Final Game Design Document

COMP 277: Game Design

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Team Friday: Jessica Li, Nate Steckel

High Concept

The game being developed here is *Fish Tale,* where the player takes the role of a fish with legs trying to collect pieces of DNA through platforming and puzzle solving. The game world is an everyday house viewed through the lens of being a tiny animal, so mundane objects suddenly become imposing obstacles. The objective of the title is to navigate through/around these obstacles to collect strands of DNA, which will allow the player to unlock new levels and progress further in the game. The accumulation of DNA will represent the evolution of the player and their skills and will also be represented by the player's avatar changing appearance as they collect more and more. This main character is an orange cartoon fish, and is vague in appearance to the point where it would not represent any particular kind of player. Instead the player base would be made up of players who like platformers and puzzle games. The game should also be appealing to anyone who wants a relaxing, cute or family friendly gaming experience.

Game Design Team Bios

Nate Steckel is a senior computer science student who comes from an arts oriented background. He has made other small games as part of his academic career at Occidental including a visual novel ARG that incorporated environmental and real world puzzle elements into its story. He has a fair amount of experience working in physical and digital art which has made him comfortable designing cohesive and visually appealing assets, characters and environments for games in both two and three dimensions.

Jessica Li is a senior computer science student who had a strong programming experience and some training in fundamental drawings and digital designs. She has designed a full-stack buy-and-sell marketplace website for the Occidental community. She had also created drawings that expressed her imaginations of a combination of reality and fiction.

Three Similar Games

There are many games that helped influence our game, the first of which is *Human Fall Flat. Human Fall Flat* is a puzzle-platformer game where the player must explore a cartoonish world and solve environmental puzzles. This game influenced *Fish Tale* in its tone, mechanics and genre, with the tone of both games being somewhat silly and unwilling to take itself too seriously. Both of these games are also somewhat similar in genre and mechanics, operating as

goofy games that ask the player to platform and solve puzzles while sometimes fighting an awkward or obscure physics engine. Other games that inspired this title were older 3d platformers like *Super Mario 64*. This inspired some of the mechanics, in that both games place heavy emphasis on exploring each level thoroughly to find hidden collectibles before moving on to later levels. Another game that inspired this title was the puzzle game *The Witness,* a slower paced game where the player builds a narrative by exploring a 3d area and solves 2d puzzles. The game also implemented switching between these methods of interacting with the game, and the idea of environmental storytelling outside of puzzles was also very appealing.

Game Map and Navigation

Each level is a contained area where the player must collect all of the DNA bubbles/collectible objects to continue on to the next level. Objects can be found through platforming challenges, and/or puzzle solving. The first level is focused more on platforming, and will require the player to locate 10 collectible bubbles. Once they do so, a white capsule will appear and transport them to the second level. The second level has a bigger emphasis on puzzle solving. While the player retains the movement abilities from the first level, they are now in a more detailed and closed environment. In order to progress, they must find the tv remote, use it to complete a puzzle on the tv screen, and input a code from that puzzle into a safe combination lock. Upon entering this code, the safe will open and the player will be taken to a success / game over screen. Since the levels are relatively small and for the most part can be seen all at once, there is no map / navigational system in the level. The first platforming level is one long strip with platforms and collectibles that lead the player down it. The second puzzle level is a tight room that can be moved around in and whose camera can be readjusted with the mouse for a 360 degree view as the player goes through it.

Mechanics

The mechanics in this game can largely be broken down into two types, the first of which is Movement, and the second one being Interaction. The movement mechanics are essentially any mechanics that allow the player to move around the environment, and include running, jumping/falling and moving while affecting obstacles (pushing crates around the environment.) Interaction mechanics include picking up collectible objects around the environment, interacting with static 3d objects to trigger scripts (like the scene manager and the code input) and interacting with the 2d puzzle to reveal the secret password number. Interactions with collectibles or object collisions must be done/carried out while moving, while more precise interactions (like those with the 2d puzzle and safe input) must be done with the mouse while the player stands idle. This is laid out in the finite state machine diagram below (figure.

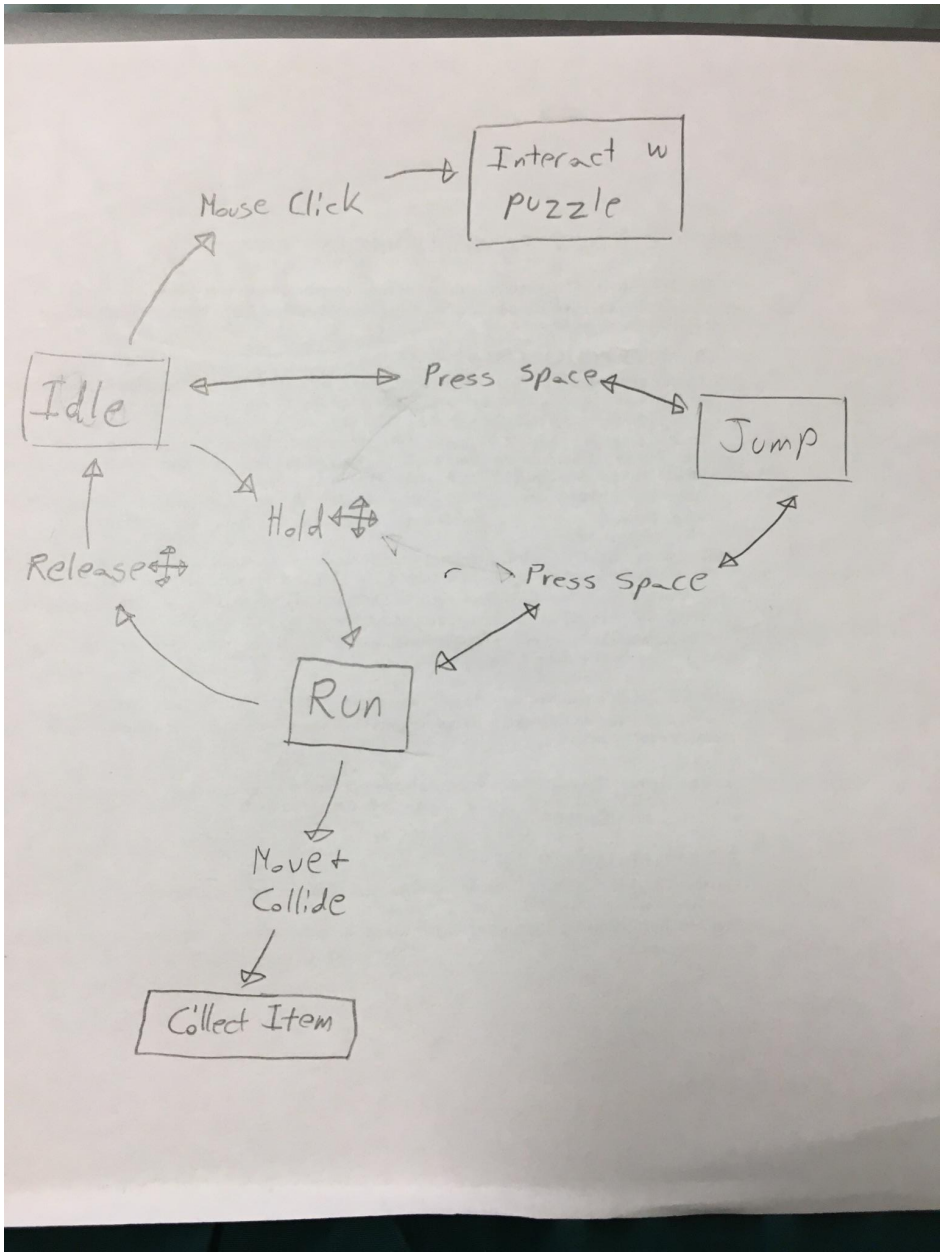

Figure 1. *FSM*

Game Art

Sydney, the main player character, is a small goldfish with large eyes, thin legs, white shoes. This is the player character, and can be controlled with the arrow keys. The DNA pieces are floating bubbles with blue DNA helical structure that the player can interact with by collision.

Production Milestones

Make more interactive furniture and	0.5 week

configure ways for the camera to look at the interactive furniture.	
A dialogue system that provides hints to complete the game available to use when enough DNA pieces are collected.	0.5 week
Final success scene animation and menu	0.5 week
Interactable moving npc to interact with.	0.5 week
A collaborative puzzle solving version with another player object and a different environment setting.	1 week

Technical Features

This game will be relatively easy to optimize as it is a graphically light game with very simple mechanics. The game will be made for computers and will be played with easy, universal keyboard controls. The visuals are pretty simple, and the level environments are all pretty small and will not require a lot of memory or processing power to render them. Most of the environmental animation(s) will be controlled and/or triggered through code, and the only premade animations used will be for the player avatar and will respond to player input. Most of the sound effects/music used in the game will be either looped throughout the game, or only triggered on specific player interactions.

Prototype as a Vertical Slice

The first level of the game will present the player with several game-centric assets including the playable avatar, the collectible ‘keys’ and intractable crates that can be pushed around the environment. Mechanically this level will see the player collecting their first keys by jumping off of a crate at the beginning of the level (figure 2), moving boxes around as part of an environmental puzzle and colliding with a colorful sign to change levels (figure 3). In the second level, the player will explore a more fully realized 3d world and interact with various parts of the environment to unlock interactable 2d puzzles (figures 4 and 5) that will unlock further level progression.

Figure 2. *Player jumps onto a box in order to reach an otherwise impossible-to-grab collectible.*

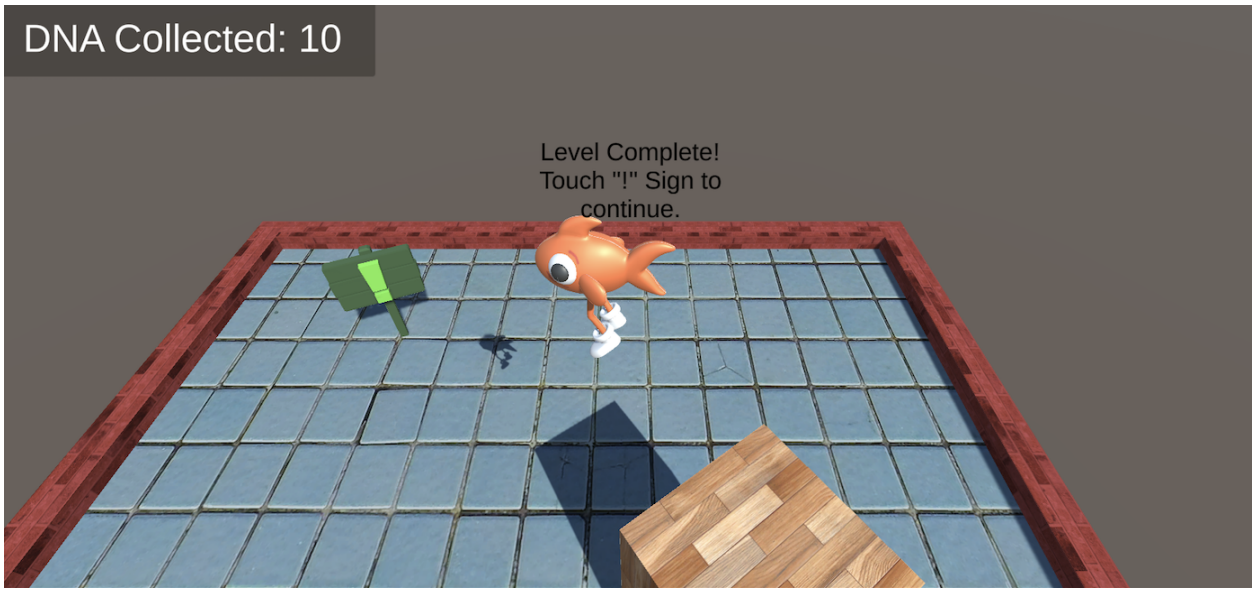

Figure 3. *Player grabs all collectibles in a level, which then unlocks the next level transport sign.*

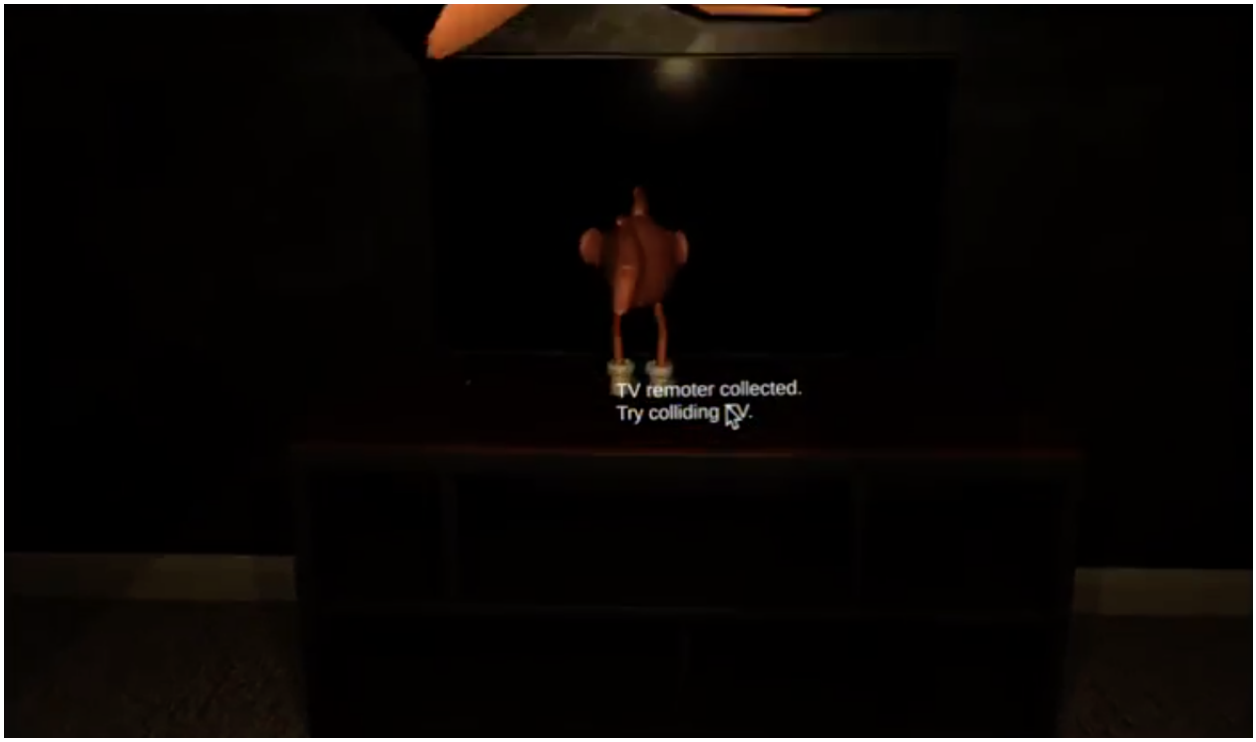

Figure 4. *Player jumps towards a tv after picking up the tv remote and unlocking the first puzzle.*

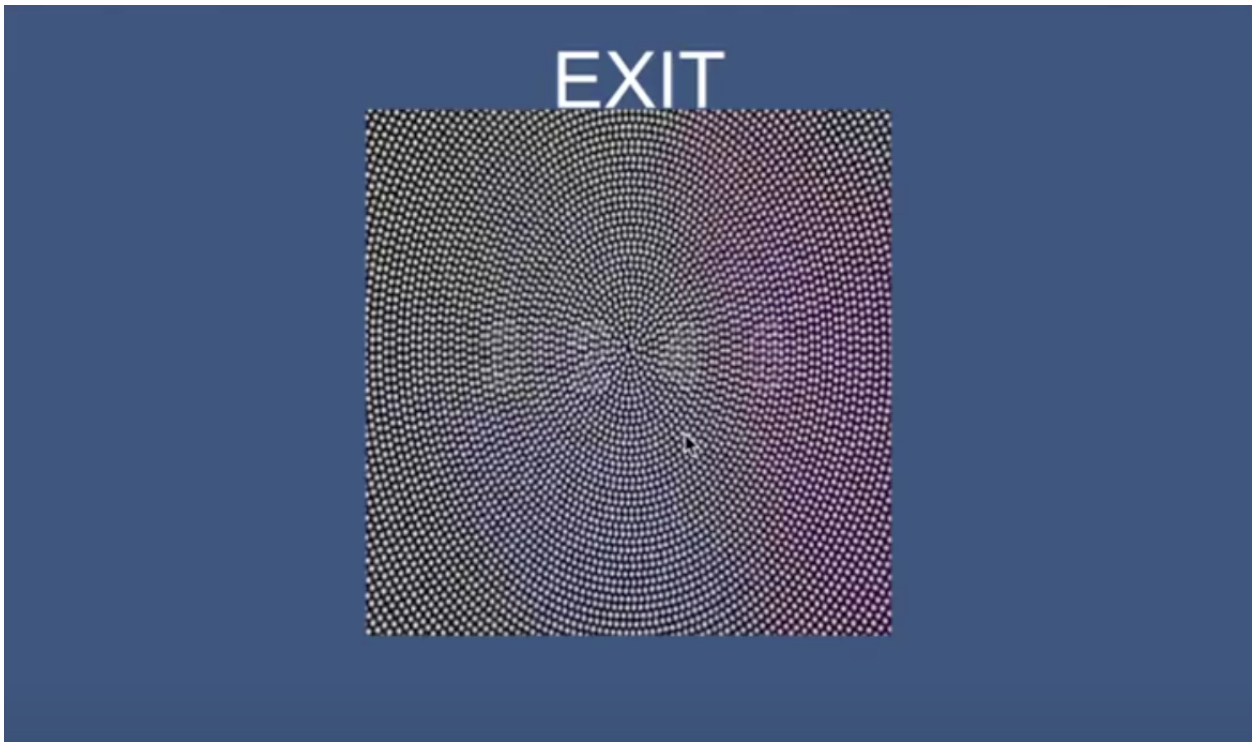

Figure 5. *Player interacts with a 2D spinning tile puzzle in order to collect a secret code number.*