**A Game of Cat and Mouse**

**What are the rules of the game?**

1. Users move cat left and right with left and right arrow keys.
2. User presses spacebar to shoot projectile
   1. Holding the spacebar down will only fire 1 projectile for the initial keypress.
   2. Tapping the spacebar rapidly will at most fire 1 projectile every half a second, this is so that users cannot simply spam to shoot and endless stream of projectiles.
   3. Once a projectile hits a mouse, it will continue to travel in the same direction and can hit another mouse on the way.
3. Mice fall from the sky at random locations.
   1. No two mice will fall in such a way that they are on top of one another or overlap one another.
   2. Mice will continue to fall; no event will stop this unless the player closes the game.
4. Player loses a life when a mouse touches the bottom of the screen.
   1. Player does not lose life if a mouse touches the cat.
5. If the player’s projectile makes contact with the mouse, the mouse is deleted/disappears/removed, and the player gets a point.
6. Losing condition:
   1. If player reaches 0 Life. A life is lost when a mouse touches the bottom of the screen.
7. Player advances in level after 20 mice has been hit by projectiles.
   1. Level increments by 1 every time Score hits 20.
8. Stats tracked:
   1. Lives - Player starts with 3 lives.
      1. Player gains a life for every 10 mice hit (does not have to be consecutively).
   2. Score - Player starts with 0 score.
      1. Score increments by 1 for each mouse hit.
   3. Level - Player starts at level 0.
      1. Level increments by 1 every time Score hits an interval of 20.

**How does that translate into code?**

**Will we need to use loops? if/else statements?**

**What variables will we need?**

**Under what circumstances will our variables change?**