



Project Requirements

Overall philosophy and goals

The general idea for the project for Creación de Videojuegos is that groups of three to four students collaborate to design and develop a video game in Unity. The students are free to choose any genre of game or other interactive experiences for this project, with the only restrictions being that the game supports single player play, consists of three or more levels/stages/zones, and contains some AI controlled character or system. The project consists of three main parts:

- A design document describing the mechanics of the proposed game (8% of the grade)
- A prototype, which constitutes a first playable version (20%)
- The final product (25%)

Additionally, each group is expected to create a simple website (e.g. by using github pages) to document their progress and report their progress on the project in the form of a short presentation every Tuesday in class. These presentations are graded with 0.5% of the grade each, for a total of 7%. During the first of these presentations, on August 20, each group is given 10 minutes to introduce its members and provide three to five short (one to three sentences) pitches for possible games. Subsequent presentations will be limited to a maximum of 5 minutes per group, and not all group members are required to speak. Additionally, on November 11, each group will be given time to talk about their prototype, and will play another group's prototype and give constructive feedback.

Note that, while the game design document is the first deliverable, it would not be unexpected for game play to work out differently than originally planned. Any such changes should be recorded in the design document, and discussed with the instructor when they become necessary.

Finally, the main focus of this class are the programming aspects of game development, and therefore the students are not expected to produce their own art assets. There will be no point deduction if a group uses e.g. a simple box as their protagonist instead of the mighty Elven sorceress their design document describes. However, students are encouraged to peruse the Unity asset store for free art assets that fit the game they are developing, or use art assets from other repositories, such as opengameart.org. It is, however, *required* that students name the sources of their art assets and do not use copyrighted material without permission. All assets that are used must therefore be listed in a file `asset-sources.txt` in the project.



Deliverable 1: Design Document

Deadline: September 4, 2019

Objective: Design the game play experience for a game, and describe the necessary parts in a structured way.

Goals:

1. Design a game that fulfills the requirements set forth in the course.
2. Describe game play in a structured way.

Evaluation: Since the class provides great freedom to the groups as to which kind of game (or interactive experience) they want to develop, the proposed project is not evaluated in terms of how it appeals to the instructor, but rather of whether it fulfills the technical requirements of the class. The main focus of this assignment, however, is the communication of game play concepts. This portion will be graded on whether all content that is required is present in the design document and how clearly the ideas are presented.

1. Gameplay (2%)

- Whether the game provides a single player experience
- Whether there are three or more levels/stages/zones
- Is there a part/character that is controlled by the computer in an intelligent way
- Is the proposed implementation language/environment reasonable

2. Description and Structure (6%)

- Does the Design Document contain all required contents:
 - A team name
 - A game name
 - A short, one paragraph “pitch” for the game
 - A detailed description of the game components (objects, attributes, relationships)
 - The game mechanics, including how player input is translated into changes of the game state, and the win/loss conditions (if applicable)
 - A short description of each team member: name, skills, and responsibilities
 - A rough division of labor between these team members, as well as any technology to be used. If you don’t use Unity, please note why, and which of your team members bring the required skills.
- Are gameplay concepts described in a concise and consistent manner
- Does the design document convey how the game works, and which decisions the player has to make in order to achieve the goals presented by the game



Deliverable 2: Prototype

Deadline: November 6, 2019

Objective: Implement a playable version of the game presented in the design document. This version is not necessarily free of bugs and fully balanced, but it should be possible to experience all aspects of the game.

Goals:

1. Get familiar with Unity and set up the project for the game
2. Design the code structure
3. Implement all game play mechanics

Evaluation: The main goal of this deliverable is to produce a playable version of the final product, which will then be iterated upon to turn it into a final product. Because a maintainable project structure will reduce the likelihood of game breaking bugs in the final product, part of the evaluation of this deliverable will be based on how maintainable the codebase is. The main focus of the evaluation, is the implementation of the game mechanics.

1. Project structure (5%)

- Is gameplay divided properly into scenes (if applicable)
- Are assets in the project grouped properly
- Is the code structured in a maintainable way, with classes representing single concept, and proper reuse of functionality

2. Gameplay Implementation (15%)

- Are all gameplay elements described in the design document present in some form
- Is the game playable in a way that conveys the mechanics to the player

Deliverable 3: Finished Game

Deadline: November 27, 2019

Objective: Submit a fully polished version of the game, in which the user/player is properly introduced to the game mechanics, and the game is playable and behaves as intended.

Goals:

1. Provide a proper introduction and conclusion to the game.
2. Balance the game
3. Fix bugs
4. Polish the game

Evaluation: The deliverable for this assignment should consist of a complete game, in the sense that a player can start the game, is gently placed into the game world, can play the game in a way where their decisions/reactions matter, and is communicated the outcome in an



appropriate way. For example, this guidance could consist of a menu system, and scoring screen. It is also expected that this version is free of bugs. Additionally, the game play experience is evaluated again to give students the opportunity to improve upon any shortcomings in the prototype.

1. Player Guidance (7%)

- How is the game presented to the player
- Is the player introduced to the game gracefully
- Is the outcome of the game/level/episode presented to the player appropriately
- Is the user experience appropriate for the game

2. Software quality (8%)

- Are there any bugs (game breaking, visual, control problems, unintentional AI behavior)
- Do player decisions contribute to the outcome of the game in a meaningful and discernible way
- Is the game balanced as intended

3. Gameplay experience (10%)

- Are all gameplay elements described in the design document present in the game
- Do the mechanics behave as expected
- Are there any missing or superfluous mechanics
- Is it conceivable that the game is enjoyable for its intended audience
- Are all levels/stages/zones present