# Problem Statement and Goals
# Software Engineering

Team #10, Five of a Kind
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Table 1: Revision History

| Date | Developer(s) | Change |
|------|-------------|--------|
| Sept. 16, 2025 | Khalid Farag | Extras |

# 1 Problem Statement

[You should check your problem statement with the problem statement checklist. —SS]

[You can change the section headings, as long as you include the required information. —SS]

## 1.1 Problem

## 1.2 Inputs and Outputs

[Characterize the problem in terms of "high level" inputs and outputs. Use abstraction so that you can avoid details. —SS]

## 1.3 Stakeholders

## 1.4 Environment

[Hardware and software environment —SS]

# 2 Goals

# 3 Stretch Goals

# 4 Challenge/Research Level and Extras

The extras for this project are:

- **User Manual**: This manual will provide a comprehensive guide and explanations on how to effectively use the software, emphasizing the key features that differentiate from a normal CAD software. This is useful for helping users to operate the system independently, reducing the need for direct support, and ensuring they can utilize the system to its full potential with all of the features. To make it more user-friendly, the manual will be written in a way that is easy to understand and follow, with clear instructions and examples. It will also include any safety warning that are relevant to the software.

- **Usability Report**: This report will document the findings from usability testing, including identified pain points, user feedback, and recommendations from stakeholders for improving the user experience. It will also include the results of the usability testing, including the number of participants, the tasks they were given, the questions they were asked, and the results of the testing. This is useful for ensuring the product is intuitive, efficient, and satisfying for its target audience, leading to higher user adoption and satisfaction.

# Appendix — Reflection

The purpose of reflection questions is to give you a chance to assess your own learning and that of your group as a whole, and to find ways to improve in the future. Reflection is an important part of the learning process. Reflection is also an essential component of a successful software development process.

Reflections are most interesting and useful when they're honest, even if the stories they tell are imperfect. You will be marked based on your depth of thought and analysis, and not based on the content of the reflections themselves. Thus, for full marks we encourage you to answer openly and honestly and to avoid simply writing "what you think the evaluator wants to hear."

Please answer the following questions. Some questions can be answered on the team level, but where appropriate, each team member should write their own response:

1. What went well while writing this deliverable?

2. What pain points did you experience during this deliverable, and how did you resolve them?

3. How did you and your team adjust the scope of your goals to ensure they are suitable for a Capstone project (not overly ambitious but also of appropriate complexity for a senior design project)?