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Our prototype of "The Four Horsemen" implements several core mechanics of the game: hitboxes, projectiles, and basic combat. The protagonist can move side to side with the arrow keys and jump with the up arrow key. He can attack with his (currently invisible) sword by pressing "A".

The protagonist, enemies, and projectiles all have their own hitboxes. The protagonist has one large hitbox around his entire body. When he collides with a projectile, he loses health as evidenced by the green health bar in the top left corner. He flashes to indicate a brief period of invincibility after being hit. The projectiles are timed so that the invincibility frames will protect him from consecutive projectiles. He also is knocked back slightly each time he is struck. The projectiles are simply DisplayObjects with their own hitboxes that spawn and move across the screen. The protagonist can attack the enemies (represented by black boxes) by walking up to them and pressing "a". When he attacks, several red boxes flash in front of him to indicate his sword's hurtboxes. These hurtboxes are DisplayObject children of the character that always hover in front of him, but only check for collisions when "a" is pressed. When the enemies collide with the hurtboxes, they lose health as indicated by the red health bar in the top right. Taken together all together, the hitboxes and the projectiles demonstrate basic combat functionality in the game. Moving forward to the alpha, we will build on these mechanics to make combat more complex and interesting. We plan to add combos to the player's melee attack that will activate based on the timing of button presses. Each combo move will have different hitboxes. The next build will also have real bosses that move and react to the player's actions. The behavior of the bosses will be implemented by combining various tweens. The bosses will

try to avoid the player's attacks while using their own melee or projectile attacks. Some bosses will have complex projectile attacks that spawn projectiles of different sizes and speeds. We will also try to perfect the placement of hitboxes to accurately match the appearance of the sprites, since platform combat is the main mechanic of this game.