



# MLESTONE 04

## Beta



**Purpose:** To build the beta version of your project in which you iterate upon your previous Milestone 03 and leverage Mode 0, good code architecture, and other concepts learned over the course of the semester.

---

### Instructions:

For this milestone, you will be getting the rest of the project implemented, lacking only the amount of polish that can be accomplished in a single weekend. Especially now, I would highly recommend saving this milestone separately so that you have something to revert to if there are strange problems in this last leg of the race. **If for any reason you fail to submit the final project on time, the submission for this milestone will be graded as and presented as the final.**

For this milestone, **you will largely focus on sound and art.** *The cheat can be saved for the final project submission*, but you are welcome to get that implemented now as well. Refer back to the final project requirement document as you develop each part of this milestone.

### **Part 1: Backgrounds**

*REMINDER: Review the final requirements document on Canvas to ensure you're meeting this requirement correctly.*



Every state of the game must have its own background. This doesn't differ from before, except that now it's time to add in the final, artistic versions (remember, you are not graded for artistic ability, but you are graded for effort. Simple Usenti-text labeled screens aren't as good as, for example, drawings of MS Word Art style state screens). Your instructions state must have all the instructions needed to play the game; the player shouldn't need someone to explain the game to them before opening it. At least one state must have the background requirement met. Additionally, *you may not use any background that has been used in a lab before.*

### **Part 2: Sprites**

*REMINDER: Review the final requirements document on Canvas to ensure you're meeting this requirement correctly.*

All sprites must have artwork that is not just a blank square or placeholder from previous milestones (if your game requires it to be only a blank square, let us know ahead of time, but this is likely not the case for most, if not all, of you). There must be at least four unique sprites, of which two are animated, where "animated" means three or more frames of a looping animation. *You may not use any sprite art that has been used in a lab before.*

### **Part 3: Sounds**

*REMINDER: Review the final requirements document on Canvas to ensure you're meeting this requirement correctly.*

You must have at least two sounds that play simultaneously, one of which must loop. *You may not use any of the sounds that were used in a lab before.*

### **Part 4: Changing (background tiles, tilemap, or sprite tiles) and (background palette or sprite palette) at runtime**

*REMINDER: Review the final requirements document on Canvas to ensure you're meeting this requirement correctly.*

Simply using DMA to replace what is there with another Usenti export does not meet this requirement. *You may not do this in the same way that it was done in a lab or homework before.*

### **Part 5: Timer or interrupt**

*REMINDER: Review the final requirements document on Canvas to ensure you're meeting this requirement correctly.*

You must include meaningful use of a timer and/or interrupt, other than a vertical blank interrupt and digital sound. *You may not do this in the same way that was done in a lab before.*



You can of course keep working on gameplay at this point, but it should have been almost entirely completed with M03. Remember, finishing touches on art, sound, and gameplay can be saved for after this milestone.

**ADDITIONAL REQUIREMENT:** As with the previous milestone, at the top of your `main.c` file, *include a comment block that explains the following*: what is finished about the game so far, what still needs to be added, any bugs that you have found, and, for our sake, how to play the game in its current state (and see anything you want us to see).

---

### Submission Instructions:

Ensure that **cleaning** and building/running your project still gives the expected results. **Please reference previous assignments for instructions on how to perform a "clean" command if you need clarification.**

Compress your entire project folder, including all source files, the Makefile, and everything produced during compilation (**including the .gba file**). Submit this zip on Canvas. Name your submission **M04\_LastnameFirstname**, for example:

"M04\_HarunaLaura.zip"