

## **Bubbleburst Coding Challenge**

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Hi there! Thanks for checking out my submission for the Bubbleburst Coding Challenge. I made the project using Unity **2021.3.21f1 (LTS)**. This document should be in the project folder but you can also find the GitHub repository for the project <a href="here">here</a>.

I had a lot of fun with the challenge and changed the theme to be about mining gems instead of popping bubbles, hence the game's title - 'Match Mining', although it is functionally the same.

The game has a main menu with the option to play on three different difficulty levels, each of which has a unique leaderboard associated with it. So, it is best to launch the game from the "0\_Menu" scene, although it should work if directly launched from the "1\_Game" scene as well.

# Gems

81



I made everything myself, including the 3D models and 2D textures. I used Blender for the 3D models (this file is in the folder) and GIMP for the 2D textures. I'm much more of a programmer than an artist, so the assets may not be the best quality - but I had fun making them anyways!

There are a couple of limitations to note with the code. Firstly, I make use of the Singleton pattern. This works well for my usage as it is solely for management systems (ex: the GameManager), but it has drawbacks as discussed within the class in the code. Secondly, the VFX are all instantiated & destroyed. A better system would involve pooling. Finally, I made a limited Tweening system. A more robust one, or a library such as DoTween, would be better.

Thanks again for checking this out!

**Daniel MacCormick**