

DP Preliminary Report Guidelines

6.033 2021

*This document explains the scope of your DP Preliminary Report (DPPR). The DPPR is due at **5:00pm on March 30th**. You should submit it via the [submission site](#). We only need one copy of the DPPR per team.*

The preliminary report in 6.033 has several purposes: to provide a framework within which you can articulate your preliminary design and justifications for design choices; to get feedback from technical instructors which will guide the remainder of the design and/or modifications to the design; and to gain mastery of many of the skills needed to write a systems design paper. Like the final design report, the preliminary report explains how your design works to solve the assigned problem. It further demonstrates that the design meets all the requirements and justifies design decisions. The preliminary report is jointly written.

Your description should be written for a broad range of systems experts from different fields, and the paper should build on key reasoning patterns and concepts (defining behaviors and properties in relevant use cases; naming techniques used to produce desired outcomes), using specific technical language as appropriate. It should build on our framework of key concepts such as modularity, simplicity, scalability, etc., using specific technical language as appropriate.

Writing Guidelines

Your preliminary report should:

- Briefly introduce your system by identifying the purposes and goals, then summarize your system's modules, behaviors, and innovating techniques or strategies. Give your system a name for ease of reference.
- Include a system diagram (titled, labeled, captioned, and referenced in the text) and include figures if appropriate to illustrate complex or challenging concepts.
- Define your system completely, clearly linking design choices, techniques, or strategies to the behaviors and properties they produce. Justify your choices with use cases, scenarios, and design principles, and identify major design decisions, tradeoffs, and choices.
- Conclude by summarizing how your design will meet the requirements, highlighting the novelty or specific focus of your system, and note problems which remain to be resolved. (May be a separate section or may be the final paragraph.)

Technical Guidelines

Your preliminary report should contain enough information to convince the staff that your design

is reasonable, but it does not need to describe every single detail of the system. That means your report should:

- Clearly lay out the problem and explain the challenges your system needs to overcome.
- Characterize your system at a high level and describe how it will meet the requirements. Doing so may require you to explain some of the implementation details.
- State any assumptions that you made in your design.
- Address the use cases given in the design project description, since those use cases should inform how you design your system.

You do not need to evaluate your design; an evaluation section will be part of your final report, but not the preliminary report.

Length

The preliminary report should be approximately 2500 words. We care more about the content of your report than the exact word-count. However, if you're writing significantly more than 2500 words, you're giving too much detail; if you're writing significantly less, there is not enough detail.