As Yogi Berra said, you can observe a lot just by watching. Watching how people do things is a great way to learn their goals and values, and come up with design insight. We call this **needfinding**. This assignment helps you train your eyes and ears to come up with design ideas. Your goal is to uncover user needs, breakdowns, clever hacks, and opportunities for improvement.

**Step 1: Read the Design Briefs**

Read the three [design briefs](https://class.coursera.org/hciucsd-005/wiki/view?page=DesignBriefs) to get yourself acquainted with the different types of themes your project could be based on. While you are reading through the briefs, think about anything in your daily life that you can apply to any of the three briefs.

**Step 2: Pick an Activity; Make an Interview & Observation Plan**

You will ultimately be designing a web-based service or application, but you don't need to restrict your observation to people using computers and the Web. If you're designing for an activity that people don't currently use computers for, or where non-digital tools have benefits, then observe people doing the task as they do it now. Observing the strengths and weaknesses of analog tools can inspire ideas for the digital world. Where people are using software, remember to observe and interview people in situ -- using their computer, their software, in their environment, doing their activities. Context matters. If you have mobility limitations, perform your observations and interviews over email, phone, Skype, and/or video chat. If for whatever reason you're interested in activities that are tough to observe (maybe because they're infrequent ) you can augment your interviews with [diary studies](https://class.coursera.org/hciucsd-005/lecture/14).

Make a list of types of people you might interview and situations you might observe to come up with design insights. Think about different types of everyday users, marginalized users, and extreme users. Also think about other stakeholders in the ecosystem. Think about the characteristics of these users.

For example, this [IDEO design team](https://class.coursera.org/hciucsd-005/lecture/88) was asked to redesign the grocery shopping cart. Their interviewees included not just everyday users, but also extreme users like professional shoppers and other stakeholders like store managers. Often, lead users or extreme users have come up with better solutions and creative tricks. Interviewing and observing marginalized users not only helps us create more inclusive designs, it also often highlights issues that everyone has to varying degrees.

**Step 3: Choose a Design Brief**

What do you want to do with this information that you are going to find from observing your users? Your brief will serve as a theme and yardstick for your work throughout the project sequence. (Yes, your ideas can shift over time -- especially in response to what you learn from prototyping and testing. And yes, a blend of two themes is fine. However, for the rubrics and peer assessment, you'll need to pick a 'main' brief that your work addresses.)

**Step 4: Select 3 Individuals to Observe**

Select three individuals to observe. Choose people who are not similar to yourself in some way (for example, they are studying different discipline, working a different type of job, have a different family situation). \*\* Your goal is to observe the successes, breakdowns, and latent opportunities that occur when computers are used, not used, or could be used to support your chosen activity. Ask them to participate in this assignment and get permission from them. Be sure you coordinate with your participants to select a time that will be rich for observations.

Your three individuals do not, however, need to be representative of "the general public". It is perfectly valid to limit your observations to a specific niche or user group, if desired.

**Step 5: Observe and Interview**

Tell the participants to perform the task as realistically as possible, while communicating to you as appropriate. [Utilize the strategies we talked about in lecture to help you.](https://class.coursera.org/hciucsd-005/lecture/20) During the observation, take detailed notes and use digital photographs or sketches to document activities, but **do not use a video camera**. This is because your choice of moments to capture with a photograph or sketch is what is important, as it shows specific successes and breakdowns. You can also frame your observations through a lens of redesign of the activity you are observing by asking yourself questions like, "When, where, how, or why can’t someone use what is out there already for this activity?"

Remember, your photos or sketches are meant to highlight specific **breakdowns or design opportunities**. To effectively do this, caption each photo to explain what is being observed and describe the breakdown or design opportunity. Keep in mind that another student will be evaluating you on these photos and captions; ask yourself if they will be able to understand what is going on without having observed with you. Note: Using stock photos/art is plagiarism and is unacceptable.

After the observations, spend 10 to 15 minutes interviewing your participants about the activity you observed. It should take you approximately two hours total to make all three observations if you have planned carefully. It will take longer if you haven’t!

**Step 6: Identify User Needs**

After observing people, go over your findings and use them to brainstorm a list specific user needs: opportunities for design innovation that would enable computers to better support the activity you observed. Think back to when you asked yourself, "When, where, how, or why can’t someone use what is out there already for this activity?" What does this tell you about the needs that they have?

All ideas are good ones at this stage; go for volume when you brainstorm and include as many people as you want to help you. Brainstorming is a group activity and should be fun! You are free to brainstorm with anyone around you to generate as many interesting ideas as possible.

Afterwards, narrow down your user needs to **at least 15** most insightful ones. Each idea should be able to become the basis for a design project.

More than just features, the goals should be articulated as user needs. You are not looking for solutions yet: **focus on user needs and goals only**. An example of a need might be "Sometimes, when Scott takes the Caltrain home, there is no room for his bike and he has to wait for the next one. Scott needs a way to plan what train to take based on how much room is available in the bike car".

It is helpful to use to phrases "needs a way to" or "needs to be able to" as you list your user needs.

***What’s this for? A UX agency perspective***

*by Mike Davison, Community TA and UX Project Manager*

*Needfinding is probably the most important part of any UX Designer's arsenal. Without it, your design team could spend months designing a solution that completely misses the point. You will be surprised at how much you can learn, especially when you vary the audience.*

*Take the smartphone In all likelihood, you will have seen an elderly person press the screen harder and more slowly when it does not respond as they had expected. Needfinding research has suggested that this relates to 50s, 60s and 70s technology - the technology this age group are familiar with...this technology often does yield a different result if you press harder.*

*Why is this useful? Well perhaps we could develop interfaces that took into account the pressure the user applies, and not just where they apply it? How could we make the interface itself easier for the elderly user? Needfinding is a very powerful way to generate ideas.*

**Submit**

* An explanation of the design brief you chose and how it relates to the activity you observed.
* Thorough descriptions of your observations for each of the three people observed.
* Photos or sketches of a design breakdown or opportunity for each of the three people observed. Remember: Each photo must have a caption that fully conveys the breakdown or opportunity.
* A list of insightful user needs inspired by what you observed (at least 15). If you brainstormed with others, please include their names in your submission to recognize their contribution.

**Common "I wish" Feedback**

The following statements are common feedback given on this assignment. We call these statements "I wish" feedback because they are a way to express things that you wish the assignment had contained. You could think of these as common problems to avoid.

* The activity you observed isn’t clearly related to the brief you chose. Revisit this.
* More thorough observation needed in order to identify opportunities for design.
* Brainstorm more user needs.
* Base user needs more on your observations.
* Focus more on user needs rather than solutions. [Here is an example](https://d396qusza40orc.cloudfront.net/hciucsd/assignment_ressources/Student%20Examples/Assignment%201/A1Wish-Needs.pdf) of a submission where this feedback would have been given.

**Student Examples**

* These observations are great at describing processes and highlighting design breakdowns. This example also includes a staff suggestion regarding the method used: [Observation example](https://d396qusza40orc.cloudfront.net/hciucsd/assignment_ressources/Student%20Examples/Assignment%201/A1Ex-Obs.pdf)
* These user needs are very thoughtful and do not focus too much on solutions: [User needs example](https://d396qusza40orc.cloudfront.net/hciucsd/assignment_ressources/Student%20Examples/Assignment%201/A1Ex-Needs.pdf)
* These photos and captions clearly describe the activity being observed and explain the design breakdown or opportunity: [Photos and captions example](https://d396qusza40orc.cloudfront.net/hciucsd/assignment_ressources/Student%20Examples/Assignment%201/A1Ex-Photos.pdf)

**Evaluation criteria & Grading rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Unsatisfactory** | **Minimal** | **Proficient** | **Mastered** |
| Observation Quantity | 0: No observations or completely irrelevant observations. | 1: The student observed only one person and/or the student observed an activity unrelated to the brief. | 3: The student observed only two people and/or the student observed an activity that would be better related to another brief. | 5: The student observed three people in an activity clearly related to the brief. |
| Observation Quality | 0: No observations or completely irrelevant observations. | 1: Most of the observations did not demonstrate a breakdown or a design opportunity that was relevant. | 3: The student's observations somewhat demonstrated a breakdown or design opportunity, but they were only somewhat relevant, were communicated poorly, or left major questions unanswered. | 5: The student's observations clearly demonstrated a breakdown or design opportunity. The descriptions were well written, informative, and comprehensive. |
| Photos/Sketches | 0: The student did not submit photos/sketches and captions related to each described observation, or submitted photos/sketches that were clearly not taken as part of the actual observation (e.g. stock photos). | 1: The student submitted one relevant photo/sketch and caption that demonstrate a breakdown or design opportunity. | 3: The student submitted two relevant photos/sketches and captions that demonstrate a breakdown or design opportunity. | 5: The student submitted three relevant photos/sketches and captions that demonstrate a breakdown or design opportunity. |
| Ideation Quantity | 0: The student did not come up with ideas for user needs or gave an irrelevant answer. | 1: The student came up with 1 - 7 ideas for user needs. | 3: The student came up with 8 - 14 ideas for user needs. | 5: The student came up with 15+ ideas for user needs. |
| Ideation Quality | 0: The student did not come up with ideas or gave an irrelevant answer. | 1: Most of the ideas the student came up with were irrelevant, repeated, obvious (didn't require observation), or describe solutions or features rather than user needs. | 3: Many of the student's ideas were insightful, but some seemed irrelevant, repeated, obvious, or describe solutions or features rather than user needs. | 5: All of the ideas were insightful. Each idea could become the basis for a design project. More than just solutions or features, the goals were articulated as user needs. |