

Game Engineer Simulation

We are looking for exceptional game engineers: you! We've designed this simulation to give you an opportunity to impress us.

Your assignment is simple:

- Develop a game using our open source tech in 7 days or less
 - Be sure to fulfill the minimum requirements listed for the game type of your choice before adding your own mechanics and polish!
- Write a reflective essay on the game development process
 - Discuss the tech, software and game design decisions, algorithms, visual effects and more

Part 1: Make a game!

You should start by downloading and installing our open source HTML5 devkit:

<http://docs.gameclosure.com/guide/install.html>

Feel free to use any art assets you like. You can pull examples from the devkit, or from sites like <http://opengameart.org/>.

Choose one of these two mobile game genres as a starting point for your game:

- Bubble Shooter (more details on the next page)
- Gem Swapper (more details on the next page)

Have fun and be creative! Focus on the game screen / gameplay. We want to see a polished game at the end of the week. Your game should work; it should not contain any syntax errors, TypeErrors, or infinite loops. It should be fun to play, even if a bit basic. Your code should be clean and consistent, legible, and should demonstrate good software design decisions.

Part 2: Reflection

Write a concise and organized reflection on your process developing the game. Consider discussing:

- Did you face any technical challenges while writing the game code? Were there any JavaScript optimizations you found useful while writing the game?
- How did you polish the game? What did you add to make the game more visually appealing or to make the gameplay feel right?

- Did you find anything lacking with the devkit? How would you improve our devkit to make game development easier? What did you like about it?
- Did you have any plans to improve the game further?
- Other thoughts on game development, our tech, or HTML5 in general?

Bubble Shooter

Research: Bubble shooters are a common type of arcade / mobile game. It's very important to familiarize yourself with how these games work by finding examples on Google Play, the Apple App Store, or online. Start by looking at the top charts! Bubble Mania is a great example. Find at least 2 different implementations so you can compare different styles and mechanics.

A functional bubble shooter should at least contain the following elements:

- A hexagonal grid of bubbles
- A ceiling to which the bubbles are attached
- A cannon or similar element from which the bubbles are fired
- Slots to display both the current and the next bubble to be fired
- Firing a bubble that connects with at least 2 other bubbles of the same color creates a match, popping those 3+ connected bubbles
- Any bubbles that become detached from the ceiling and the rest of the bubble grid should be dropped and then popped, so there are never any floating bubbles
- **Bonus:** Particle effects and other types of visual polish!

Gem Swapper

Research: Gem Swappers are another common type of arcade / mobile game. It's very important that you find at least 2 examples of match-3 gem games online or in app stores to use as references before you start. Browse the Google Play or Apple App Store top charts for the best references! Candy Crush is a great example.

A functional gem swapper should at least contain the following elements:

- A square grid of gems; gems fall to fill in any gaps
- The ability to swap two adjacent gems
- Creating a match between 3 or more gems vertically or horizontally should clear all matching gems in the group
- An objective to complete (like score within a time limit or score within a certain number of moves)
- **Bonus:** Particle effects and other types of visual polish!