Project Introduction

In this assignment, you will write up a proposal for the course project.

- The goal of the course project will be to develop some kind of **tool** (it could be an app, a wearable device, a smart appliance, a smart room, or some other form factor) that enables an individual or group to set goals and monitor their progress toward those goals.

- While these kinds of tools are very common in areas like tracking steps, exercise, and eating, your goal here will be to track some kind of activity that is not well supported by existing tools.

- Part of your goal will be to learn about the particular community you are working with and how they think about reaching goals; and to design and prototype tools that can help support individuals or groups in reaching these goals.

- Your task is to generate a proposal for this project.

What you'll do in the project

- Students will be assigned to teams of 2 or 3 students.
- Over the course of the semester,
- you will collect data from users about your project domain,
- sketch and prototype solutions,
- test these prototypes with users,
- apply user feedback to your design,
- and document your final design.

How we'll choose projects

- You will submit project proposals this week (due Sunday 9/16 at 5 pm).
- We will read through the proposals, merge similar proposals, and post a project voting form by Tuesday.
- You will bid on projects before Friday (9/21) at noon.
- We'll assign project groups by next Sunday (9/23).

What to do for this assignment

- You will write up and submit a one page project proposal.
- Your proposal should include a title, describe the problem that you are trying to address, the user group you are targeting, and the general idea behind your solution.
- These do not need to be the final solution, as we expect that the project will evolve, but you should plan on spending some time thinking through your project idea.
- You can talk about your ideas with others, but each person will submit their own proposal.

Empowering Home Owners to Use Less Water through Better Information

- Cities across the world are facing an escalating demand for potable water due to growing populations, higher population densities and warmer climates. As new sources of water become more environmentally and economically costly to extract, water suppliers and governments are shifting their focus from finding new supplies to using existing supplies more efficiently.

- One challenge in improving residential efficiency, however, is the lack of awareness that occupants have about their inhome water consumption habits. This disconnect makes it difficult, even for motivated individuals, to make informed decisions about what steps can be taken to conserve .

- In this project, we propose a new type of feedback mechanism for residential water consumption that leverages emerging sensors that monitor water usage at individual fixtures with only one or a few lowcost sensors.

- Unlike past water usage feedback systems which only provide one number per month on consumption (e.g., a water bill), our system provides realtime feedback on all water fixture usages across the home via a live HTML5 website that can be viewed on mobile phones or traditional web browsers. Our system promises to help better inform residents about wasteful water usage practices (e.g., leaky toilets) as well as to help inform new government codes about plumbing, water heating and lowflow fixtures."

Your one page PDF should include the following information:

- Your name
- Recitation section (time and TA name)
- Project title of the project: including the problem being solved, suggested solution, targeted user group, and whatever else you think might be relevant.
- You can include images either your own sketches, or other illustrations.
- If you include images that someone else created, you must cite the creator and link to the image source.
- If you would like, you can submit additional projects put each on its own page with your name and recitation section.
- You won't receive extra credit but will increase the likelihood that you (or someone else) will do that project.