For the special feature, team Reptile Ninjas decided to implement the bullet collision feature. This feature allows enemy bullets to ricochet off a large bullet and bullets will spawn when colliding with the walls. To implement this, first we needed to change the bullets such that they can move in different directions. Within the current implementation the bullets fall downward towards the user so there is no way for the bullets to interact with one another.

The collision class will need to be altered such that the enemy bullets list will be checked to detect a collision among the large bullets and the enemy bullets. A new bullet type needs to be implemented that will have its own entity list. With a new bullet type in place, the factory pattern should be utilized when creating the different bullet types.

The observer pattern could be used when the bullets collide with the large bullet, when the collision happens the observer could be the bulletList which will update the direction of all the bullets that interacted with the larger bullet. The observer pattern could also be used when the bullets collide into the wall, the bulletManager will be notified to create more bullets.