4-10-2022

Devour

Rachel Miku Richardson

Devour

by

Rachel Miku Richardson

An Honors Capstone
submitted in partial fulfillment of the requirements
for the Honors Diploma
to

The Honors College

of

The University of Alabama in Huntsville

April 10, 2022

Honors Capstone Director: Professor Vincent Argentina
Associate Professor of Art, Art History, & Design

DocuSigned by:
Rachel Richardson 4/12/2022
DF41E6B6F04441A...
Student Date

4.10.22
Director Date

DocuSigned by:
Kathryn Johnson 4/13/2022
4FA399FDB7644CC...
Department Chair Date

William Wilkerson Digitally signed by William Wilkerson
Date: 2022.04.21 14:25:48 -05'00'
Honors College Dean Date

HONORS COLLEGE
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Honors College
Frank Franz Hall
+1 (256) 824-6450 (voice)
+1 (256) 824-7339 (fax)
honors@uah.edu

Honors Thesis Copyright Permission

This form must be signed by the student and submitted as a bound part of the thesis.

In presenting this thesis in partial fulfillment of the requirements for Honors Diploma or Certificate from The University of Alabama in Huntsville, I agree that the Library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by my advisor or, in his/her absence, by the Chair of the Department, Director of the Program, or the Dean of the Honors College. It is also understood that due recognition shall be given to me and to The University of Alabama in Huntsville in any scholarly use which may be made of any material in this thesis.

Rachel Miku Richardson

DocuSigned by:
Rachel Richardson
DF41E6B6F04441A...

Student Signature

4/12/2022

Date

Table of Contents

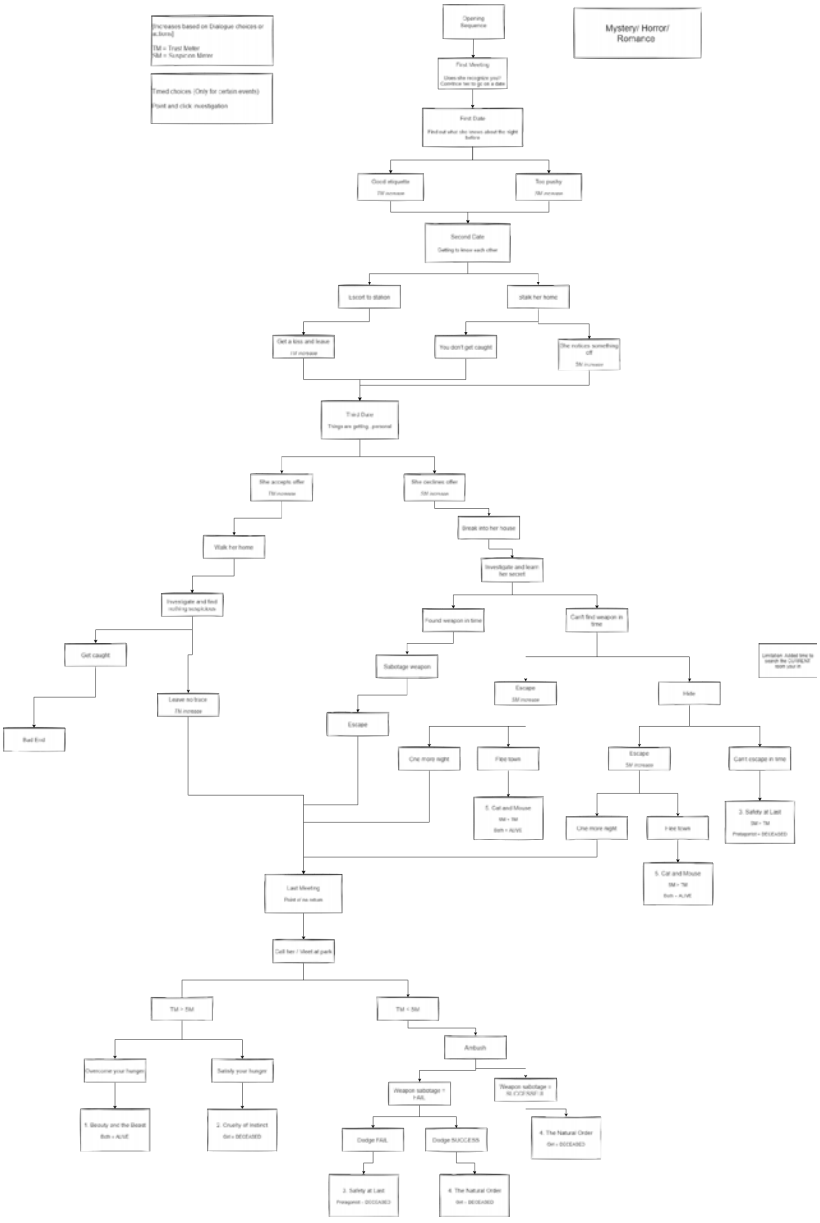
Abstract

I created a horror/mystery game from an original story concept. As per the standard visual novel format, players will have to make choices that will affect the chances of earning a particular ending. Much time was devoted to the writing, especially considering dialogue. Each decision the player makes adds up to one of two-point counters that are coded to alter which ending is obtained depending on which one is higher. For the game to be experienced in full, I programmed multiple decision trees and hidden lore within minigame segments that encourage replay value.The game's art design will be mostly based on concept art I prepared during the summer 2021 and collaborative feedback by my teammates. Illustrations include environment backgrounds, character portraits, special event scenes, etc. Sound design includes copyright safe soundtracks as well as various SFX of which are credited in the end cards.

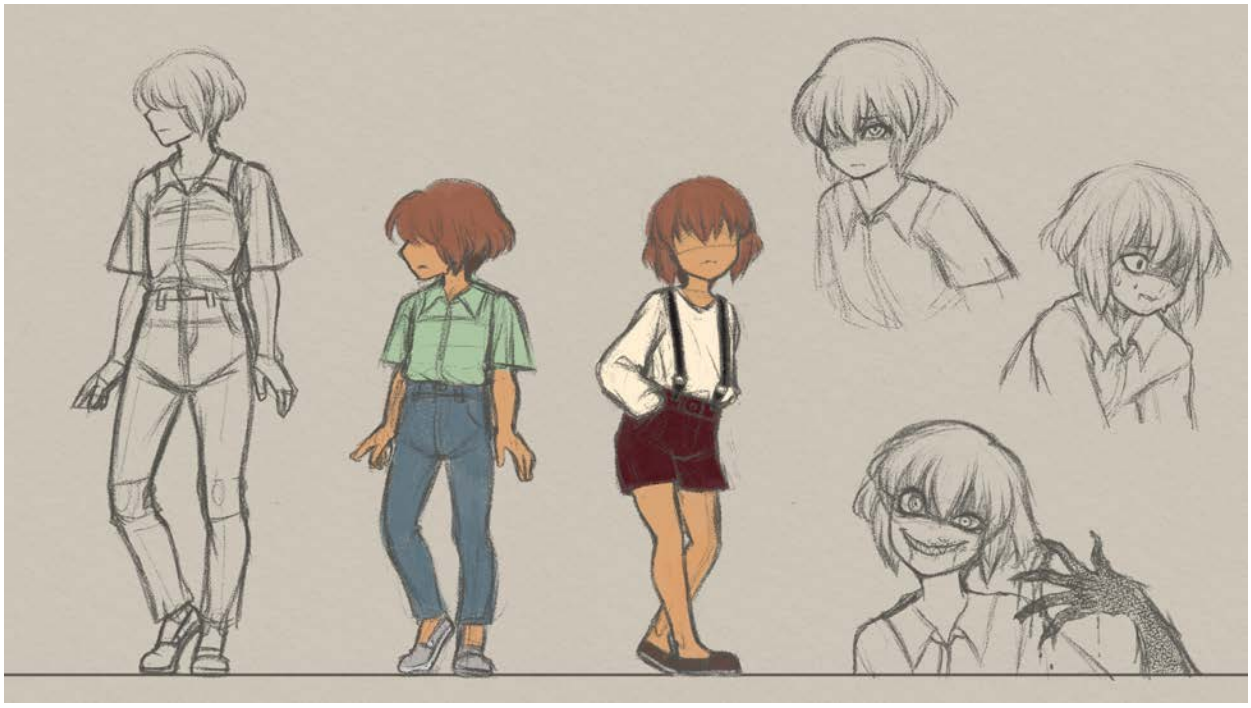
Planning/Concept

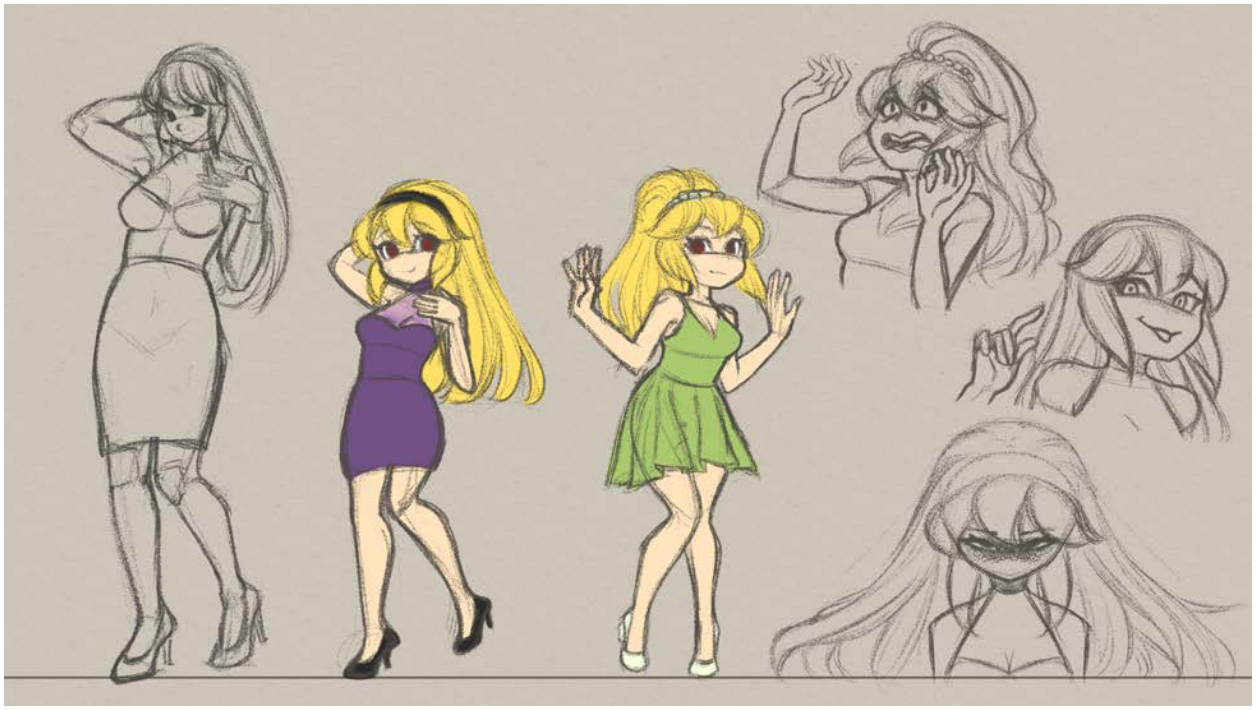
At the beginning of summer 2021, I began building up my initial concept. Since there were a limited number of those with programming knowledge that would likely be attending the course and my own lack of programming knowledge, I settled on formatting my game to fit one of the most basic types of games in regards to coding – a visual novel.

After deciding on the media, a basic story idea was determined. Something simple but intriguing enough to gain attention. A horror/romance about a monster pursuing a girl for better or for worse. Most of the script would be determined later but I cosidered various ideas until I came up with a type of flowchart of how things could flow in the story depending on choices the player made. The actual game was simplified due to time constraints.



Then I developed some first pass concepts for the characters. (Protagonist [Your chosen name], their monster form, and the deuteragonist [Delilah].)





After that, a quick powerpoint for the game's pitch was made including materials such as photo boards of types of environments, aforementioned character concept designs, basic game mechanics, and what platformers the game could be played.

Obviously, the game was approved to start production, and my team was assembled. We consisted of 4 members in total:

Myself- Project Director / Technical Director / Concept Artist / Writer / Programmer, Background Artist
Kevin Guo - Background Artist / Project Manager
Grace Martin - Art Director / Character Artist
Rachel Watts - Sound Director / CG Artist

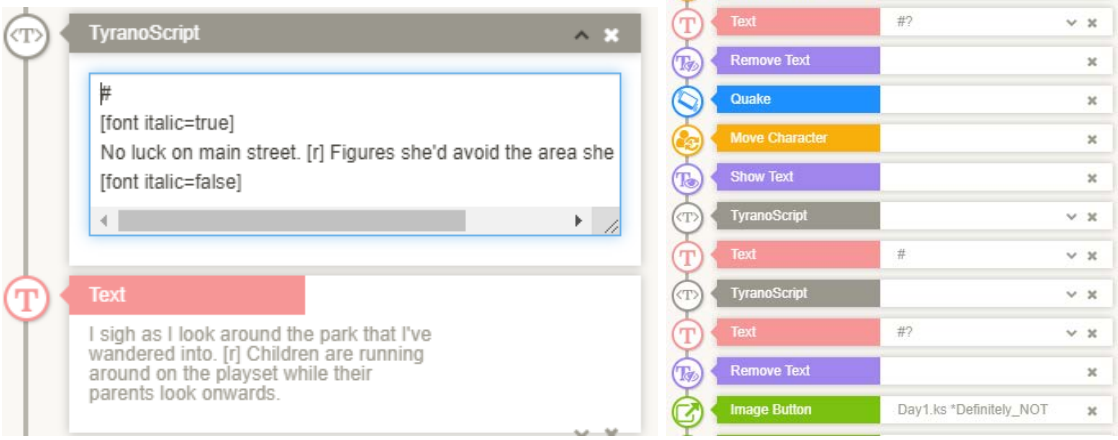
Our first meetings consisted of us sorting out ideas we sought to implement and how best to plan our tasks with Guo keeping track of them on Shotgrid (project management software used to schedule estimated times, dates, number of tasks, etc.).

Programming : Writing

We spent about two meetings discussing ways to flesh out the story and another couple days modifying the environment, character, and UI designs which also served to coordinate the skills we were best suited for, which were decided as above.

I was the programmer but also the main writer, and though I liked many of the ideas my teammates pitched, there unfortunately wasn't enough time or human resources to fully implement them. For example, we had wanted to include much more interactive conversations with Delilah such as a second date, more variables to determine more endings (like finding or not finding a hidden object in time), and a more in depth escape sequence.

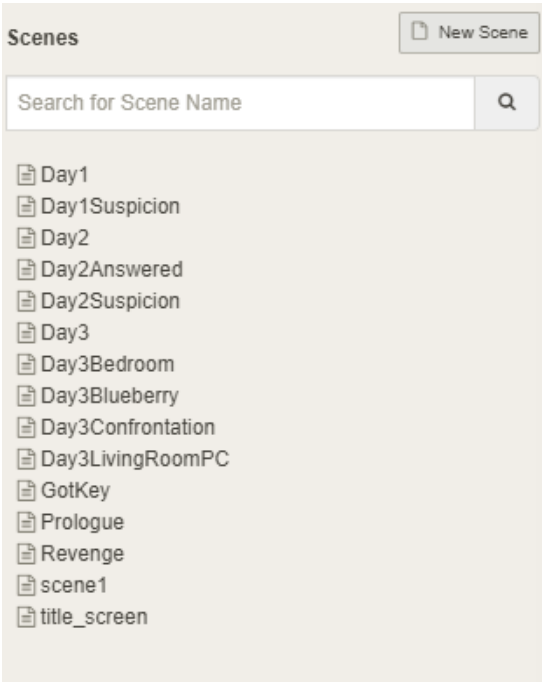
I tried my best to keep the bare bones of what we wanted despite not being much of an author myself. Thankfully, members of my team would assist during the more difficult parts (particularly the decision trees) during class meetings. Programming the dialogue and description of the script wasn't a difficult task though it was laborious. The text script was coded in two styles : Drag and Drop and Tyranoscipt. The former was used primarily for dialogue while the other was used for descriptions and the protagonist's thoughts.



Programming the dialogue choices, character animations, and scene changes were similar as to the difficulty in programming them due to just dropping in what code I needed and adjusting timing and such as necessary. However, programming the variable for dialogue choices was challenging in that it took days of bug-testing and adjustments just to have the meters' outcome work correctly and not end up with the player failing regardless of how amicable they acted with Delilah. Nevertheless, I managed to brainstorm enough to fill out the inbetweens of a more simplified version of the flowchart. The endings had to be reduced to two not excluding the dead ends yet more or less keeps to the spirit of the original chart.

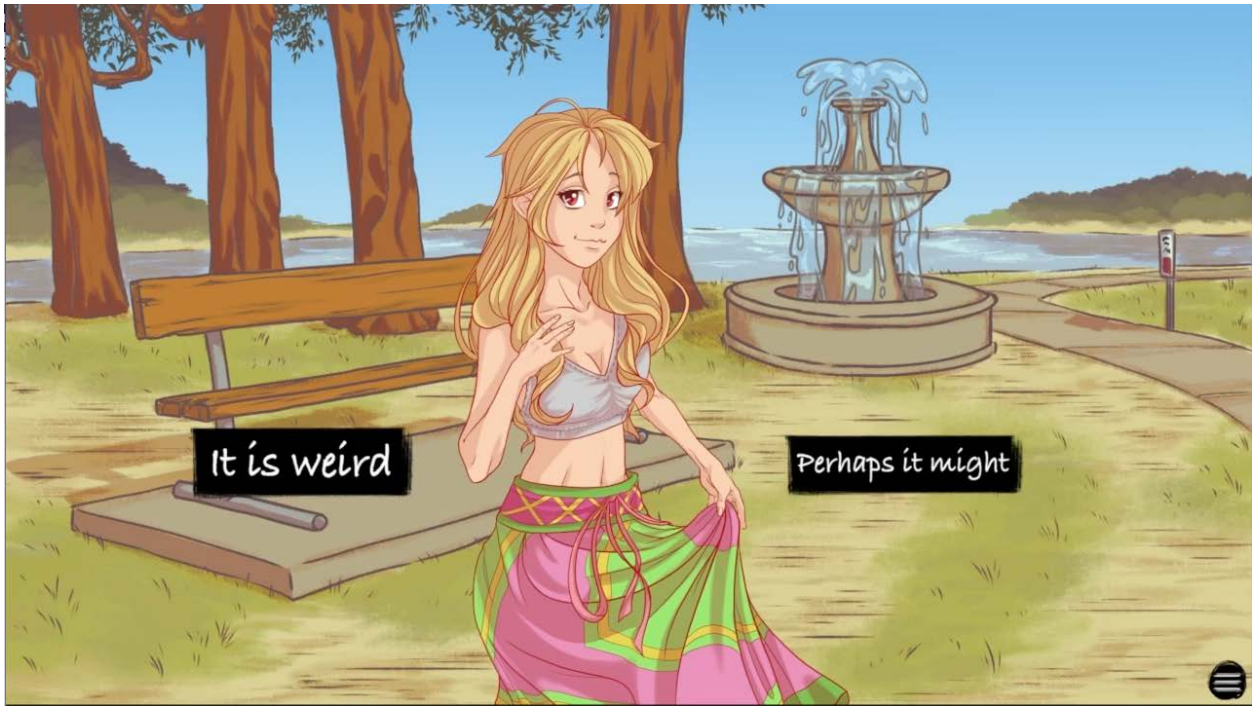
Programming : Game Mechanics

For this project, I used a drag and drop style game engine called Tyranobuilder. While relatively simple to use, some adjustments had to be made in order for certain mechanics to work. In the story script, the entire game takes about 4 days in game time- the Prologue, Day 1, Day 2, and Day 3 and the code is sorted into categories based on these days.

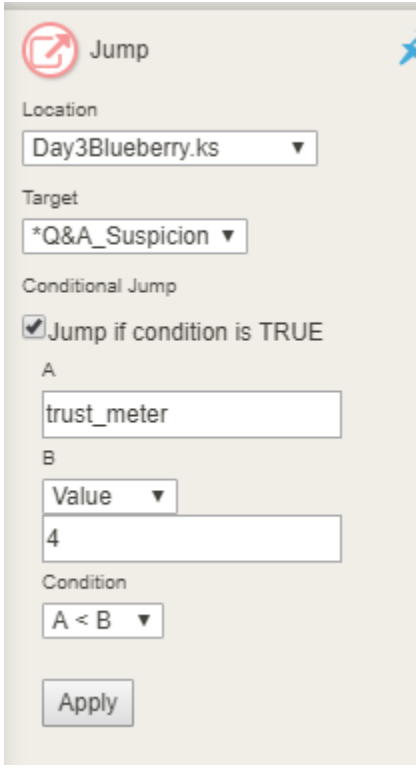


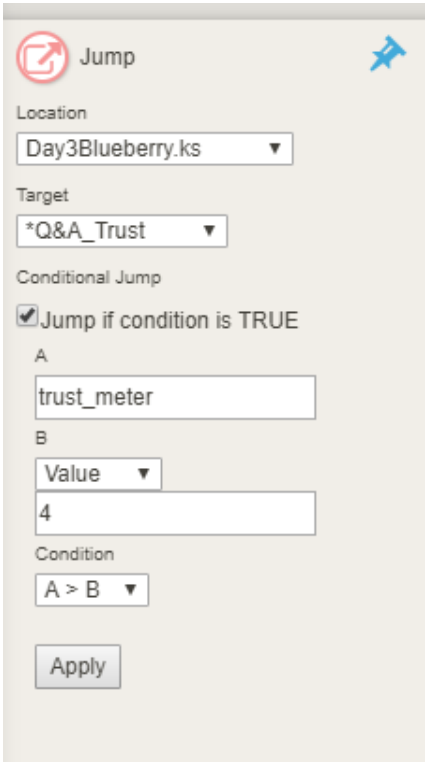
Each day with the exception of the Prologue has multiple dialogue options which lead to different dialogue trees. Some are insignificant while others will drastically change the story, which could potentially skip scenes and/or lead to a specific ending. Each choice is filtered into one of two point meters [Trust and Suspicion]. Whichever meter is higher [and considering you don't critically fail an encounter] will determine whether you would achieve the good or the bad ending. However, in order to simulate real interaction, the player cannot see which meter is highest or which choice they make filters as Trust or Suspicion. Thus, it is up to the player to choose their options wisely though, more often than not, they will be able to determine which point type they get by observing the character they are responding to's reaction to their choice.

Ideally, if they manage to get close enough to Delilah points [4], the code will continue the good route and jump them to the good ending. If they fail to earn enough, they are jumped to the bad ending route.



[example of player choice above/ variables they are factored into below]





In addition to the point system, two minigames were implemented, two point and clicks and three quick time events.

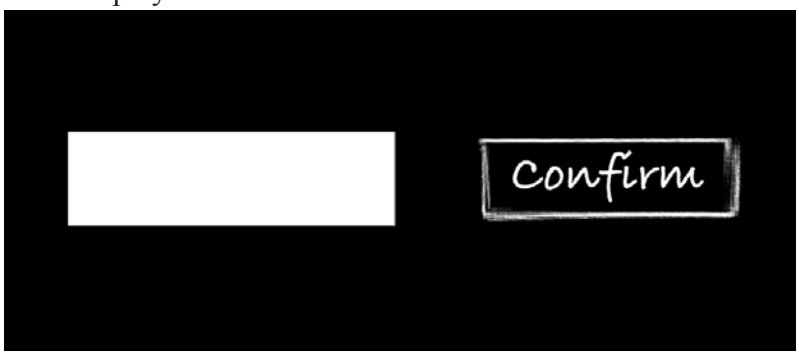
The first point and click room functions differently depending on the time of day. ONLY at night, after searching are you able to enter the second point and click room. There were many adjustments that had to be made in order for this work involving variable and more separated code sections. The point and click sections are also limited in accessibility by the meters. However, one is available no matter what route you pick and the other is hidden unless aiming for the bad ending. By limiting the accessibility of how many things can be searched for in different sections during different times of day, we hoped to encourage multiple playthroughs to explore all the secret areas.

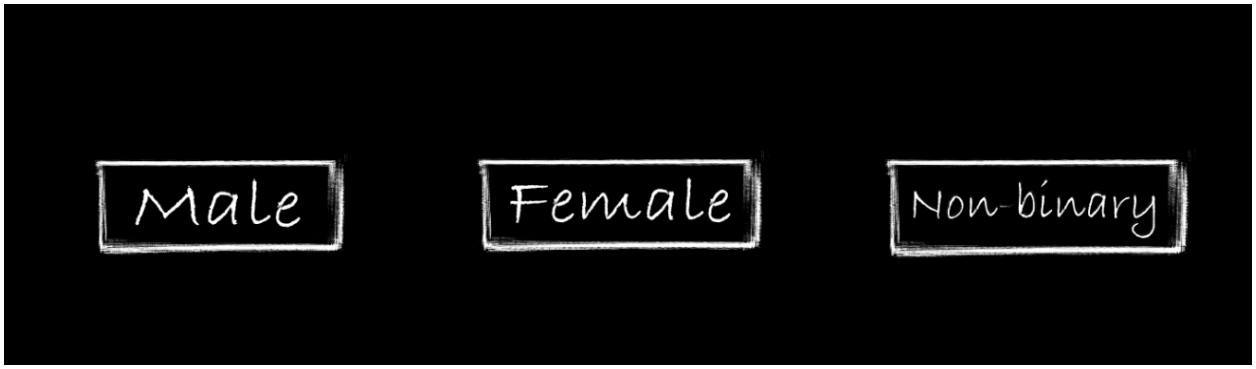
[*Stars as interactive areas. Daytime with unlimited time, Nighttime with limited time]

[*Stars as interactive areas. Daytime with unlimited time, Nighttime with limited time]

All three quick time events are all set to around five seconds. Two options are presented on screen and the player must pick one before time runs out. If not, the choice defaults to a game over sequence.

For more immersion, type boxes [inputting custom name] and gender options were dropped in as persistent variables that are remembered by the game and used while playing to increase player immersion.





In terms of User Interface, most work done was simple customization of presets regarding appearance. However, some elements required manual tweaking, like the skip button which was adjusted to interrupt the execution of the code at specific times instead of simply skipping from one set of choices to another. There were some frustrations regarding the strange limitations of the game engine with typical customizations available and others not (like changing the hover icon of your cursor or being able to move buttons on the menu screen).

Art Assets

Work on character sprites, CG, and environments started simultaneously though the sprites and CGs were implemented faster with all the environments following. The environments had more iterations to them. Originally we had photos as placeholders in order to specify different scenes and then replaced them with environments drawn by Guo. Initially he was the sole worker for this so some images had to be cut from the game or heavily simplified in order to fit within the initial time constraints due to the sheer amount of work that needed to be done. While the interiors of the house are fitting in their simplicity due to the context of the story [Delilah only recently had moved into her home], I felt that the other scenes needed more detail and thus adjusted them accordingly during my time in my Professional Practices course.

[Before and after pictures below. First versions by Kevin Guo, second by myself.]

Alleyway (Day) : Guo

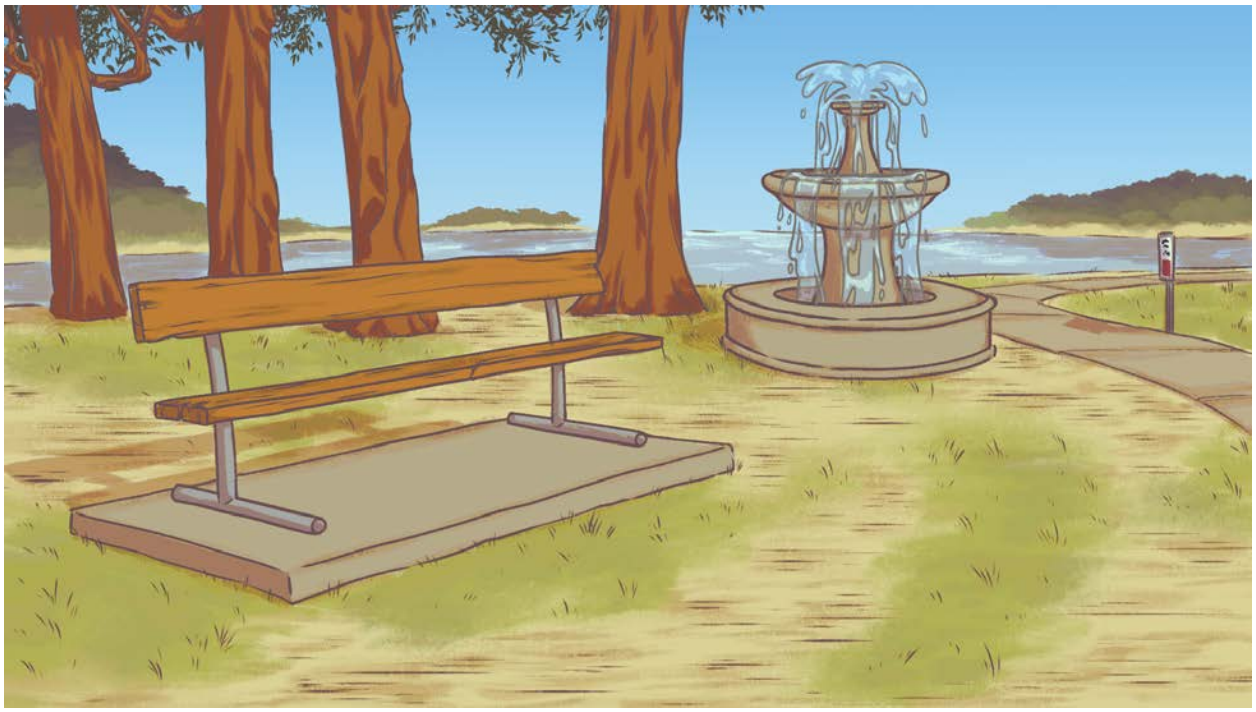
Alleyway (Night): Guo

Alleyway (Day) : Me

Alleyway (Night) : Me

Park (Day): Guo

Park (Night): Guo



Park (Day) : Me

Park (Night) : Me

Main Street : Guo

Main Street : Me

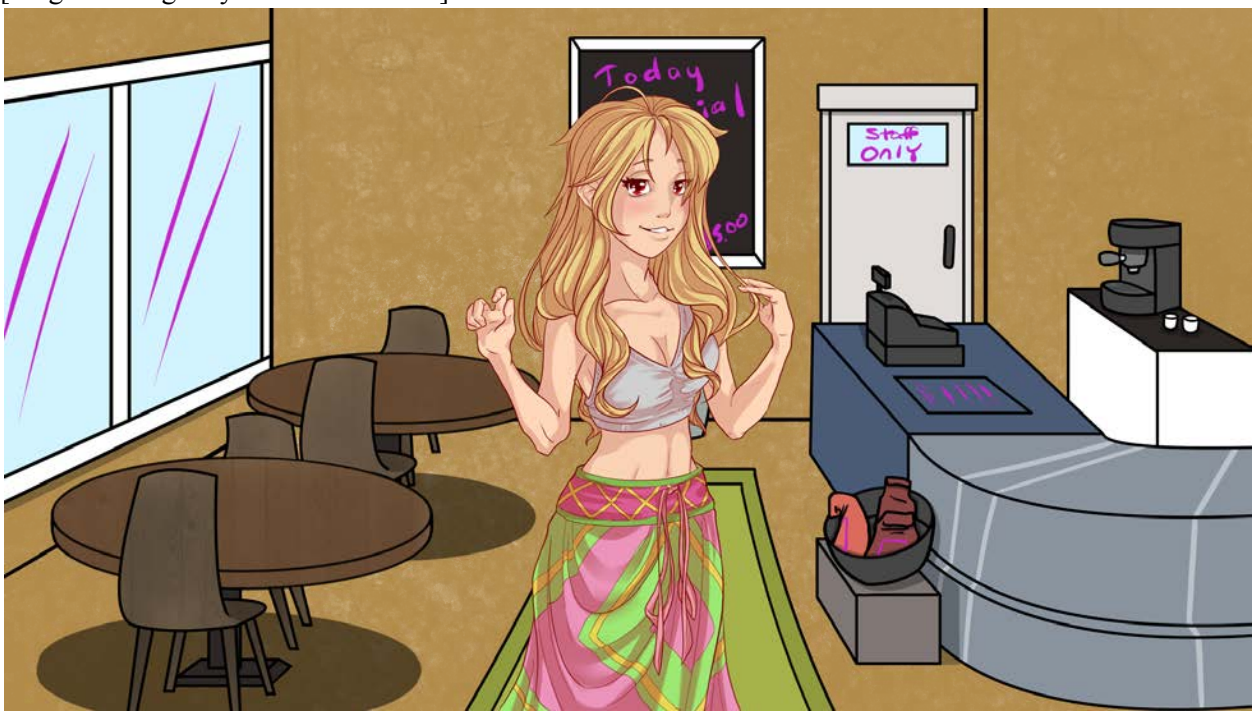
Nonetheless, the process for all these works was about the same: line art, flat color, and rendering - with the added step of filters for ones with different time of day. The exception being the UI elements which were simple enough to not need much such a long process. [images below : Cafe Interior]

Line Art

Flat Color

Rendering

[Original design layout of Cafe : Guo]



[Final design layout of Cafe : Me]

Unadjusted/ Finals of House (Guo)

Living Room (Day)

Living Room (Night)

Kitchen

Bedroom

[Sprites Sample by Martin]

There are many sprites; only a couple are shown here. We implemented several depicting emotions such as anger, surprise, happiness, concern, determination, and neutrality. Two outfit designs, the monster-hunter and casual as well as versions with her hair up or down (the version of which changes based upon player decision) and versions with filters overlaid to fit the time of day.

These sprites were fairly quickly finished leaving plenty of time for small adjustments such as line color and giving Martin time to create the UI elements and help fix anatomy issues with Watts on the CGs

[CG Event Screens : Watts]

Night Sky CG

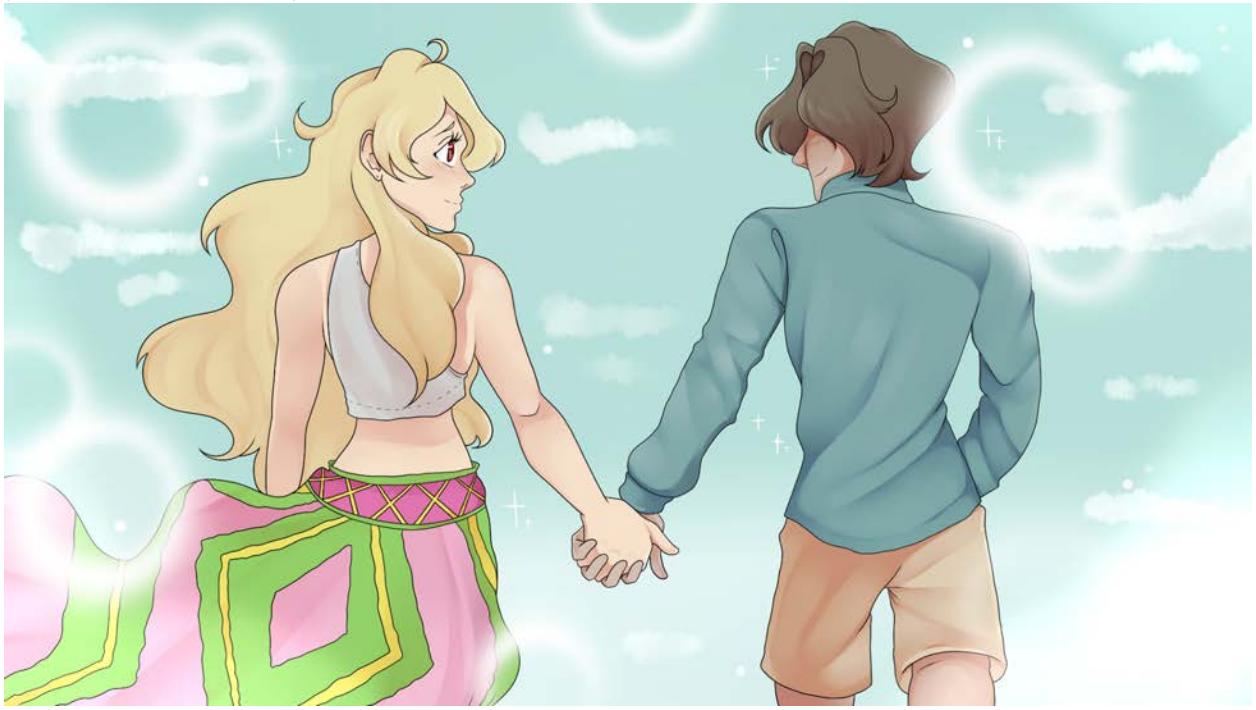
Prologue CG 1

Prologue CG 2

Cafe CG

Due to not having access to the original drawing file, I was unable to adjust this CG during my Professional Practices course, however, I implemented as many of the same objects in the redesigned cafe as possible in order to maintain some cohesion.

(Good and Bad End CGs)



Watts also designed the title screen. [Game buttons by Martin]

The CGs were finished at a steady pace throughout the semester, and though not much assistance was required, they took more time than expected. Therefore, I helped search for additional audio clips when needed to lessen the load. As of the game's creation, audio clips consisting of sfx and music were free for public use (though under certain conditions such as credit in ending scenes).

Main Menu UI Screen : Martin

Out of all the art assets, the UI elements were the quickest to complete and implement.

Dialogue buttons [Sample] : Martin

Cursor Icons : Me [I created these with intention to decorate the mouse cursor, however due to game engine restrictions, was unable to do so]

Game.exe Icon : Me

[Typical Scene Layout]