

Computer Game Design Project

LEARNING GOAL: Students will learn how design a game following the six step design process, and applying processes related to **concept development** and **game development**.

PROJECT DESCRIPTION: Design and produce a playable computer game consisting of all aspects of game design covered in game design course. Study the game assets provided for you, and develop a **game using those assets**. The game may be for one or two players. You must **document the six step design process on a design process flow map**. The design process documentation would include **concept document** and **storyboard**, as well as **alpha and beta** testing documents. The design will also reflect your understanding of programming scripts and/or creating properties, as well as developing, testing, and evaluating a hypothesis. The design process documentation must be assembled into a three prong folder and/or submitted electronically.

TEAMS: This project should be done in teams of **two or three students**.

GRADING: Total value is **200 PTS**. See [RUBRIC LINK](#) for details.

REQUIRED ELEMENTS:

- 1) Evidence of brainstorming. Download and discuss the **brainstorming** document. Discuss and make decisions regarding how you are going to approach the problem. Explain how you are going to include each of the game design elements listed on the document.
- 2) A one full page **concept document** written using 12pt readable text. Writing must include details of your entire game based on brainstorming, and must include elements of concept document writing.
- 3) A **storyboard** with at least three frames showing sketches of how game develops from front end the end game message and reset. The sketching should show objects, backgrounds, as well as illustrations of changes in game action during gameplay. Brief descriptions of action must be included below each frame. **Each student must complete their own copy of a storyboard**.
- 4) Game must include either original or permissible **assets** (graphic assets, audio assets, text, and music). All assets should be saved in a special folder titled **Game Assets**. You are **required to have at least one custom graphic asset**. You may also include a custom **audio asset** (not required), saves and named using proper naming conventions (e.g. *open_music.wav*).
- 5) Game must be for one or two players and created in **Game Maker** or other game engine. It must include the following:
 - A **front end** with sound, music, and links for game information
 - At least **one levels** of challenge that can be played through from start to finish. Games with additional levels of increasing challenge will be scored higher on the rubric.
 - A **scoring system** including rewards and penalties
 - A **congratulatory message** or advice along with **reset** button or instructions.
- 6) You are required to **test and evaluate** your game by following the **alpha testing** procedure with your few of your class members. You may also **beta test** your **target group** of middle school students.
 - Evidence of alpha and beta testing and documentation of how test data was used to make improvements to game must be shown in documentation.
- 7) Finished game must submitted in the following form:
 - Game Maker programming must be saved as a .gm81 file (our typical format).
 - Game Maker game program must be compiled into an executable file.
 - Documentation bound in a folder or submitted electronically (**concept document, storyboards, alpha and beta reports, and any other paper evidence**).