

## Crazy Bullet

Scrolling shooter arcade games are among my favorite games. These games emphasize on fast-paced shooting enemies and dodging enemy fire. In most of the games, the player can infinitely fire bullets. However, an idea occurred to me that what will happen if the player could be hurt by its own bullets? It leads the player to think carefully before he fires instead of keeping firing in traditional shooter games. It increases the choice of player and it may also increase the game play. I make the Crazy Bullet prototype to test the friendly fire in shooter games.

I set up a prototype on a 2D plane and the player can move freely and fire bullets. Enemies spawn randomly on the boarder of the plane and they are flying rapidly to kill the player. In the first version of my prototype, if the bullets fired by the player hit the enemy, the bullet will become smaller and bounce back, then the player need to fire another bullet to kill the bounced bullet. If the player keeps firing, his bullets will also hit each other and bouncing everywhere. I played the game and also introduced it to several of my friends, however, they all thought that this game doesn't change much of a shooter game. It just prevents the player from firing continuously. All they need to do is dodging the bounced back bullet which is also predictable.

Therefore, I made several changes given the feedback of my first prototype. Instead of making the bullets bounce back from the enemy, I make it bounce back from the boarder of the plane. In this way, if the player misses a fire, he need to fire again to deal with the bouncing bullet. However, there is a overpowered playing strategy that is keep firing and let the bullets bouncing around the world to kill enemies. This is against my design of making the player firing carefully. Therefore, I set an explosion timer for each bullet. It means that, if a bullet is still alive after being fired for 5 seconds, the bullet will explode and kill the player. This prototype has better feedback than the first one. If a player missed one fire, he needs to chase and kill the bouncing bullet in several seconds whiling dodging the flying enemies. In the final version of my prototype, I set the explosion time count down as a sprite render on the bullet to give more information to the player.

I also thought of several different approaches. For example, the bullet size may change according to how long the player press the firing button. If the bullet is not big enough, it will not kill an enemy who is strong enough. This design also seems interesting and I plan to test it in the future.