

6.033 Spring 2015
DP Proposal, CI guidelines

A design proposal is typically used to propose a particular solution to a problem. It explains how the author's design works, demonstrates that the design meets all the requirements, and if necessary shows how the author's design is superior to others. As in a professional environment (and unlike a problem set) we ask you to clearly lay out the problem, then match your solution to that problem description. You should be able to characterize your proposed system at a high level using summary, and describe your proposed implementation and how it will meet requirements. Use technical language as appropriate. The DP1 Proposal should be no more than 2000 words.

Your proposal differs from your report in that it will not include a complete design; some details will be missing and small portions of the design may be left as future work. However, you will get feedback on your design from your recitation instructor. The more thought you put into the design proposal, the more valuable their feedback will be. Additionally, even though your design proposal does not include an evaluation section, you should think about ways in which you could analyze and evaluate your design.

- Individual Cover memo** (see below for a description)
- Title** names/describes your proposed project.
 - I.e. "Spynet: MIT Facilities Sensor Network" not "6.033 DP"
- Overview** presents the problem and your solution.
 - Explain the problem to be solved by your design
 - Summarize your proposed solution, including your overall design approach
 - Specify how your design solves the problem and meets requirements
- Design description** gives a fuller presentation of your design, demonstrating to your reader that your design will work and will solve the problem.
 - Presents the high-level design of the system
 - Responds to each "Design Consideration," in detail or with suggestions about your future work
 - Identifies major design decisions and choices made
 - May include figures (titled, labeled, captioned) to illustrate complex or challenging concepts
 - Uses some hierarchy (subsections, logical groupings of material) and briefly introduces each subsection
 - If bullet lists are used they are always introduced with a few sentences
- Conclusion** briefly summarizes how your design will meet the requirements, and notes problems which remain to be resolved.
 - May be a separate section or may be the final paragraph
- Overall** the language of your report should be professional but not legal or bureaucratic.
 - We expect correct grammar and syntax, careful proofreading, and visually appealing layout

Cover memo: Each student should provide a cover memo, approximately 250 words, to accompany the Design Proposal. Memos generally use a block style (no indents) and are single-spaced, with a full space between paragraphs. The top of the memo should have four items, arranged as follows:

DATE:

TO:

FROM:

RE: (The subject of your memo—e.g., “DP Project Summary”)

The prominent display of these elements in the heading clearly **identifies an audience**, **attributes an author**, and **contextualizes the forthcoming document content** by providing both date and purpose (to communicate information on a particular subject). The direct and easy-to-navigate style of the memo makes it an ideal document for communicating specific information in a professional setting.

This letter should briefly summarize the contribution of each team member and reflect on the writer’s own contribution. Please answer these questions:

- What is the most novel contribution of your design in its current form?
- What is the weakest point of your design, and how will you address it?
- Which model(s) of collaboration did your team use to develop your design and write this proposal (review the handout if needed)?
- Was this mode successful/appropriate for your team? Would you like to use a different model for the next stage of the project?