

Introduction to Sketching

- What do we mean by “sketching”?
 - What sketching isn’t:
 - Artistic drawings (you don’t need to be artistic to sketch)
 - Wireframes (this is covered in the next recitation)
 - Show better examples of sketching:
 - UI sketches
 - Scene sketches
- Why Sketch? Motivation for doing sketches
 - Sketching is a fundamental tool for all designers (i.e. you)
 - Sketching is critical for generating ideas, elaborating on ideas, and making design choices
 - Sketches are useful in many settings. UROP, internships, architecture, etc.
- Contextualizing sketching for this class
 - In this recitation, we’ll be practicing sketching in the context of generating ideas in response to a design challenge. What we’re doing is an aspect of the Diverge/Converge design approach that we’ll be learning over the next couple of weeks and putting into practice in A2 and A3.
 - The diverge part means that we first generate many ideas without worrying too much about the quality/feasibility. Then, the converge part means that we reduce the ideas to the ones we think are best and develop those. The overall goal here is to avoid “local hill climbing”, that is, over-optimizing on one idea before considering other, potentially better ideas.

Warm-Ups: Sketching for Quantity over Quality

- Before the design challenge, we’ll first warm up with a couple of short design challenges - the goal is to get you into the mindset of sketching for quantity over quality
- Advice: A sketch is primarily about recording and elaborating an idea – so we want to keep things basic. We want to avoid getting carried away with making a sketch too pretty or accurate
 - Include ideas that you think are bad! At this point don’t try to filter for “good” or “bad”
- Mechanics
 - Use a pencil/pen and paper or your iPad. If using an iPad, we recommend limiting to using just 1 or 2 pens in the software.
 - Use a napkin if that’s all you have! :)
- **Exercise 1:** Sketch different ways to show progress on a UI. 1 minute to sketch as many as you can. (e.g. progress bar)
- **Exercise 2:** Sketch different concepts that are part of Piazza. 2 minutes to sketch as many as you can. (Do this from memory) (e.g. instructor-endorsed answers is one concept, posts, comments are another concept)

Activity: Sketching with the 10 by 10 Method (35 min) (Start by X:20)

1. Introduce the design challenge
 - a. The design challenge: Introduce a new concept to Google Docs
 - i. What is a concept? (self-contained unit of functionality, reusable)
 1. You're already familiar with many concepts, and know how to interact with them.
 2. Go online to make a **reservation**, putting up a **post** on social media, **upvoting** the post, organizing files in a **folder**
 - ii. Examples of existing concepts from Google Docs:
 1. Adding comments / adding emojis
 2. Pageless view
 3. Suggest mode
 4. Version history
 5. You can extend on existing concepts
 - b. The high-level plan: generate 10 different ideas, then refine to 1 good idea, and develop that 1 good idea
 - c. What to draw? Some ideas:
 - i. Low-fidelity UI: Probably the most common thing you will draw. What you want to emphasize should inform what you decide to include vs. exclude and the level of detail.
 - ii. Scene: Useful for when the idea is not just a UI but involves real-life interactions beyond the UI
 - iii. State transition diagram: sketching the appearance of the UI as it changes state - helpful for capturing events within an interface
 - iv. Storyboard: useful for capturing a more complete story of a user's interactions over a series of events, beyond the UI.
2. Each student - generate 10 or more different design concepts of a system that addresses this challenge.
 - a. Sketch your concepts as quick drawings - it's ok if they are ugly
 - b. Be as creative and diverse as possible
 - c. Try not to judge how good or bad each concept is, include even ideas that you think are bad
 - d. Don't go on the Google Docs website but you can reference the screenshot
 - e. The focus is to quickly generate as many concepts as possible (hence the short time limit). Aim for 30 seconds each.
3. In pairs - reduce the number of design concepts
 - a. Students should get into pairs and explain their designs to their partners.
 - b. The focus here should be on identifying the 1 best idea for each person.
 - c. Feel free to sketch more ideas as they come up in conversation
 - d. However, resist the urge to rabbit-hole down one idea. That will come next.
4. Each student - produce 10 details and/or variations of a particular design concept

- a. With the most promising concept that you identified in the previous step, try generating different ways of realizing that concept
 - b. Then, go deeper into the concept and try to flesh out the details of the idea
5. In groups of 3 - present your best idea(s) to a group
 - a. Each student gets 2-3 minutes to present their idea(s)
 - b. The other students should give feedback
 - c. Feel free to continue sketching even at this stage!

Takeaways: sketching as a tool for parallel prototyping

1. *Conclusion:* What we did in that activity is called the “10 Plus 10” Method - but emphasize that the specific methodology isn’t as important as the overall approach of diverging ideas and then refining selected ideas. And the utility of sketching as a lightweight tool to develop several ideas.