

Deliverables include the following:

- A 4-5 page PDF summary that describes your work, results and answers to the questions posed below. Thoroughness in analysis and answers in the reports are the primary component of your grade!
- A page in your summary describing what each group member did to participate in the project.
- A zip file that includes your code and results in an organized form.
- A README file that describes how to run the code.
- Print the summary and bring it to the following class.

Problem 1 - Pre-Project: Towers of Hanoi

1. Explain the method by which each of the two planners finds a solution.
2. Which planner was fastest?
3. Explain why the winning planner might be more effective on this problem.

Problem 2 - Project Part I: Sokoban PDDL

1. Show successful plans from at least one planner on the three Sokoban problems in Figure 2 (1-3). The challenge problem is optional.
2. Compare the performance of two planners on this domain. Which one works better? Does this make sense, why?
3. Clearly PDDL was not intended for this sort of application. Discuss the challenges in expressing geometric constraints in semantic planning.
4. In many cases, geometric and dynamic planning are insufficient to describe a domain. Give an example of a problem that is best suited for semantic (classical) planning. Explain why a semantic representation would be desirable.

Problem 3 - Project Part II: Sokoban Planner

1. Give successful plans from your planner on the Sokoban problems in Figure 2 and any others.
2. Compare the performance of your planner to the PDDL planners you used in the previous problem. Which was faster? Why?
3. Prove that your planner was complete. Your instructor has a math background: a proof is a convincing argument. Make sure you address each aspect of completeness and why your planner satisfies it. Pictures are always welcome.
4. What methods did you use to speed up the planning? Give a short description of each method and explain why it did or didn't help on each relevant problem.

Problem 4 - Post-Project: Towers of Hanoi Revisited

1. Give successful plans from at least one planner with 6 and 10 disks.
2. Do you notice anything about the structure of the plans? Can you use this to increase the efficiency of planning for Towers of Hanoi? Explain.
3. In a paragraph or two, explain a general planning strategy that would take advantage of problem structure. Make sure your strategy applies to problems other than Towers of Hanoi. Would such a planner still be complete?