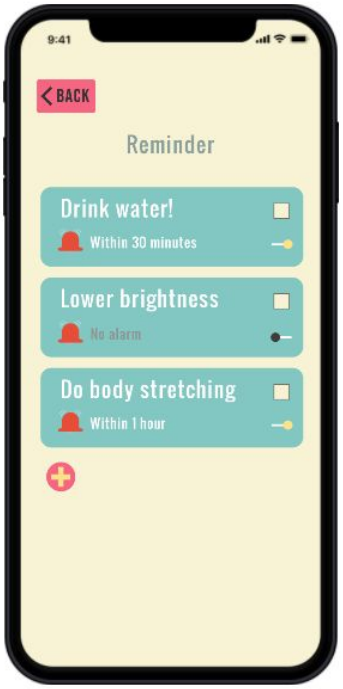
User 5

Elmira Akma binti Raman, 21 years old. A student of UTM Johor in Graphic and Multimedia Software course. Currently in her second year’s study.

User 6

Lin binti Abu Kassim, 50 years old. An officer working at a headquarters office in Damansara. Currently working for more than 10 years as an officer.

6. TESTING WITH USERS

TASK 1:Adjust chair	TASK 2: View sitting time	TASK 3: Add reminder
		

Each user did the 3 tasks in 1 video.

User 1, 2, 3 (Student) :
https://drive.google.com/file/d/1qwDPfzjxhTzEpA5PwAAu7ttg5pMPIln7/view?usp=sharing

User 4 (Student) :
https://drive.google.com/file/d/1A9lgPUtpIsdmSb0Y7diKLVy9rg28olkF/view?usp=sharing

User 5 (Student) :
https://drive.google.com/file/d/1umOucQ4oTFIwlay2ESbZgA8LMWnL7lnL/view?usp=sharing

User 6 (Officer) :
https://drive.google.com/file/d/1hhGqUyaKriIrjS3WlYv92AlbP7hJdi-v/view?usp=sharing

7. OBSERVATIONS

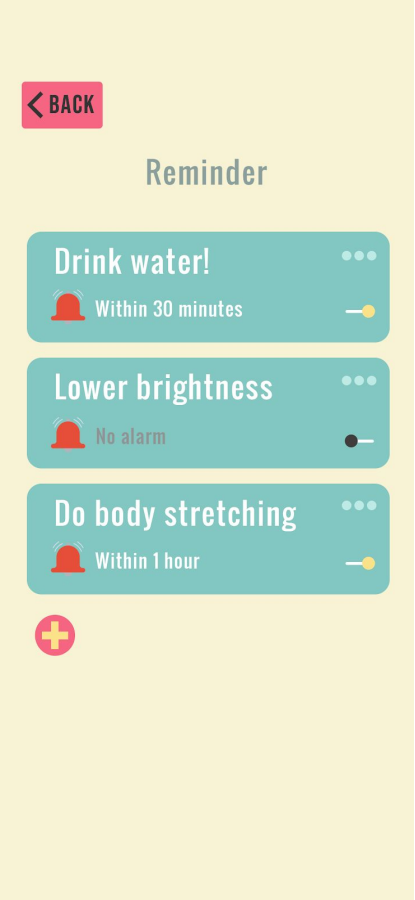
After doing the user testing, we found that all the users managed to complete all the 3 tasks given easily which means that our product is easy to use and efficient. There is also no one speaking out “terminate” to stop doing their task. So, it shows that the easy use of our product will increase the learnability and memorability of the users.

For task 1, all the users managed to adjust the chair with ease. However, user 5 seems a bit confusing on the maximum height of the desk and armrest. So, she suggested that we should add the maximum height for the user to notice it. Next, all the users also managed to view the time tracker on task 2. They are not having any difficulties while doing the task. Besides, all the user manages to complete task 3 easily. But, user 1, 2 and 3 tend to click on the checkbox while doing task 3 and user 4 failed to turn on the drink water reminder and just add the new reminder because she was confused about the checkbox. The user 4 also said that adding the reminder was a difficult task to do. So, she suggested adding a manual tutorial for the beginner user.

All the users also said that this application is easy to use and user friendly but some of them are having some difficulties for the first time user. Even so, user 2 suggested adding the vibrations when clicking anything on it because some users may be more satisfying while using the app and user 3 suggested adding the notification ringtone. User 6 also suggests adding the massage function for elder user. Lastly, all the users said that they would suggest using this application in real life because for the students, it would be easy to use while online classes. It can notify them to do other things while sitting for too long doing the assignment. For the officer, it is also very convenient and can save their time while using it.

9. FINDINGS USABILITY PROBLEMS

Based on our observations, we think that the checkbox in reminder feature makes users a little bit confused about the function. Users will be prone to make a mistake by pressing on the checkbox. Hence, the solution is to replace the checkbox with a setting icon whereby it has a few options such as edit and delete the reminder.



Revised image

Moreover, the user does not know the maximum height of the desk and armrest and the current height of their desk and armrest. So, add the maximum height number to the alert message when the user has reached the maximum height of the desk and armrest and write the current height of the desk and armrest.

Last but not least, some users are having some problems while using it for the first time, so we decided that it would be better to have a tutorial for beginner users. This

tutorial will briefly show the user how to use the app along with all the functions. Instead users need to explore by themself, the app will teach and lead the user step by step. Since we consider that not all users like to be taught, the skip button will be provided for users to skip and continue exploring the app by themselves.