

The Challenge Design Exercise (CDE)
RSS Spring 2014
(Due Monday 10 Feb by class time)

The Challenge Design Exercise is an opportunity for you to think individually about design before you begin to work with a group. We accept that you will not be able to produce a complete design. Rather, we ask you to consider what you know and what you need to learn, anticipate problems, and identify questions to explore as the term proceeds. Then, write a brief document describing your assumptions, your approach, and your design choices in as much detail as you see fit.

Audiences:

This document is to be written for yourself, your instructors, and (eventually) your team.

Purposes:

This document has several purposes:

1. To get you thinking about what attributes a design might have;
2. To begin a planning process for how to accomplish it;
3. To help identify aspects of the Challenge which you don't yet know;
4. To anticipate problems you may encounter; and
5. To help your instructors assess your knowledge, thinking, and writing.

Outcomes:

A successful document will provide a concrete way to share ideas with your teammates. It will give your instructional staff a realistic indication of your technical and writing needs. Finally, it will help you clarify your goals for the class, including which strengths you bring and which skills to develop.

Essential Structure (you may add sections as needed):

- Problem statement
- Your assumptions about the environment or task
- High-level description of your approach
- System block diagram (modules, inter-module connectivity)
- Description of each essential module
- Milestones and implementation plan
- Conclusion

Specifications:

- Due Monday, February 10, at 12:59 pm (before lecture)
- **Individually written** (must be your own ideas and your own words)
- Should be about 1200-1700 words
- Include figures as needed, each numbered and captioned
- Each section should be formatted with a section heading
- Each page should have a footer containing name, date, and page number
- In a PDF file with name: Firstname_Lastname_CDE.pdf
- Post it online, and **email the URL** to rss-staff@csail.mit.edu with **subject "6.141 CDE"**
- Do not send us attachments; **send us a link** instead. Thanks.

Resources:

- RSS Course Challenge description from 2013
- Syllabus with list of lab exercises
- Lab assignments from previous years