

Team Assignment #1 (T1) Team Formation & Background Research

Part 1: Choose a Team (Due Friday 9/9, 6PM)

Your first task is to form a team of 4 people (we may have a team or two of 3). Use Piazza to informally network and find teammates. At least two people on your team should have solid programming skills in the same programming language that your team decides to use. It would be beneficial to have at least one team member with prior user interface, design, or visual art experience.

Part 2: Background Research -- Understanding the Problem Space (Due Friday 9/23, 6pm on Blackboard)

When starting any design project, it is critical to gain a deep understanding of the context you will be designing for (the “problem space”), and what other work has been done in the problem space, or in related problem spaces. This semester, the problem space is navigating the home ownership process. Within this problem space, we will examine how technology can help residents interface with government agencies to obtain support for fundamental needs, such as housing. We will be answering the following research questions:

1. In what ways do city residents currently use technology to address their home buying questions, needs, and concerns?
2. How do residents’ needs during the home-buying process vary across low, middle, and higher income household?
3. What do residents feel city government’s role is in helping them through the home buying process? During this process, how do residents want to engage with local governments through an app?
4. What design opportunities exist for technology to bridge the gap between residents’ desire for home ownership and successful completion of the home ownership process?

To gain this background knowledge, it is important to search for research papers that have addressed the topic at hand or parts of the topic at hand (e.g., computer-mediated interactions between community residents and governments, the importance of housing stability and home ownership [*e.g.*, the health implications], the challenges inherent in home buying, home ownership challenges in low-income families), existing software tools that address the problem, and credible websites with information on the topic (e.g., the World Health Organization). You will also be provided with background material from the Mayor’s Office of New Urban Mechanics (on Blackboard: Course Material/Readings/).

Researching the problem space will help you begin to understand what the challenges are and--later--if your design concepts are creative, original, and non-obvious. (As we progress through the course, Prof. Parker and the TA will tell you when an idea does not meet these criteria. However, it will be left to you to figure out why and propose alternatives. Coming up with a good idea, and knowing when and having the courage to switch ideas when you discover one is not good, is one of the biggest challenges in this course.)

What to Post

You must post to blackboard a comprehensive and well-written report (max 10 pages, double-spaced, 1 inch margins, 11-point font, PDF format), that includes the following parts:

- **Problem Space.** In this assignment, your team will describe the problem space by critically and thoughtfully answering the following questions:
 - What are the benefits and challenges of home ownership and housing stability for families in terms of health, finances, and other positive outcomes?
 - *(hint: start by doing a Google Scholar search on these topics. Here are a couple references to start with—you can access the full articles via the Library website:*
 - <http://www.tandfonline.com/doi/abs/10.1080/0267303032000168577>
 - <http://uar.sagepub.com/content/30/1/152.short>
 - <http://www.tandfonline.com/doi/abs/10.1080/01944369408975571>
 - <http://www.sciencedirect.com/science/article/pii/S1051137799902486>
 - What makes the home buying process challenging for families? How do these challenges vary between families of different income levels? What questions do families have as they go through the home buying process?
 - *(hint: start by looking at the MONUM readings on Blackboard)*
 - What are the important steps in the home buying process?
 - *(hint: start by looking at the MONUM readings on Blackboard)*
 - Describe your initial thoughts on how a new, innovative software tool could help families overcome existing challenges in the home buying process.
 - What is the mission (goals) of the Boston Mayor's Office of New Urban Mechanics (MONUM) and the Boston Home Center? *Hint: start here:*
 - <http://newurbanmechanics.org/boston/>
 - <http://dnd.cityofboston.gov/#page/HomeCenter>
 - In what way does the Boston Home Center currently seek to encourage home ownership?
 - *(hint: start by looking at the Boston Home Center's website:*
<http://dnd.cityofboston.gov/#page/classes>,
<http://dnd.cityofboston.gov/#page/housing> [homebuyer resources])
 - What challenges do citizens across the United States currently face in accessing services and resources from local governments?
 - In what ways does Boston MONUM try to connect citizens to the government?
- **Target users.** Based upon what you've learned about the mission and activities of MONUM and the Boston Home Center, provide a comprehensive description of the characteristics of their target populations.
- **Existing technology.** Answer the following questions:
 - What software tools exist to connect city residents with government agencies, as a means of supporting access to city services, information, or other resources (commercially-available systems and research prototypes)? What types of interactions do these tools support between residents and the government? What sort of resources, information, etc. do they connect residents to?
 - *(hint: look ahead to the Dombrowski et al. research paper reading on Blackboard as a starting point: "The labor practices of service mediation: a study of the work practices of food assistance outreach")*

- What software tools exist to help people through the home search and buying process?
- Critique the technologies that you have identified, using your newly-gathered knowledge about the problem space. What do you see as the strengths and weaknesses of these tools?
- Include a couple sentences describing each team member's contribution to this assignment. All team members must contribute to the assignment.

Important: All of the starting points for readings given above (prefaced by “hint:”) are just that – starting points. You are expected to go beyond these starting points to do **an exhaustive search** of research articles, books, technologies, and relevant and credible websites and news outlets to produce a comprehensive report. If you are unsure how to do such a search, you will need to make an appointment with a reference librarian at Snell Library.