



OVERVIEW



DEFINE

- 1 Problem/Vision Statement
- 2 Primary Persona
- 3 Context Scenario
- 4 Design Requirements



IDEATE

- 1 Sketches
- 2 Storyboards



PROTOTYPE

- 1 Wireframes
- 2 Prototype



EVALUATE

- 1 Cognitive Walkthrough
- 2 User Evaluations
- 3 Conclusion

* Use the links in the words to quickly navigate towards each section.



PROBLEM STATEMENT

As students move forward in school they have a hard time developing affective study skills, managing their time, and seeking better advice, leaving students behind academically and unsure about their direction in their major.



VISION STATEMENT

With Guardian, we seek to develop a product that will help students oversee their academic curricula in a manner that will track, remind, and manage their time here at Purdue University.

Define



The Process of going from Persona to Conceptual Designs

PERSONA

- From 3 personas one was chosen as “primary” based off data collected and vision statement.



SCENARIO

- From the persona a fictional story was derived with the persona interacting with the application.



DESIGN REQUIREMENTS

- This story led to ideas for the app which led to design requirements that were needed in order to begin designing the application.

Define

Problem/Vision
Statements

Primary Persona

Context Scenario



Name: Jeffrey E. Nelms

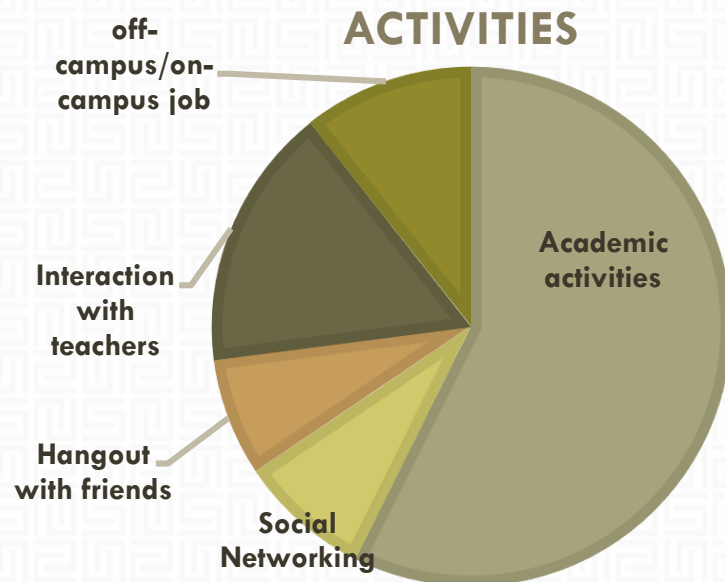
Year: Junior

Major: Mechanical Engineering

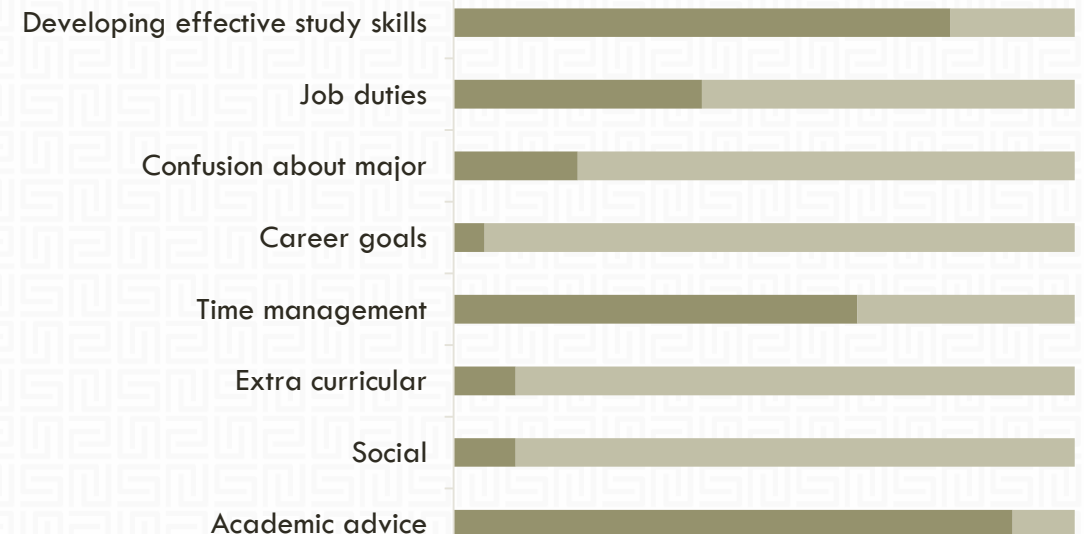
College: College of Engineering

University: Purdue University

“I need better advice from teaching community and better time management to help me graduate on time”



Influencers (frustration levels)



Define

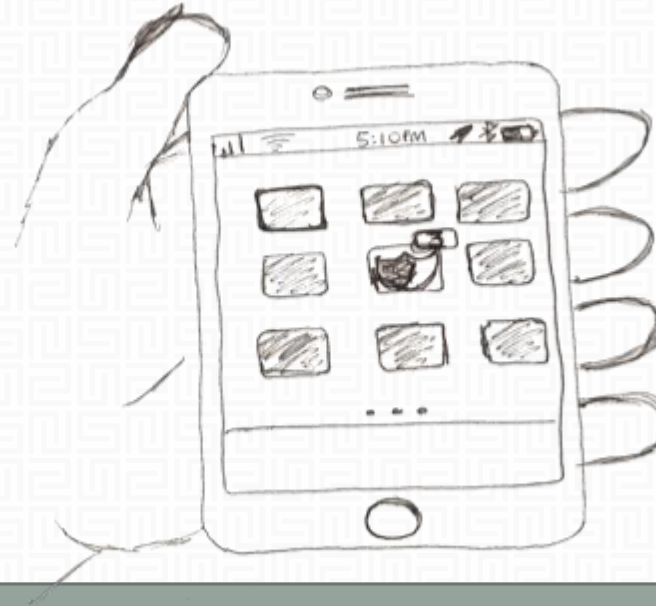
Problem/Vision
Statements

Primary Persona

Context Scenario



Jeffery wakes up after a long night of doing last minute homework and studying for midterms. He usually keeps on task and can handle working and keeping organized; however, lately he has found himself using Guardian as the semester gets busier and busier. Guardian is a new app that has been launched in the department of Mechanical Engineering that focuses on helping students keep track of all their academic responsibilities.



As he wakes up he notices that he has 3 new notifications from his advisor from the plans of studies he has generated. Jeffery likes to make sure he has multiple options when it comes time to enroll for classes, in case something goes wrong and he is unable to be assigned to a course.



The notification pops up as he clicks on it and shows the comment box where his advisor tells him his plans of study look good. His advisor also added three buttons that have course numbers on it that will link Jeffery to the course catalog and student ratings as other alternatives to check out. Jeffery chooses ME 455 and quickly browses what the course is all about.

Define

Problem/Vision
Statements

Primary Persona

Context Scenario



FRIDAYS OFF!

{ HOMEWORK Reminder! }

ME 310 due in 3hrs 10min

He notices that Guardian has placed in the bottom suggestion box more courses like ME 455 that will count towards his graduation requirement and serves as an alternative solution. He quickly becomes interested in ENGR 410 and sees the ratings for the class fit what he has been looking for. Jeffery taps on the plus sign to add it to his second POS he has made for the coming semester. He removes ME 322 and sees that ENGR 410 is a perfect fit to the semester. It will also give him Fridays off!

As Jeffery goes to close the app his reminder that he has two assignments due in the next three hours gets Jeffery moving and back on task to completing his assignments. He quickly replies with a thank you to his advisor and closes the app.

Define

Design Requirements



1. Access for advisor
2. Easy to setup, synchronize all the data from related applications (Blackboard, MyPurdue, EPOS etc.)
3. Easily manage multiple for the courses by semester.
4. A notification system which is multi-platform (Mobile, desktop, send email) for notifications such as deadlines, exams etc.
5. System generates suggestions based on peer analysis, grade patterns by students who take similar courses - design should be minimalistic for this.
6. Chat portal between advisor and advisee, and between peers.
7. Show/share plan of study in much user friendly way to both advisor and the student.
8. Customizable interfaces.

Define

Design Requirements



9. A graduation track/map to show how far is the goal to be achieved.

10. A sub-map to show how far the student is from achieving certain grades (A, B, C etc), and what can be done to improve them.

11. Appointment management system.

12. Critical information can be easily accessed.

13. Shows the area where the student should work on, judging from the history data such as scores in quizzes, missed assignments, scores in exams etc.

14. Predictive system which can display heat map, of the areas where student is lagging to achieve his overall goal.

15. Based on peer reviews, the guardian gives suggestion on what to work on during free times (Such as learning programming languages, design tools etc.)

16. The free time itself is automatically predicted by system, by looking at time tables, schedules, manually entered tasks etc.



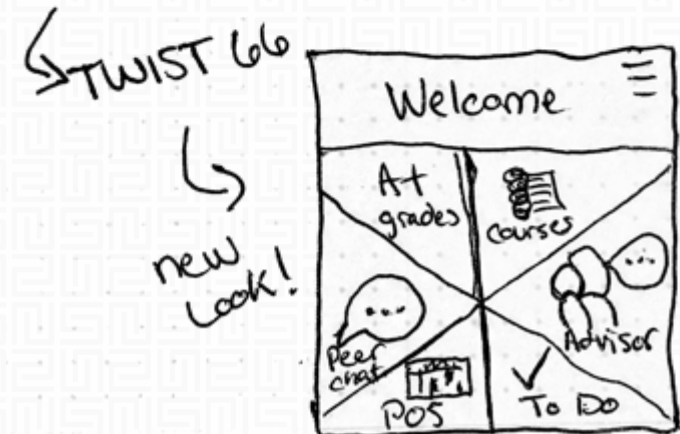
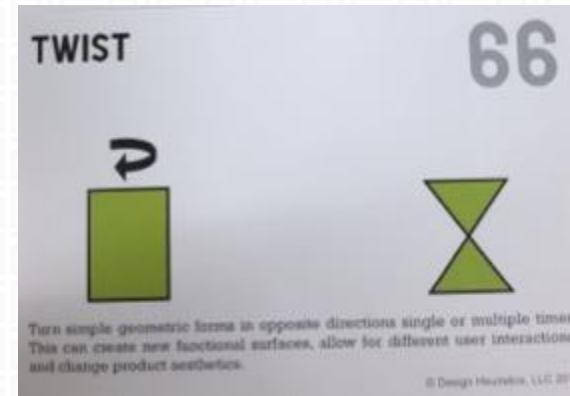
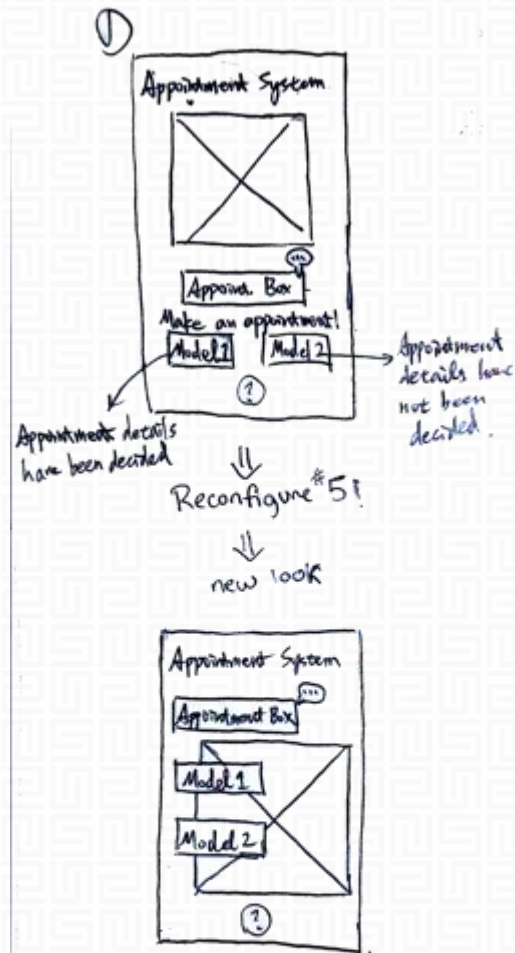
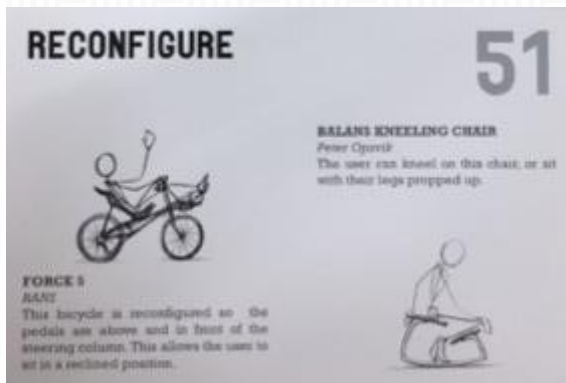
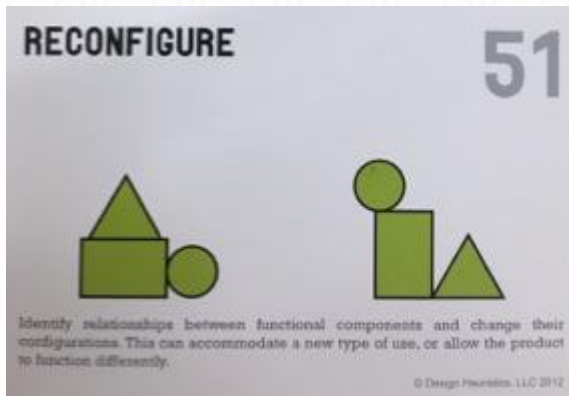
Each member of the team drew as many sketches that a mind could possibly create and imagine.

The Rules:

1. Be limitless.
2. Anything goes.
3. Magic CAN happen.
4. No extreme details.
5. Keep it simple.



As ideating became harder or sketches were becoming dull, Design Heuristic cards were used to spice things up.



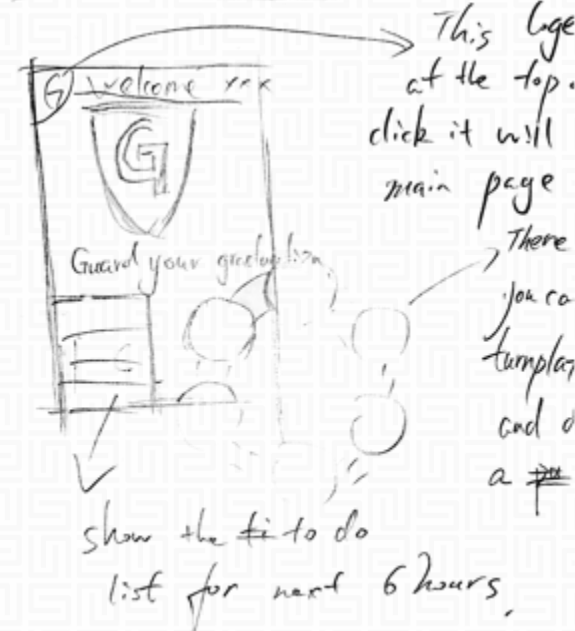
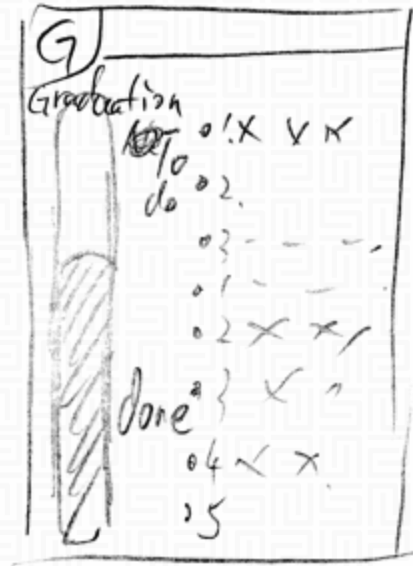


From all the sketches, three were selected to evaluate further.

How to choose:

1. Allowed for many concepts to derive from the one sketch.
2. Was creative/unique.
3. Could be designed many ways.
4. Met the most design requirements.

Of those three one was chosen to move forward with. It was chosen mainly for its flexibility in design.



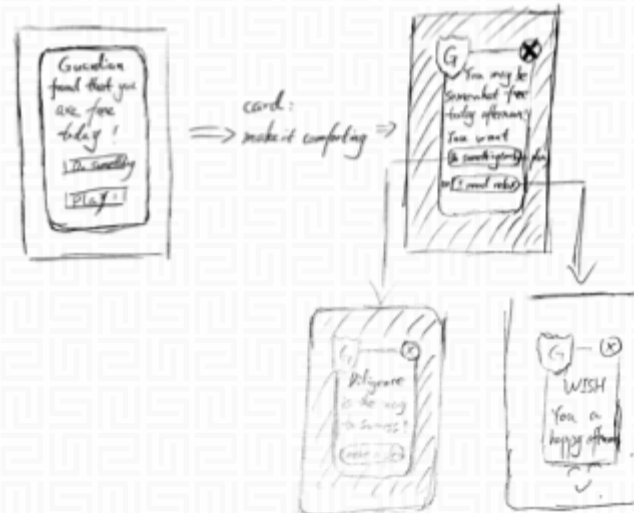


From the main sketch chosen, each member took a section from the home-screen to begin designing further into the app. Each part was explained in detail on how that part of the app would function.

The Main Parts:

1. Plan of Study (POS)
2. Grades
3. Advisor Chat
4. Peer Chat
5. To Do
6. Courses

When designs became unclear, a group discussion arose. If the problem could not be solved by discussing, Make It Critical cards were used.



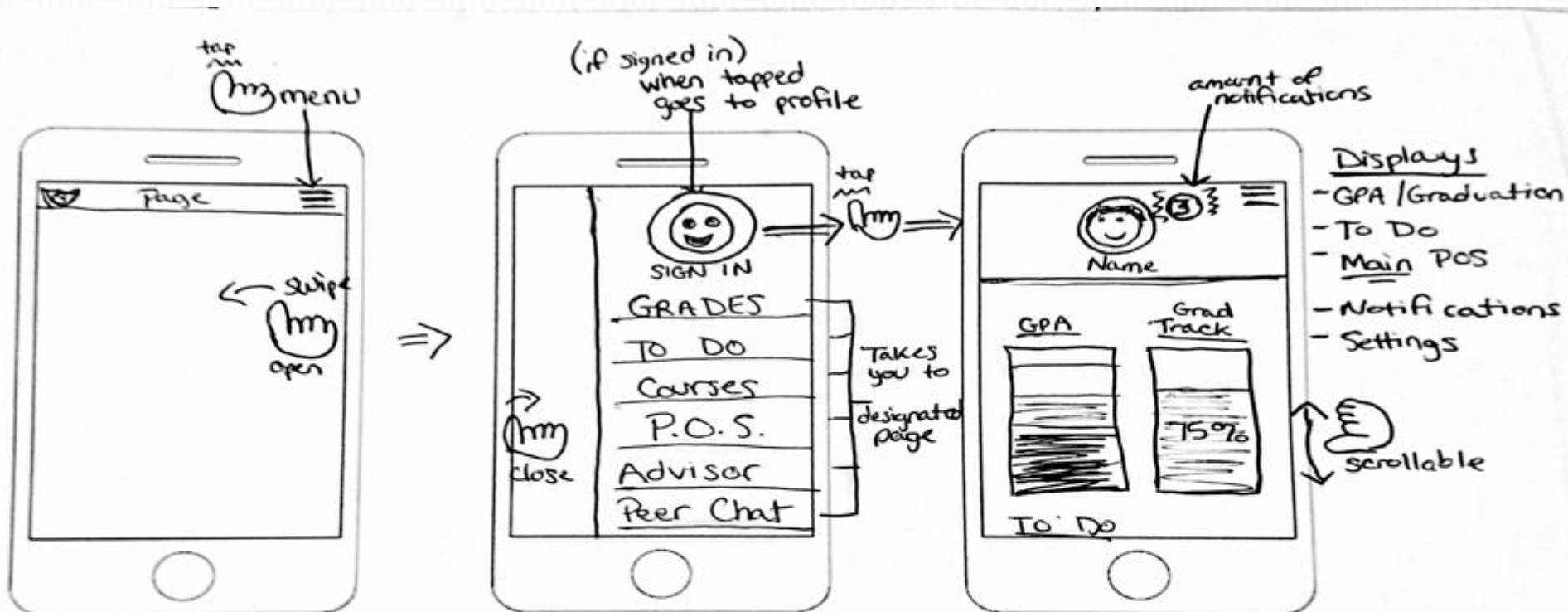
Like-a-Hug

Melissa Kit Chow, Andy Payne, Phil Seaton, 2011

"The vest inflates when friends 'Like' a photo, video, or status update on the wearer's wall, thereby allowing us to feel the warmth, encouragement, support, or love that we feel when we receive hugs."



1.

MenuDisplays

- GPA / Graduation
- To Do
- Main POS
- Notifications
- Settings

Notes:

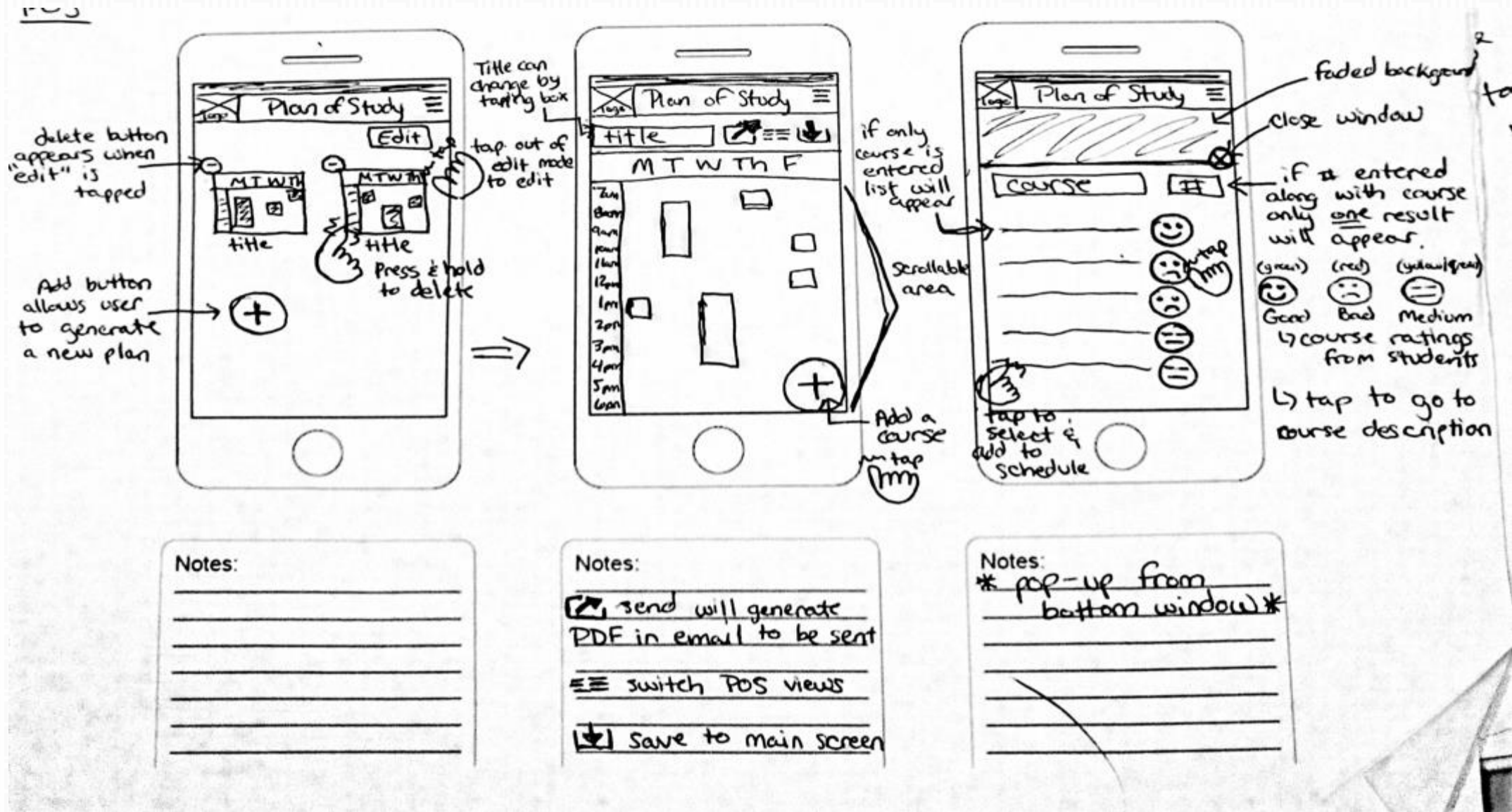
Notes:

Notes:

PROFILE PAGE

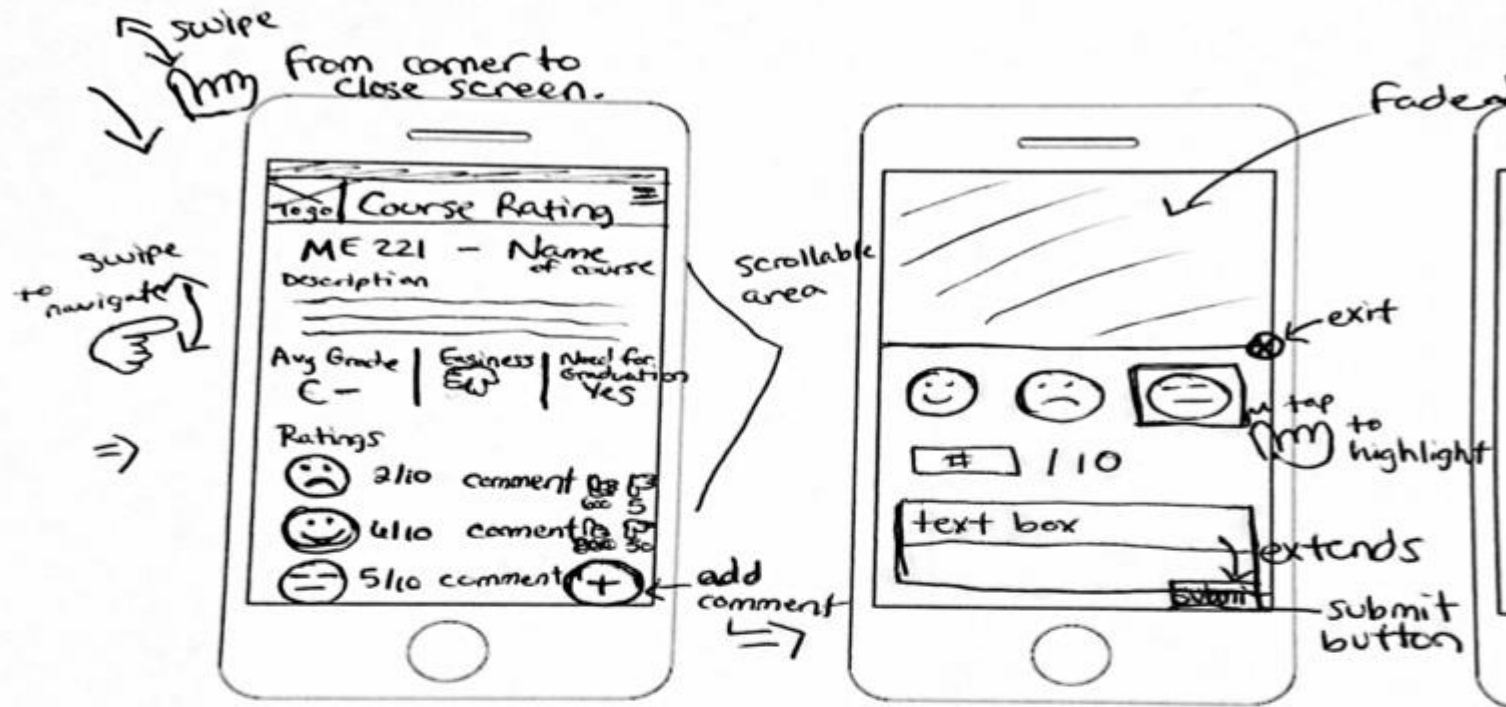


1.





1.



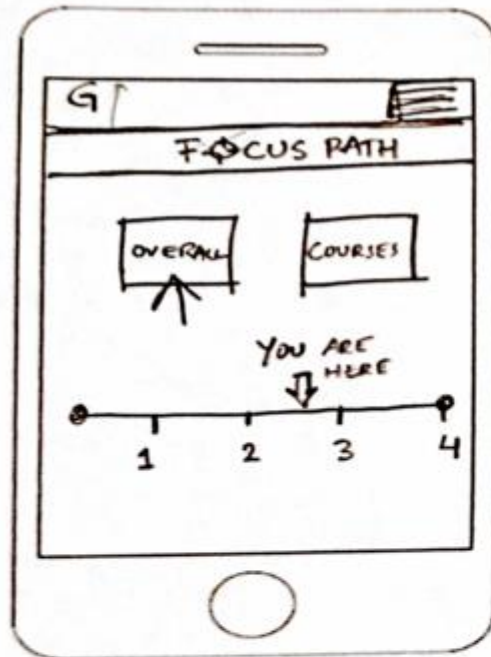
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Notes:

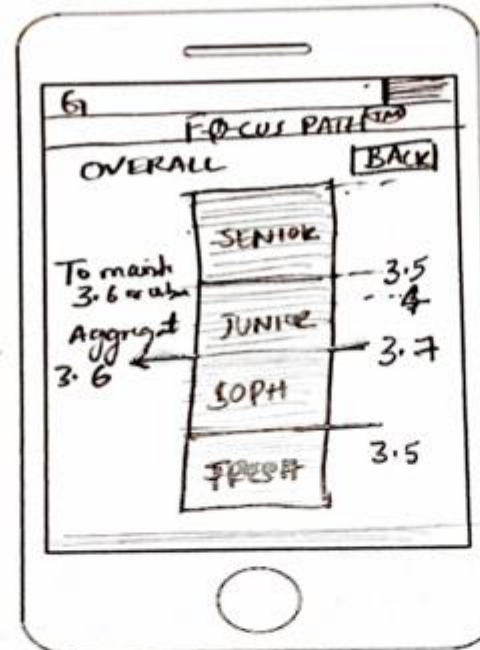
No



2.



click
on
→
overall



Notes:

Home page of focus
path. Shows the
current status
Option to overall &
courses.

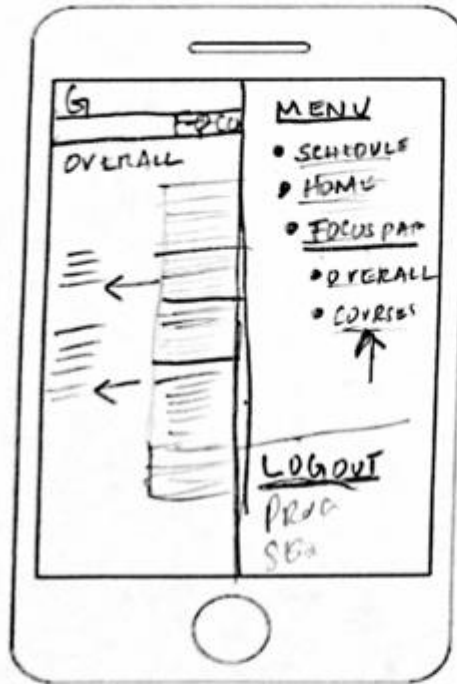
Notes:

Show a heatmap.
Greenish means safe.
Yellowish ok
Reddish danger
Shows what should be
done to maintain 3.6

Notes:

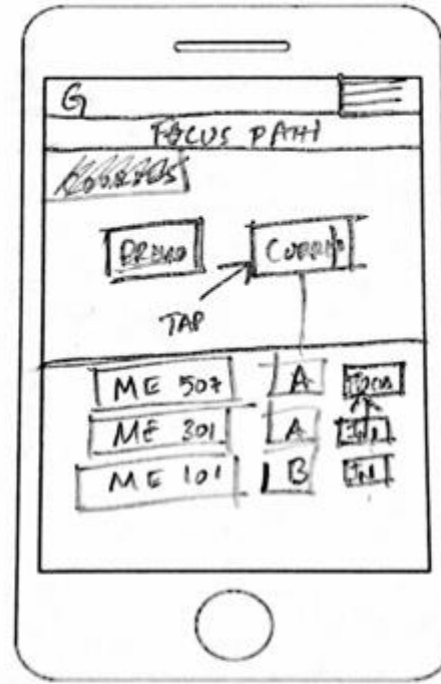


2.

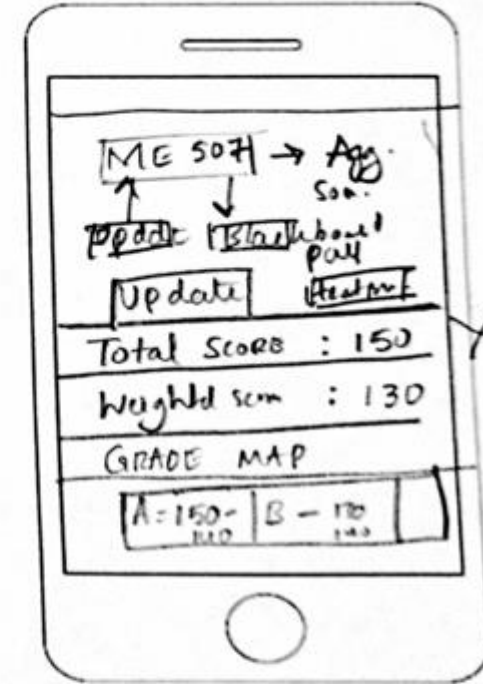


Notes:

Menu shows
hierarchy of the
selected option.
Additionally will have



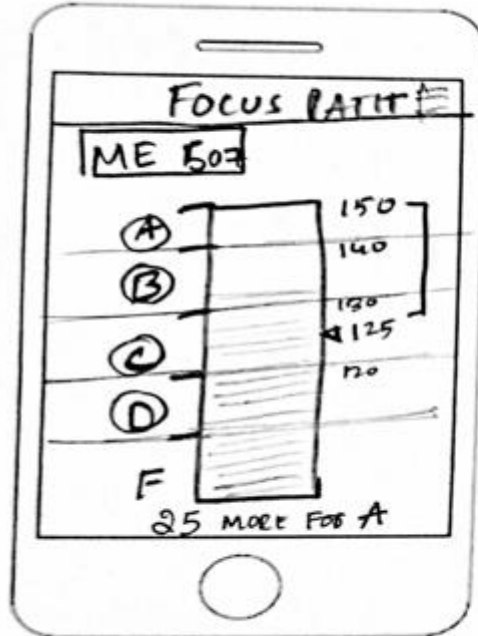
Notes:



Notes:



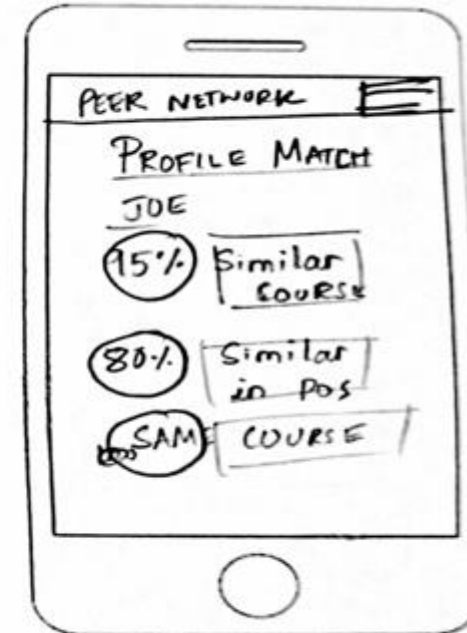
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Notes:



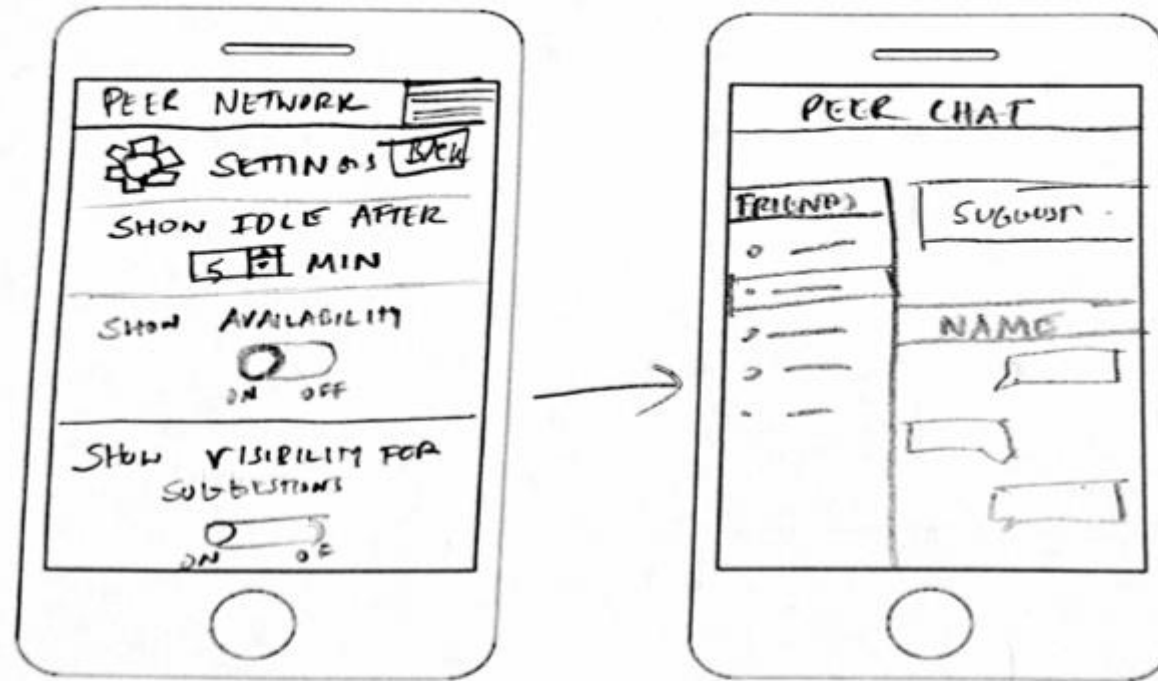
Notes:



Notes:



3.



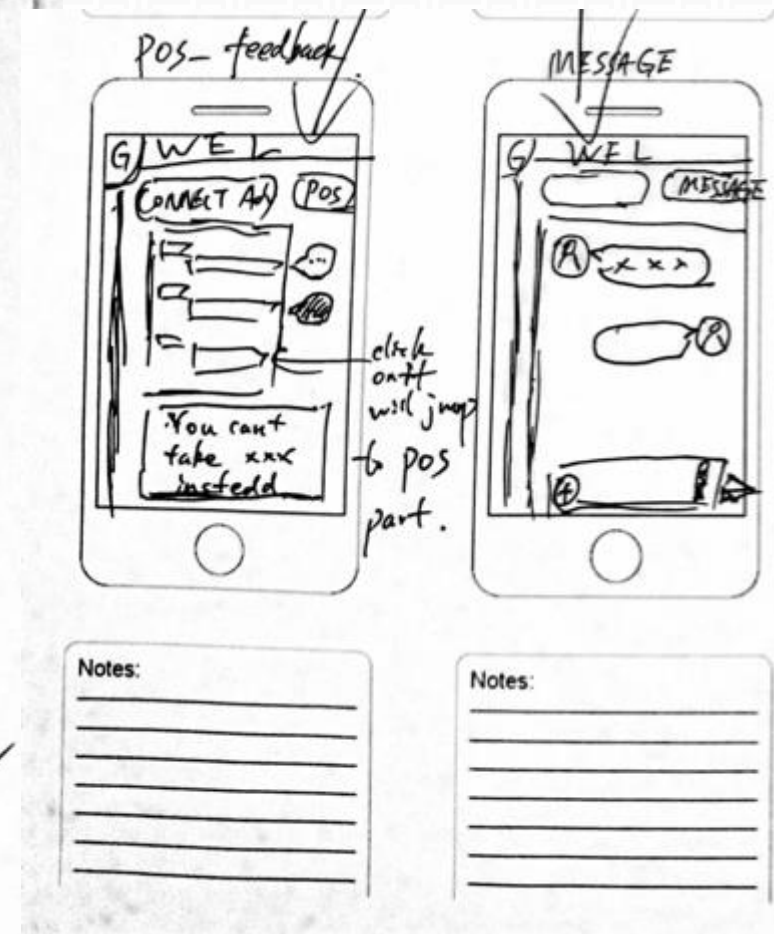
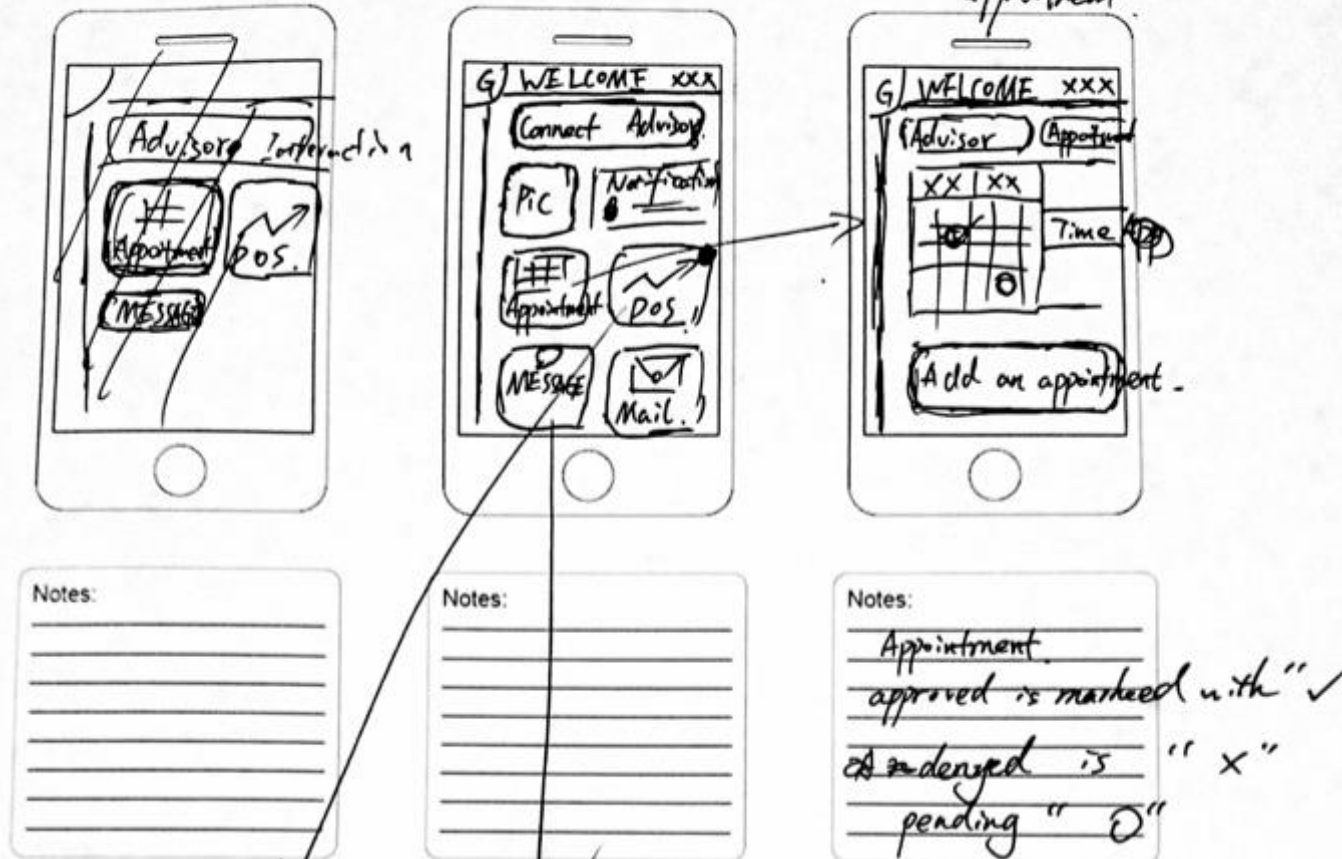
Notes:

Notes:



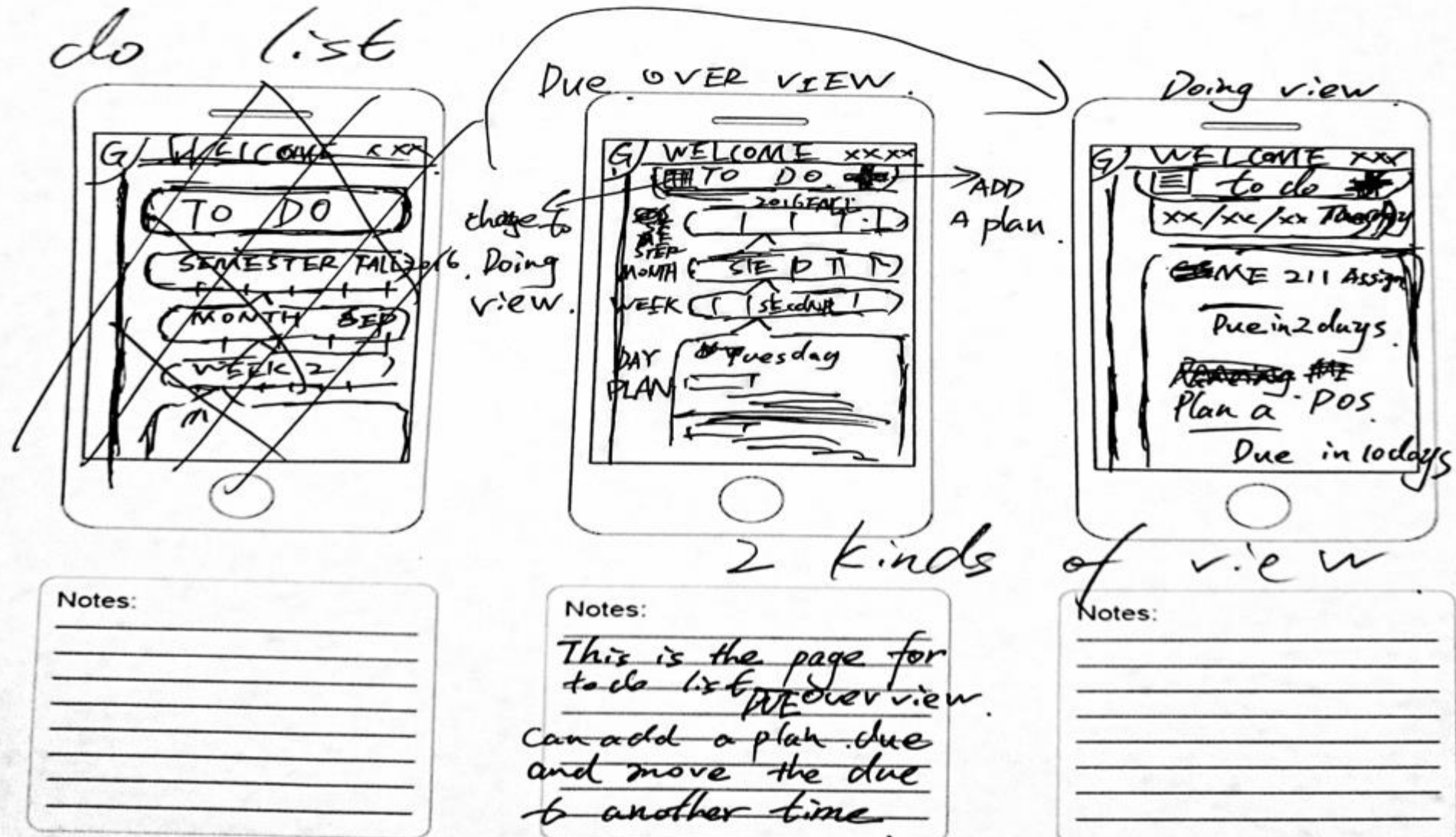
4.

STUDENTS' view for connecting advisor
Appointment.



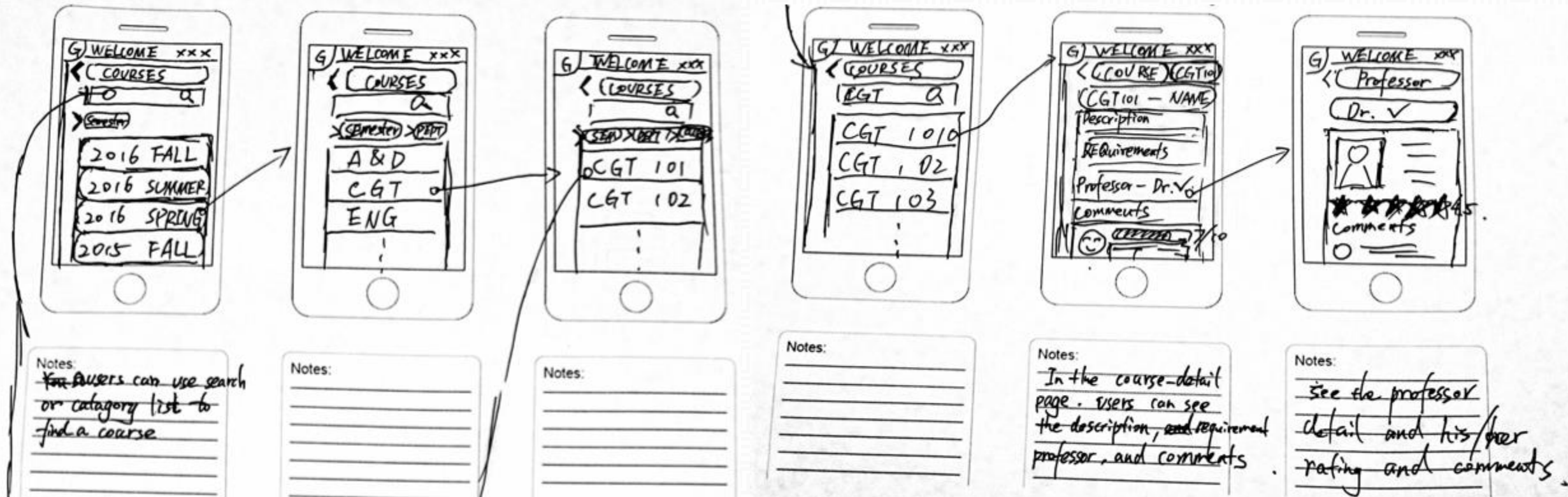


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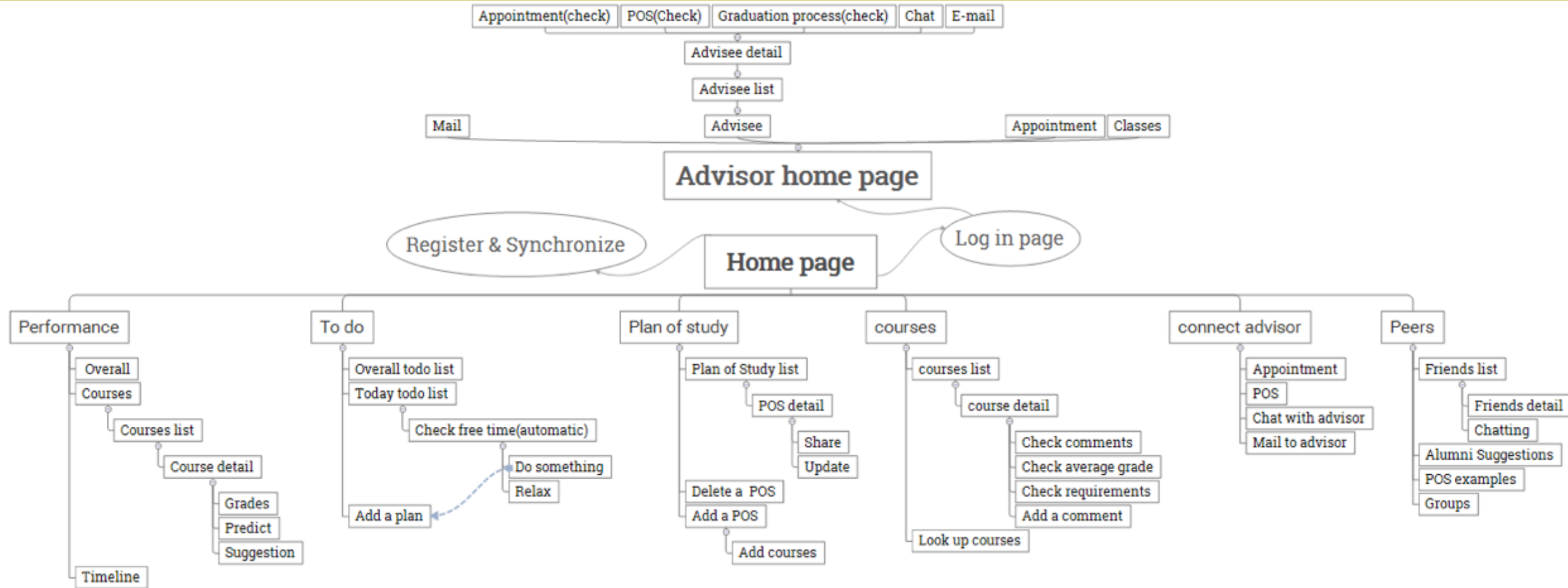


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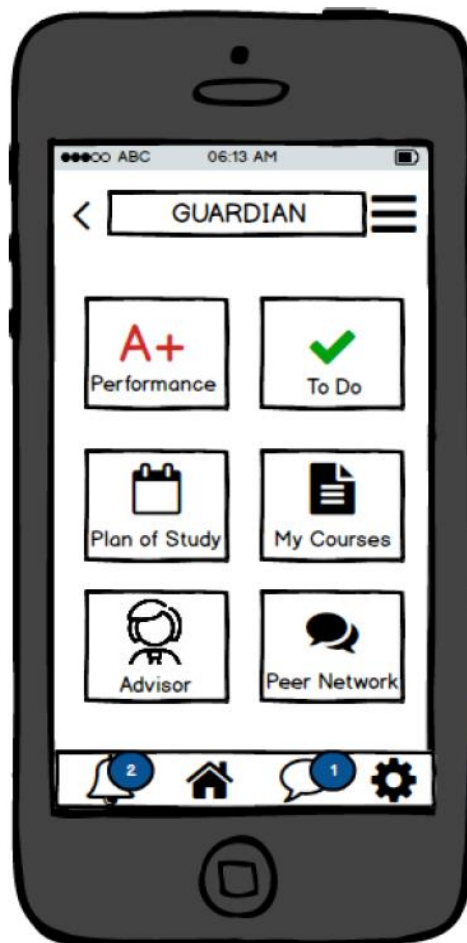


INFORMATION ARCHITECTURE

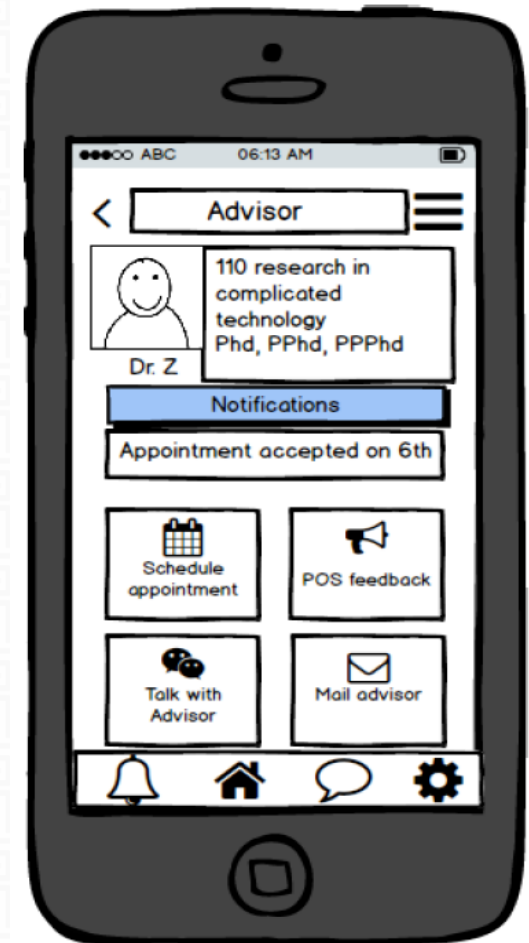
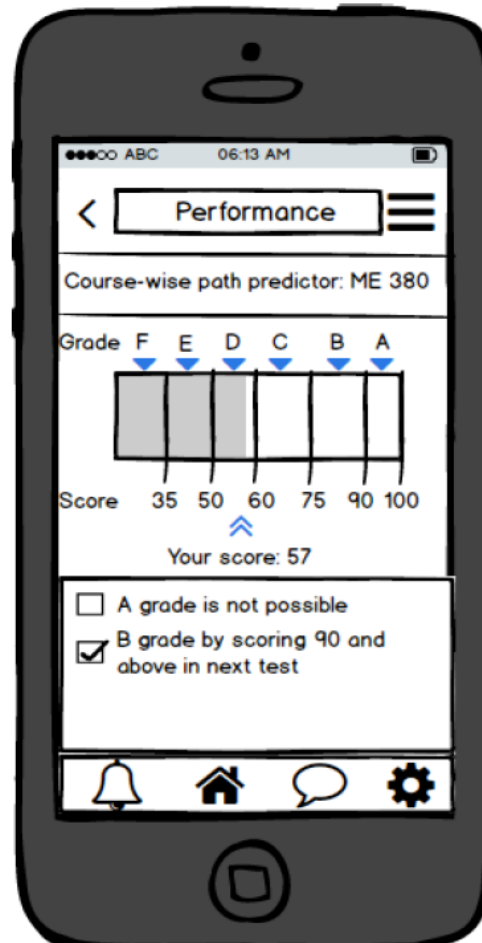




PREVIEW OF WIREFRAMES

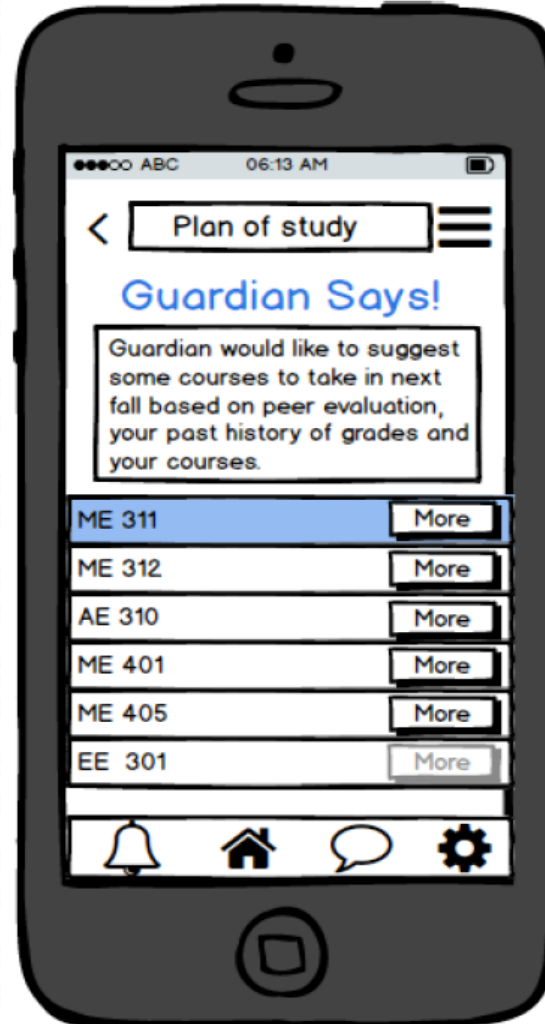
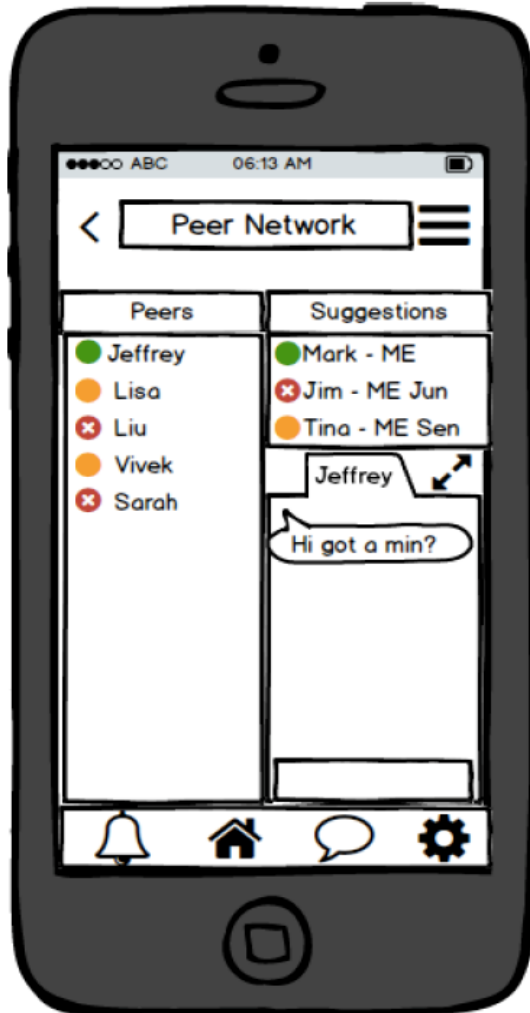


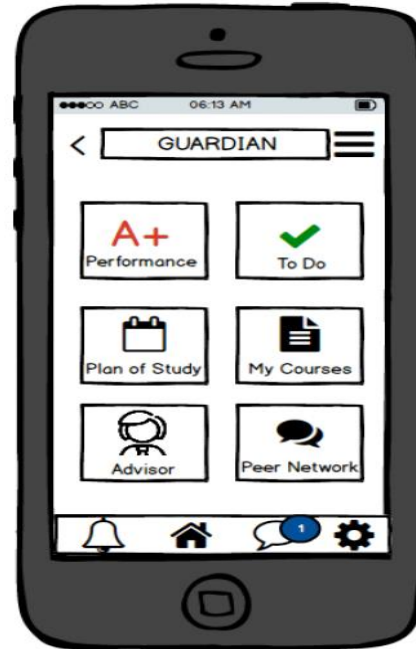
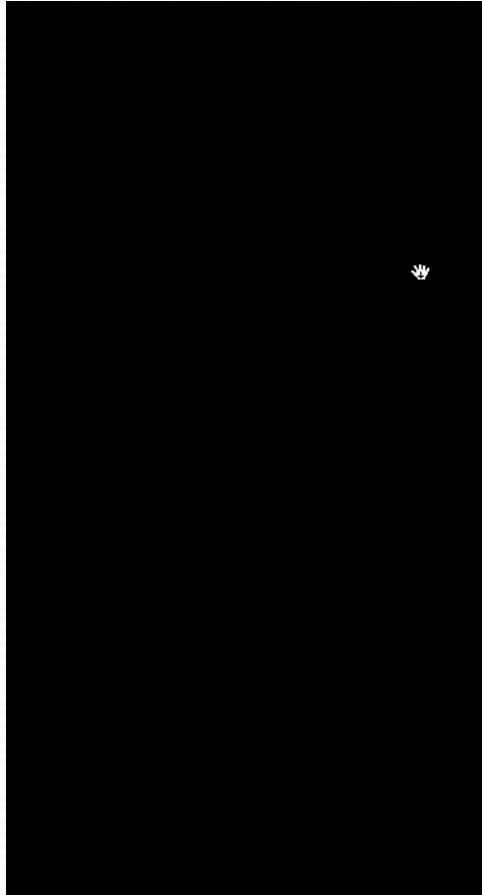
Click on each options to explore starting with notifications and chat





PREVIEW OF WIREFRAMES





*Please see the interactive prototype located within the ConceptualDesign.zip folder.

Evaluate

Cognitive
Walkthrough

User
Evaluations

Conclusions



OVERVIEW

ACTION >	The student wants to add a different course to a new plan of study.	The student wants to see Guardian's advice on what course to take in the coming semester.	The student would like to schedule an appointment with the advisor.
1. Will the user realistically be doing this action?	YES	YES	YES
2. Is the control for the action visible?	YES	NO	YES
3. Is there a strong link between control and action?	YES	YES	YES
4. Is the feedback appropriate?	YES	YES	YES



OVERVIEW

ACTION >	The student wants to check course-wise path predictor.	The student wants to chat with another peer.	The student wants to check their notifications in the app.
	1. Will the user realistically be doing this action?	YES	YES
	2. Is the control for the action visible?	YES	YES
	3. Is there a strong link between control and action?	NO	YES
	4. Is the feedback appropriate?	YES	YES



TASK 1:

The student wants to add a different course to a new plan of study.

ACTION SEQUENCE:

- Choose “POS”
- Choose “Plus sign”
- Choose “Plus sign” again
- Choose “Course” box
- Choose “Course color” box
- Choose “name of course” wanted
- Choose “Green Check” to submit

POTENTIAL PROBLEMS:

- Student may be confused with the plus sign in the corner of the screen.
- Selecting Course and not “more” may throw the student off.



TASK 2:

The student wants to see Guardian's advice on what course to take in the coming semester.

ACTION SEQUENCE:

- Choose "My Courses"
- Choose "Term"
- Choose "Guardian Advice" button
- Choose "Course"
- Choose "More"
- Choose "X" to close out of screen

POTENTIAL PROBLEMS:

- Student may add or drop before seeing the Guardian advice.
- Student may accidentally choose add instead of closing out of window.



TASK 3:

The student would like to schedule an appointment with the advisor.

ACTION SEQUENCE:

- Choose “Advisor”
- Choose “Schedule Appointment”
- Choose “Pick a date”
- Choose “Pick time”
- Choose “Choose place”
- Choose “Type a reason”
- Choose “Submit”

POTENTIAL PROBLEMS:

- No potential problems seen.



TASK 4:

The student wants to check course-wise path predictor.

ACTION SEQUENCE:

- Choose “Performance”
- Choose “course-wise path predictor”
- Choose “Course”

POTENTIAL PROBLEMS:

- Wording may be difficult to understand.



TASK 5:

The student wants to chat with another peer.

ACTION SEQUENCE:

- Choose “Peer Network”
- Choose “Name of peer”
- Choose “Expand button”
- Choose “Text”

POTENTIAL PROBLEMS:

- Maximizing the screen may be difficult to understand



TASK 6:

The student wants to check their notifications in the app.

ACTION SEQUENCE:

- Choose “Bell” icon
- Choose “Clear Notifications”

POTENTIAL PROBLEMS:

- Student may want to click on the notification but it does not link anywhere.
- When closing the notifications it clears all notifications. Student may not want to clear all.
- There is no separate window to see notifications separately.

Evaluate

Cognitive
Walkthrough

User
Evaluations

Conclusions



PROCESS

3 tasks
Chosen

User
Identified
Issues as
they
appeared

Issues
Documented.

1. The student wants to check course-wise path predictor.
2. The student wants to check their notifications in the app.
3. The student wants to add a different course to a new plan of study.

Evaluate

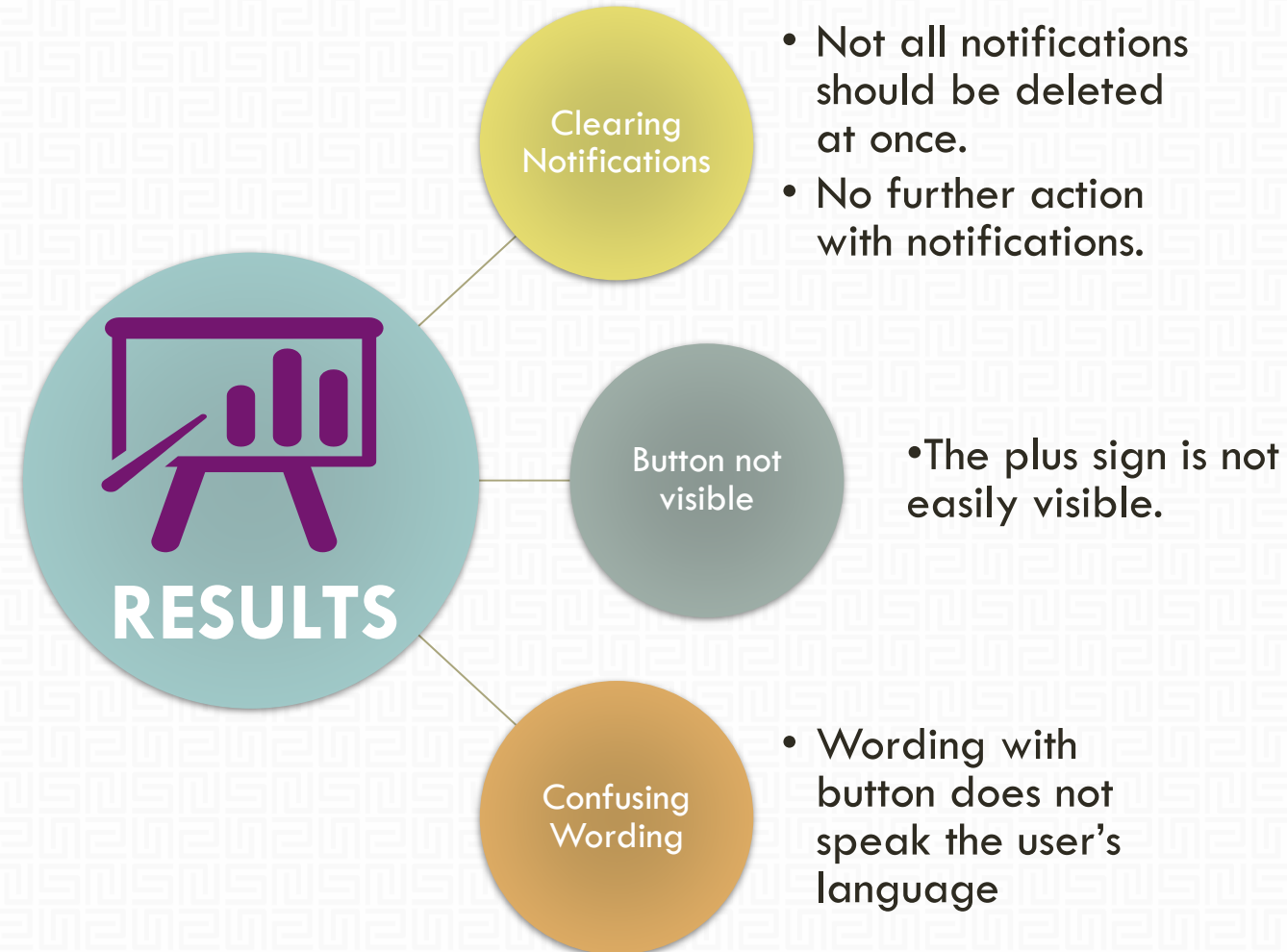
Cognitive
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In total 3 problems were found by the users testing the application. Suggestions were made and applied.



Evaluate

Cognitive
Walkthrough

User
Evaluations

Conclusions



PROBLEMS:

None visible.

COMMENT:

“Pretty awesome idea!”

RECOMMENDATIONS:

Make the interface “youthful” and “fun”.



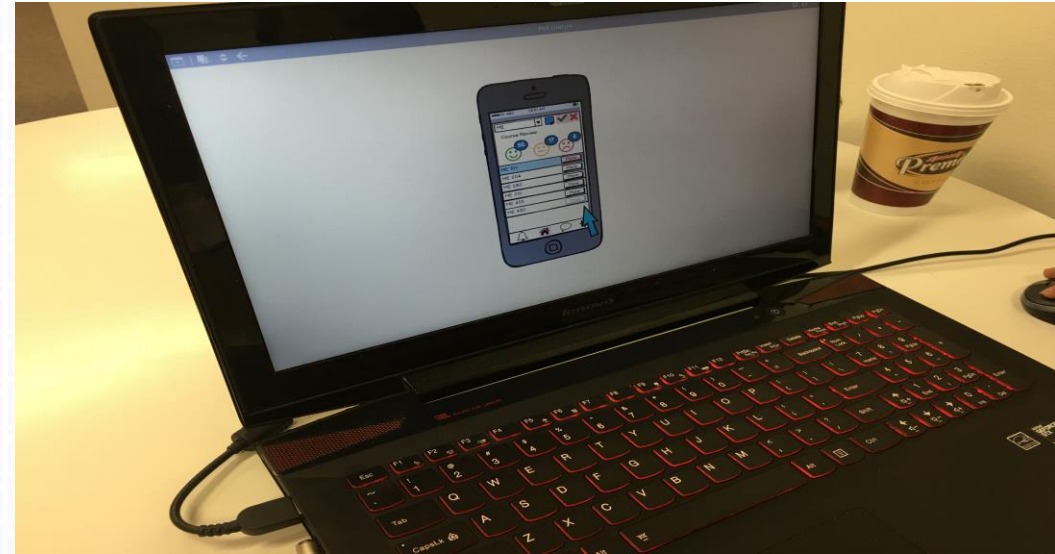
PROBLEMS:

- There is not other options within notifications but to clear all.
- Plus sign button is not easily visible.

COMMENT:

“When I see the several notifications, I only have one action which is "Clear Notification". Sometimes I prefer to leave those notifications until I have no time to process them and I want to process them later.”

“The plus sign is not clear and a little hard to recognize fast.”



*User requested to not be shown in photo.

RECOMMENDATIONS:

Add other button like "Leave Notification" that users can check them at a later time.

Try putting a bold color to the plus sign or relocate it somewhere else.

Evaluate

Cognitive
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PROBLEMS:

Wording on buttons do not speak the user's language.

COMMENT:

"I feel confused about the wording of the buttons in the Performance section. I do not really understand what their functions are and differences."

RECOMMENDATIONS:

Change the words to make it simple and easy to understand.

Evaluate

Cognitive
Walkthrough

User
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DONE TOGETHER AS A TEAM



SKETCHING &
STORY BOARDS

WIREFRAMING

COGNITIVE WALKTHROUGH
& USER EVALUATIONS

POWERPOINT
DESIGN & LAYOUT