# Project 2

# Computer Game Design (Comp 441)

# The Assignment

For this assignment, you are to design and implement a 2D game. The game must be an interesting, interactive game with good gameplay and simple rules.

The game must have at least the following components:

* Background music and appropriate sound FXs;
* animation, with at least some of the cels created by you;
* accurate collision detection;
* some advanced technical features (e.g., physics, scrolling background);
* cheat codes to provide things like infinite lives/health/weapons/ammo, skip a level, etc.;
* reasonable check pointing system in the levels;
* scorekeeping, splash screen, ending screen; and,
* minimally two levels.

The game must be complete, and it must work. I will play each game, and we will exchange games among everyone in class (i.e., other students will play your game).

**You are to work in groups of three. All coding must be shared equally, as should all artwork and sound creation (if any). In addition, each student must create a separate component that is added to the game1.cs file. These components should be named using the student’s last name. For example, my component would be in the file Birmingham.cs**

# Dates and Deliverables

**Upload to mygcc the following things by the listed due dates.**

1 November: Game proposal using the game proposal worksheet (the same as used for Project 1). Be sure to have complete **storyboards**, **level maps**, a **poster** for your game, and the names of group members. The poster must be a different file than the proposal.

18 November: Complete game is due. The deliverables are the following:

* complete project,
* final game report, where you will fill out an evaluation of your game. You must specify all the information in the form. In addition, in the appropriate place on the form, comment on the following items:
  + design decisions you made, particularly involving tradeoffs between game complexity and performance or ease of implementation,
  + interesting gameplay ideas in the game, focusing on how you implemented “flow” in the game,
  + a list of cheat codes, special elements of your game, Easter eggs, etc., and,
  + Completed “grade rubric” with your appraisal of how well you did on the project.

# Grading Rubric And Course outcomes

Game Description (10% of total grade). You will be graded on the design of the game and the quality of the document. **It is important to** produce **a good quality description, pay particular attention to the storyboards.** Make the document complete. Be concise, however.

Game (90% of total grade).

* (15%) Good quality graphics and sound, appropriate to the game. Supports Course Outcome 2.
  + Must have at least two textures.
  + Textures must look reasonable and be appropriate to the game.
  + Textures created or modify by you.
  + Must have at least two different sound fxs.
  + Music must be appropriate to the game (i.e., play at the right time) and add to the overall mood and effect of the game.
* (15%) Originality in game. The best score will be for a completely original game, but high scores will also be given for interesting and original remakes of existing concepts. Supports Course Outcomes 1 and 3.
  + If the game is based on an existing game, at least two novel game play elements are required.
  + If the game is based on an existing game, at least one unique interface or control element is required to support the item above.
  + Game must exhibit good flow, and levels should build on each other to create a game experience with a beginning middle, and end.
* (Acceptable/Unacceptable) The game must be stable, must be playable and must be complete. If the project fails on any of these, it will be unacceptable and a failing grade will be given on the project. Supports Course Outcome 3 and 4.
  + Game must play from start to finish without crashing.
  + All elements of the game must work, including all game, scoring, and sound fx elements.
* (10%) The game should be easy to play and the controls, strategies and tactics self evident. If you need to show the user how to control the game, consider some training tasks before allowing the user to play the full game. Supports Course Outcomes 1 and 3.
  + A player should be able to play the game without (significant) training.
  + Any key combinations should be simple and appropriate to established conventions, e.g., do not remap WASD to YHNJ.
  + Keyboard and must should be used for appropriate functions, e.g., do not use a mouse to pick out letters from a menu when the keyboard is available.
* (50%) Quality of game play. Simple and fun—all of you have a sense for what makes for good game play. Course Outcome 1.
  + The game must play with an organic feel: all the element must work together to create an entertaining experience.
  + The rules must be clear and simple, so that the player can concentrate on the game, not learning the rules.
  + The game must exhibit good design principles, such as flow.
  + While “fun” is hard to quantify, the game should be fun to play.
  + Game performance is good: frame rates are kept up, response to controls are fast, objects move on the screen as expected (without hiccups or stutters), etc.
* (10%) Report. Must provide all the information listed in this specification