

# 6.170 Assignment 4: Wireframing

## Overview

In the previous assignment, you developed a conceptual design for the concepts of *Refreet*, *Following*, and *Upvoting* in Fritter. In this assignment, you will use that conceptual design as the basis of a wireframe design, which you will evaluate in two different ways -- using heuristic evaluation and user testing. This process of designing and evaluating a UI is (in a more realistic setting) just one step in an iterative process. Although you won't have an opportunity to iterate, you will learn the essential skills: evaluating a user interface design and reflecting on how it might be improved. You will also get to think about the ethical implications of your visual design.

## Objectives

**Concepts.** Prior to beginning this assignment, you have already thought through the concepts of Refrets, Following, and Upvoting within Fritter. As you create your wireframe, you will be able to rely on your conceptual design to guide your visual design. This should give you a deeper understanding of the role and impact of conceptual design, including potential ethical implications.

**Wireframing.** Wireframes can be used in many ways -- in particular, to explore design ideas early in their development, and to evaluate a planned user interface prior to making more expensive commitments (such as more realistic prototypes, or even implementation and deployment). This assignment will give you practice creating wireframes, and the opportunity to become familiar with a wireframing tool.

**Evaluation.** You will be using both heuristic evaluation and user testing to evaluate your design. Using two different techniques of evaluation will provide you with contrasting experiences, so you will be able to appreciate the relative benefits of the two approaches.

**Ethical implications.** This assignment gives you more practice considering ethical and social implications. Fritter provides a timely and relevant subject for this. Two years ago, Facebook [announced](#) that it may hide like counts due to their negative social effects. And, of course, Facebook and Instagram and other social media apps have been much in the news for their role in the spread of disinformation and magnification of extreme political views.

## Specification

**Wireframes.** Design a user interface expressed as a set of wireframes. Your wireframes need only be comprehensive enough to support your conceptual design for refreting, following and upvoting (in particular, including each of the actions in your conceptual design); you do not need to cover the app in its entirety. For pairs, your wireframes should support the union of the actions in you and your partner's conceptual designs.

When creating your wireframes, you should focus on the essential interaction design: the kinds of widgets, their positioning, the labels used, the navigation patterns, and so on. You are *not* required to address aesthetic concerns (such as the choice of colors and type). Although having an attractive interface is important and can have a major impact on usability, it is beyond the scope of this assignment.

(This does not mean, of course, that you cannot select colors, fonts, spacing, etc., to make your design attractive; it just means that this is not a requirement and you will not receive extra credit for doing so.)

In your submission, you can submit your wireframes by providing a link (in your PDF, *wireframes.pdf*) to a project constructed using one of the recommended tools, or as images that show the wireframes and the flow between them.

**Heuristic Evaluation\***. Evaluate your wireframe using the following heuristics:

- Use Fitts's Law
- Speak the user's language
- Consistent naming & icons
- Information scent
- Follow conventions
- Show location & structure
- Accelerators
- Keep paths short
- Undo & cancel
- Perceptual fusion
- Gestalt principles of grouping
- Recognition vs recall
- Anticipation & context

For each heuristic, you should cite one example in your wireframe either illustrating how the heuristic suggests an improvement, or pointing to a design decision you made that supports the heuristic. Use the Heuristic Evaluation Template provided. Submit a pdf named *heuristics.pdf*

**User Test.** Find a friend (preferably not someone taking the class) and have them try out your design by simulating an interaction with the wireframe. Specify at least one task for each concept (Upvoting, Refreeing and Following) in your Fritter design for them to complete that test specific parts of your wireframe. For these tasks, use your concepts' tactics to create specific scenarios that your user goes through and sees the effect of their action (e.g for upvoting, the action should demonstrate the effect of upvoting).

As the user interacts with your wireframe, observe carefully, and take notice of which aspects of your wireframe are easy or difficult for them to discover and use appropriately. After you've completed your observations, write them up and describe the changes you would make in response to what you learned in using the User Test Template provided. Submit a pdf named *user-test.pdf*

**Ethical Implications.** For this assignment, we want you to think more thoroughly about the ethical/social implications of design, by answering the following questions that guide you through some interesting issues. In your answers, please distinguish which implications follow from your *conceptual* design and which follow from your *UI* design. Submit a pdf named *ethical-implications.pdf*. Use the Ethical Implication Template provided.

- Did you make cultural or other assumptions about your users that affect how they interact with Fritter?
- Would an effective use of design heuristics to maximize engagement with Fritter be manipulative?
- How would you adjust your design if your only goal were to: get children addicted to Fritter? or make it hard for older people to use Fritter? or stop fake news spreading? or prevent harassment? How, if at all, do your answers to these questions inform how you would actually design Fritter?
- You have the option to allow users to see which other users have upvoted a Freet. What forms of engagement between users (positive or negative) would be encouraged by allowing this?
- In A3, we asked about stakeholders who aren't your immediate users. Identify a design choice you faced that would benefit or harm such a stakeholder, and explain how.

- What are the accessibility implications of your design for people with different abilities?
- One of the heuristics is to “speak the user’s language.” In retrospect, assuming you followed this, can you identify what kind of user you had in mind?

## Submission

You should submit the following documents, uploading them to GitHub:

- *wireframes.pdf* - Document containing all of the wireframes you constructed for this assignment, demonstrating the concepts of upvoting, refreezing, and following in action in your wireframes.
- *heuristics.pdf* - Document containing all heuristics and your examples and explanations why your UI fits the heuristics or how it could be improved using the heuristics.
- *user-test.pdf* - Document containing your tasks for the user and your observations from the user test as well as your changes to the UI in response to the user test.
- *ethical-implications.pdf* - Document containing your answers to the questions posed on ethical implications.
- *critiques.md*

## Grading

See the attached rubric.

## Hints

**Class materials.** Checkout the lecture slides and videos for information on the different heuristics and usability concepts. This week’s recitation (10/15) should give you practice doing a heuristic evaluation, as well as teach you the basic skills for using [Moqups](#), a wireframing tool.

**Keep it simple.** When wireframing, start with something more simple than you think you need, and add complexity only where necessary.

**Think about concepts.** Your wireframe should match your concept description -- any actions from the concept design should be achievable through your wireframe.

**Wireframing tool.** In recitation, we went over how to make a wireframe in [Moqups](#), but there are many different wireframing tools out there and you are welcome to use whichever you like. See the Diagramming & Wireframing Tools document to see a few more recommended free tools.

**\*Heuristic Evaluation.** We’re using the term heuristic evaluation in the general sense, but is often used to refer to more specific types of heuristic evaluation, such as [those from Nielsen](#).

**Usability Heuristics.** See the accompanying Usability Hueristics Cheat Sheet.

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