

**Shall We Play A Game? Project or Short Problems?**

This document describes your final project. Your last assignment is to do either the *Shall We Play A Game?* project, or a set of three short problems. If you choose the short problems, you will see there are 3 groups: A, B and C. You need to do at least one problem from each of the first two groups. These are discussed in much more detail in the “short problems” project handout. You may use either MacGambit or Dr.Scheme to code your project.

**Checkoffs**

There will be three checkoffs (0, 1 and 2) in your lab, worth 2, 4 and 4 points each, which compromise your project multiplying factor, as explained in the “Grading Guidelines” section below. You will be penalized for a late submission. *Missing a checkoff costs all the checkoff points that week.*

Relevant due dates for the project are as follows.

**Checkoff Zero**

In lab the week of November 5-7 (this week!), you must discuss with the staff on which project you choose to work. You will be required to submit a single 8.5” x 11” sheet of copier paper with answers to the following details into your lab TA’s folder at the beginning of the Nov 7<sup>th</sup> lecture this week. This sheet counts as your checkoff 0.

1. Names of the people in your group
2. The TA’s name, and day and time for lab and section.
3. Your email address and your partner’s email address (if you have one) in case we need to contact you about anything.
4. Whether you are working on the project or on the short problems
5. If you are working on the project
  - How you plan to split the project between members of your partnership (if you’re working with a partner)
  - Which game you decided to implement
6. If you are working on short problems
  - The specific problems you plan to work on
  - A timetable that will indicate the problems you will complete for each of the three deadlines (two checkoffs and final deadline)

**Checkoff One**

In lab the week of November 12-14, you must display significant progress on the project: some functions coded and tested, with a fairly detailed plan for proceeding on the rest. If you chose short problems, you must have one problem finished. If you chose *Shall We Play A Game?*, see the separate *Shall We Play A Game?* www page for the checkoff one requirements. Due to the holiday, those in the November 12<sup>th</sup> lab must get their project checked off at another lab this week.

**Checkoff Two**

In lab the week of November 19-21, you should show your TA that you are at least two-thirds of the way finished. If you chose short problems, you must have your second problem finished. If you chose *Shall We Play A Game?*, see the separate *Shall We Play A Game?* www page for checkoff one requirements.

By the beginning of lecture on December 5th, you must submit your complete program. You may submit it early for extra credit as discussed below.

**Submission Guidelines**

Missing the final deadline costs 4 checkoff points per day. The project will not be graded face-to-face. Instead, you are to deposit a 10” x 13” envelope containing your submission into boxes labeled “*Shall We Play A Game?*” and “Short Problems” outside the lecture hall **BEFORE LECTURE on December 5<sup>th</sup>**. You can earn **one** extra-credit checkoff point by submitting your project two days early (*before* lecture on December 3<sup>rd</sup>). **You will lose 2 project points if you fail to follow any of the subsequent directions.**

**Your 10” x 13” envelope should be labeled in the upper-left with**

- Your name and your partner’s name
- Your Lab TA’s name, Lab day and time, as well as your section.
- Your email address and your partner’s email address (if you have one) in case we need to contact you about anything.
- [If short problems]  
The phrase “Short Problems:” followed by the list of the three short problems you worked on. E.g., “Short Problems: A1, B2, C3”
- [If *Shall We Play A Game?*]  
The phrase “Shall We Play a Game of \_\_\_\_?” with the blank filled in with the game you chose. E.g., “Shall We Play a Game of Poison?”
- Whether these should be run under MacGambit or DrScheme

**Your envelope should contain**

- A printout of your program including tests
- A general overview of how all your functions fit together.
- A brief printed description of how to run your program. We will assume you run *Shall We Play A Game?* by typing ([gamesman](#))
- A **NAMED** disk with (for *Shall We Play A Game?*) the **single** program file (either `mkayles.scm`, `mtoads.scm`, `mpoison.scm`, `msnake.scm` or `mtactix.scm`) and tests stored in the files `isolation.txt` and `overall.txt`. For Short Problems, you will have three files that each are named after the problems you chose (e.g., `a1.scm`, `b2.scm` and `c3.scm`) that, when loaded, defines all the functions needed to run the program. **Do not use Microsoft Word to create any documents you submit on disk.** All files on your disk should be in plain text format as saved by Dr. Scheme or MacGambit.

**Grading Guidelines**

The project is worth 40 points, providing 10% of the points on which your course grade will be based. A student must do the “*Shall We Play A Game?*” project to be eligible to get a course grade of A– or higher, although doing the project does not guarantee you an A. A student who chooses to do the small problems as a project is eligible for a highest grade of B+. Up to 20 points will be awarded for project correctness and adherence to specified turn-in procedures; up to 20 points will be awarded for displayed correctness (test cases), readability, and the general case you make that your program works correctly. The project checkoffs, instead of providing points toward your lab grade as was the case earlier in the semester, will contribute toward a factor by which your project grade will be multiplied: the points your project earns will be multiplied by the fraction of the checkoff points you earned before being counted toward your course grade. (For example, if you earn 8 out of the 10 points for the three checkoffs (0, 1 and 2), your project grade will be multiplied by  $\frac{8}{10}$  before being included in the course grade computation.) You can earn one extra-credit checkoff point if you turn your project in two days early; thus, your maximum multiplicative factor is  $1\frac{1}{10}$  (i.e., up to 4 potential free points).

**Readability** includes comments, indenting, sequence of functions in your file, appropriate use of Scheme (coding style), and choice of names for functions and their inputs. Some readability guidelines: Functions that deal with the same kind of structures should be together in your file, so that they are easy to find. Rather than using a `cond` with a zillion conditions, you should probably use `assoc` with a table.

In general, your comments should include an overview of how all your functions fit together. Appropriate **test cases** are described in each project writeup. Also **test your component functions in isolation**, to provide more evidence that they will work together correctly.

**Murphy’s Law**

Every semester 10 students claim the computer / dog / cat ate their final project disk. It is up to each project team to make sufficient backups onto another floppy/zip “just in case”.

**Rules Governing Groups**

You are strongly encouraged (though not required) to do the project with a partner. **You may have at most one partner (i.e., maximum two persons in a group); groups of three or more are not allowed.** A group should turn in only one solution (but make sure both your names and lab sections are on it!). The students in a group need not be in the same lab section. Both partners will receive the same grade.

Every year there are a few “delinquent” students who do nothing and rely on their hard-working partner to finish their project for them. We have two thoughts: First, make sure you choose a partner you trust. Second, if you find your partner is delinquent, see your TA as soon as possible so that a “warning” may be granted. It is not unheard-of for TAs to grant “divorce” requests filed from the hard-working partner when the delinquent partner did not shape-up after a TA warning. In these cases, the delinquent partner is required to turn in a unique project with no code taken from the hard-working partner. The delinquent partner typically fails the project, seriously affecting their class grade.

Summary? **Pull your own weight!**

Turning in unacknowledged code not written by members of your group or supplied by us constitutes cheating. It will be penalized by a grade of F in CS 3 and referral to the Office of Student Conduct.