Idea: Cat and Mouse

Main Character: Mouse

- Mouse is initially starts from small hole
- Mouse will maneuver throughout floor collecting all the crumbs, cheese and traps to change their score
- If mouse is caught by a cat or the score goes below 0 points the game is over and player loses with some score
- If mouse has collected all the crumbs and goes to the finish space, the game will be over and the player wins with some score
- Can only move once during any given tick

Enemies

Moving Enemy: Cats

- The cats will move towards mouse inorder to catch it
- Can't collect rewards or punishments
- After a specific intervals of time another cat will spawn
- Can only move once during any given tick

Punishment: Mouse traps

- If mouse has stepped over a trap, they will lose points
- There will always be *n* amount of mouse traps at any given time at random locations

Rewards

Regular: Crumbs

- Specific amounts of crumbs will be scattered across the floor
- Mouse's objective is to collect all the crumbs
- If collected by mouse, the player gets points

Bonus: Cheese

- There will be at most one cheese on the floor at any given them
- Spawn at randoms locations and disappears if not collected after some time

Barriers

House hold objects & Walls

- These objects and walls are barriers that neither the cat or mice can pass through directly

Board

House Floor (Bird's eye view)

- The floor is the given area that the user can user can see
- Floor plan will consist of kitchen, living room, …
- Inital map will contain the mouse, *m* cats, all crumbs, *n* traps and objects
- The board will also contain the player's score and time passed