



# Canvas Redesign /

## Process Book

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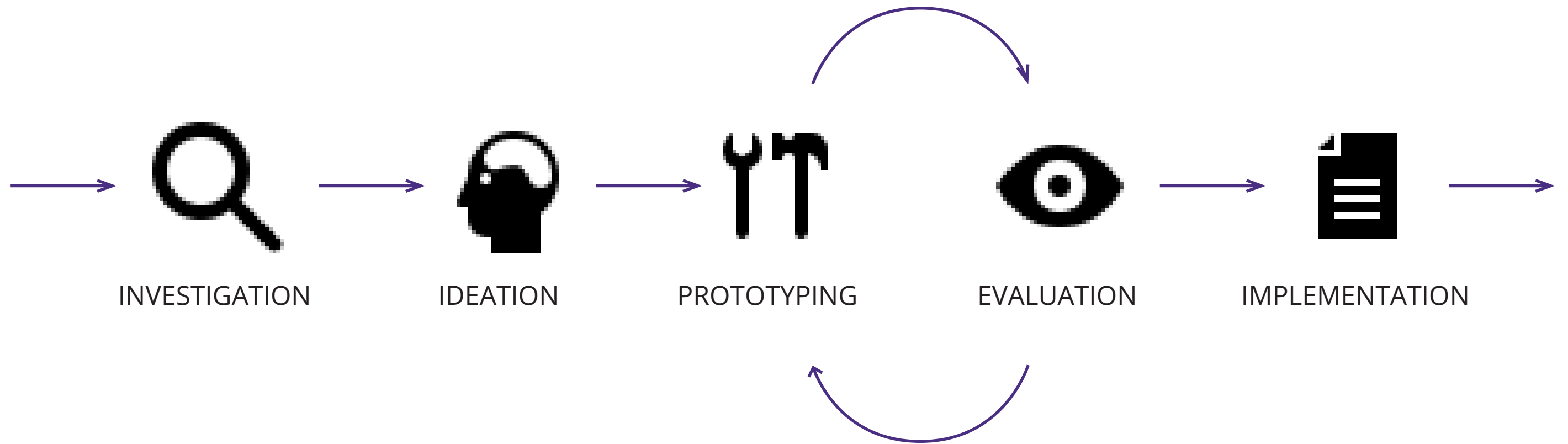
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# Process Overview



# **Problem Statement**

## **Problem Statement**

How can we create an overarching and integrating team working experience for the group projects assigned on canvas to help team members collaborate, manage project progress and submit deliverables conveniently.

## **Constraints**

- This is a design that involves the interaction between multiple users at a time
- Need to explore the team assignment settings from an instructor perspective

## **System Needs**

Users

- Communication & Interaction
- Accountability
- Software integration

Designers

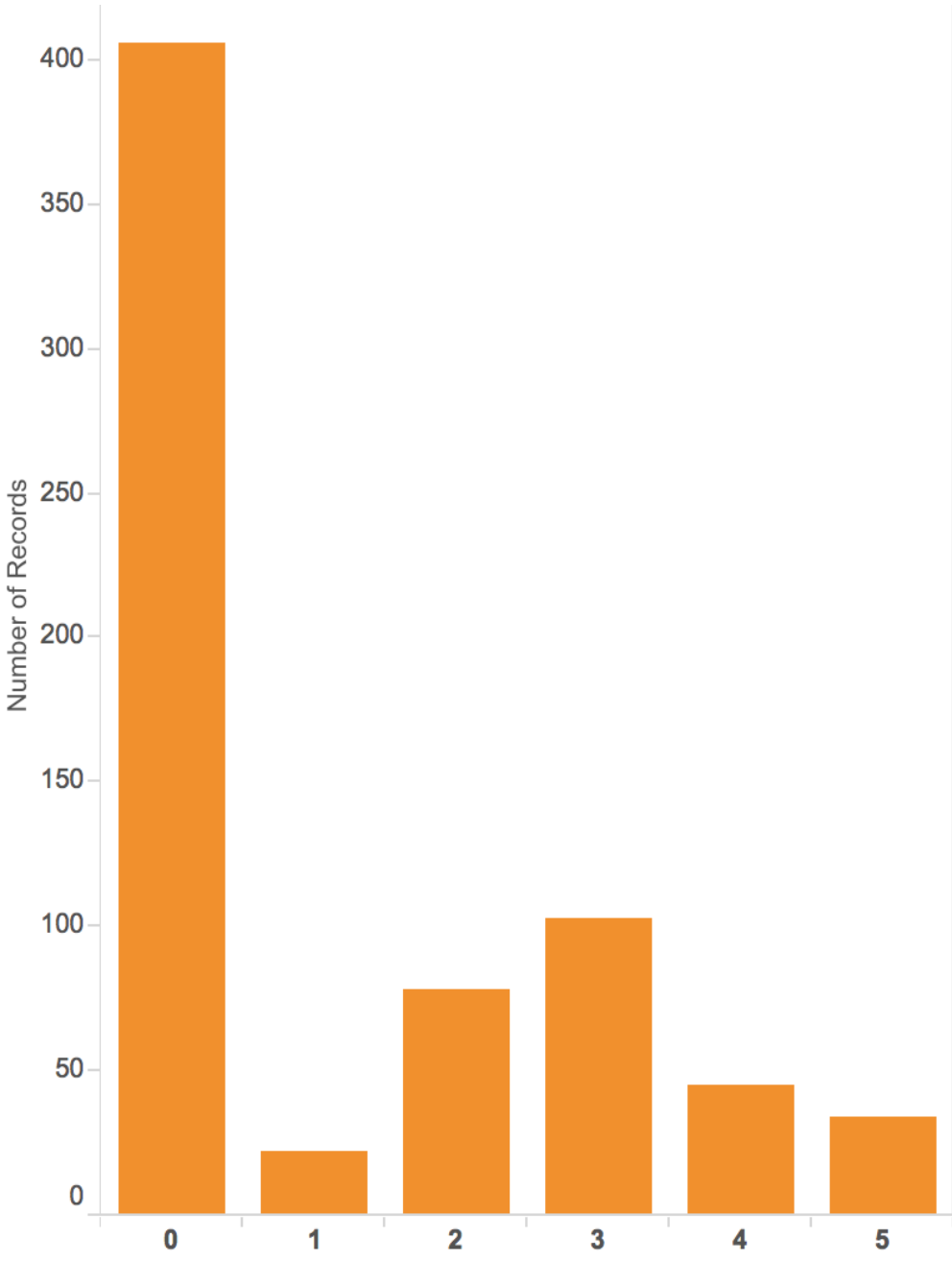
- Time constraints
- Budget constraints

Stakeholders

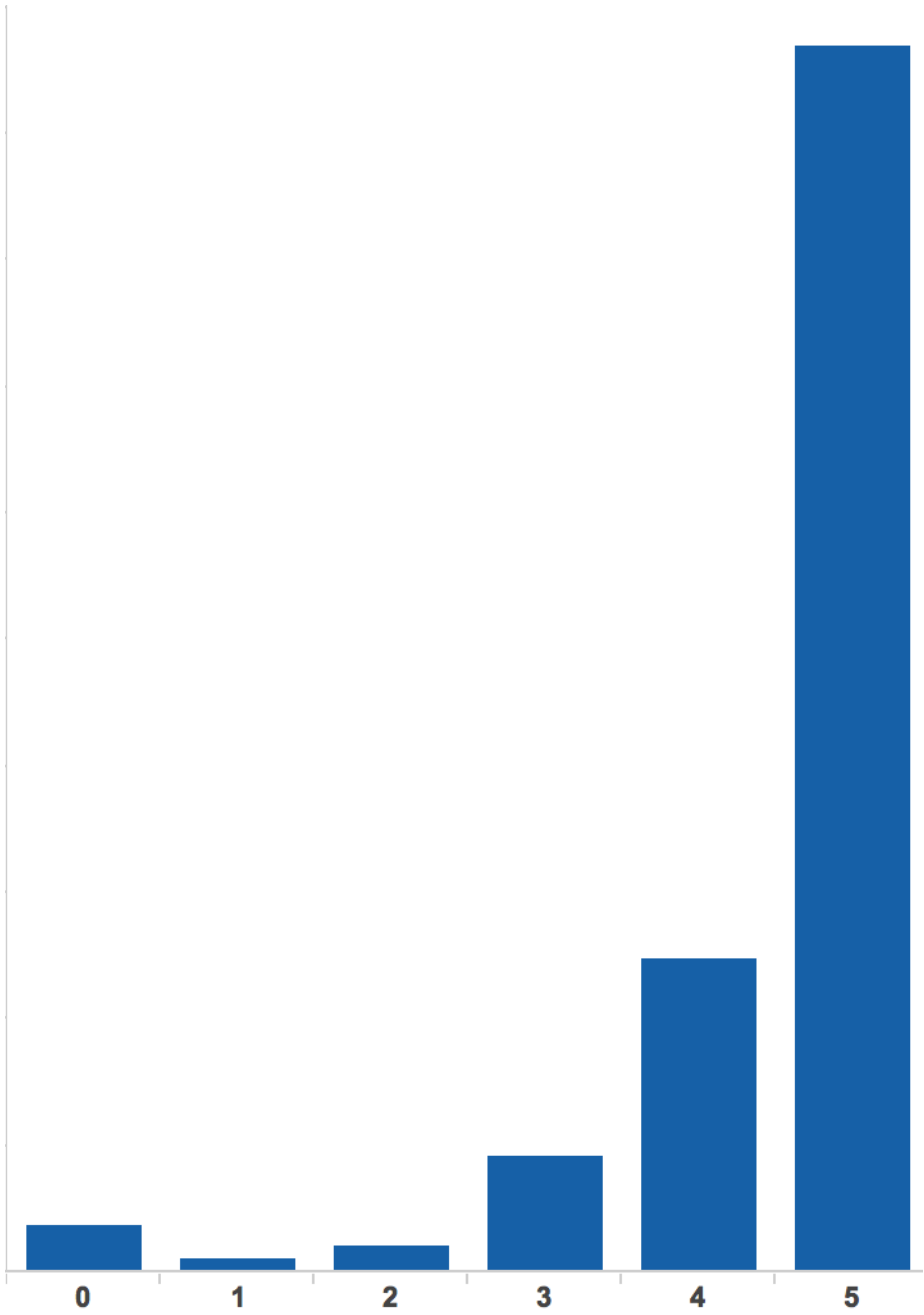
- Users amount
- Users' satisfaction



# LMS Survey Data Analysis



How important is your tablet to your academic success?



How important is your laptop to your academic success?

## Findings

This diagram clearly shows that when regarding how much value different devices bring to academic success, students value laptop much more than tablet. It gives us an insight that when building academic relevant system, laptop may outperform tablet.

- 0 = Haven't use recently
- 1 = Not important at all
- 2 = Not very important
- 3 = Moderately important
- 4 = Very important
- 5 = Extremely important

# LMS Survey Data Analysis

## Open question concerning group projects

"A system similar to google docs to make group projects easier."

"Better support for group collaboration and a clearer interface overall (rather than canvas)."

"I would also give the option to remove oneself from 'Groups'."

"Group submission options, a bit of a clearer user interface, and better mobile support."

"Live group chat rooms."

"Online collaborative calendar for classes, homework, group projects, etc."

## Findings

1. It can be seen from these input that students are confused by the group projects interfaces and submission options.

2. Integrations including google docs, mobile usage, live chat rooms and collaborative calendar could be considered.

3. Opt-out option of a group should be provided as well.

# Expert Interview

## Tyler Fox

Tyler is a subject matter expert (SME) with a wealth of data related to university member's needs and behaviors while using the UW LMS.

## Key Takeaways

1. Canvas is a open-sourced platform that can be easily integrated with plug-ins like dropbox, google docs, chat rooms...
2. Canvas has a steep learning curve that requires a lot of efforts into users training.
3. Instructors don't like synchronized platform on canvas and different faculty prefer different communication tools, which include canvas inbox, discussion, pages...

# Outline Research Methods

Method Name	Type of Research	Strengths	Weaknesses	Notes
Interview	Primary/ Qualitative	Can dig into WHY questions. Build in-depth understanding. Can ask follow-up questions. Can integrate with activities.	One-on-on is time consuming. Self-report issue. Not statistically significant.	Previous experience tells me interview is a very important method. I'd like to conduct one this time.
Survey	Primary/ Quantitative	Statistically convincing. Easier to generalize. Quickly reach out to a large mount of participants. Less observe effects.	Only focus on WHAT not WHY. No follow-up questions. Self-report issue. Lots of pre-work.	Setting up good questions is very important for later analysis.
Focus Group	Primary/ Qualitative	Efficient. See the dynamic conversation between each other. See the consensus for problem space.	Can't dig deeper on one person. Group thinking. Private issue. Require experienced moderator skill.	Focus group's opinion might be easily dominated by a few talkative people.

# User Research Findings

## Interview

I interviewed two participants that had experiences with group assignments in canvas before.

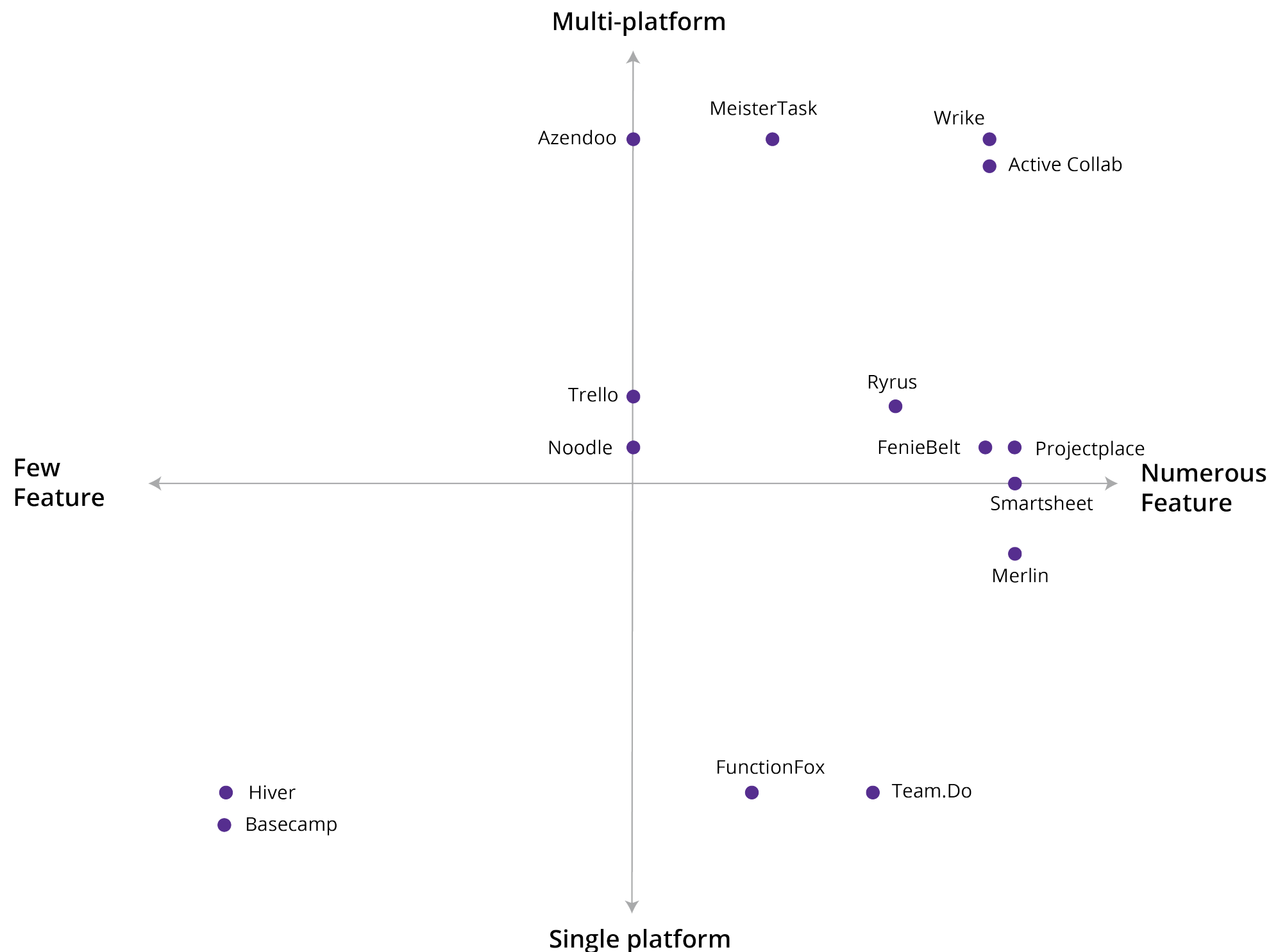
## Research Questions

- Have you had group projects assigned on Canvas before?
- How long did those group projects last? How complicated were they?
- How did your team collaborate? Who took charge of what? What tools did you use?
- How's your experience with it?
- Did you run into any difficulties or confusions? How did you solve it?
- How much interactions between you and your teammates had on canvas. (Discussion, pages...)
- What improvement can you see for group projects.

## Key Findings

1. Confused about if canvas really did send notification to my teammates or not.
2. Students have no access to the assignments team members submitted in the personal files folder on canvas.
3. It's good to be able to notify the team work distribution.
4. Should be able to opt-out some dated groups.
5. It'd be good to know if your teammate has submitted the assignment or not.

# Competitive Analysis



## Dimensions

**FEW - NUMEROUS FEATURE**  
X-axis measures how many features the service have.

**MULTI - SINGLE PLATFORM**  
Y-axis measures how many platforms the service supports. Multi-platform cover three major areas - installed, mobile and SaaS.

## Findings

As is shown on the matrix, services support multiple platforms usually come with numerous features.

During my testing with these services, I found that most of the services are not free to use and they usually paid by the number of users.



# User Task Matrix

Task	Light users	Medium users	Heavy users	Score
Submit Assignment	H	H	H	9
Submit Notifications	H	H	H	9
Assign task	H	H	H	9
Opt-out group	H	H	H	9
Calendar view	H	H	H	9
Tool Integration (Google Drive)	H	H	H	9
Set prime assignee	H	H	H	9
Set due date for task	L	H	H	7
Set task	L	H	H	7
Assign subtask	L	M	H	6
Sort task	L	M	H	6
Set task priority	L	M	H	6
Task progress bar view	L	M	H	6
Holistic progress bar view	L	M	H	6
Set subtask	L	M	M	5
Set due date for subtask	L	M	M	5

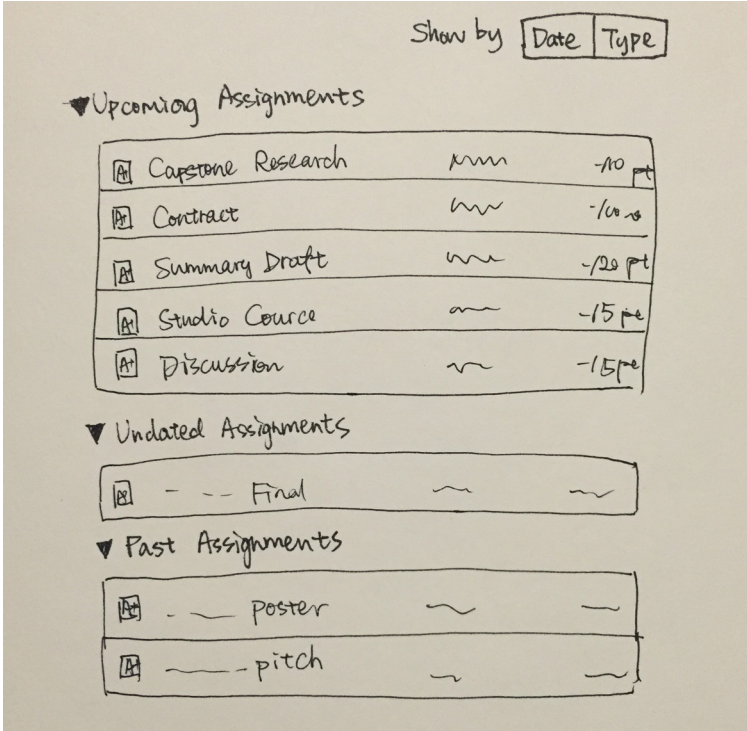
## User Types

**LIGHT USERS**  
Rarely have team projects. Usually these projects last for a day or two.

**MEDIUM USERS**  
Sometimes have recurrent team projects that last a certain period but involve relatively simple work distribution.

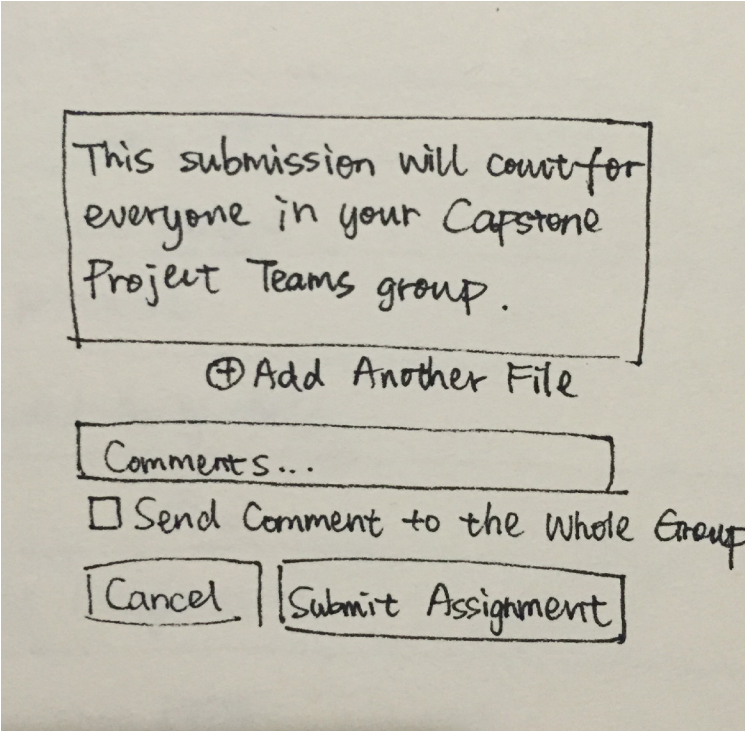
**HEAVY USERS**  
Always have complicated team projects like capstone assignment that lasts throughout a quarter, consists of multiple milestones and involves complex work distribution.

# Current Pain Points



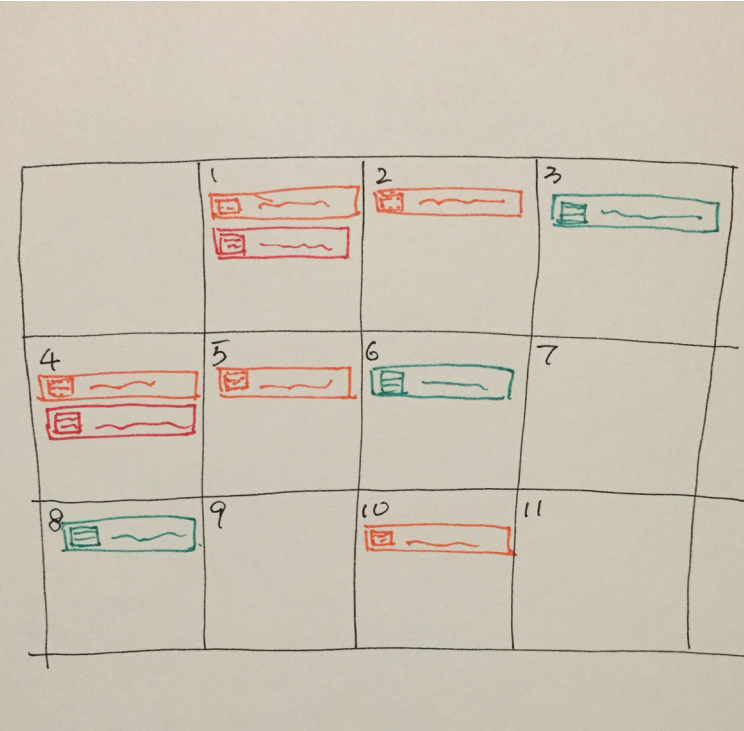
## ASSIGNMENT VIEW

Canvas doesn't offer distinct view on the type of each assignment in terms of individual assignment and team assignment.



## SUBMIT TEAM ASSIGNMENT

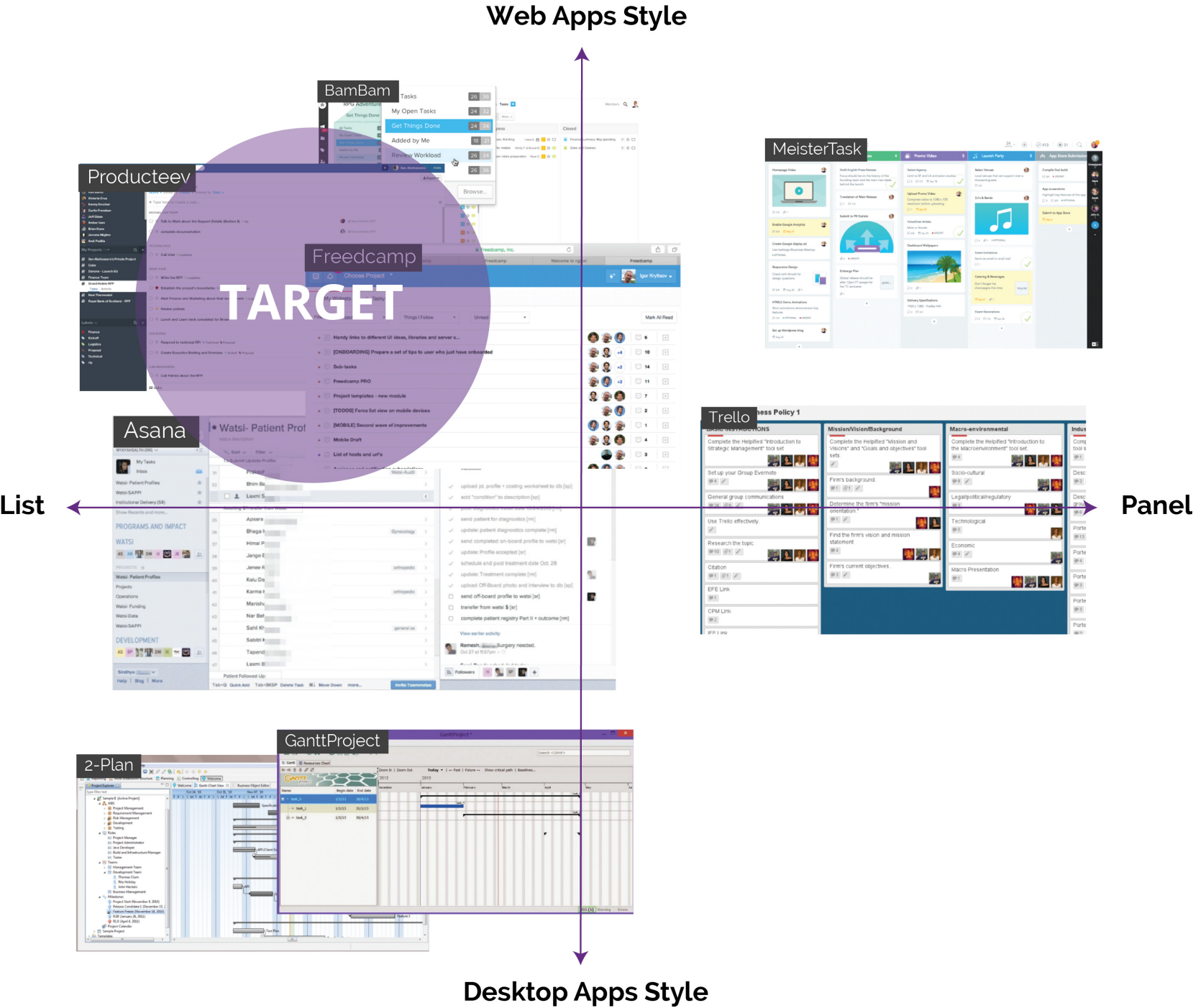
When submitting a team assignment, student often times get confused about if their teammate has already submitted the assignment.



## CALENDAR

Canvas calendar is usually crammed with different color coded assignments and all the assignments are segmented. One potential redesign direction is to create Gantt diagram indicating the teamwork progress.

# Style Matrix



## Dimensions

LIST - PANEL  
Tasks layout basically can be divided into two categories - list and panels.

WEB - DESKTOP  
Project management tools have web and desktop platform and their looks differ as well.

## Findings

Generally, when the tasks can be sorted, list layout is more appropriate.

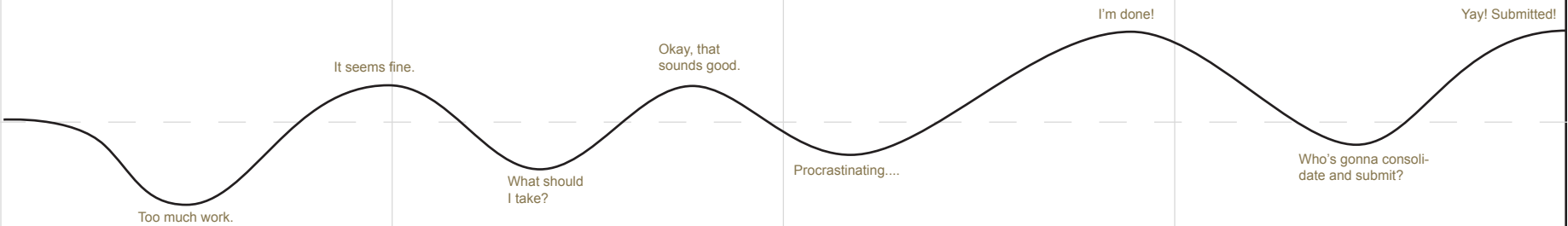
Panel layout is ideal when it comes with the feature to drag and drop tasks from one column to the other one.



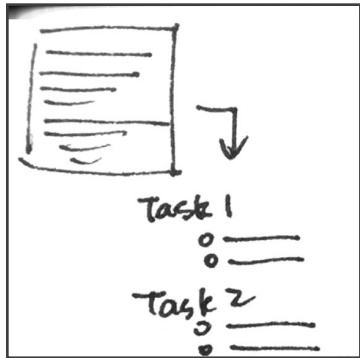
# Outline Ideation Methods

Method Name	Strengths	Weaknesses	Notes
Storyboards	<ul style="list-style-type: none"><li>Can outline the scenes of a story describing how all the parts of the concept system work together in actions</li></ul>	<ul style="list-style-type: none"><li>It's based on a hypothetical journey</li><li>The level of sketch fidelity might affect how audience grasp the design concept</li></ul>	<ul style="list-style-type: none"><li>From my experience, storyboard is extremely helpful when planning out the sequence of a short video</li><li>Need more practice in sketching figures</li></ul>
Thumbnails	<ul style="list-style-type: none"><li>A way to quickly generate numerous ideas without concerning about the feasibility at this stage</li></ul>	<ul style="list-style-type: none"><li>Some of the ideas might not be feasible enough</li><li>Necessary explanation might be needed since thumbnails are often times rather low-fidelity</li></ul>	<ul style="list-style-type: none"><li>Give yourself some time constraint can make the thumbnails generated process more productive</li></ul>
Journey Map	<ul style="list-style-type: none"><li>Can break down users' journey into component parts to gain insights into problems that may be present or opportunities for innovations</li></ul>	<ul style="list-style-type: none"><li>Need to generate a list of all the activities involved in the process, which might be time-consuming</li></ul>	<ul style="list-style-type: none"><li>Can be very helpful to consider all the activities involved to find potential opportunities</li></ul>
Critical Path	<ul style="list-style-type: none"><li>This method aims at letting designer consider the most positive and negative scenarios when using the product</li><li>Help pinpoint the pain-points directly</li></ul>	<ul style="list-style-type: none"><li>Might only account for the most extreme use case</li></ul>	<ul style="list-style-type: none"><li>Feel like it can be considered as an extreme activities journey map</li></ul>

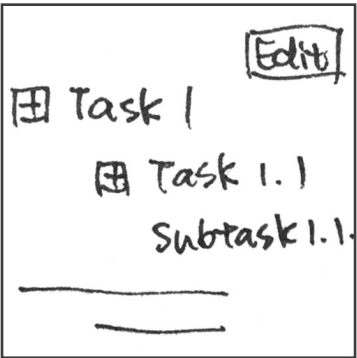
# Journey Map

Stages	Assigned	Distribute work	Make progress	Submit assignment
Emotion				
Needs	<ul style="list-style-type: none"><li>Understand the assignment requirement</li><li>Have an initial sense of the timeline and time constraint</li></ul>	<ul style="list-style-type: none"><li>Set tasks/ subtasks with due date</li><li>Assign them to teammates</li><li>Set schedule (meetings/ milestones)</li></ul>	<ul style="list-style-type: none"><li>Communicate/ comment</li><li>Link task to documents</li><li>Check task and notify members</li><li>Keep things on track</li></ul>	<ul style="list-style-type: none"><li>Submit and notify members</li><li>Move on to the next one</li></ul>
Thoughts & Feelings	<ul style="list-style-type: none"><li>“What’s this assignment about?”</li><li>“How much time do I have?”</li><li>“What are the other ongoing assignments?”</li></ul>	<ul style="list-style-type: none"><li>“How to split work?”</li><li>“Who do what?”</li><li>Make sure everyone knows the schedule</li><li>“What’s the tasks priority?”</li></ul>	<ul style="list-style-type: none"><li>“I want others to know I’m done and I want to know how others are doing.”</li><li>“What is the risk?”</li></ul>	<ul style="list-style-type: none"><li>“Has any one of my team members submitted the assignment?”</li><li>“How do this assignment related to the else?”</li></ul>
Context	<ul style="list-style-type: none"><li>The total work load</li><li>How clear the requirement is</li></ul>	<ul style="list-style-type: none"><li>The complexity of the work</li><li>Other ongoing work</li><li>Teammates’ strengths</li></ul>	<ul style="list-style-type: none"><li>The time constraint</li><li>The progress</li><li>The quality of the work done</li></ul>	<ul style="list-style-type: none"><li>Who submit the final version, me or my teammate?</li><li>How does this assignment fit in the rest?</li></ul>
Insights	<ul style="list-style-type: none"><li>Assignment could be automatically or designed to be tasks like (could come with sub-tasks as well)</li></ul>	<ul style="list-style-type: none"><li>Teammate work load infographic</li><li>Flexible tasks/ sub-tasks setting with due date</li><li>Assigned notification</li></ul>	<ul style="list-style-type: none"><li>Communication platform</li><li>Checking notification</li><li>Risk alerts</li><li>Notifications settings</li></ul>	

# Thumbnails



Automatically split the assignment requirement into tasks and subtasks, or it is done by the instructor.



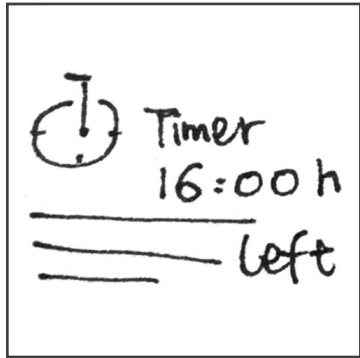
Flexible tasks and subtasks setting. Can be incorporated with the 1st thumbnail so it allows you to edit the default tasks come with the requirement.



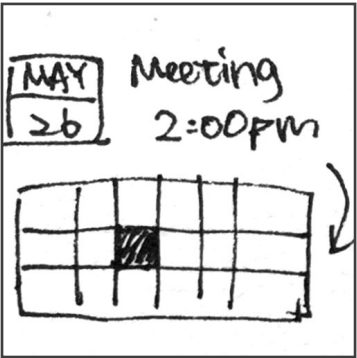
The tasks and subtasks can link to corresponding google drive documents so as to create a seamlessly work flow.



When teammate submit the assignment, a notification will be sent out to the chosen platform.



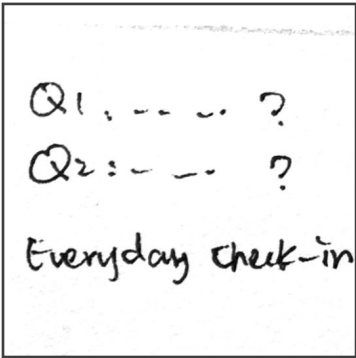
The assignment comes with a timer that counts how much left before due, or it is a timer that counts how much time you've spent on it.



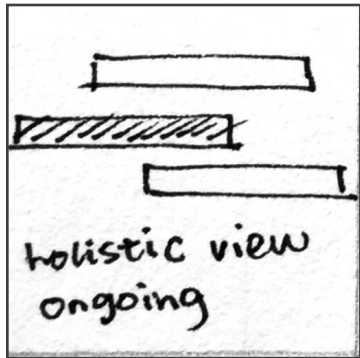
Calendar feature that allow team members to set meeting schedule or milestones into teammates' calendar with alerts.



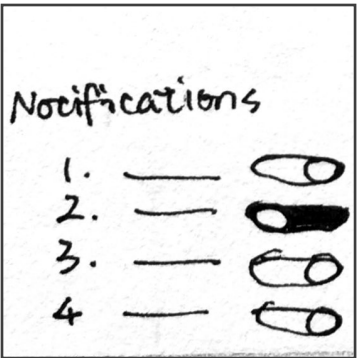
Multiple tasks/subtasks status to track the work progress in real time. Status can be switched by teammates when proofreading for instance.



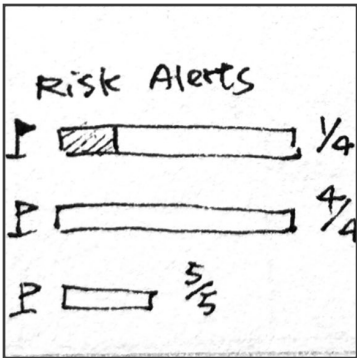
Some everyday check-ins questions to make sure your teammates are on track.



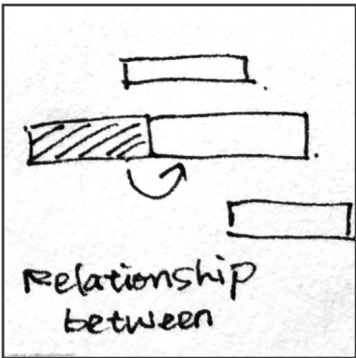
Offers a holistic view on all the ongoing work within one course or across multiple courses.



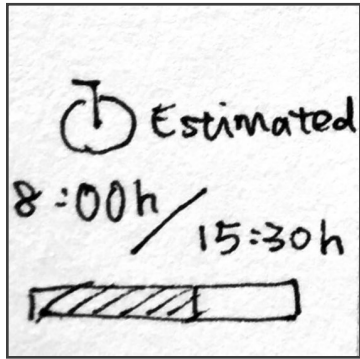
Customize your project notifications. Turn the unnecessary alert off.



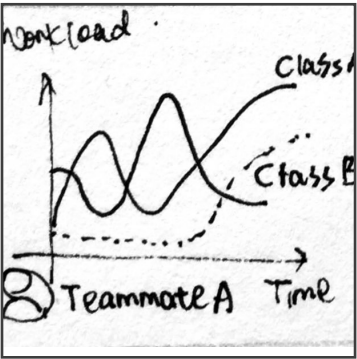
Intelligent automatic risk alerts based on the completed tasks and the whole tasks amount.



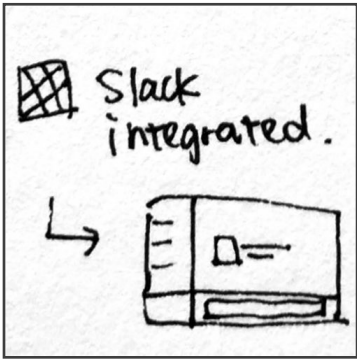
If the assignment is related to a future assignment, it will be shown as a predecessor other than a totally different assignment.



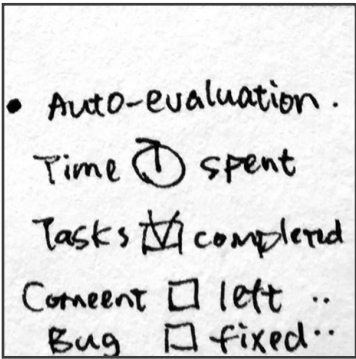
You or the instructor set the estimated time that should be spent on this assignment. Combined with the timer feature.



Visualize the workload your team members have across the timeline. Intelligently consider and suggest work assigned to them.



Integrate canvas with Slack so any notifications can be push on Slack as well.



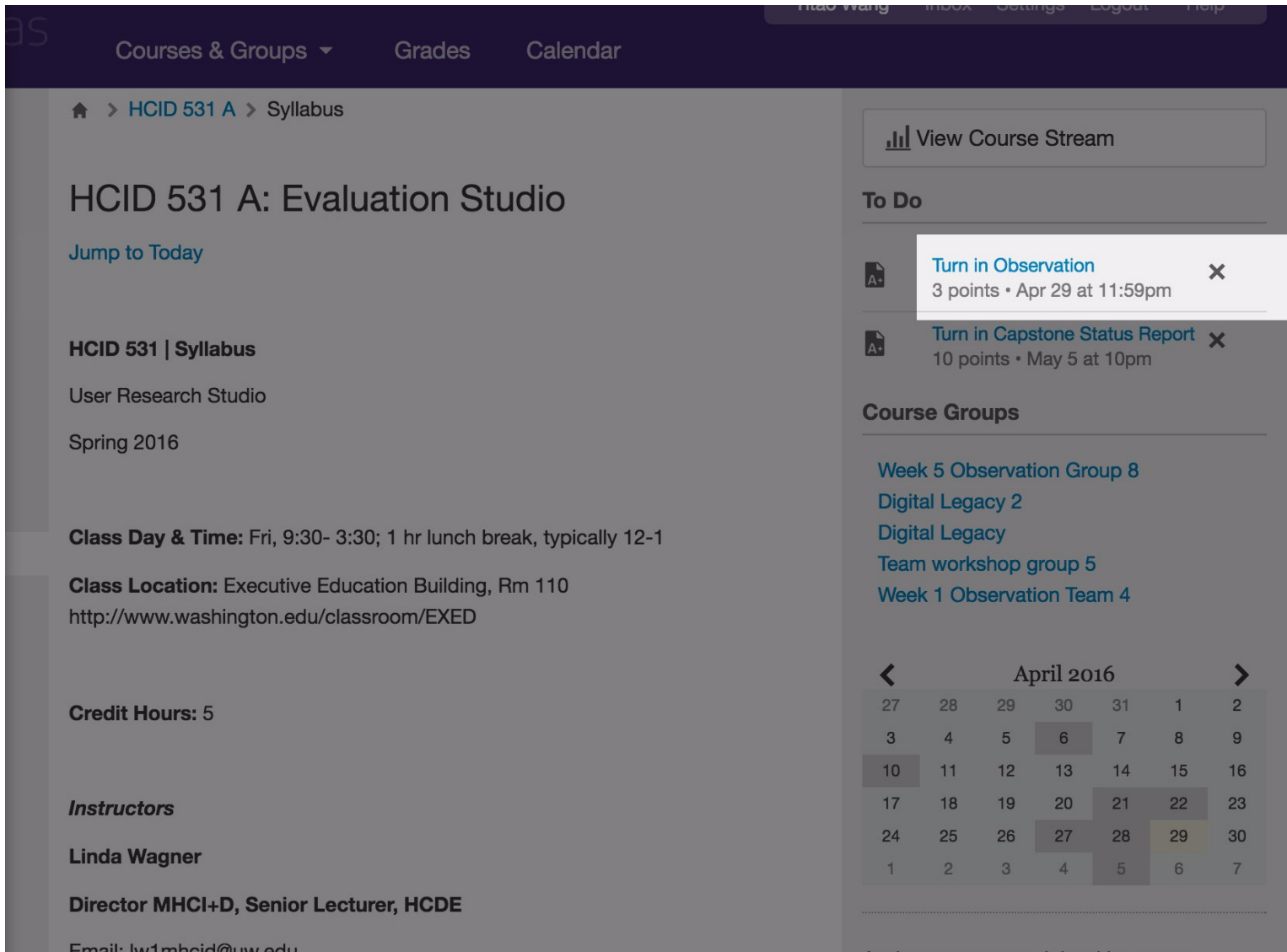
Auto-evaluation feature that give convincing quantitative data. It can serve as a motivation to get things done as well.



# Heuristic Analysis

## 1. Visibility of system status

The system should keep users informed through appropriate feedback within reasonable time.



### Note

The system doesn't know that I have already turned in this assignment.

### Recommendation

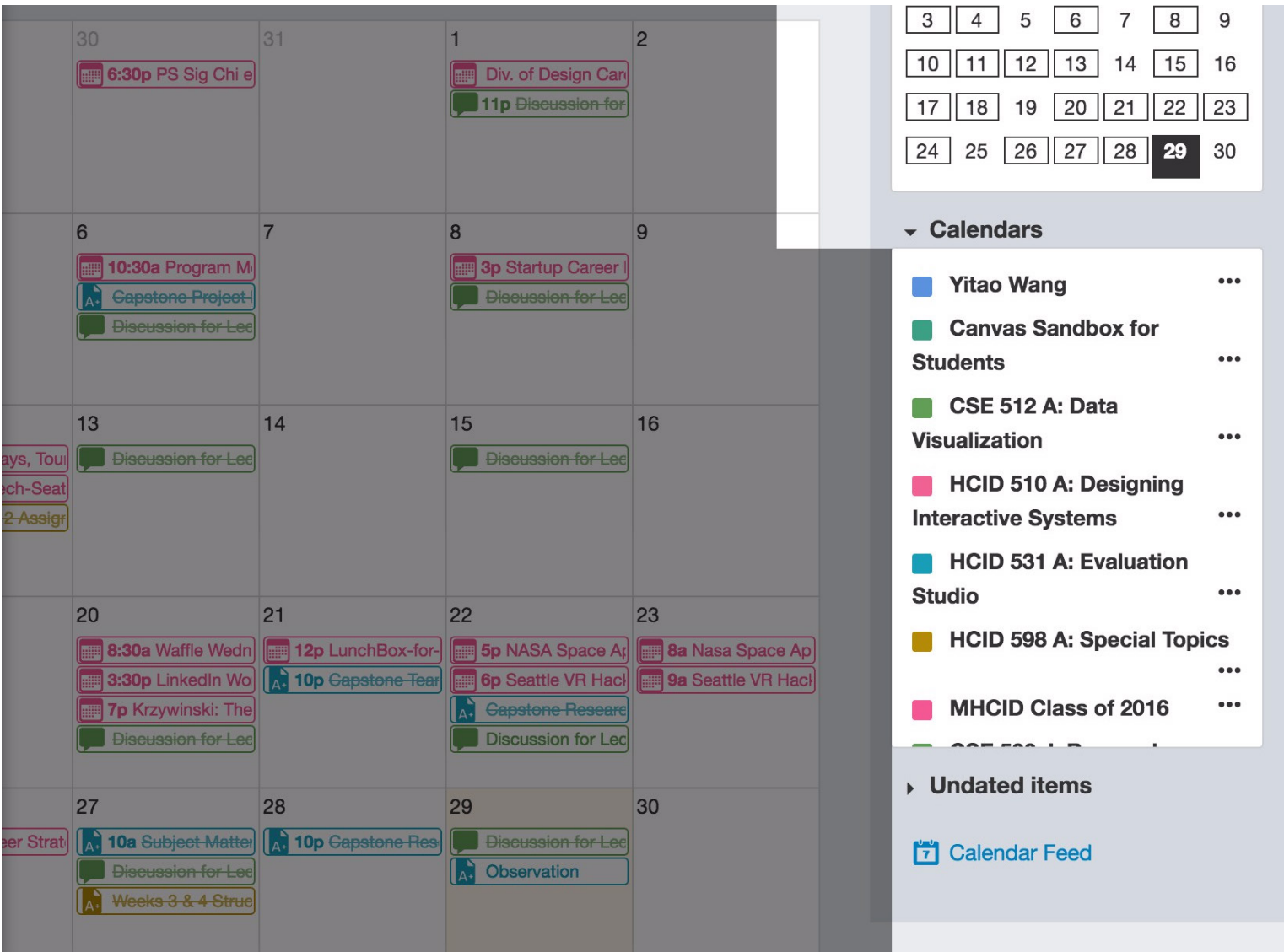
Should help me check this to-do task off automatically.

### Severity- 1

# Heuristic Analysis

## 2. Match between system and the real world

The system should speak the users' language rather than system-oriented terms. Follow real-world conventions.



### Note

The calendars are actually checkbox that can be checked and unchecked, but the color blocks don't appear to be checkbox.

### Recommendation

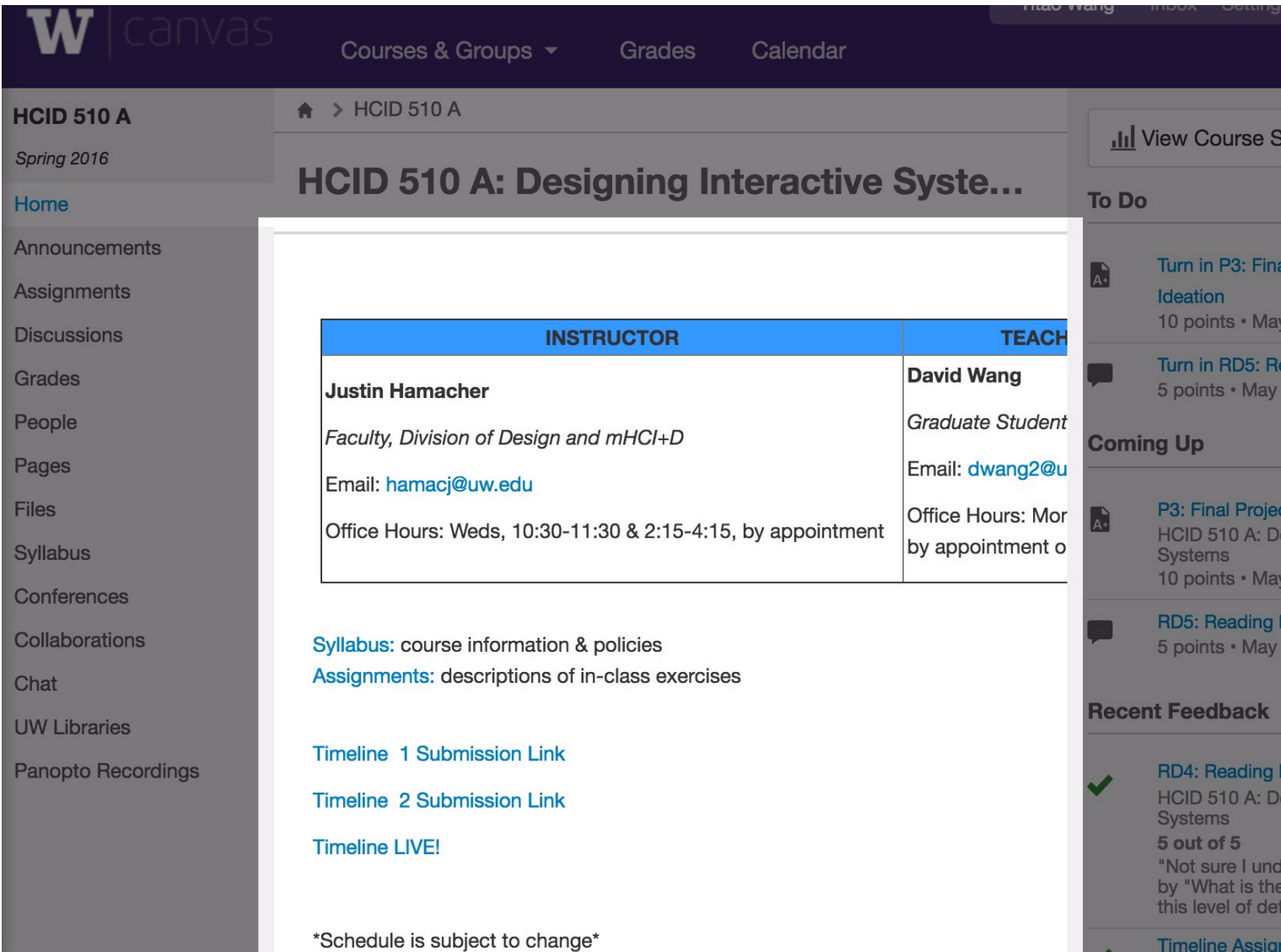
Turn the color blocks into regular color or checkmark.

### Severity - 3

# Heuristic Analysis

## 3. User control and freedom

Users often make mistakes and need ‘emergency exits’ to leave the unwanted state. Support undo and redo.



### Note

The content in this middle main column will be covered if the screen get squeezed.

### Recommendation

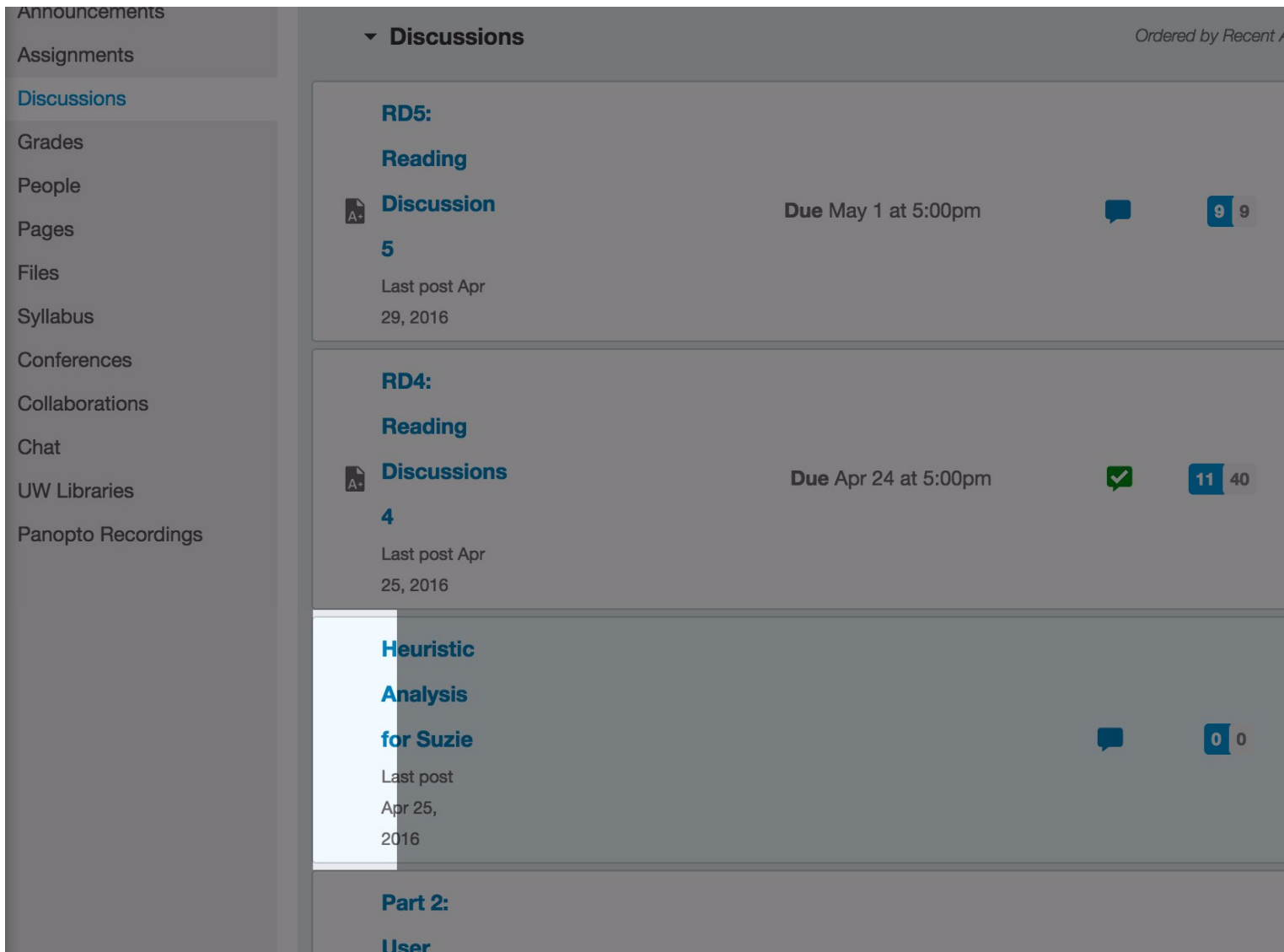
The left or right panel should be fold-able.

### Severity - 3

# Heuristic Analysis

## 4. Consistency and standards

Users shouldn't have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.



### Note

The icon for the discussion thread is not consistent. Some have and some don't have.

### Recommendation

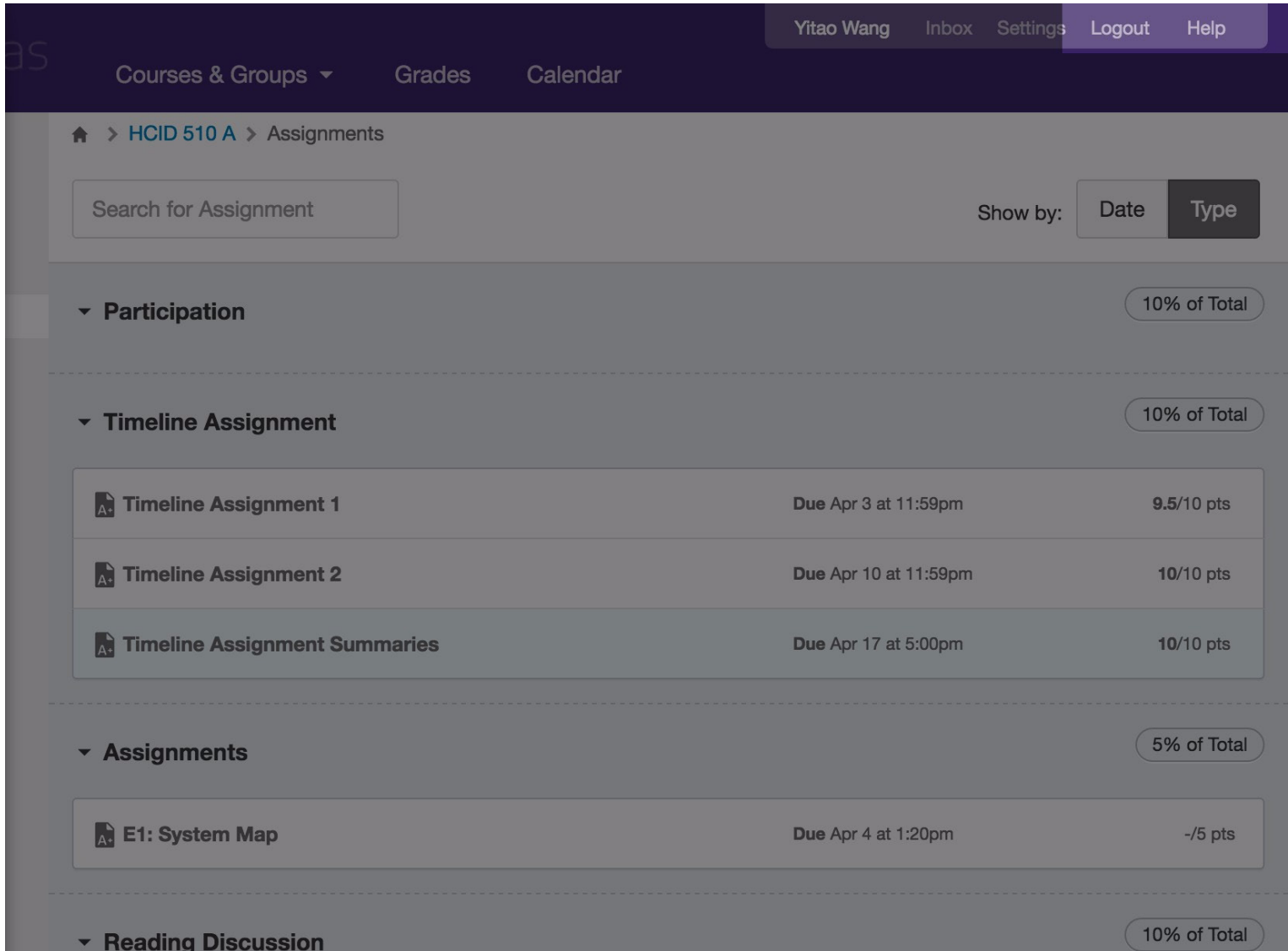
Put marks saying what each icon stands for.

### Severity - 1

# Heuristic Analysis

## 5. Error prevention

Prevent problems from occurring in the first place, or check for them and present users with a confirmation option before they commit to the action



### Note

When user hits “Logout” button, there is no dialog popping out to prevent you from accidentally hitting it by mistake.

### Recommendation

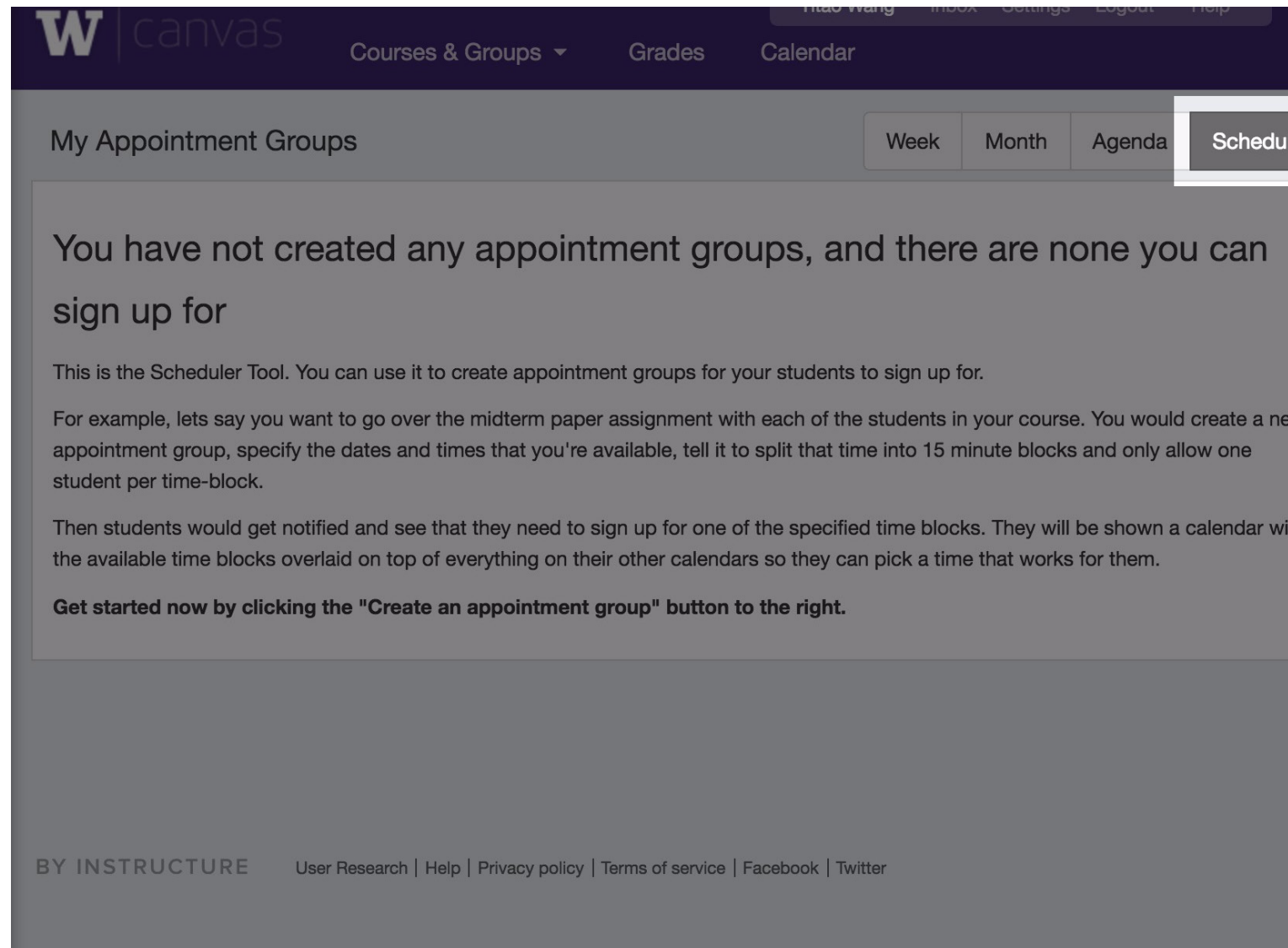
Call out a confirmation dialogue.

### Severity- 2

# Heuristic Analysis

## 6. Recognition rather than recall

Minimize memory load by making objects, actions, and options visible. Instructions should be visible or easily retrievable.



### Note

The term “scheduler” doesn’t seem related to the real content under this category, which is more like an appointment group that you can sign up for.

### Recommendation

Turn the word into “Appointment”

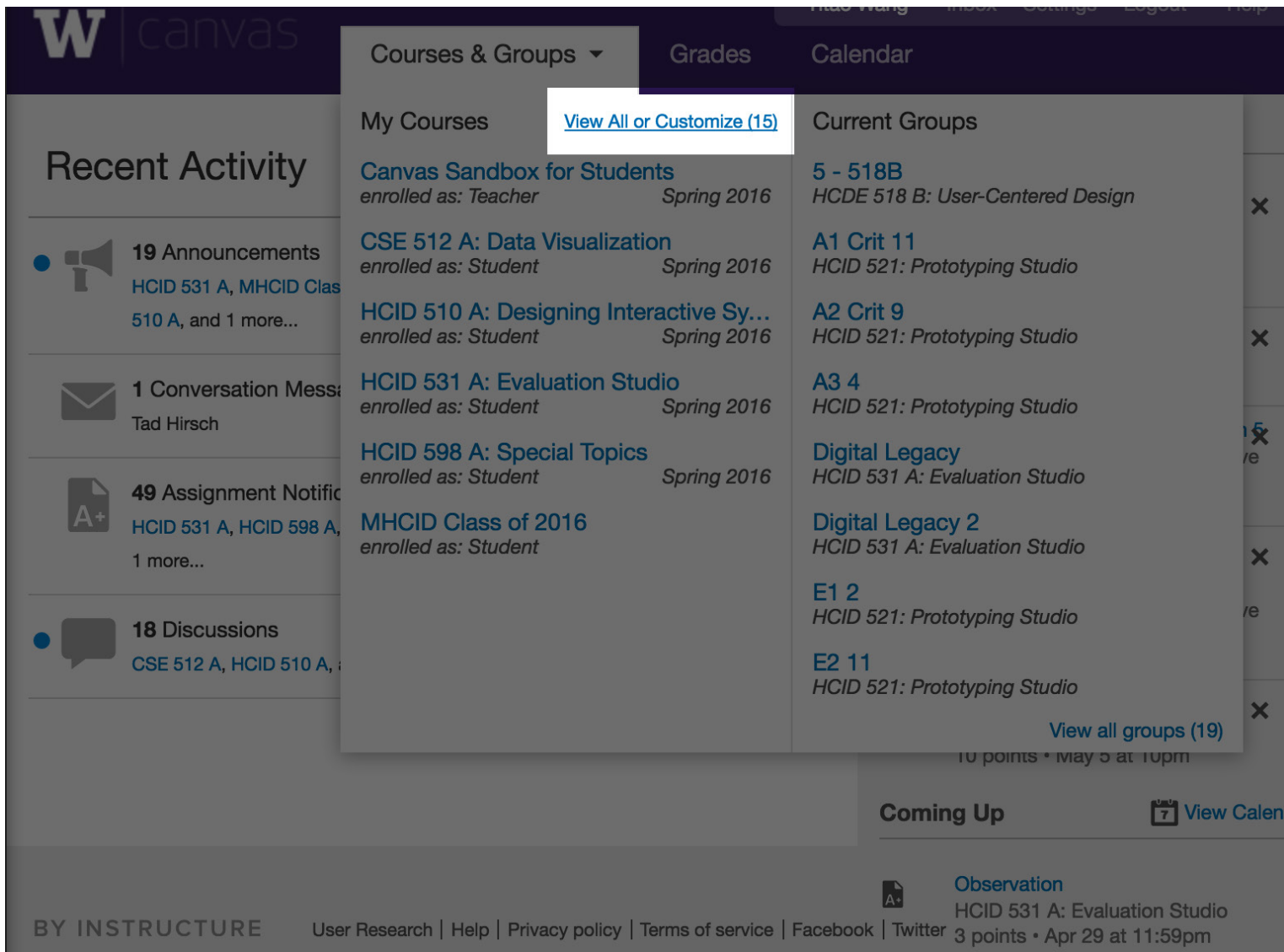
Severity - 2



# Heuristic Analysis

## 7. Flexibility and efficiency of use

Accelerators - unseen by the novice user - may often speed up the interaction for the expert user. Allow users to tailor frequent actions.



### Note

Novice users might not notice that they can choose if they want to view a specific course.

### Recommendation

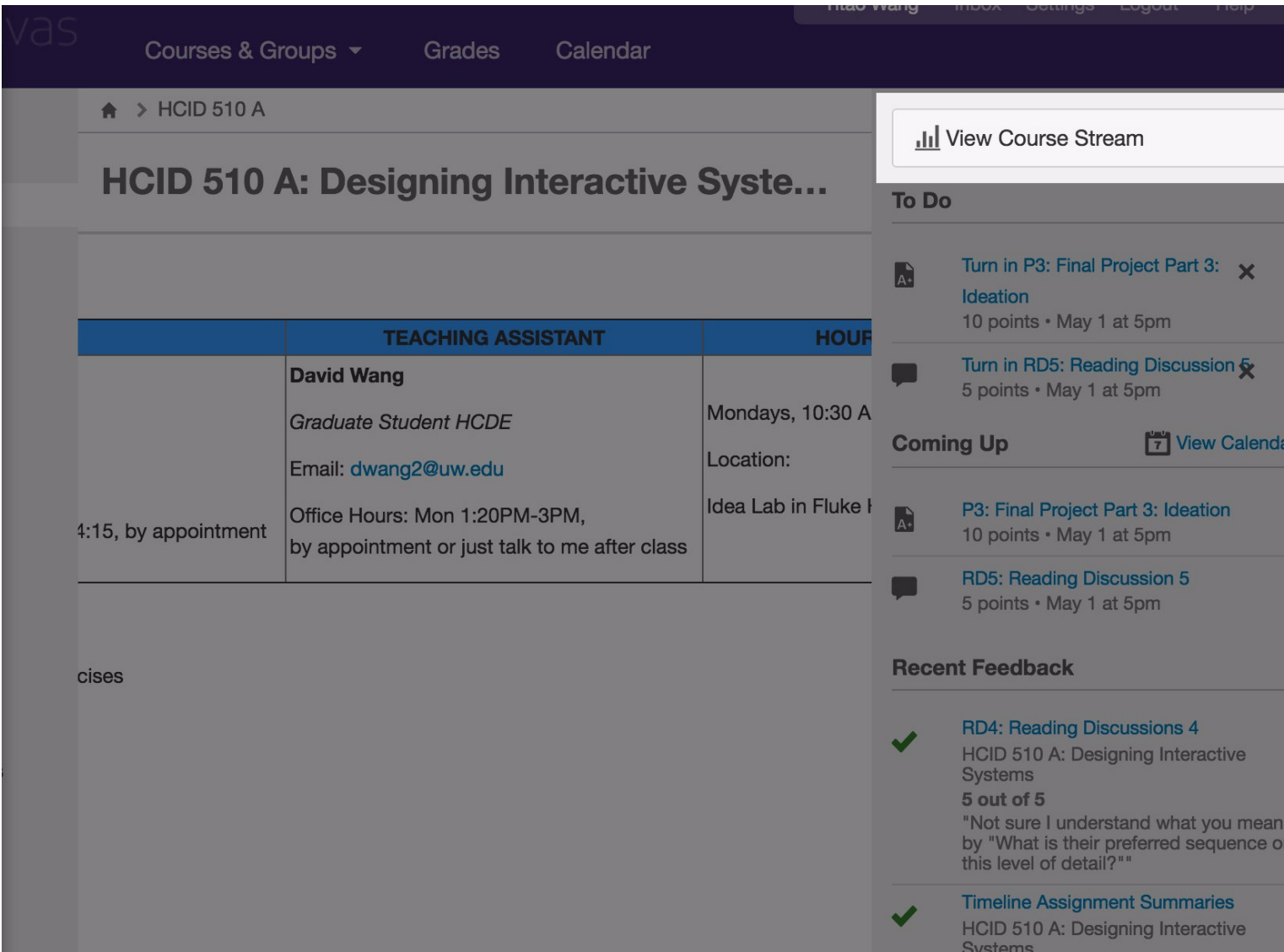
Make this button more obvious.

### Severity - 3

# Heuristic Analysis

## 8. Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed.



### Note

This is a button that I've never used.

### Recommendation

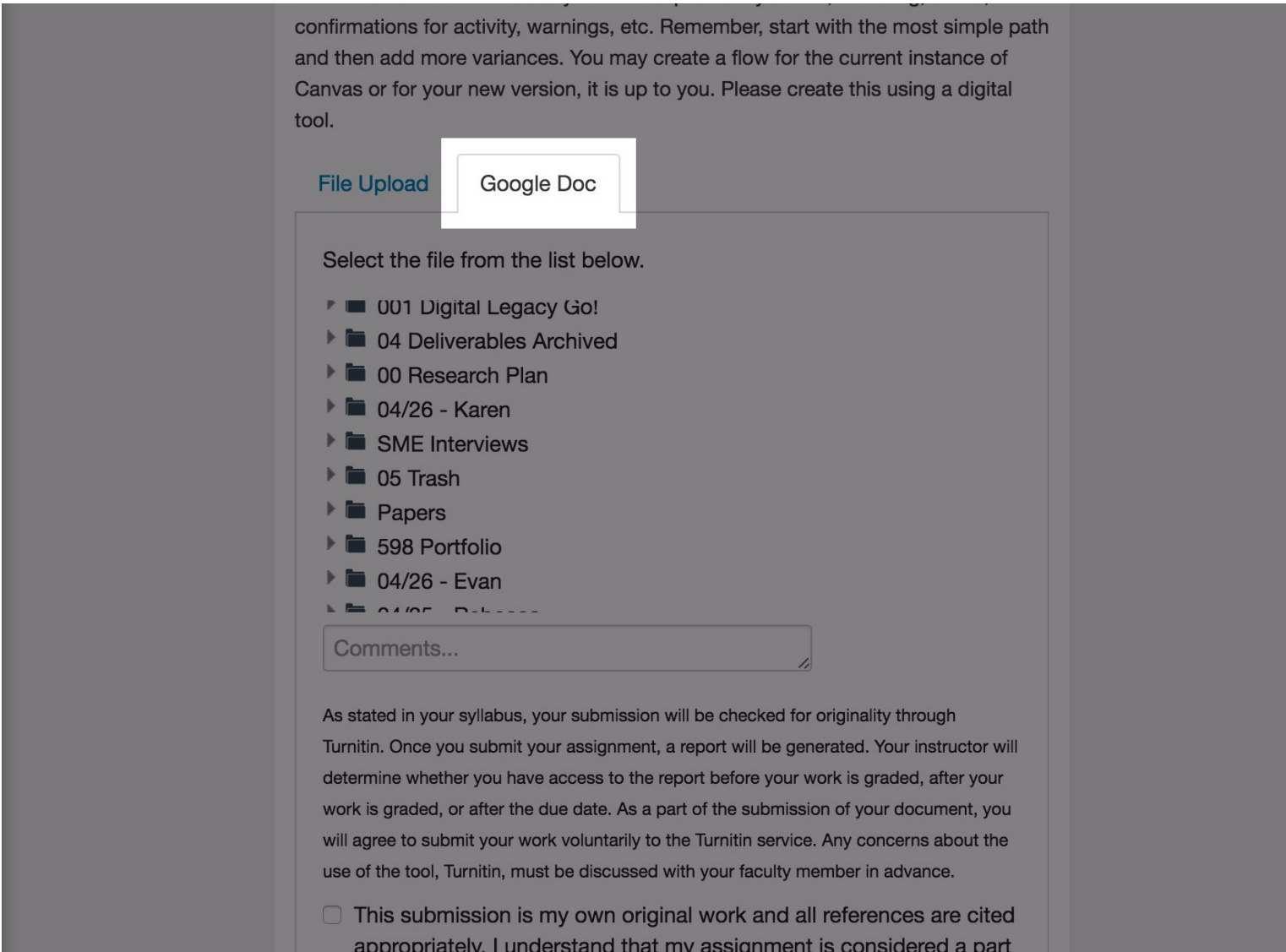
Remove it for the sake of minimalist design. Only keep the buttons that are frequently used or don't put it at the top.

### Severity - 3

# Heuristic Analysis

## 9. Help recognize & recover from errors

Error messages should be expressed in plain language, indicate the problem, and suggest a solution.



### Note

Actually when the assignment makes it specifically clear that it requires pdf format, the system still allows you to submit other format like google doc, which gives no reminder or notification to prevent you from doing it.

### Recommendation

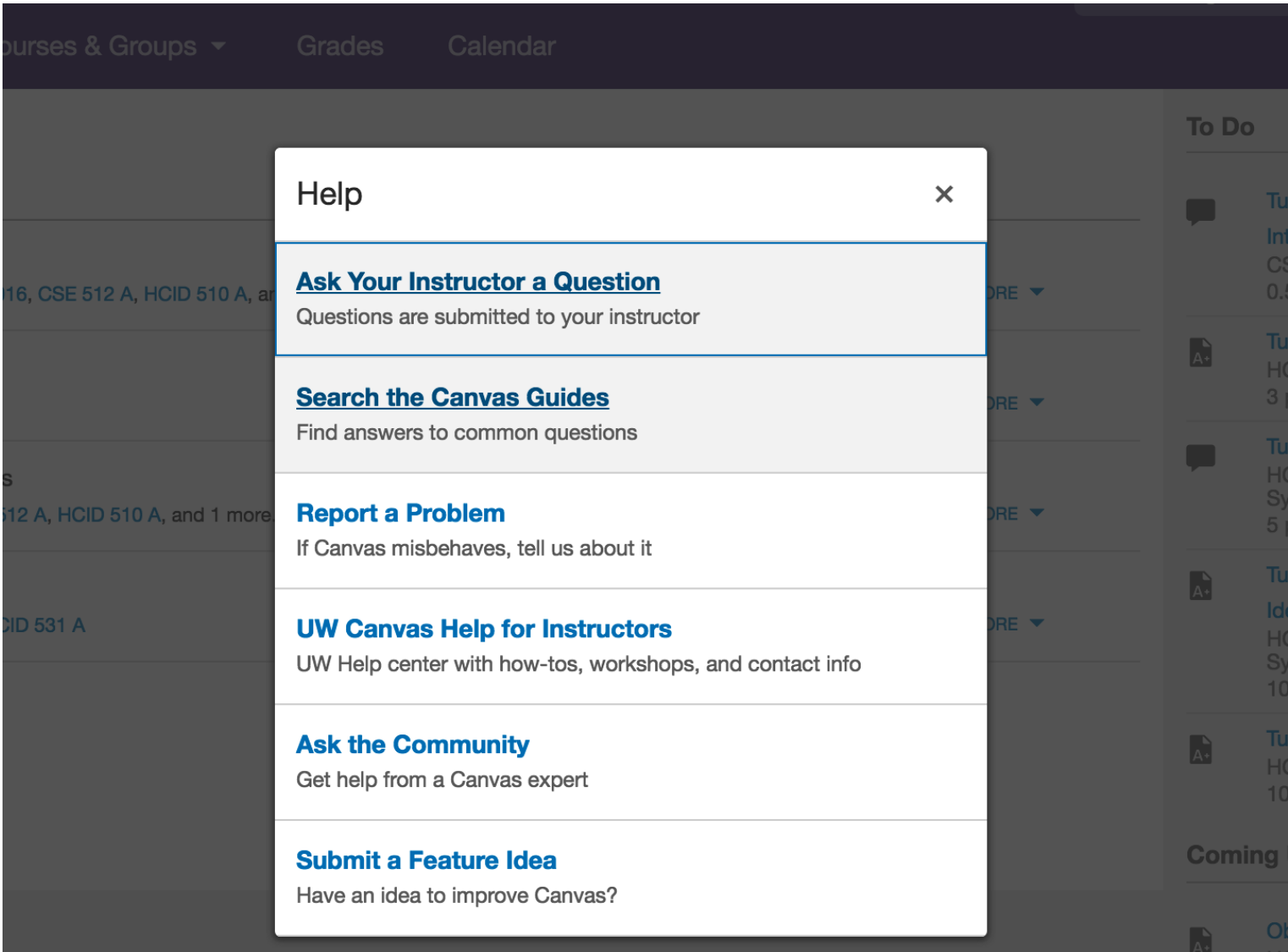
Should prevent users from submitting the wrong format.

### Severity - 4

# Heuristic Analysis

## 10. Help and documentation

Any necessary help documentation should be easy to search, focused on the user’s task, list concrete steps to be carried out, and not be too large.



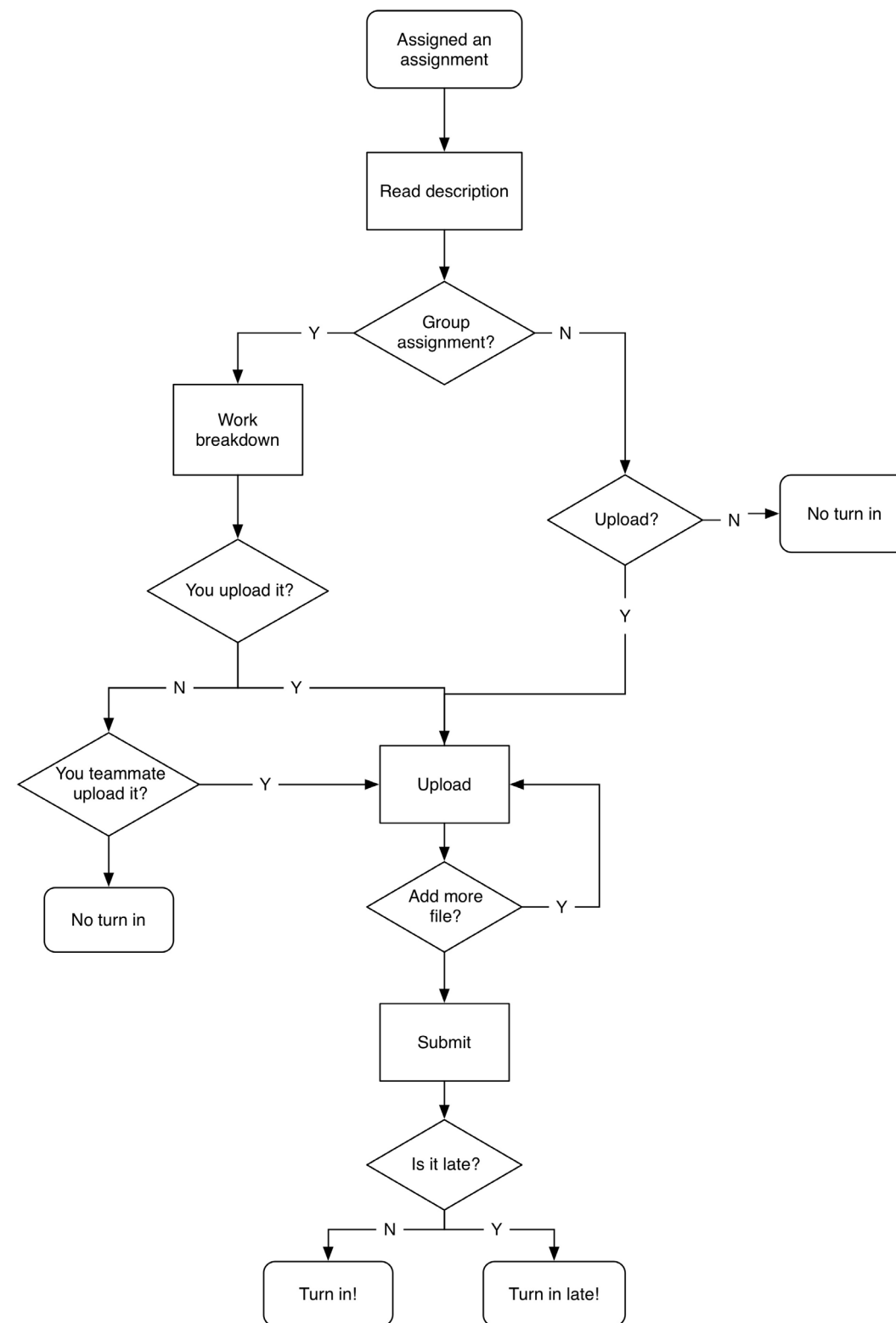
### Note

In the help dialogue, it can do a better job by putting the most frequent asked category at the top. My assumption here is that “ask your instructor a question” is not a frequent used category so it should not be the first one.

### Recommendation

Rank the category by the use frequency.

### Severity - 1



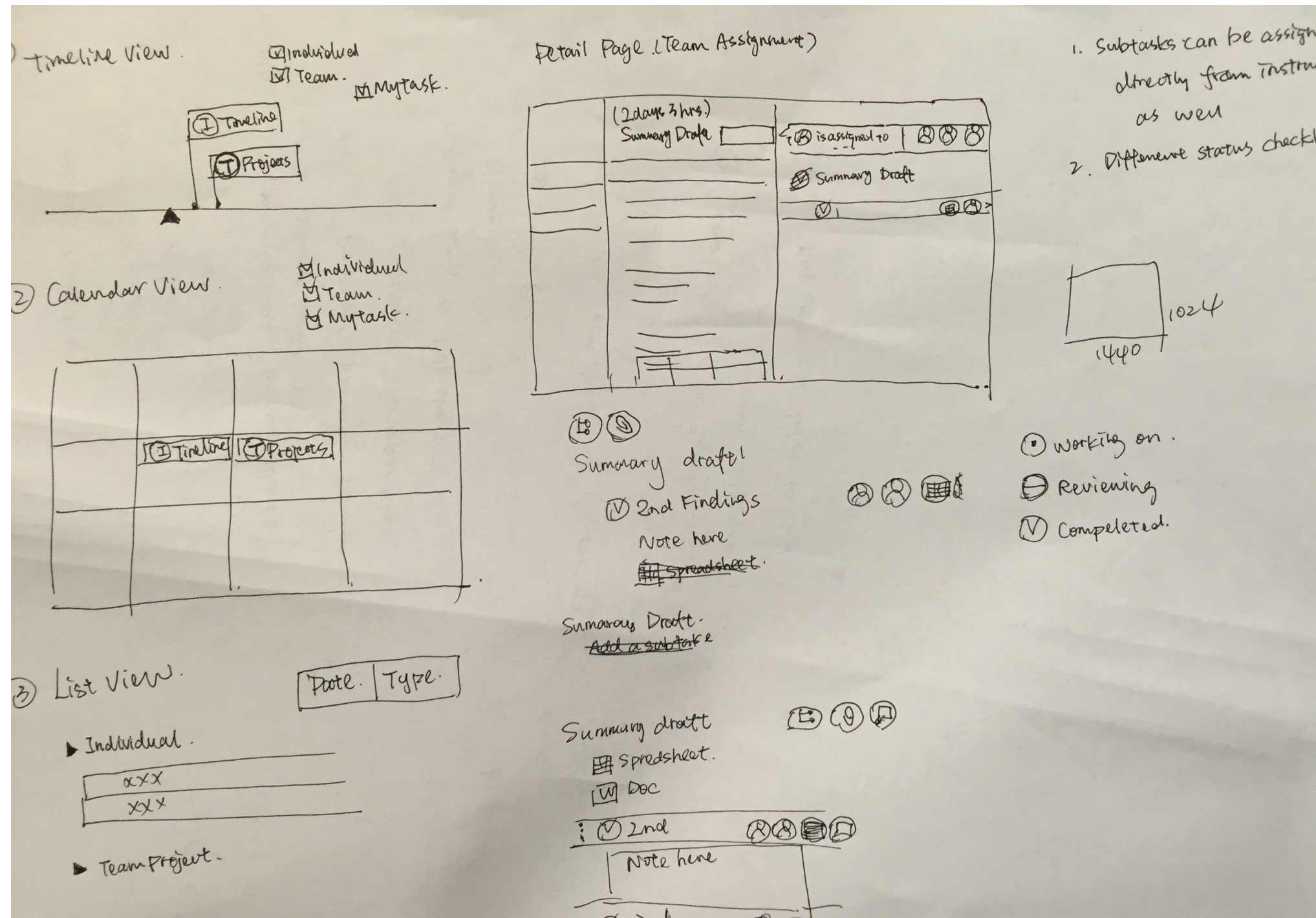
## Assignment turn in flow

This is a user flow depicting specifically after students have been assigned assignments to work on. If it's a group assignment, team breakdown and who will be turning in the assignment would be the main steps differentiate this path from the individual assignment user flow.

This flow gave me insights that to make the team assignment turn in process more smoothly, work breakdown and assign people to turn in the assignment eventually would be the pain points the new system can tackle.



# Paper Sketches



## Paper Sketches

Before going about doing wireframes in Axure, I sketched my initial design ideas on paper.



W   Canvas			Courses & Groups	Grades	Calendar
HCID 531 A Spring 2016			List View   Calendar View   Timeline View		
Home					Date   Type
Announcements			► Individual Assignments		
			Capstone Peer Evaluation	Due Apr 6 at 22:59pm	9/10 pts
Assignments			Capstone Project Pitch	Due Apr 7 at 22:59pm	-/10 pts
Discussions			► Team Assignments		
Grades			Capstone Team Contract	Due Apr 6 at 22:59pm	-/10 pts Not Yet Graded
People			Capstone Research Plan	Due Apr 7 at 22:59pm	-/10 pts
Pages			Capstone Status Report	Due Apr 8 at 22:59pm	-/20 pts
			Capstone Research Summary	Due Apr 9 at 22:59pm	-/25 pts

## 1. Assignment List View

There are three view options to display the assignment list. The first of them is the list view. Assignments will be defaultly sorted by the “DATE” - due date.

This wireframe shows how assignment will be sorted by “TYPE”. As shown, assignments will be grouped by individual and team type and they are ranked by due date from the latest to the oldest.

W | Canvas

HCID 531 A  
Spring 2016

Home

Announcements

Assignments

Discussions

Grades

People

Pages

Courses & Groups

Grades

Calendar

List View | Calendar View | Timeline View

MAY

Today

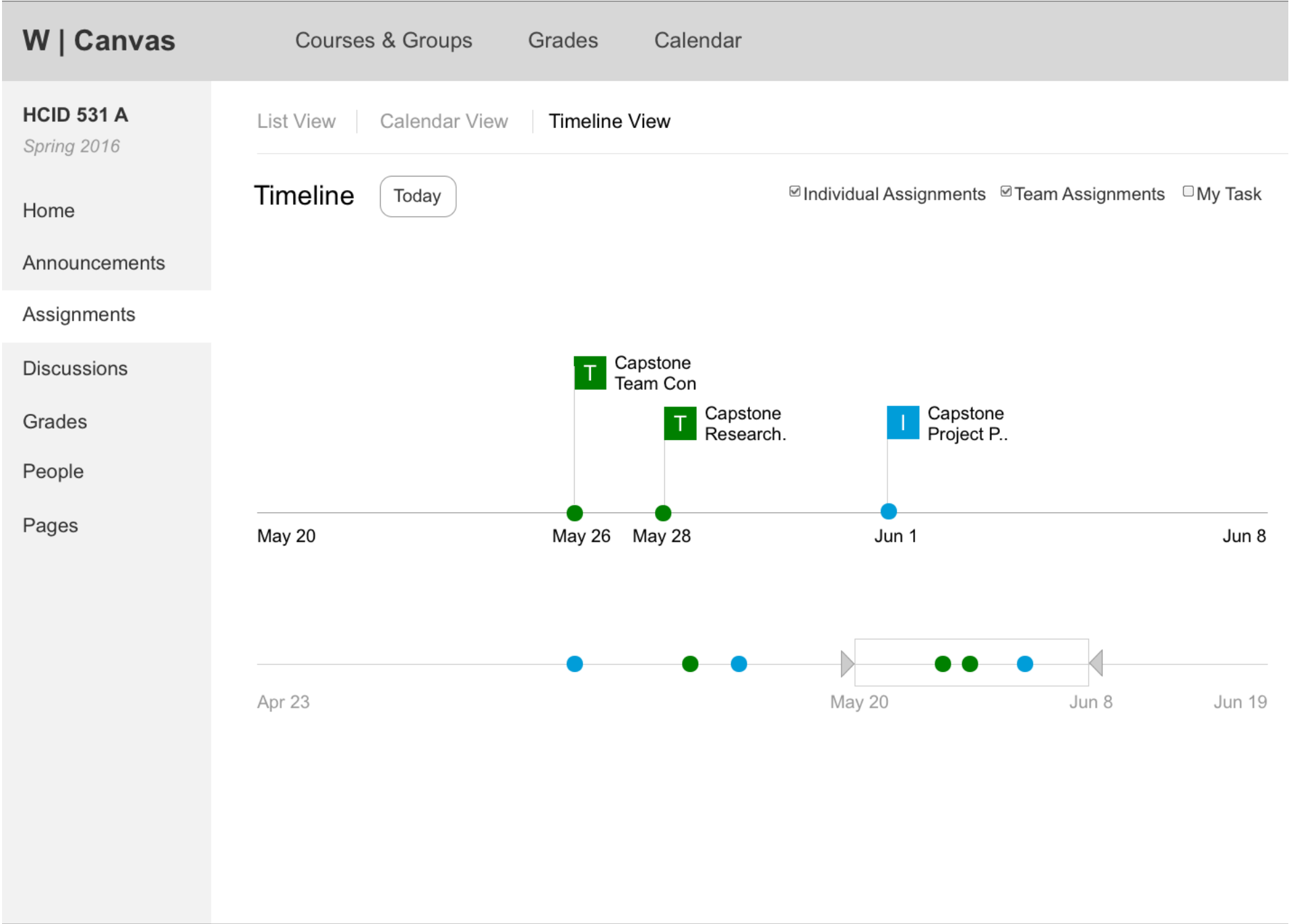
☒ Individual Assignments☒ Team Assignments☐ My Task

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6 <div><div>I</div>Capstone Peer Eva..<div>T</div>Capstone Team Con..</div>	7 <div><div>T</div>Capstone Research.</div>
8	9 <div><div>I</div>Capstone Project P..</div>	10 <div><div>T</div>Capstone Research.</div>	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

## 2. Assignment Calendar View

This wireframe shows how assignment will be displayed in a calendar view.

Users can scroll up and down to switch the month. There are three checkboxes offered to filter three kinds of assignments - “Individual, Team and my task”. “My tasks” are subtasks of one assignment that you or your teammates assign to you.

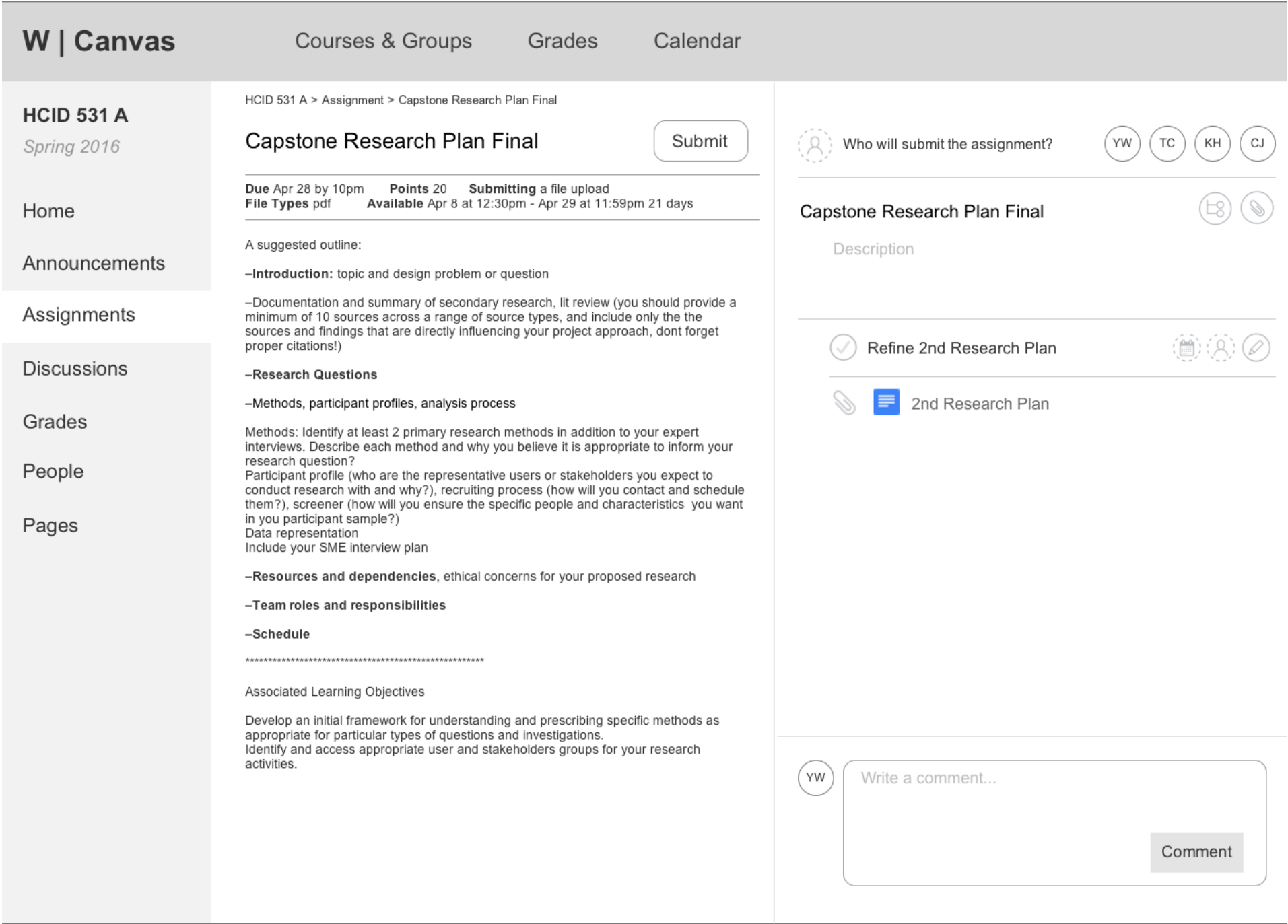


## 3. Assignment Timeline View

This wireframe shows how assignment will be displayed in a timeline view, to give users a holistic sense of all the assignments they will be having in one quarter.

There are two timelines, the bottom one is the timeline for the whole quarter. Users can zoom in to a certain period of time by adjusting the two-side slider, then the corresponding period will be displayed above, showing more details of the assignments.

This view offers three checkboxes on the top right to filter as well.



## Detailed Assignment Information

Left panel shows the assignment requirement information. TO-DOS panel on the right is the panel for team or individual to break the assignment into smaller actionable tasks. If it is a team assignment, shows the team members, and users can assign a specific team member to submit the assignment eventually.

The user can click on "Add task" button to add a task below, or click on "Attach file link" to attach an external google file. Additionally, it allows users to set a due date for the task and assign one or more teammates to a specific task. The paragraph at the bottom lists the activities log, such as attaching a file or assigning a task.

# User Testing – Description

## Location

At home  
On campus

## Screener

1. Students of University of Washington
2. Canvas users
3. Have been assigned to at least one team assignment in this quarter

## Material Needed

- A laptop displaying interactive wireframe
- Tasks for the user testing printed on a paper
- A notebook and a pen for taking notes when necessary

## Assumptions That Led to Design

1. Users need various assignment views to have a better sense of the assignment due date, type (solo or team project) and how they fall on the holistic time scale in a quarter.
2. When assigned a team project, user would inevitably face a question about who should submit the final version of the assignment.
3. When encountered a team project, users want to divide the whole workload into several subtasks, assign each to their teammates and remind them by the due date.

## Research Questions

1. Can user understand how three assignment views work?
2. Can user know how to assign teammate to submit assignment?
3. Can user figure out how to add external files from google drive?
4. Can user figure out how to set up subtasks for each assignment?
5. Can user figure out how to set a due date for each subtasks of the assignment?
6. Can user figure out how to assign subtasks to teammates?
7. Would these improvements and redesigns help people mitigate the concerns with their team assignment? How do people feel?

# User Testing – Script

## Introduction

Hi, welcome, thanks so much for taking your time to join our test. I'm Yitao, nice to meet you. I'm currently helping canvas improve the user experience, especially for the team assignment aspect. Most importantly, I want to make it clear that there is nothing that you can do wrong during the test, since you are testing the system; the system is not testing you.

The test would take about 30 minutes and if you don't mind, we will be videotaping the test and the video will be strictly used for analysis among our team only.

The whole testing procedure would go like this - we will start off by going through a few questions about your canvas using experience. Then we will get down to let you try out the prototype we designed. In

the end, we will wrap up by asking you a few more questions.

Does it make sense? Any questions before we begin?

## Interview Questions

1. How often do you use Canvas?
2. How often would you be assigned to team assignment?
  - How long would those assignments last?
  - How complicated are they?
3. What are the obstacles that you've encountered with the team assignment?
  - What and how do you think they can be improved?

## Tasks

1. To see how these assignments fall on the calendar, what would you do?
2. To filter out the individual assignment on the calendar
3. To see how these assignments fall on a timeline for this quarter
4. To adjust the time slot
5. To see the assignment requirement page of the assignment "Capstone Research Plan Final"
6. To assign the teammate "TC" to submit this assignment finally
7. To add a subtask for this assignment "Refine 2nd Research Plan"
8. To add an external google document called "2nd Research Plan"
9. To set the due date for this assignment to be "May 30"
10. To assign this subtask to teammate "TC"

# User Testing – Script

## Prop Questions

- [After evaluator stop after each task] Did you think you have succeeded the task?
- [When evaluator read the wording on the interface for a while and stop talking] Are there any interface elements that don't make sense?
- [When the evaluator stop talking for a while] What's in your mind now?
- [When the evaluator clicking back and forth] Is there anything confuse you or you need more information?
- [When the evaluator looks surprise] What did you expect to see?

## Wrap-up Questions

1. How do you feel about the design? Is it easy to use?
2. Any one of the features particularly good or bad designed?
3. Do you think they've addressed the problems you encountered previously?
4. Any other suggestions or comments?

## Learned from Pilot Test

1. For the interview question 2 "How complicated are they?", more props should be prepared to define the word "complicated"
2. For the interview questions 3, be careful not to ask in a way that is misleading
3. To prepare for the test, more details of the wireframes should be fleshed out



# User Testings

## Test Carried Out

### LOCATION

At home or on campus

### PARTICIPANTS PROFILE

P1: [Medium Heavy User]

Female, Master, 20s.

She has one team assignment every 2 weeks.

P2: [Light User]

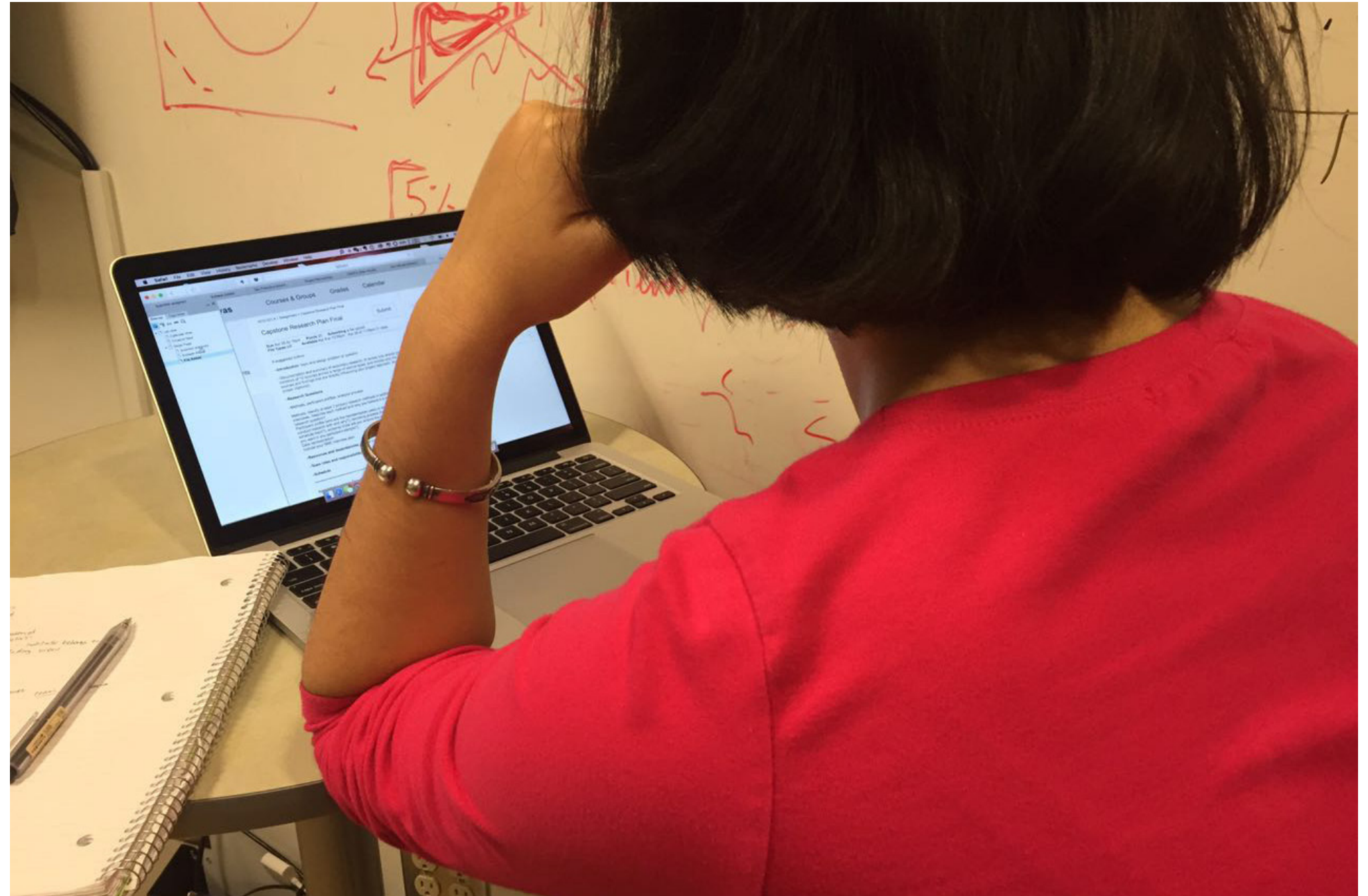
Female, PHD, 30s.

She has two team assignments in two years.

P3: [Medium User]

Female, Master, 20s.

She has one team assignment every 2-3 weeks.



# User Testing – Results

Page	Feedback	Queto	Implications	P1	P2	P3	All
Calendar view	TODAY button is confusing.	"I don't know it will just show the assignment today or it will highlight today in calendar only." "It might take me to see only the tasks on today."		1	1		2
Calendar view	Color code different types is enough.			1			1
Calendar view	The detail time of each assignment should be displayed.				1		1
Calendar view	Make the whole month into one screen	"It's too much a hassle to scroll down to view a whole month."				1	1
Calendar view	Miss the button to switch between months.		add a left and right button			1	1
Timeline view	Two timeline looks confusing at the first glance.	"I didn't know the bottom line is a quarter."	Add title	1			1
Timeline view	Font size of the assignment title are different.			1			1
Timeline view	Miss the mark of TODAY in the timeline.			1		1	2
Timeline view	MY TASK is not clear.	"here is the only place shown 'task' along the whole prototype that can't make me think of what it refers to." "Looks like individual task."		1		1	2
Timeline view	Mark every month on the line.					1	1
Detail page	DESCRIPTION is confusing.	"i think here is a place to add task?"		1		1	2
Detail page	The feedback after assign a teammate to submit is not noticable.	"prbly color code it to make it more obvious"				1	1
Detail page	ADD TASK icon is confusing.	"It looks more like a share button."	Add text "add task"	1		1	2
Detail page	Not share what the right panel is for.	"The right panel looks like one part of the submission procedure now."	Add a title - "Team collaboration" Consider collapse the right panel	1			1
Detail page	Not sure the file belong to which task.		Move the file icon below the main task	1			1
Detail page	Didn't know the file is a link to the external file	"I thought I just upload a file and it will never update again." "if it'll update, how about putting a url here?"		1	1	1	3
Detail page	Can consider add sections as milestones to separate tasks.			1			1
Detail page	The PEN icon looks like for editing the name.			1			1

## Problems Identified

This is a table itemizes usability issues belong to corresponding prototype pages, along with problems frequency and feedback collected from participants.

By summing up the frequency of each issues and color coding, this table serves as a clear direction for future iterations.

# User Testing – Results

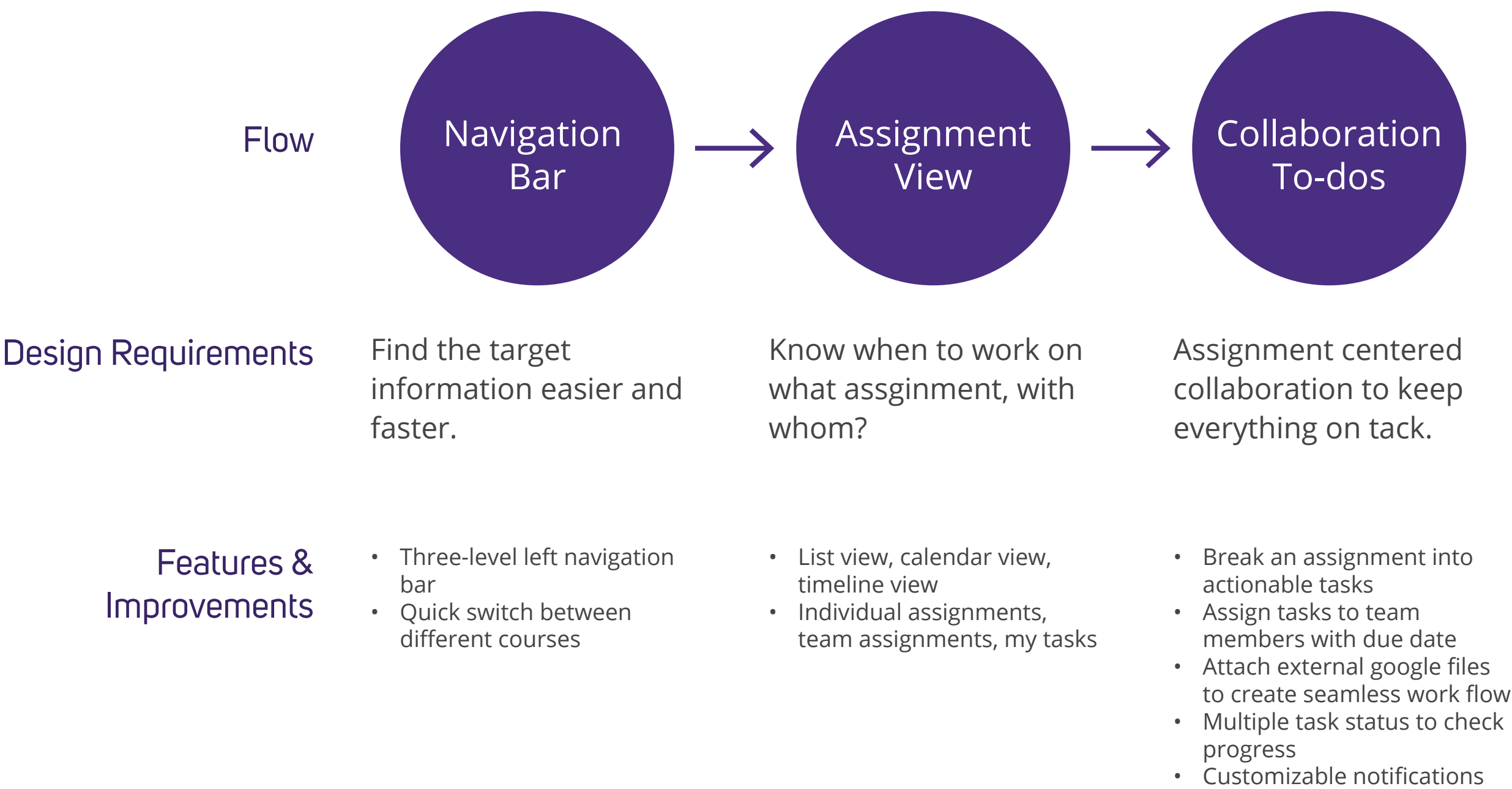
## Key Findings

1. [3/3] Since the external files are uploaded on the page with assignment submit button, it makes people think the file link would not be uploaded.
  - *"I thought I just upload a file and it will never update again." - P2*
2. [3/3] Participants were confused about the flexibility after one of the teammates has been assigned to submit the deliverable afterwards.
  - *"Everyone can assign who to submit?" - P1*
  - *"What if that teammate forget? Can I help him or her to submit?" - P2*
3. [2/3] The timeline view misses the sense of today.
4. [2/3] The DESCRIPTION text below the main task is confusing.
5. [2/3] The icon to ADD TASK is confusing.
  - *"It looks like a share button." - P1*
6. [2/3] Activities log should be provided.
  - *"So I know who did what." - P3*
7. [1/3] Missing the button to switch between months.

## Iteration Directions

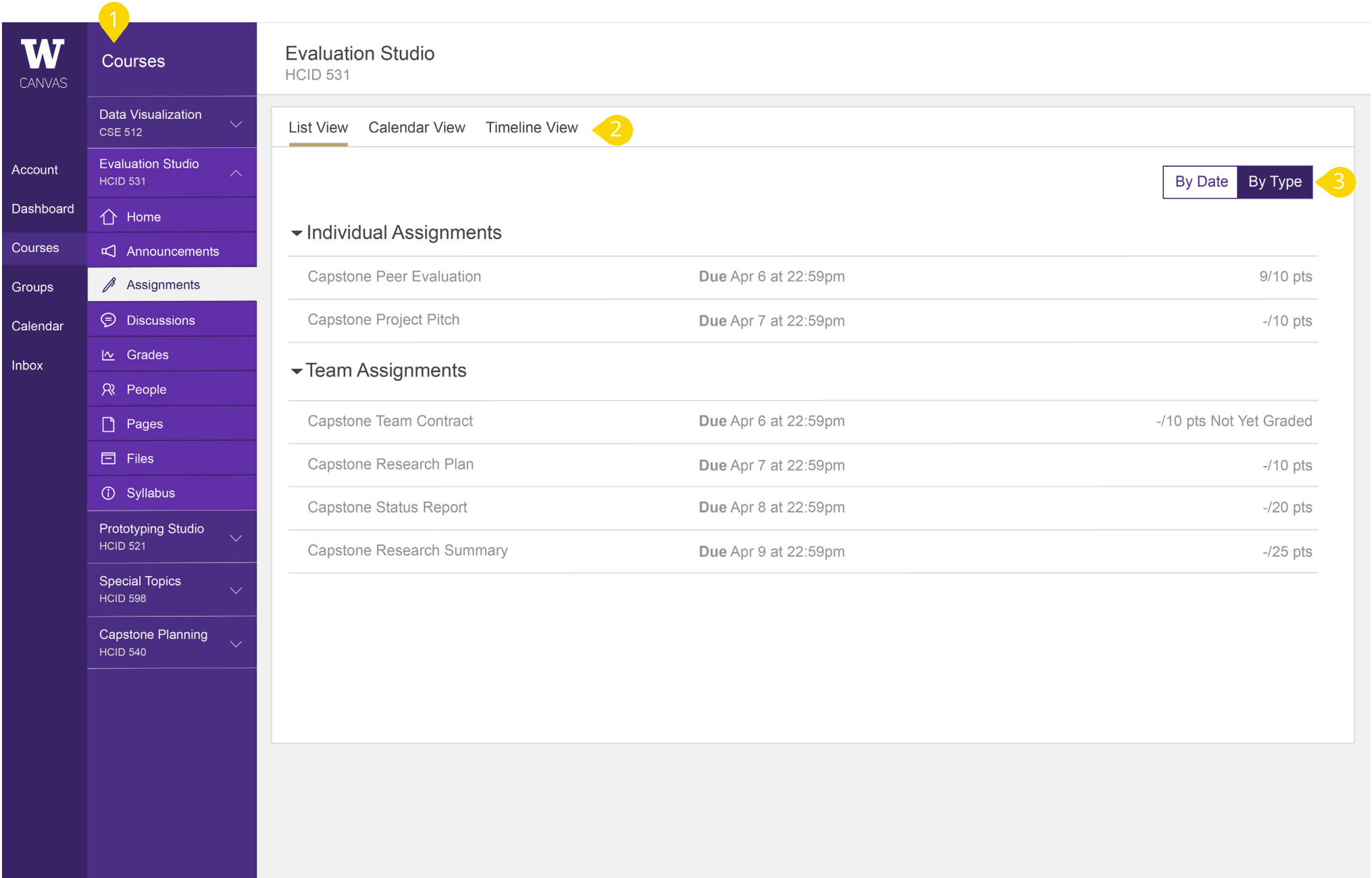
1. Give the external files a sense of "link", instead of a static file
2. Make sure there is notification after someone has been assigned to submit the deliverable
3. Mark TODAY in timeline view
4. Remove DESCRIPTION text
5. Tweak the ADD TASK icon by replacing it with a plus looking icon or simply adding text next to the icon to describe it
6. Add activities log at the bottom of the collaboration tool
7. Add a left and right button to switch between months
8. Add a title - "Team collaboration"
9. Consider collapse the right panel
10. Move the file icon below the main task

# Summary of Visual Design





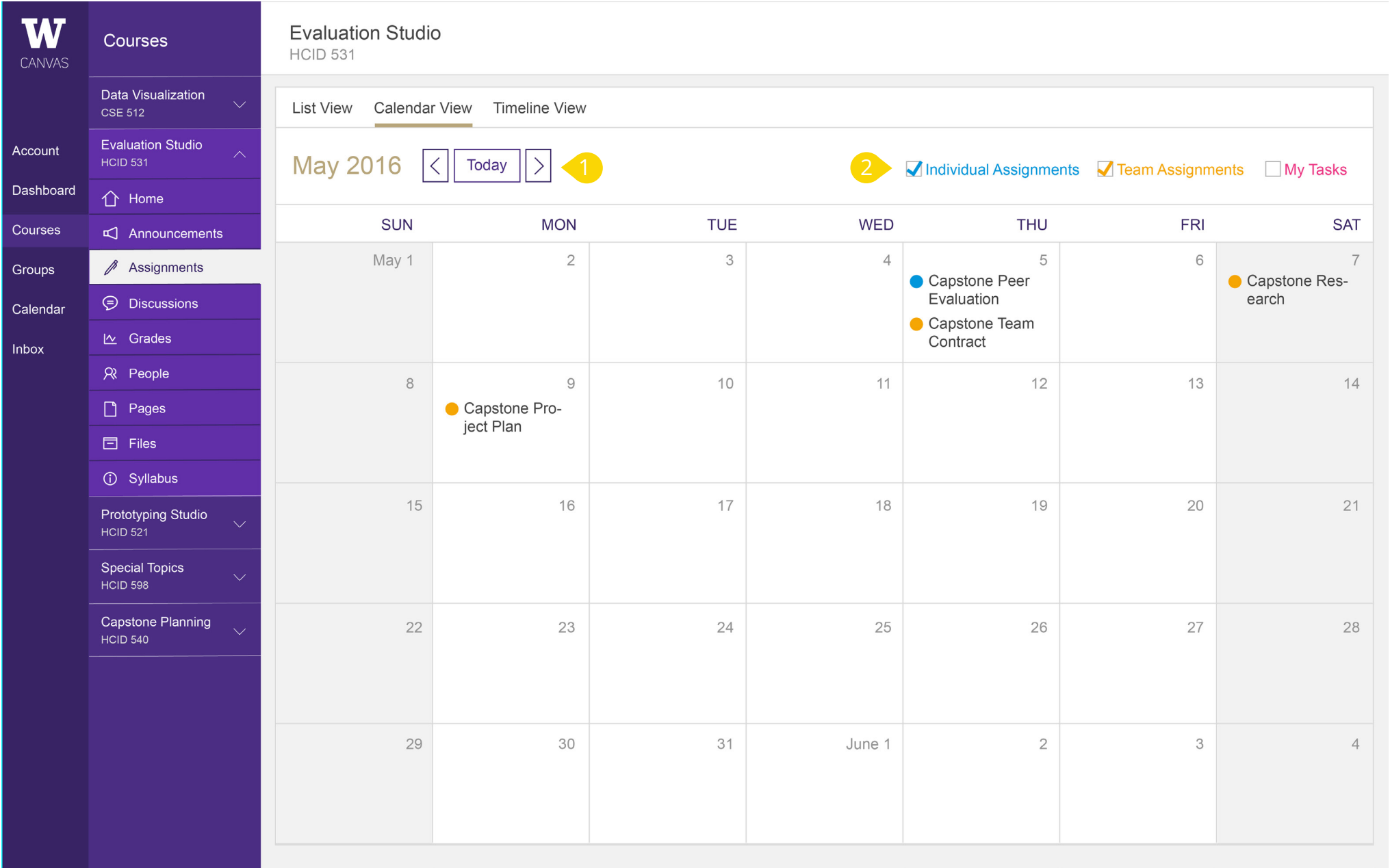
# High Fidelity Visual Components



## Assignment List View

1. Three-level left navigation bar
2. Allows users to quickly switch between different courses
3. Three assignment views
4. Allows users to have intuitive sense of when the due dates of the assignments are
5. Sort assignments by type
6. Assignment type is defined to be individual and team assignment

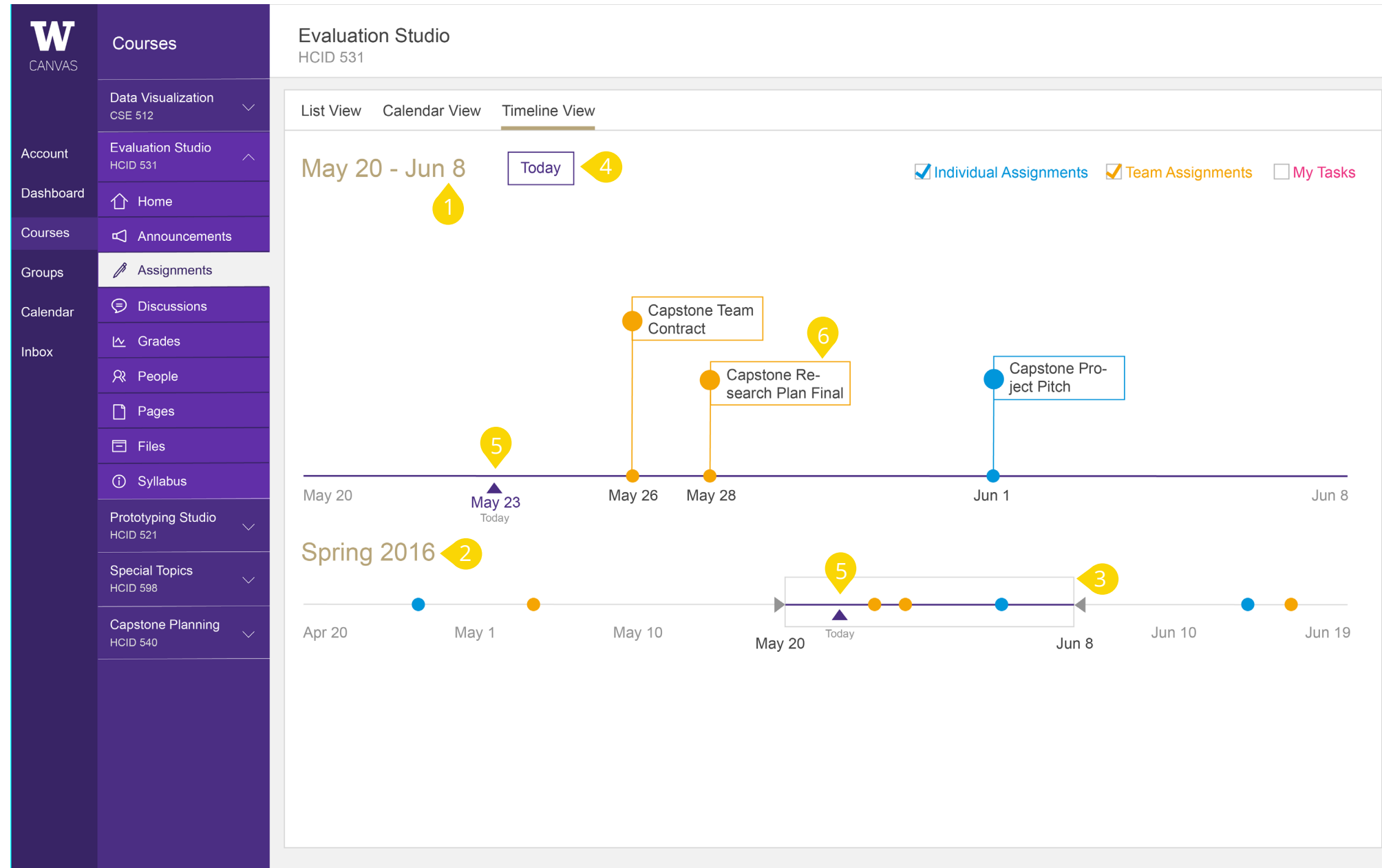
# High Fidelity Visual Components



## Assignment Calendar View

1. Added month switch based on the feedback learned from user testing. "TODAY" button allows users to go back to the current month
2. Filter to select the type of assignment that users want to see on the calendar

# High Fidelity Visual Components

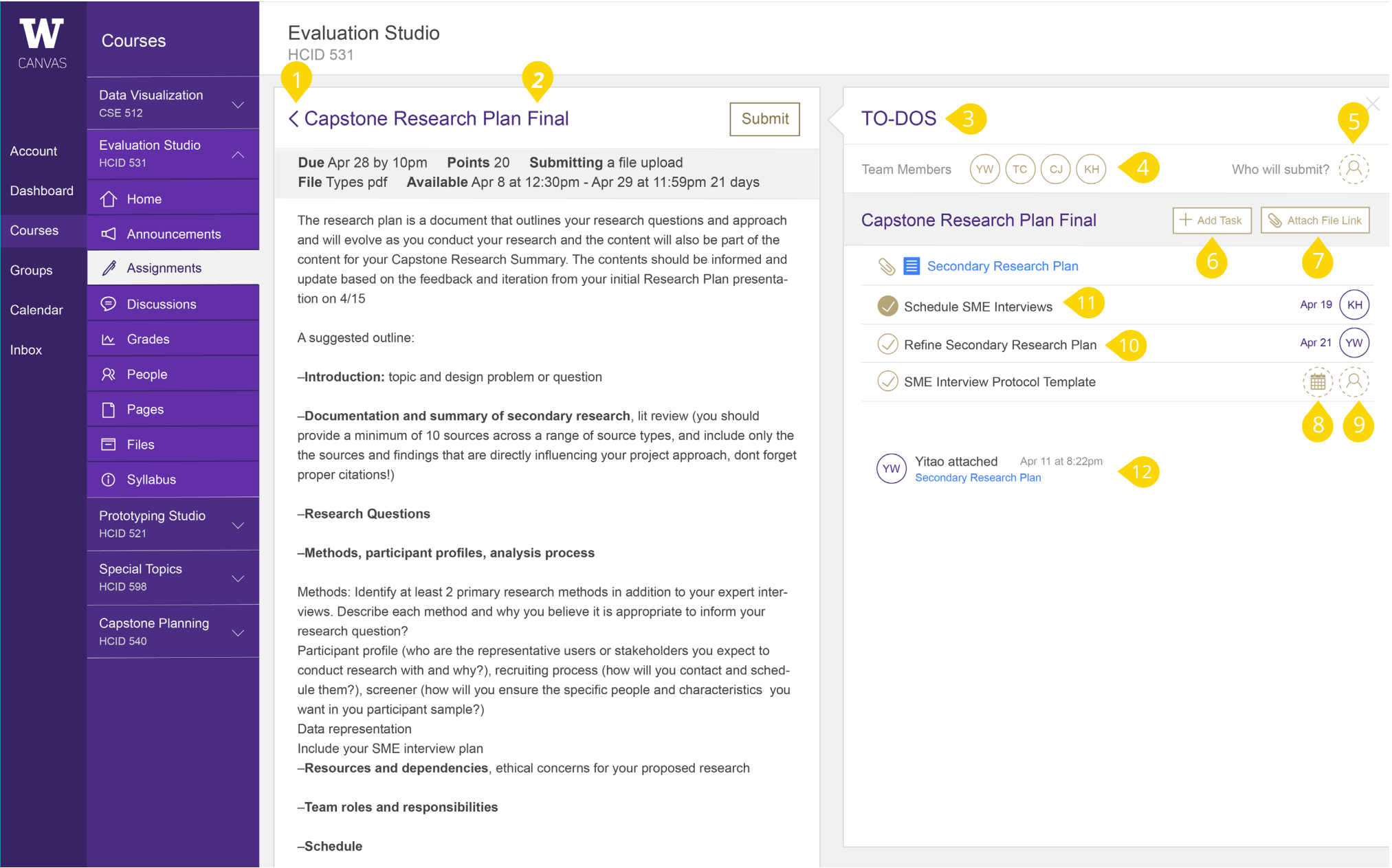


## Assignment Timeline View

1. The default time span of the first timeline is the recent 7 days starting from today
2. The second timeline span is the length of the current quarter
3. It's a double slider lets users to zoom in a certain period, the assignments fall into this period will be displayed on the first timeline above with detailed information
4. "TODAY" button lets users to go back to the default timeline view - recent 7 days
5. It shows where today falls on the timeline.
6. The assignment details. Users can click on it to go to detailed page



# High Fidelity Visual Components



## Detailed Assignment Information

1. Allows users to go back to previous page
2. Left panel shows the assignment requirement information
3. TO-DOS is the panel for team or individual to break the assignment into smaller actionable tasks
4. If it is a team assignment, shows the team members
5. Can assignment a specific team members to submit the assignment eventually
6. "Add task" button to add a task below
7. "Attach file link" to attach an external google file. The file will be displayed above the first task
8. Set a due date for the task
9. Assign one or more teammate to a specific task
10. The task that has not been done yet
11. The task that has already been finished
12. List the activities log, such as attaching a file or assigning a task

# **Moving Forward**

## Project Summary

The scope of the Canvas redesign is focusing on facilitating the team work for team assignments in Canvas. The refined version helps students distribute team work, keep track of progresses and submit the assignment without hassle.

This 5 weeks project followed the user-centered design process, which included investigation, ideation, prototyping, evaluation and final deliverable. Going through the process, a wide range of design methods were carried out in every stages, and I believe the design toolkits learned from this experience could be easily applied to future projects and work.

## Next Steps

Given the limited time, the high fidelity user interface haven been fully tested out. So another round of user testings should be under scheduled.

Team communication is an important part of team work. To better communicate accross multiple platforms, applications such as Slack that are widely used should be integrated into Canvas to create seamless collaboration experience. For example, notifications in Canvas can be push onto Slack to gain instant notice.