VG100
Introduction to Engineering

Project 1 (Retrospective)

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Congratulations on getting through Game Day! The main purpose of this retrospective is to help you look back at your work on Project 1 in a critical manner and hopefully improve for your next project. Other purposes include providing us with information about how well the course is working out, and help you widening your perspectives in term of game design.

This retrospective is designed to be a multipart work sheet. As you work through it and answer the questions, we hope to bring you the much needed introspection into your work. **It is of the most importance that you answer those questions honestly, even if they do not paint a perfect picture for you.**[1] We understand that even experienced developers can miscalculate, and certain practices are just part of human nature. In the meantime, a brief answer, one or two lines, will be sufficient. If a particular question does not apply, or your answer is an unequivocally "No", please state as such.

Ex. 1 — *Development process*

This exercise should help you better understand your development habits and practices.

1. Global time.
   a) When did you complete your base game?
   b) Of all the development time, roughly how much percentage of time is spent on (i) developing game mechanics, (ii) creating visuals, and (iii) debugging?
2. Time spent on specific features.
   a) Provide a list of major features orderer by amount of time spent on developing them.
   b) Features can be categorized roughly as (i) mechanics, (ii) art-work or asset, and (iii) aesthetics. For each feature label which category it fits into. Your list of features needs to account for 95% of your development time. If a feature was developed but removed at a later stage, please also include it.
3. What is the feature that *you* personally spent the most of your time developing?
4. Were there any significant waste of work during the development phase? This includes (i) features implemented but which did not appear in the end product, (ii) two people accidentally duplicating part of the work, (iii) ideas tested but never completed, and (iv) any other issues such as data-loss?
5. What are examples of features that you had planned but ended up not being able to complete due to time restrictions and/or a lack of expertise?

Ex. 2 — *Game design*

Game design has never been formally discussed since this is not a course on game development. It is however beneficial to have a critical eye in terms of game designs, such as to better understand how to create more interesting game mechanics.

We will explore various topics related to game design by looking at how existing games approach it. We are not expecting you to replicate those mechanics. In fact, a lot of those games requires a significant manpower and time to develop. Part of our goal is to point you to the details that you would normally

[1] We will grade the quality and honesty of your answers, rather than the answers themselves.

miss when you are playing other people's games. Always remember that game design is not an exact science.

1. Games are about interactions, and meaningful interactions are about players making choices. In this video, the game designer discusses the notion of agency, choice and calculations.
   a) What examples of choice does your game offer to the player?
   b) What examples of calculations do you require the player to preform?
   c) How do they compare to the game you made in the second milestone?
2. Modern games usually contain numerous contents. More contents does not always mean more fun, as they may be overwhelming to the player. Watch this video where designers explain the relationship between depths and complexity.
   a) How does your game perform in terms of depths?
   b) What features do you believe contribute mostly towards depth?
   c) What features do you believe contributes more to the complexity?
3. *Super Mario Bros* is master work in terms of gaming design. In this video the game designer breaks down part of the very first level of this game.

   Every game needs to teach users about its controls. How is the player familiarized with the controls in a painless manner?
4. The game *Baba is You* is a 2019 puzzle game inspired by the traditional game *Sokoban*. Watch this video where a game designer breaks it down.
   a) What is the main mechanics change compared to the original Sokoban game?
   b) How does the designer exploit the aforementioned mechanics to create tremendous depths?
   c) A significant part of level design consists in setting constraints. What mechanics does the designer exploit to implement them?
   d) How does the design of the levels prepare the user for the more advanced levels and mechanics introduced in the later part of the game without the help of a game tutorial?
5. A game's numerical design can significantly affect a game's experience. In this video, the designers deconstructs PopCap's very popular game *Bejeweled* to better understand its leveling system.
   a) How will the game's difficulty curve felt like if the designers chose *not* to shuffle the board at the beginning of each level?
   b) How good of an idea would it be?
6. Game mechanics can and will re-enforce or break the game narrative. In this video, designers analyzes the mechanics of *Missile Control* and show how they help construct the nuclear doomsday narrative.
   a) What moral dilemma does the game present to the player?
   b) What set of mechanics contributes to creating this dilemma?

Ex. 3 — *Play-testing*

The goal of this exercise is to help you reflect on your own work. Evaluation and testing are integral

parts of a rigid development process, and engineering very often has to take into account various human factors. Games in particular relies heavily on **play-testing** to determine which designs are most suitable or working as expected.

Before evaluating your game with respect to what we learned earlier, play your game and try to finish a complete run, i.e. clear all stages, test all your major features, and make full use of the available controls.

1. General feeling.
    a) Are you able to finish your game pleasantly?
    b) If no, do you believe it is an issue, and otherwise what do you think went wrong?
2. Controls.
    a) How does your control feel?
    b) If your game offers an in-run store, it is easy enough for a player to make a purchase in the middle of the game?
    c) If your game offers a pause, can a player pause the game in the middle of a run?
    d) How do you expect the players to learn about the available controls?
3. Game play.
    a) Referring to the list of available choices (exercise 1), how many did apply during your run?
    b) Did the gameplay match up with your design?
4. Narrative.
    a) How much narrative could you understand and experience in your run?
    b) How well does your game actually present the narrative?
5. It is hard to determine the right amount of challenge a game should present to the player. In this video, designers discuss the difference between challenging games and punishing games.
    a) Does your game present enough challenge to the player?
    b) Does your game feel punishing at any moment?
6. Based on your observations,
    a) Which of the features you have implemented could have been omitted?
    b) Which of the features you intended to implement would have helped the game?
    c) How would you allocate your development time if you could redevelop this game?