

# CS 2261

## Milestone 01: Concept

### Instructions

For your final project, you will be designing and creating your own GBA game, which will require most (if not all) concepts that we have covered in the class. To get started, this first milestone is the project concept. Create a document (Word document or PDF) that describes the final project you will create. Your concept document must include the following things:

- The title of the game
- A detailed description of the gameplay and the intended player experience
- Ideas for how you will implement these concepts in code
- Rough sketches or mockups of what you think the art will look like
  - These may be in the document or zipped with the submission

We will give you very detailed feedback for the feasibility of the idea as well as advice on how to create it. Thus, the more detailed you are, the more we can help you. You are not 100% locked down to every detail you include in this proposal, but if you change your idea in a major way later on, you will **need to get these changes approved**.

A very detailed example of what you might submit is attached to the assignment page on Canvas.

So that you know what to plan to create, your final project, once completed, must have the following characteristics:

- At least 2 animated sprites
  - “animated” means **three or more frames** of a looping animation
- **One** of the two following background requirements are implemented (*you do not need to implement both*)
  1. two backgrounds that move/scroll **independently** (hint: try parallax movement)
  2. one XL background (**greater** than 512 for width **OR** height)
    - a. Note: there is no BG\_SIZE\_XL macro - You’ll need to cleverly implement a workaround
- The following states: Start, Instructions, Game, Pause
  - game state **must be implemented in mode 0**
  - you may (but are not required to) use modes for other states (ask your TAs for tips if you’re confused)
- A Win and/or Lose state as applicable
  - you must have at least one or the other
  - you must be able to restart the game from this end state without re-running your .gba file
- At least two sounds that can play simultaneously
  - one must be looping
  - one must not loop
- A cheat to make the game easier
  - not just skipping to the win state; not just an “invincible” mode. It must meaningfully change existing mechanics or introduce an entirely new one-- please be *creative* (and ask your TA for ideas / guidance)
- The ability to play the game correctly without being told how to do so ahead of time
  - aided only be the in-game instructions and menus
- Bug-free gameplay

**Meeting these basic requirements for your final project will get a 70/100.** The other 30 points will be earned based on the creativity, quality and completeness of your project. More details on those below.

- **Gameplay:** we prefer to see innovation; games like pong, breakout, and collect X won't score very high here. A game like frogger won't earn many more points than these. You should always strive to make something better than the last thing you made, and we've already made games like Frogger, Breakout, etc. Two good standards for any medium are "is it fun to play" and "is it catchy?". **Unless explicitly worked out with your TA(s), you CANNOT recreate or extend an assignment already submitted for this class.** Be original!

- **Quality / Completeness:** no bugs, smooth movement/transitions, natural controls, and a general feeling of polished work. Everything "makes sense" and "feels right". To earn points here, **have your friends playtest it** and spend time tweaking numbers and timing. Additionally, we will consider how complete your game is -- related to scoping your project appropriately and making sure you don't bite off more than you can chew. See a TA if you feel like the size of your final project is getting out of hand.

We will not penalize you for not being an "artist" and being able to have perfect visuals and colors (we don't even require you to create your own pixel art), but if the visual quality of your game detracts from the experience and gameplay, or make it hard to grade your assignment, points will be taken off. If you are artistically talented, then any effort put into making the visuals more appealing will definitely help you.

Finally, we will reward **extra credit on the FINAL project (up to 20 points) for extraordinary effort**. This includes interesting graphical effects, use of advanced programming or GBA features (mosaic effect, malloc, XXL background [greater than 512 in **BOTH** width and height]), and general coolness. Note: This is a programming course, not an art course. Amazing custom graphics may be rewarded, but technical achievement will be rewarded much more.

**We want you to come out of this class with something you're proud of. We want this class to feel meaningful and not a waste of your time.** Whether you're here to just eventually get a job or change digital media forever, here is an opportunity to draw from your inspirations and achieve something worth doing.

## **Submission Instructions**

Submit the document as a single file (either Word Document or PDF) or a single .zip file. Submit this file on Canvas. Name your submission M01\_FirstnameLastname, for example: "M01\_GeorgeBurdell.zip".