**Intro:**

Welcome to Brave Digital Entertainment’s Code Challenge!

At Brave, we’re looking for insights into the way you think, work, and play. In addition to evaluating your general technical aptitude, we’re trying to determine how well you understand what makes a digital experience fun. To help further this end we strongly encourage you to document your thought process through a self-styled explanatory document (such as a journal or log), as well as judicious inline code comments.

You have one week to complete the challenge and return it to Brave Digital Entertainment via [info@brave-digital.com](mailto:info@brave-digital.com).

**Challenge Overview:**

Demonstrate your technical and creative thinking by cloning one of these popular mobile games: Candy Crush, Angry Birds, Tiny Wings, or Flappy Bird.

**General Instructions:**

Using Pixi.js (a browser-based webGL renderer) and starting from the example code supplied by Brave, replicate the core mechanics and fun of one of these iconic mobile games.

* Candy Crush (Recommended)
* Angry Birds
* Tiny Wings
* Flappy Bird

**Code Instructions:**

In the project folder provided by Brave, implement as many, or as few, features as you feel are necessary to highlight the fun of your chosen product. You may also include features in the challenge that do not appear in the original game.  However, we caution candidates to critically consider scope before over-extending themselves on the challenge. Less is often more.

The completed challenge should be playable in full by opening *index.html* in Firefox.

* Candidates may add, remove, or modify any code found in *base.js*.
* Candidates may add any number of additional files to the project, provided the candidate wrote the code her/himself.
* Candidates should not modify *pixi.dev.js*.
* Candidates should not include any additional external dependencies, such as solutions for physics, time, animation, particle effects, etc. However, should the candidate feel they are necessary, the candidate is welcome to write her/his own.

**Documentation Instructions:**

Document your workflow and decision-making process throughout the challenge. This self-styled document may take whatever form best fits your experience. It could be an essay, journal, feature list, etc. Its primary purpose is to help Brave understand how you approach and solve problems. This document is in addition to, and may overlap with, candidates’ inline code comments.

**Submission Instructions:**

Candidates should submit the final challenge to Brave Digital Entertainment via [info@brave-digital.com](mailto:info@brave-digital.com) within the allotted time. Deliverables should include the following:

* All code necessary to play the candidate’s completed challenge.
* Documentation explaining the candidate’s process and motivations.
* Any custom art assets required to play the challenge.

Once again, the completed challenge should be playable in full by opening *index.html* in Firefox.

**FAQ:**

Q1: What about art?

A1: Feel free to use any amalgamation of the supplied art, your own art, ripped art, or no art at all.  Our chief concern is evaluating your technical and creative thinking as it relates to coding for games.  However, sometimes spicing up your project with a little art can go a long way. We would never discourage applicants from going after this “low hanging fruit”.

Q2: When you say *clone*, does that mean my challenge has to look and play exactly like the game it’s based on?

A2: No. It should be based on the game you chose with the same basic structure, but as mentioned above, feel free to add or streamline the game experience as you see fit.

**References:**

**Pixi.js:**

* <http://www.pixijs.com/> (Pixi.js Home)
* <http://pixijs.github.io/docs/index.html> (Pixi.js Documentation)

**Candy Crush (Recommended):**

* <http://candycrushsaga.com/> (Browser Version)

**Tiny Wings:**

* <http://www.andreasilliger.com/>(Tiny Winds Home)
* <http://www.plonga.com/adventure/Run-Jump/Tiny-Wings-Online> (Comperable Browers Game)

**Angry Birds:**

* <http://www.angrybirdsgames.com/games/angry-birds> (Comperable Browser Game)

**Flappy Bird:**

* <http://flappybird.io/> (Browser Version)

**Troubleshooting:**

Problem: The example code supplied by Brave isn’t running in my browser.

Solution: The example code supplied by Brave may not run in Chrome due to CORS.  However, it should work in Firefox just fine.