CS 91S: Games Systems

Hack Project

~~DUE October 29th at 11:59 PM~~ **DUE November 6th by lab**

You and your partner will conduct a small-scale study of an Atari 2600 game. You can pick one of the games in "Racing the Beam" or some other game, potentially a home-brew 2600 game. You should modify the behavior of the game using `stella`, 8-bit workshop, or `dasm`. You can start from commented assembly, if it is available, or as an extra challenge, work with the raw disassembled binary.

You might consider (roughly in order of difficulty):

- changing the bitmaps of the sprites;
- changing the color of the game objects;
- changing some initial value of a variable (e.g., the number of lives);
- changing the sound;
- changing the control scheme;
- changing the game mechanics.

NOTE: Remember the timing of the 6502 instructions is crucial in terms of the 2600's operation. So as you add and remove instructions, you should be mindful of how the cycle count also changes—afterall, we are *racing the beam!*

1 Learning Objectives

- Reverse-engineer a game
- Practice reading & writing 6502 assembly
- Think and write critically about games

2 Deliverable

Submit your project on GitHub as markdown It should be clear, look nice, and fully document your changes. It should be written in the style of the "Fixing ET" article we will read. You will present your work during the lab period.