Signal Creek

Hi! This is an overview of the year long Capstone Project I'm currently working on at the **NYU Game Center**.

It's a narrative-focused pixel art RPG.

I'm part of the **Art** team, as well as being the primary **programmer** & **project manager**.

We're a team of 5 multidisciplinary designers, and we all work together on story development, **narrative design**, and game writing.

Our three main characters are in the *Signal Creek Shopping Mall*, which has served the town of **Signal Creek, NJ** for 30 years.

The mall, now **in a state of near-disrepair**, was built on former chemical-dumping grounds. **Negotiations for its demolition are underway**.

Our three protagonists have returned to the mall from their pasts, seeking closure for their deepest unresolved struggles.

They're brought together by a strange phenomenon: they have been transposed into a **parallel dimension**, a version of the mall that **manifests their memories and subconscious desires**.

The Party

Nour Abdul Gamal (she/they)
Age 22, Egyptian-American
University Student (Parsons Photography)

Documenting the mall before demolition.

Has been in the Dream World for a day; she's more comfortable in the current situation, and is investigating the cause.

"We're in an alternate dimension."

Frequented the mall in the early 2000s.

Nicholas de la Cruz (he/him)
Age 16, Colombian-American
Public High. Student

In the mall on a dare to steal something.

Bumped into **Ms. Suwan** in "We R Toys" while pretending to play on a broken game console. Pestered her with questions until she found an old toy.

"We're in the backrooms."

Often visited the mall with his mother and younger siblings when it was fully open.

Ms. Kannika Suwan (she/her)
Age 46, Chinese-Thai
Criminal Defense Lawyer

Legal representative proposing mall demolition.

Bumped into **Nick** in "We R Toys". Seeing an old toy she'd wanted as a child caused both of them to **shift to a Dreamlike parallel dimension**.

"We're hallucinating from dumped chemicals."

Came to the mall a few times when she was in college.

Nour's Character Design

The Signal Creek team came up with our protagonists' personalities and backstories as a group, and we drew from our personal experiences when designing them.

Each protagonist has a **real** self and a **dream** self.

I designed the appearance of Nour, using her backstory and personality to inform my choices.

My process involved asking myself questions, like:

- how does Nour get ready for the day?
- What does styling her hair mean to her?
- What does she want to express with her clothing choices?

Paper prototype: narrative playtest sample

I designed this playtest and helped to conduct it in-person; it followed a TTRPG format.

Our goal was to see how players feel when embodying our characters; we were able to learn a lot about what players want to know more this way!

Narrative Testing Sample

The following text on this sheet will be presented to players who are testing our game. Our goal here is to see how players respond to observing certain objects. There's two planes of existence in the mall: the **Dream** plane (manifestations of the party's subconscious) and the **Real** plane (the mall as it is now, abandoned). The party **shifts** planes when they have an interaction with an object that evokes a strong emotional response, so we want to gather player responses, and see which interaction is most impactful.

The three of you are in the B&N Bookstore. Everything seems to be as it should be, before the decline of Signal Creek Shopping Mall.

Nick, you see:
- A stack of comic books
- An assortment of cool pens, many with little animal toppers on them

Ms. Suwan, you see:
- A new 1970 Mattel Hotwheels Thailand Police Diecast car
- A large stack of fresh copies of a book, released 1980s

Nour, you see:
- A retro 80s Polaroid camera
- A massive stack of copies of *The Price of Salt* by Patricia Highsmith
- A large green dragon plush

Designer's responses to players during testing

"Which object do you want to take a closer look at?"

Nick
- A stack of comic books
  - These books are so much better than the boring ones you have to read in school. You wish you could read these all day!

- An assortment of cool pens, many with little animal toppers on them
  - Even if the pens seem too childish, you don't care. You really want them! One has your favorite animal, a frog. The frog winks at you!

Ms. Suwan
- A new 1970 Mattel Hotwheels Thailand Police Diecast car
  - You were given a lot of cars like this as a kid. You weren't particularly excited about them, but you felt like you should've been.

- A large stack of fresh copies of a book, released 1980s
  - This reminds you of high school summer vacations, when you visited family in China. This book was one of many banned at the height of the Tiananmen Square protests. You remember witnessing firsthand the CCP's strict suppression of free speech.

Nour
- A retro 80s Polaroid camera
  - Nick says: "Nick: Hey, Nour! You've got a camera on you, right? Have you ever used one of these before?"
    You remember the times when this was the only camera you owned. (Wait for an answer)
    Nick says: "Wow, cool. These are like so old-school…"
    You think about how your passion for photography started at a young age. You pick it up and usher Nick closer to take a photo with him.

- A massive stack of copies of *The Price of Salt* by Patricia Highsmith
  - You remember how you read the book in snippets when you visited the store with your family until there were no more copies left in stock. You never finished reading it. (You specifically realize that these books appear unfinished: they seem to end right around where you had stopped reading back then.)

- A large green dragon plush
  - You had the same dragon as a kid, from the story book *Puff the Magic Dragon*. You remember your dad singing the story to you when you were young, in the tone of the Peter, Paul, and Mary song. You think about how your relationship with your dad has changed since then.

"How do you, as this character, feel?"

Software Design

- We're using Godot Engine (mono) which uses C# and GDScript
- For narrative systems, we're using Ink by Inklestudios.
- As primary programmer, I've designed the system for determining object sprites and their placement in rooms, which changes when the party shifts between the **dream** and **real** worlds.
- Documentation for creating new "shiftable" objects can be seen to the right.
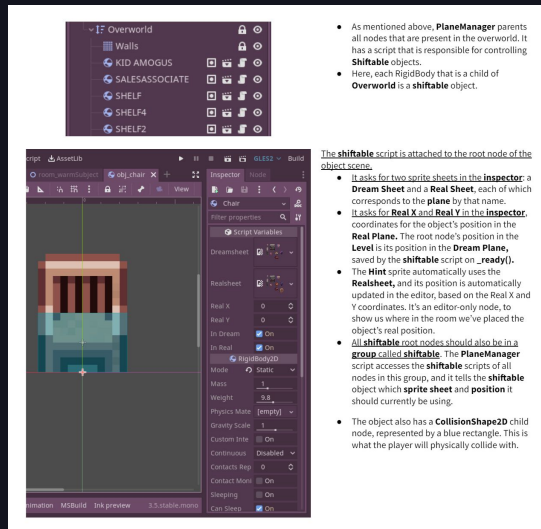
- As mentioned above, **PlaneManager** parents all nodes that are present in the overworld. It has a script that is responsible for controlling **Shiftable** objects.
- Here, each RigidBody that is a child of **Overworld** is a **shiftable** object.

The **shiftable** script is attached to the root node of the object scene.
- It asks for two sprite sheets in the **inspector**: a **Dream Sheet** and a **Real Sheet**, each of which corresponds to the **plane** by that name.
- It asks for **Real X and Real Y** in the **inspector**, coordinates for the object's position in the **Real Plane**. The root node's position in the **Level** is its position in the **Dream Plane**, saved by the **shiftable** script on **_ready()**.
- The **Hint** sprite automatically uses the **Realsheet**, and its position is automatically updated in the editor, based on the Real X and Y coordinates. It's an editor-only node, to show us where in the room we've placed the object's real position.
- All **shiftable** root nodes should also be in a **group** called **shiftable**. The PlaneManager script accesses the **shiftable** scripts of all nodes in this group, and it tells the **shiftable** object which **sprite sheet** and **position** it should currently be using.

- The object also has a **CollisionShape2D** child node, represented by a blue rectangle. This is what the player will physically collide with.

Formatting for the inkparser.gd script

In our project, we have a script called **inkparser.gd** that interfaces with the **InkPlayer.cs** script.
- **InkPlayer** is a C# script, the nice person who made our Godot Ink plugin adapted it for Godot.
- **inkparser.gd** is a GDScript written by Max. It takes user input and tells the **InkPlayer** what to do, such as select a choice or go to the next passage. It also takes information *from* the **InkPlayer**, and uses it to create Control nodes for our dialogue UI.

What inkparser.gd looks for

Case 1: A Choice entry
inkparser.gd sees a colon : as the *first* character. This means that this line is actually a title for a choice entry. In this example, all of the choices are for Nour. In other cases, the title could be The Party, Nick and Ms Suwan, etc. It will parse the name, and then move on to the next line, expecting choices to immediately follow.

```
:NOUR:
* [Rolls eyes.]Nour rolls her eyes.
    -> antibodies
* [Growls.]Nour growls.
    -> antibodies
```

What the InkParser produces in the game:

Case 2: A normal Dialogue entry
inkparser.gd sees a colon : only *after* the first character. This indicates that it's a normal dialogue entry. It parses text *before* the colon as a name, and *after* the colon as what that character says.
Also, note the space between the colon and "Hey". The parser expects that space.

```
KID AMOGUS: Hey. Getting the vaccine made me realize how I want another
shot with you. Choosing between Pfizer and Moderna was easy but I don't
think I could pick anyone over you.
```

What inkparser.gd produces in the game:

I've also designed the system that connects the Ink backend with our Godot project and game UI. Above: code documentation for writers.

Some of the pixel art I made for the game!