Milestone 2:
Requirement Elicitation (Interviews)

Learning Goals

- Learn to identify and describe the stakeholders for a given system.
- Elicit functional and quality requirements from stakeholders
- Learn to conduct interviews with stakeholders and explore a problem space.
- Design an interview script and conduct the interview with relevant stakeholder(s) for your class project.
- Be prepared for the next Milestone – Requirement documentation.

Due: 9/27 Sunday 11:59pm EST

Web Application Description (Proposed by Group 9 - Nëntë):

Chef Co-Pilot involves a system that builds off of an existing database of recipes to provide the user with creative solutions to their culinary needs. Taking an input of ingredients, it will query recipes and produce a concoction for the chef to put together. Non-trivial features could include suggesting groceries and shopping locations nearby, similar recipes, and recommendations based on previous choices. The idea of grocery management could be expanded upon further to track low quantities in your fridge and compile grocery lists for your next store trip or automated online purchasing in the future.

We would purchase ingredients to create a specific dish, but are often left with extra material that goes to waste. Chef Co-Pilot can help with the issue of managing food waste to ensure that all food purchased can be used up by proposing meals with those ingredients. In addition, this application can largely benefit college students who are time-limited to go grocery shopping. By giving students options to create edible meals from existing ingredients, the tool can reduce time spent shopping which can ultimately lead to better grades, morale, and mental health.

Assignment

First, identify a group of stakeholders. Your team will seek information about requirements from public documents and observations of the current and alternative systems, as well as, from interviews with stakeholders. This person could be a potential end user. With your target stakeholder in mind, design an interview script with closed- and open-ended questions that cover the professional background or knowledge. Each member of the team should contribute two or three questions to the interview script.

We do not provide any guidance about studying artifacts to understand the domain (e.g., look at existing systems and their documentation, including commercial competitors).

Second, conduct the interview. Regarding interviews, a team with N team member will conduct at least N interviews. Each team member should participate in at least 2 interviews. Be deliberate about how you select interviewees.

Reach out to stakeholders early and negotiate a time and place for the interview. Notice that they have regular jobs and may need to squeeze interviews into a busy schedule.

We suggest to schedule 15 to 30 minute interviews with each stakeholder and record the interview using an audio recorder. (Ask the interviewee if this is ok first.) Test the recorder before meeting your participant, and test the recorder at the start of your meeting to make sure that the setup is working properly. Take brief notes as you go, recognizing that you have the audio recording to complement your notes (e.g., you can mark times in your notes to remind yourself where in the recording to revisit the third part, below).

Third, transcribe the interview. You should have notes where your questions you contributed are asked, transcribe ~1-page of information from the interview that describes the most relevant events to your project. This should include the user's goals and any explanation of how and why they pursue those goals. [Speech to text transcription tool -- Temi (https://www.temi.com/), after signing up, you get one free transcript under 45 minutes.]

Further Guidance on Interview

- Before the interviews, become familiar with the problem, for example through content analysis of public information and other systems. Think about possible stakeholders, quality attributes, use cases, and assumptions for an actual implementation. Be deliberate about who you want to interview. If you go into the interview unprepared, you are likely to miss important questions.
- *Make appointments for the interviews and plan them beforehand*. You should use the interviews to check your understanding of the problem and elicit additional requirements. Since some people you are interviewing are usually not in the software field, you'll have to work with them to figure out what information is important to build the application.
- Conduct the interview. We suggest to conduct most interviews in groups, but you may further divide roles as you prefer. Treat the interviewees and their time respectfully.
- During the interview, allow yourself to deviate from the script as needed to follow-up on an important idea or line of inquiry that you had not anticipated.
- Take notes or if (and only if) the interviewee agrees, record the interview. We suggest to test

recording upfront. It can be useful to partially transcribe an interview or at least its key points afterward.

- Revise your understanding of the problem, based on the interview.
- Review the audio recording once to identify relevant topics of discussion and to prioritize segments for transcription; this will save you time. When transcribing, do your best to follow the exact wording of the conversation. The key idea is to preserve any ambiguities and avoid summarizing or reinterpreting what the stakeholder says during the interview.
- Share your insights within your team and synthesize requirements, resolving potential conflicts as far as possible. If there are conflicts you cannot resolve, make reasonable assumptions and document how you would resolve them in practice.

Deliverables

1. **Group report (20pt):**
    a. Interview script. Each *group* should submit *a single PDF* of their interview script. Mention which team member contribute to which question(s).
    b. List all the stakeholders you interviewed (use fake names) and by which team member(s).
    c. Justify why the stakeholders you interviewed are relevant. Describe all relevant stakeholders' interests, and their importance to the system. Importance can be measured on any reasonable scale you define as long as it is clear and a developer can read the document and understand which stakeholders are key.
    d. *Only one team member* should submit a PDF file to Quercus called ECE444_[GroupNumber]_Milestone2.pdf containing all the information above. Please also save this file in your Shared OneDrive folder.
2. **Individual Reflection document (30pt)**
    a. In a reflection document of two pages or less describe what insights (if any) you gained from going through the requirements process, including conducting interviews and synthesizing. The reflection can include both positive and negative aspects and can set them in context with experience outside of class, if applicable. Use specific examples from your experience gained in this assignment, and include any context information required to explain the situation.
    b. Individually submit your interview script, a brief justification about why this stakeholder is relevant to your project, the 1-page transcript and a 60-second sample audio file that covers a few sentences of your transcript. Indicate where in the transcript the 60-second audio sample begins, explicitly identify the user's goals and include your project name in your submission.

Hints:

The following questions may help you to identify interesting issues for the individual reflection document, but it is not necessary to answer them all:

- Were there surprising aspects of the requirements process?
- What went well in the preparation for and during the interviews? In retrospect, what could you have improved?
- What did you not expect in the interviews? Were there unusual situations or misunderstandings? Were there unexpected requirements that you did not anticipate?
- Did the interview(s) cause you to adjust your initial assumptions in any way? How so?
- Were there surprising conflicts in the requirements? Were they easy to resolve?
- Who else would you interview, and why, if you had access to more stakeholders or more time?

Format:
ECE444_[GroupNumber]_[YourFirst&LastName]_Milestone2Reflection.pdf containing all the information above. For example:

- **File Name**: ECE444_Group21_ShuruiZhou_ Milestone2Reflection.pdf
- **Content:**
    - Title: Project 1 Milestone 2 Individual Reflection
    - Name: Shurui Zhou (Group 21)

Logistics

Schedule your interviews as soon as possible. Please contact the instructor or your TA if you have any issues. You will need to be respectful of the fact that the stakeholders are real people with their own schedules and responsibilities; if you wait too long, you may not be able to complete your interviews.

Evaluation Criteria

You will be graded as a team, with an individual component. This homework is worth 50 points, as divided above. We provide additional detail on what constitutes full-credit solutions in the narrative above; a summary is below.

Group Report. For the group component, we expect all below-listed information to be appropriately organized in a document. Additionally:
To receive full credit on the stakeholders and actor descriptions, we expect:

- A concise indication of whom you interviewed and their role in the system.
- A complete and well-described set of relevant system stakeholders, including their roles, interests, importance in the system, mode of interaction with the system, and other system-relevant features.

- Reasonable justification of the usage of closed- and open-ended questioning to scaffold your interview and elicit relevant technical information about your project.

Individual Report. To receive full credit on the individual reflection, we expect:

- A detailed, well written, and well-structured reflection on the requirements elicitation, interview process.
- An analysis beyond mere descriptions and superficial statements, including supporting evidence for claims, that reflects on the causes of identified issues or your own experience