

Prototypes

Demonstration and Presentation

By now, you have been (or should have been) talking with your client about the project, working up documentation that shows that you understand the project, and developing a plan for a direction to get to the finished product. Over the next few weeks, you will need to put together several prototypes, a demonstration, and a presentation on your project. While the presentation and demonstration are graded separately, let's talk about them as if they were one assignment here.

Prototypes

You are being charged with developing three prototypes that represent the mission critical aspects of your project. "Mission critical" means that without these three parts functioning correctly, your project will not succeed. Exactly what those parts are is up to you, but here is one example.

Suppose your project is to develop a long-range radio modem for a remote weather station. Three critical aspects might be:

- Radio communication
- MODEM (modulator-demodulator)
- Power supply (it's a remote station!)

With this example your team would need to develop each of these independently (meaning the prototypes don't need to integrate with each other). In developing these prototypes, things that show the basic functionality, you might come to realize that the radio has high current draws on the battery during transmission, but relatively little power draw otherwise. You might also come to realize that building a modem isn't quite as easy as expected. Then, once you demonstrate the three prototypes to your client, they might say that your suggestion of using a car battery (40lbs, 18kgs) is unrealistic for their needs. Had you not put together these prototypes, it would be during the "real product" construction phase, or worse yet, upon delivery to your client that you would learn these critical limitations. In the real world, this would mean the project ends up over budget, behind schedule, and maybe even result in the contract being canceled by the client! None of these are good for companies trying to turn a profit, nor for business reputation.

Your Prototypes

You met as a group last week to discuss what three prototypes your group should consider. This week, it's time to finalize what direction you plan to take here. You SHOULD consult with your GTA mentor to discuss the prototypes you are considering. You should because they have some insight as to how those will be graded, but, you don't have to consult them if you prefer not to. You SHOULD also discuss your prototype plans with your client, as they can provide some critical feedback that may impact your overall success. If you have trouble communicating with your client, tell me!

Demonstration

Following the Thanksgiving Break, you will demonstrate your prototypes to your GTA. You should make every effort to include your client in this demonstration too. For some that means in person, for some that means via video conference calling, and in a worst case scenario, you should video tape your demonstration to share with your client. The exact date of the demonstration should be coordinated between you, your GTA, and your client. However, all demonstrations must be complete by December 6th (Thursday). Your GTA will grade you on your demonstration using the rubric you can find on the class website.

Presentation

You will also need to prepare a presentation on your project, covering the recent prototyping, but also the project as a whole. Think about what you would tell your parents about your project, and think about what you would want to tell your client about your prototype findings.