

**Assignment 3**  
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**Design decision:**

The assignment contains 3 parts, events/Listeners, game objects and systems. This assignment is to help us understand Event-driven programming. Our work is implementing and using events and event listeners.

**Implementation process:**

In this assignment, I first finished events and listeners. Thus I got a better understanding of each event and its corresponding listeners. Then I finished game objects which implement event listeners. Lastly, I finished systems.

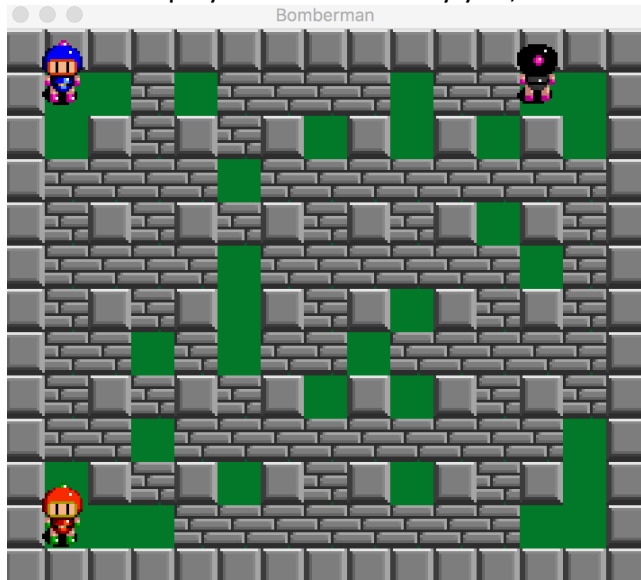
I also did the extra credits, adding random moving enemy and add powerUp function. Enemy is a subclass of character with code to let it move and throw bomb randomly. powerUp is added in BombSystem and MovementSystem.

**Problems:**

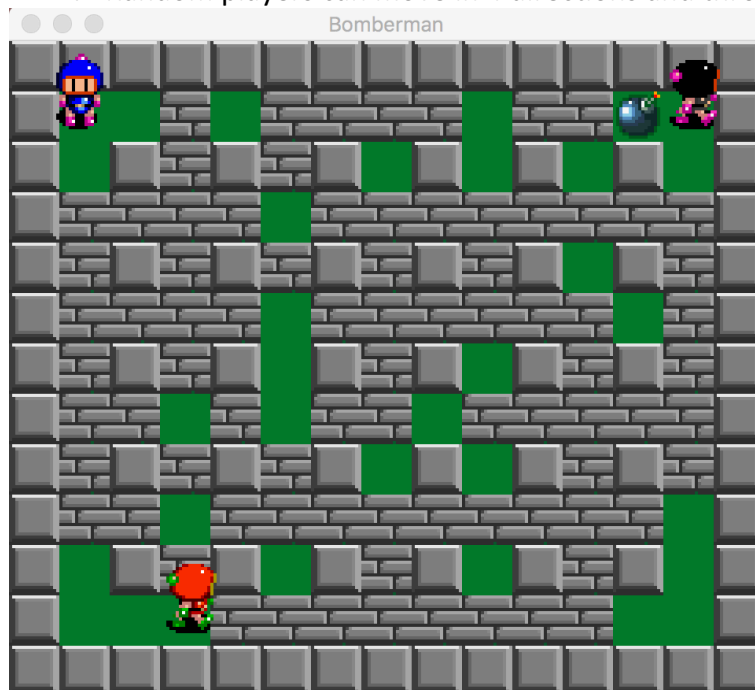
Most of the assignment is not difficult, just do it as the instruction. I have problem to locate the bomb and character, so I cannot check if the bomb or character is in the range of an explosion event. Other than that, the character can move in four directions and also throw bomb. I don't know how to write a AI enemy, so the enemy is pretty dumb, even though it can move by itself. Most of the time, it dies by its own bomb.

**Result:**

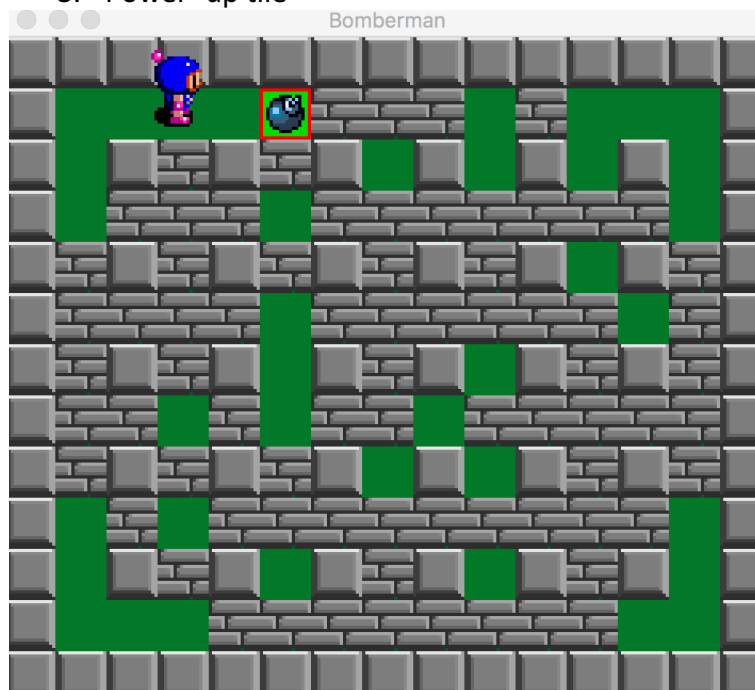
1. Blue player is controlled by you, black and red players move randomly.

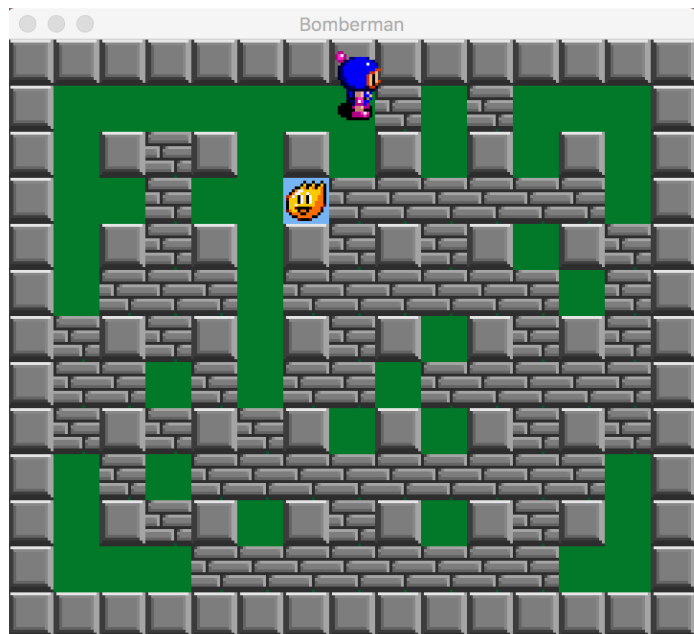


2. Random players can move in 4 directions and throw bomb



3. Power- up tile





4. Enemy died

