1 Administrative Topics

- I return the quizzes.
- There will likely be no TA hours Tuesday night.

2 Summaries

We developed a set of best practices last Monday. Here, they are, edited for clarity and to include some best practices the faculty wanted to include:

- Include a description of the computer science concept that is central to the project.
- Include a description of the project itself.
- Get to the point as quickly as possible.
- Keep the audience in mind (both what they know and how easy it is for them to understand what the writer is saying). The audience is a student in CS151. Also remember that the grader is a reader - Keep the grader sane!
- Define all terms that your audience may not be familiar with.
• Provide context and continuity - between this lab and project and between this project and previous projects.

• Include both a broad description and a few details? just enough details to give an idea of how the code was written.

• Include specific examples, rather than general statements. For example, instead of just ?analyzing data?, indicate you are ?computing the mean and other basic descriptive statistics?.

• Don?t try to make one sentence say too many things. Short sentences are usually easier to understand.

• There will always be a tension between concision and understandability. Do your best to do both. (i.e. Succinct is good. But we also want people to understand what we are writing, and sometimes that takes words.)

• Humor is good, but not required.

• You might want to write your summary last (i.e. after you have completed the project and described the specific tasks).

• Reread what you have written aloud to yourself. Check for grammatical errors and typos. Check for flow.

• Any notes about notation should be in a different paragraph.

• Supply enough description that the reader gets a sense of the overall point (i.e. don?t just say ?balls bouncing? ? talk a little about the physics aspect). So give a sense of how it was done. What does it mean to simulate a bouncing ball? (Consider using the word animation, too.)

In class, Stephanie passed out hard copies of the best practices. Students examined their own summaries, marking the list to indicate whether or not their summaries followed each practice. They then improved their summaries. As a class, we then discussed which best practices were hardest to follow and which were hardest to evaluate (i.e. determine whether or not the writing followed it).
3 Game Design

Design of game we have so far:

We have a main “event” loop that follows this basic layout:

- Query checkKey only once during the loop, right at the beginning
- Query checkMouse only once during the loop
- If-structure to respond to any user events
- Update section
  - Update the objects in the scene
  - Handle any special cases, like flying out of the window
  - Update the window

3.1 Game in Project 11

In project 11, you game will need to have three phases: a start phase (just a static screen), a game-playing phase, and a final phase (could be just a static screen). There are two approaches to implementing these phases:

- Strategy 1: One loop/code-blocks for each of the three phases. For each of the three phases, you need three stages:
  - Construction Stage: make the objects needed for the phase, organize them into relevant lists, draw them
  - Loop Stage: an event loop, for the first and last phases, no updates really necessary for a stationary scene
  - Termination Stage: undraw all objects.

- Strategy 2: One loop with three states. In this case, you have a variable that keeps track of which phase you are in. A series of if-statements in the main event loop helps you to respond differently and update differently for the different phases.
- Query checkKey only once during the loop, right at the beginning
- Query checkMouse only once during the loop
- if-structure depending on the current state
  * If-structure for each state to respond to any user events
  * Update section
    - Update the objects in the scene
    - Handle any special cases, like flying out of the window
- Update the window