TL6 Presentation

TL6: LIZ BELTRAN, AARON GUEVARA, PRABESH TAMANG, SIALAS TRIPP, GARRETT PEARSALL, CHETANNA AMADIKE, KEAGAN O'HALLORAN, BRYCE NORMILE, ROWEN PROBST

Contents of the Presentation

1. Mobile Game
2. Oral exam reminders
3. Copyright Review
4. Post Mortem
5. Final Demo

Mobile Game

- Porting on Android:
  - Developer Mode Enabled, Developer Options -> USB debugging
  - Install via USB
  - Set Icons and other graphics
  - Platform should be set to Android, but can be ported over to IOS, Windows, Mac, Server format, or WebGL.
  - Set Run device -> Phone -> Build and Run, save as APK file (for Windows, other platforms will require different file types)

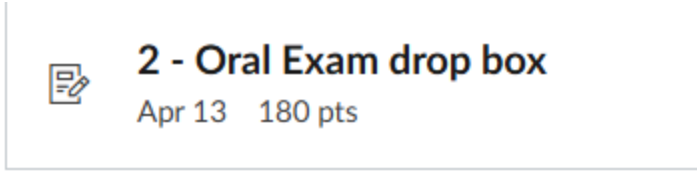
Oral Exam

Key Details

Sialas Tripp

Oral Exam Reminders

- Before Oral Exam:
  - Fill out Oral Exam Marking Key and turn in on Canvas



- Day of Oral Exam:
  - Bring laptop to run code with access to Github repo
  - 30 minutes each
  - Monday – Thursday (04/14-04/17)
  - CDA – Friday (04/18)
  - Jeb 324
    - Show up 15 minutes before

Oral Exam

Name _____ Team _____ TL ☐ Date _____ Time _____

Fill in the underlined areas (and the boxes above), now but don't write on the remainder of this form.

Contribution: Briefly describe what your feature(s) is/are: _____ _____ Walk me through your Gantt chart. How long did this take? How long did you estimate it would take? What did you learn about your skill as an estimator? Run your game and point out places where your code is called and run. (I will cycle through asking you this question and the next one until you either run out of interesting things to talk about or it is clear that you have made an above average contribution.) Show the C++/C# code that was run. Walk me through the methods called from the time it enters your section of code.	/10
Technical: Walk me through your test plan. Give an example where a test case later found a bug in your code by things a teammate added later. (Or explain why you chose a test case specifically because you wanted to ensure that a teammate would know if they broke your code.) _____ Pick a Prefab you have created that is documented well in a separate readme file. (I will point to several places in your code documentation and ask) What question where you trying to answer here? Who do you anticipate would be asking that question? What other questions might this person need the answers to? Prefab Name: _____ Show me a class in your code where there could be either static or dynamic binding. Write some mock code on this paper showing how you would set the static type and dynamic type of a variable. Super Class: _____ Sub Class: _____ Virtual Function: _____ Choose a dynamically bound method. What method gets called now? Change the dynamic type. What method gets called now?	/4 /3 /3

Pick a statically bound method. Which one would be called in each of the two previous cases? Show me an example of reuse in your code where you violate copyright law. How does it violate copyright?_____ What did you have to do to integrate it with the code you wrote? What are the legal implications if you market your code with the re-used portion? Use fair use argue that you can use this anyway.	/4
4. One big or two small, well-chosen patterns. Small Patterns = {Singleton, Private Class Data} Which patterns did you choose? 1._____ 2._____ Why did you choose each pattern? (Justify your use of it). Draw the class diagram for your pattern(s). Would something else have worked as well or better than this pattern? When would be a bad time to use this pattern?	/4

FILL OUT EVERYTHING!

- Contribution is only worth 10 marks, but the technical is multiplied by the contribution.
- Technical is only valuable in the context of it being beneficial to the overall game.

Sialas Tripp

Oral Exam: Contribution

Name Seth Owens Team Hot CC TL 2 Date 11/8/2024 Time 10:30

Fill in the underlined areas (and the boxes above), now but don't write on the remainder of this form.

	predicted time(hrs)	time spent(hrs)	Status
Animation	5	5	complete
Game Base	10	18	complete
Animation	5	10	complete
Level Design	8	15	complete
A* Path finding	8	7	complete
Pong	5	2	complete
Tetras	5	6	complete
Mine Sweeper	5	5	complete
Donky Kong	5	7	complete
Dynamic Binding	2	3	complete
Factory Pattern	3	1	complete
Integration	5	2	this week
Tests	10	6	this week
Totals	76	87	

Contribution: Briefly describe what your feature(s) is/are:

/1
0

My feature was to make mini games for the dates. When a player begins a date, they must complete a minigame, and I designed all of them. There are 3 total, and they are a math mini game, minesweeper, and pong.

Walk me through your Gantt chart. How long did this take? How long did you estimate it would take? What did you learn about your skill as an estimator?

My Gantt chart contains requirements collection, minigame level designs, 5 mini games programming, user documentation, testing, and installation. I estimated it would take 76 hours to complete them all, and in total it ended up being 87 hours.
I would say that since I was only off by only a few hours, that I did a good job at estimating how long it would take in terms of the entire project. However, certain tasks ended up being off by quite a bit, like the mini game level designs I estimated taking 8 hours, but it took 15, but also implementing my factory pattern was estimated to take 3 hours but took only 1. So, in the end the time was close, but individual times weren't always as accurate.

Run your game and point out places where your code is called and run. (I will cycle through asking you this question and the next one until you either run out of interesting things to talk about or it is clear that you have made an above average contribution.)
Vidoe was submitted on canvas.

My code runs whenever the minigames are ran. So, a player will talk to a character, and then they will enter a minigame. Once the scene changes to a mini game, that is all my code running now. My code will run until the end of the mini game, as I control the entire minigames. I have three mini games that can be played, a Math game, Pong, and Minesweeper. I also have code to handle the different elements of the games that play, like the score managers for each game, the paddles in pong, the tiles in minesweeper. It is all my code that is being run.

Show the C++/C# code that was run. Walk me through the methods called from the time it enters your section of code.

Zip file containing code was submitted on canvas.

Sialas Tripp

Oral Exam Technical Prework:

Test Plan:
Walk through test plan and show an example of test case that later found a bug.

Prefab:
Select a well-documented prefab, and answer questions on pre-work

Copyright:
Select an example of copyright in your code and answer questions on pre-work.

Patterns:
Explain and justify your use of patterns in code. Answer the questions on prework

Static/Dynamic Binding:
Show an example of static and dynamic binding in code and answer questions on pre-work.

4/21/2025

Sialas Tripp

Oral Exam Technical: Test Plan

Technical: Walk me through your test plan. Give an example where a test case later found a bug in your code by things a teammate added later. (Or explain why you chose a test case specifically because you wanted to ensure that a teammate would know if they broke your code.) My test plan was to test the three different mini games that I have made, and making sure that they run correctly. Since they are minigames, there isn't much interaction with my teammates code as they are mostly self-contained games. Therefore, I am testing the bounds of the games and the scoring system a lot. My stress tests for the games involved spawning thousands of instances of the games. One example of a test that I made to make sure no other teammates would break my code was to check the BC mode. BC mode is a public method in Patrick's	/4 /3
MainPlayer class, so I made tests to ensure that when the game is in BC mode, it will function the way I intend.	

Prior to Exam:

- Have all tests written
  - Submit all test scripts as a separate file.
- Fill out pre-work (explain what is tested and why).
  - Pick 2 –4 specific tests

During Exam:

- Highlight specific tests you like
  - Why did you choose this test?
- Explain how your test later found a bug in the code after a teammate made a change.
- Convince BC that you knew a test would break, hence why you chose to test it.

Sialas Tripp

Oral Exam Technical: Prefab

Pick a Prefab you have created that is documented well in a separate readme file. (I will point to several places in your code documentation and ask) What question where you trying to answer here? Who do you anticipate would be asking that question? What other questions might this person need the answers to? Prefab Name: _____	/3

Prior To Exam:

- Have your Prefab picked and documented in a separate README file
- Fill out pre-work (make sure to put valuable comments in your code documentation)

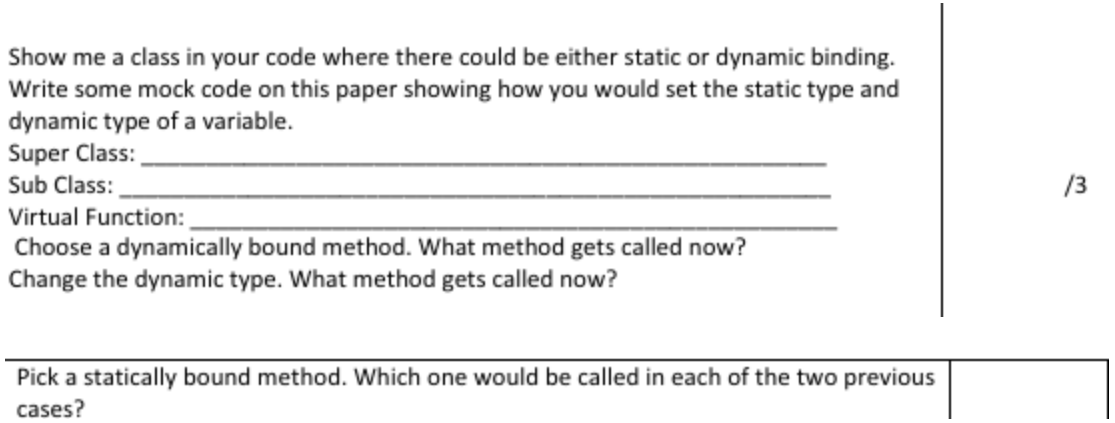
During Exam:

- Be able to explain in detail specific parts of your documentation
  - Ex: What question were you trying to answer in this part of your documentation?

- Convince BC that you understand why you used your prefab, and that you properly documented it for others use

Chetanna Amadike

Oral Exam Technical: Static/Dynamic Binding



Show me a class in your code where there could be either static or dynamic binding. Write some mock code on this paper showing how you would set the static type and dynamic type of a variable.
Super Class: _____
Sub Class: _____
Virtual Function: _____
Choose a dynamically bound method. What method gets called now?
Change the dynamic type. What method gets called now?

/3

Pick a statically bound method. Which one would be called in each of the two previous cases?

Prior to Exam:

- Have 2 main classes with static and dynamic binding, one super class and one subclass.
- Make sure you know what your class does and how it performs with using each type of binding.

During Exam:

- Be able to define and show your code and explain how each type of binding works.
- Make sure your class will call each static an dynamically and what happens to your code when it runs with each

Garrett Pearsall

Oral Exam Technical: Copyright

Show me an example of reuse in your code where you violate copyright law. How does it violate copyright?_____ What did you have to do to integrate it with the code you wrote? What are the legal implications if you market your code with the re-used portion? Use fair use argue that you can use this anyway.	/4

Prior to Exam:

- Understand that copyright protects original works like art, code, music, and other digital content.
- Be ready to explain how your project respects copyright and licensing guidelines.

During Exam:

- Explain that the game is strictly for educational use, which supports a Fair Use argument.
- Emphasize that the project is non-commercial and transformative, made solely for learning purposes.
- If asked about future release, explain that any unlicensed content would be replaced or properly licensed before publishing.

Prabesh

COPYRIGHT

- Copyright is a legal right granted to creators of original works, giving them exclusive control over how their work is used, including reproduction, distribution, and adaptation, for a specific period.
- Copyright law grants creators exclusive rights to their original works of authorship, like books, music, and art, enabling them to control how those works are used, reproduced, and distributed for a certain period.

• Potential Copyright Issues With Sound in Unity

- Using **sound effects** or **music** from Unity Asset Store **without proper license**.
- Downloading **free sounds** from the internet **without verifying their usage rights**.
- Using **commercial music** (e.g., pop songs, movie soundtracks) in the game.
- A sound labeled as “Free for personal use” cannot be used if the game is later marketed.
- Unity assets under **restricted license** may not allow distribution in commercial products.

How I Integrated Sound Assets Safely

- Chose sound assets from **Unity Asset Store** with **explicit commercial license**.
- Cross-checked licenses for **“Royalty-Free”** or **“CC0”** (Creative Commons Zero).
- **Legal Implications if We Market the Game**
  If we publish the game commercially:
- We could face:
- Game removal from stores (Steam, App Store, Play Store)
- Legal fines or lawsuits from original copyright holders
- Safe path:
- Credit sources when required by license.
- Keep a record of all assets and their licenses.

Can I Use Fair Use to Justify Sound Usage?

- Our game is for educational use, which supports a fair use claim. Courts often favor non-commercial, academic projects. Since the sounds are used in a new, transformative context for learning—not profit—this strengthens the fair use argument.

How to Defend in the Oral Exam:
Question:

"You used copyrighted sound assets. How is that justified?"

We're using the game purely for educational purposes, not for commercial gain. This aligns with fair use principles, as courts often support non-profit academic use. Our use is also transformative—we're repurposing the sounds in a new learning context, which further supports fair use.

"What if you publish it later?"

"If we decide to publish the game, we'll replace or license all copyrighted assets properly to avoid infringement. Right now, it's strictly for classroom use and skill development."

Oral Exam Technical: Patterns

4. One big or two small, well-chosen patterns.
Small Patterns = {Singleton, Private Class Data}
Which patterns did you choose?
1._____

2._____

Why did you choose each pattern? (Justify your use of it).

Draw the class diagram for your pattern(s).

Would something else have worked as well or better than this pattern? When would be a bad time to use this pattern?

/4

Prior to Exam:

- Have 1 big pattern or 2 small patterns in your code
- Make sure you have good reasons to use the pattern(s) you used
- Make a class diagram for the pattern(s) used

During Exam:

- Point out where in the code the pattern(s) is/are
- Justify your usage of pattern(s)
- Explain how the pattern(s) work
- Explain what other patterns may have worked well for you

Rowen Probst

Copyright

Key Details

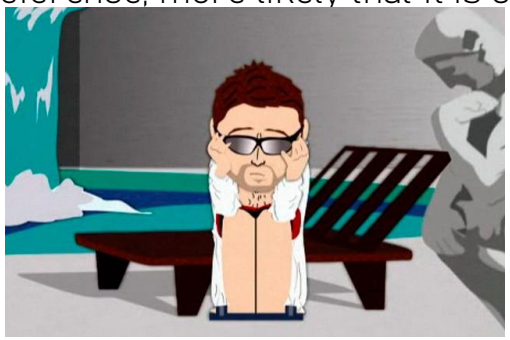
LIZ BELTRAN

4 Areas of Consideration in Fair Use

1. Purpose and character of use
   - Non-profit/Educational vs Commercial
     - Likely to get fair use if using the material for Non-profit and educational reasons.
     - For the oral exam you CANNOT give the education argument
   - Transformative
     - Has the material you have taken from the original work been transformed by adding new expression or meaning?
     - Was value added to the original by creating new information, new aesthetics, new insights and understandings?
     - Are you using the copyrighted work in a completely new way?

4 Areas of Consideration in Fair Use

2. Nature of copyrighted work
    - Factual vs creative
        - You'll have better luck taking from the factual, creative works have more protection from copyright than factual works.
3. Amount and substantiality of the portion taken
    - The less you take, the more likely that your copying will be excused as fair use.
    - Don't take from the most memorable aspect of the work.
        - Example: Star Wars=> using its iconic lines, music are likely to be recognized and get you sued for copyright infringement!!
        - If the iconic line is quoted and someone understands the reference, more likely that it is copyrighted.
4. Effect of the use upon the potential market
    - Does your use deprive the copyright owner of income?

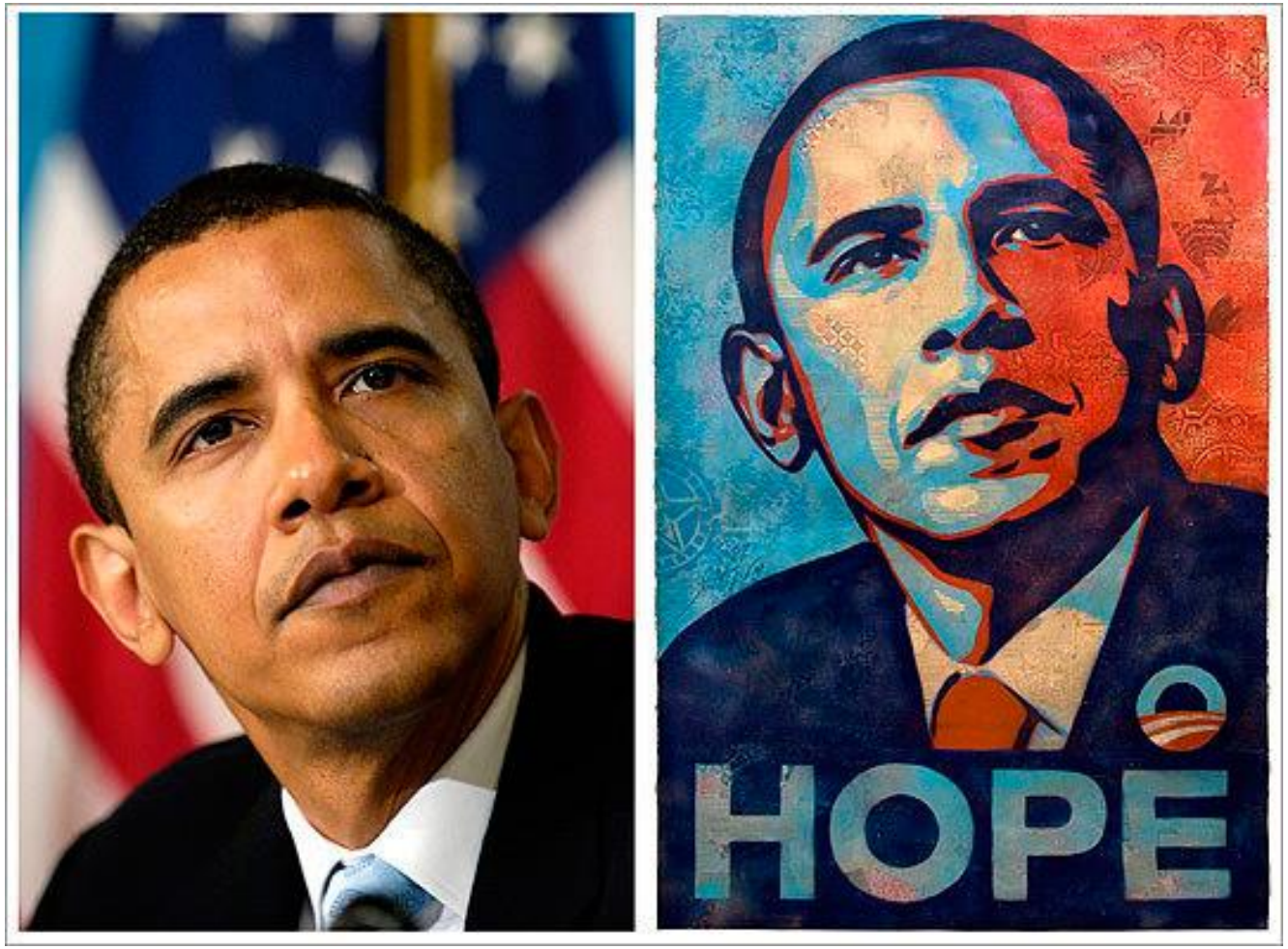


Transformative fair use

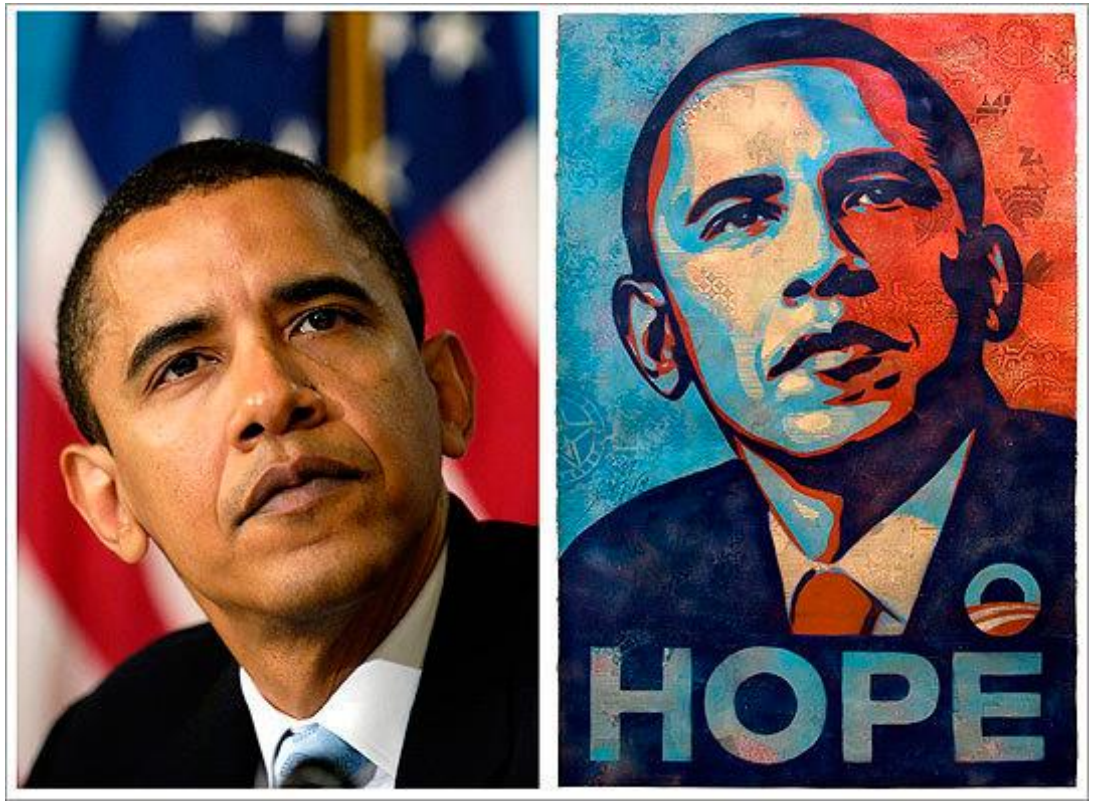
- Criticism and Commentary
- News Reporting
- Teaching and Education
- Parody (satirical commentary)
- Scholarly research

- Transformative fair use examples: https://www.nolo.com/legal-encyclopedia/fair-use-what-transformative.html
- Parody: https://guides.libraries.indiana.edu/c.php?g=158548&p=1581719#:~:text=A%20parody%20can%20be%20a,seek%20permission%20as%20a%20courtesy.

Example: Transformative or not?



Transformative!



The original photo (left) was taken from a news article about Obama.

The artist of the photo (right) made the image to inspire voters. It is meant to portray a message of hope for the presidential candidate.

Purposes: Portray news vs publicizing a presidential campaign.

Link: https://mclellan.law.msu.edu/questions/fair-use

Fair Use Explanations and Examples

Explanation of fair use:

- https://fairuse.stanford.edu/overview/fair-use/four-factors/
- https://copyright.psu.edu/copyright-basics/fair-use/#:~:text=For%20example%2C%20using%20advertisement%20images,also%20impact%20other%20subfactors%20below.

Copyright on the Oral Exam

Oral Exam: You need to give an instance of copyright in your game.

1. Explain how it violates copyright law. (How you can be sued)
2. Use the 4 factors of fair use to explain how it is not a copyright violation. (Why it really isnt violating copyright)

What are examples from your games?

BC Copyright example: https://webpages.uidaho.edu/drbc/cs383/OralExam/copyright_BC.html

Aaron's Game on different platforms

- Web Browser
- aaron-guevara.github.io

- Android

Post Mortem Content

- Breakdown your project in terms of team members
- Determine if this was a good breakdown using GRASP
- If you had to do the project again, would you break it down differently?
- Besides the GRASP changes, what else would you change in the course?
- Explain an outstanding feature that could use a pair-programming team

Post Mortem

Marking Key ->

	1	4	7	10
Clarity	No apparent logical order of presentation, unclear focus	Content is loosely connected, transitions lack clarity	Sequence of information is well-organized for the most part, but more clarity with transitions is needed	Development of thesis is clear through use of specific and appropriate examples; transitions are clear and create a succinct and even flow
Prepared	Unprepared; did not do necessary research	Attempted to research in preparation for presentation, but was misdirected	Evidence of purposeful research in preparation for presentation	Thorough and purposeful research in preparation for presentation

How is your project broken down in terms of team members?
In terms of GRASP (coupling/cohesion, etc.) was this a good breakdown?
If you were given the project to do again, how would you break it down next time?

	1	4	7	10
Content Team Breakdown (1-3)	No clear understanding of coupling or cohesion	Clear understanding of GRASP, but supporting information is disconnected or does not relate to the code.	A clear analysis of the code from the perspective of GRASP; many relevant points, but they are somewhat unstructured	Exceptional use of material that clearly relates to a focused analysis of the code using GRASP with abundance of various supported materials

Besides your team/project what other thing(s) would you change in this course to enhance the learning experience of future students?

Points	1	4	7	10
Content Future enhancement (4)	Unclear which class they took because it wasn't the one I thought I taught.	Clear understanding of course outcomes (including ABET).	Exceptional use of material that clearly relates to a focused analysis of the course.	Exceptional use of material that clearly relates to a focused analysis of the course, and at least one really good idea I can use next semester.

Points	2	2	3	3
Presentation Length	Took 2 minutes or less to set up and start talking (from the end of previous presentation).	Cleared out within 30 seconds of answering the last question.	Was within 2 minutes of going under time or 1 minute over.	Presented within 1 minute of the allotted time but did not go over

Mark: / 50

Final Demo Information

- When: Last Thursday of class
- What to bring: a laptop with your full game

  -Documentation specialist: print out poster and user manual for your game (provide a copy to CdA as well)

Any Questions?