

## Assignment 9 - Final Project Check-In: Formative Study Research Questions

This assignment is tied to your final project and should be completed with your final project team.

Submission details: Submission details: Please submit either a txt or pdf file.

For this assignment, we'll have two components. The most important component is the finalized research question (or questions) around which you will design the formative study element of your final project. To support you in designing your research questions, we will first go through a task selection process.

### Tasks

For this part of the assignment, the writeup is easy, but the decision making is tougher! Please submit a writeup describing in detail **three tasks** that you want a user to be able to complete with your language or tool. This brainstorming process will be important for scoping your formative study and also for scoping the language, tool, or environment itself.

To start the scoping, your writeup should include:

- Anything we need to know about the programmer's background
- Anything we need to know about the programmer's goals
- Anything we need to know about the context in which the programmer is doing the tasks

For each task, your writeup should include:

- The program the user is trying to write (screenshot encouraged)
- The program the user has at the start of the interaction (if any; screenshot encouraged)
- The steps the programmer takes to reach the target program *with existing tools*
- Why getting to the target program is hard right now (if it is hard!)

Depending on the tasks you choose, these tasks can also be reused as the participant tasks for the formative study. Using them for that purpose is optional!

### Research Questions for Formative Study

For this part of the assignment, think about the tasks you just wrote up. What insights could help you decide how to design a programming language, tool, or environment that would help users through these tasks? Now that you know what kinds of insights would help, what research questions should your formative study answer?

For each research question, your writeup should include:

- The research question itself.
- The kinds of answers you might learn from a formative study that addresses the research question.

- How those answers would help you design a programming language, tool, or environment to serve users in your chosen domain.