CSC290. Project Design Review Presentation

When writing complex software with a team of developers, it is important to plan ahead. In particular, many organizations hold **design reviews**, where developers present their ideas on how to design software to their peers and more experienced team members. The goal of the design review is to receive critical feedback to improve the design of your software.

The **design review presentation** will be less interactive than an actual design review meeting. Instead, your team will deliver a 6-8 minute presentation on how you plan to build your software. The presentation should answer questions like:

- What is your project? In particular, what are the rules of your game? How do those rules translate to features of your software?
- How will you structure your code? What are the different components of your code, and how will they interact with one another?
- Are there any portions of the code that you think will be difficult to write? Why? How do you intend to solve the problem?

Your audience for this presentation are your instructor, TA, and other students, and the goal of your presentation is to receive feedback about your design so that you can build a more successful project.

You should therefore discuss aspects of your software that is **specific to your project**. The worst thing you can do in the presentation is to discuss software design in general. The content of your presentation should be controversial: the point is to discuss features that can be implemented in various different ways, and explain why you chose one approach.

A good design review presentation will give your instructor and TA an opportunity to *disagree* with your implementation strategy, and provide alternatives. If your instructor and TA agree with everything you present, then you probably haven't gone into enough details about your design.

A good design review presentation will also be honest about *unknown unknowns*, or aspects of the game that you don't know how to build yet. These tasks have the highest risk of taking longer than expected to code.

Design Example: Tic-tac-toe

Suppose I am creating an implementation of the game tic-tac-toe. Here are some aspects of the design that I might talk about:

- Representing the board
  - Represent the board as a list of list of numbers
  - The number 0 represents an empty slot
  - The number 1 represents an "X"
  - The number 2 represents an "O"
  - I could have a board class that stores the current board position, and have methods that update the board
- Displaying the board using `pygame`. A board can be drawn using two horizontal lines and two vertical lines. Users will be able to click on the board position where they would like to make their move.
  - Determining which part of the board a user has clicked might be hard?
- How to track which player's turn it is
  - There will be an integer variable `turn`, whose value will be either 1 (X's turn) or 0 (O's turn)
- When a player makes a move, we need to
  - Check if the move is on an empty board position, if not display an error message
  - Update the board
  - Check if the player has won, if so display a message and end the game
  - Update the `turn` variable
- Checking whether a player has won
  - There are 8 different ways to win the game (8 different winning combinations of rows, columns, or diagonals). We need to make sure to check them all.

Notice that we could have made different decisions. Instead of the above decisions,

- I can represent the board as a single list with 9 elements. I can use strings instead of numbers to represent the "X" and "O"s
- I can use a boolean to represent whose turn it is.
- I can prevent the player from making an invalid move, thus eliminating the need for checking whether a move they made is valid.

Submission

Your presentation must be between 6 and 8 minutes long, and each team member must speak for at least 1 minute. To ensure proper timing, your presentation slides must be set up to advance automatically without human intervention. **Improper setup or presentations that run over time will result in a 10% penalty.**

Presentation slides must be submitted on time on MarkUs, so that your TAs have time to review and queue them for the presentation day. Only one person per group should submit the slides. Your slides must be no more than 15MB.

You must use MS PowerPoint to create the slides. If you do not have MS PowerPoint, you can download the software from http://help.ic.utoronto.ca/content/3/1965/en/student-advantage-and-office-365-proplus.html

Here are the instructions on how to set your slides to advance automatically (click "Specify a time to advance to the next slide"): https://support.office.com/en-us/article/set-the-timing-and-speed-of-a-transition-c3c3c66f-4cca-4821-b8b9-7de0f3f6ead1

Attendance

You're expected to show your support for your classmates in your tutorial, and attend all the presentations in your tutorial sections. This is also so that everyone has a chance to present in front of the same audience.

There will be a 5% penalty (applied individually) if you do not attend all the presentations in your tutorial.

Grading

Your instructor will be grading the group portion of the presentation (80%). Your TA will be grading the individual portion of the presentation (20%).

Introduction [10%]

Your introduction should be clear, informative, and engaging. Is there a "hook" to keep the audience invested and interested?

- **4/4** Presentation has an effective introduction that tells the reader what the presentation will be about, and "hooks" the audience.
- **3/4** Presentation has an introduction that sets the readers' expectations.
- **2/4** Introduction too short, too long, or does not effectively set the readers' expectations.
- **1/4** Introduction is ineffective.

Content - Game Mechanics [10%]

Your audience should know what game you're implementing, and what your challenges are.

- **4/4** Clear, insightful description of the game mechanics/features, and implementation challenges.
- **3/4** Good description of the game mechanics/features, and an implementation strategy.
- **2/4** Description of the game mechanics/features that lacks detail, and thoughts on implementation.
- **1/4** Poor description of the game mechanic and implementation.

Content - Components [10%]

How do you plan on breaking your software into parts?

- **4/4** Clear, insightful description of how you plan to split up the software into parts. The description is specific to your game.
- **3/4** Good description of how you plan to split up the software into parts.
- **2/4** Description that lacks detail. The description is mostly about software design in general, rather than about your game.
- **1/4** Description is too vague or general.

Content - Design Decisions [10%]

Do you describe key decisions, and persuasively explain why you chose certain designs over others?

- **4/4** A clear and persuasive description of key design decisions and their rationales. The description is specific to your game.
- **3/4** A clear description of key design decisions and their rationales. The description is not vague or overly general.
- **2/4** A list of key design decisions, but without sufficient description or explanation.
- **1/4** Omissions of key design decisions.

Conclusion [10%]

- **4/4** Presentation has an effective conclusion that summarizes the content, and an effective call-to-action that reflects presentation goals.
- **3/4** Presentation has a clear conclusion and a call-to-action. Conclusion does not introduce new material.
- **2/4** Presentation has a conclusion. Presentation might lack a call-to-action.
- **1/4** The conclusion is weak, abrupt, and/or fails to summarize or drive home the message.

Flow [10%]

- **4/4** Presentation was easy to follow. Presentation flows smoothly and cohesively. Every presenter spoke for at least 1 minute.

- **3/4** Presentation was mostly easy to follow. Every presenter spoke for at least 1 minute. Some lack of cohesion in presentation style.
- **2/4** Presentation is difficult to follow. Presentation is choppy at times; handoff between presenters may need improvement. Most presenters spoke for at least 1 minute.
- **1/4** Presentation is confusing and difficult to follow. Presentation flow needs improvement. Presenters carry their own style of presentation.

Slides & Visuals [20%]

Are your slides clear, succinct, cohesive, and enhance the presentation? Is your text readable, including texts in all diagrams?

- **4/4** Visuals are clear, succinct, cohesive, and enhance the presentation. Text is large and has good contrast.
- **3/4** Visuals are clear, and complements the presentation, but can be less wordy. Visuals are mostly cohesive. Text is mostly large enough and readable, but may have figures with small text.
- **2/4** Visuals are unclear, not readable in time, or does not support the presentation. Different slides carry their own style.
- **1/4** Text is too small to be readable, or does not have enough contrast. Visuals are ineffective or do not support the presentation. Different slides carry their own style.

Audibility [5%] – individually graded

- **4/4** Consistently audible from the back of the room
- **3/4** Mostly audible
- **2/4** Sometimes audible, but inconsistent
- **1/4** Difficult to hear most of the time

Eye Contact [5%] – individually graded

- **4/4** Excellent eye contact across the entire room
- **3/4** Constant eye contact with the audience; little reading of notes
- **2/4** Makes eye contact with a few people; reads from notes
- **1/4** Little eye contact; reads from notes

Enthusiasm [5%] – individually graded

- **4/4** Speaks naturally, comfortably, and enthusiastically
- **3/4** Mostly naturally
- **2/4** Clearly reciting
- **1/4** Monotone; makes distracting motions

Pronunciation [5%] – individually graded

- **4/4** Pronunciation is clear; good cadence
- **3/4** Pronunciation is mostly clear; good cadence; some "um", "uh".
- **2/4** Sometimes unclear; speaks uncomfortably quickly or slowly
- **1/4** Unclear; speaks too quickly or slowly to be understood

Deductions

- Improper setup or presentations that runs over time will result in a 10% penalty, applied to the entire group.
- There will be a 5% penalty (applied individually) if you do not attend all the presentations in your tutorial.