

Game Design Document Update

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Skills Update

Since the last submission, I've worked tirelessly on this game and as a result have an in-depth understanding of the UNITY engine, it's bugs and the C# language as it relates to UNITY. I can safely say that I have the skills necessary to code my dream projects and the assets to build them. I have a better understanding of workflow assets and the necessity to use add-ons to streamline games and enhance UNITY's baseline offerings. There are various places where my game could still be improved upon with additional assets and polish, but at present, it is content complete and free from MOST bugs within the Unity system. I say most because there are bugs that even the devs haven't worked out solution to yet.

Game Mechanics

The game was revised to become a JRPG from a whole host of other ideas which were far beyond my understanding at the time. At present, the game is now a quick 20 to 40 minute play through [using cheat codes] or several hours depending on how many levels you want to grind through and is fully playable from the web.

Scene Transitions

A major upgrade is the use of Unity's PlayerPrefs system between scenes. I had to learn how to save all the data needed and load into the next scene. This took months and I discovered that UNITY is really not the greatest engine for WebGL RPG games because of this issue. In WebGL there isn't a way, that I'm aware of, where I can use scriptable objects for data saving. There is a way to use JSON but its pretty complex and would take several additional months of research and training, which is unfortunately, time I do not have. Instead I used the PlayerPrefs system, which I came to later find, could not use arrays and was limited to data in the form of individual variables of type INT, STRING or FLOAT. This means that any BOOLS that I needed to save had to be stored within a binary system that also decoded the various meanings. While that sounds easy, it can become quite complex given the amount of data required in an RPG, between scenes. Although this may have been a mistake, I wanted to understand and work with UNITY's native systems before buying an asset to handle this. Now I know why there are various assets for this purpose. PlayerPrefs add little registry keys to the host's computer which sometimes work and other times don't and the Unity developers don't really provide any explanation as to why this happens or insight into troubleshooting. The overall fix for this would be to plan out the entire game over ONE scene and just have transform points to transition the player between tilemap sections. Unfortunately it wasn't until the very end that I came up with this fix and instead used the PlayerPrefs to transition data between the maps and the battle-scene. This ate up a significant amount of development time and thoroughly overcomplicated the scripting of the game. As

a result my organizational skills have grown tremendously in addition to my understanding on linking scripts and objects between scenes. I'm sure it will come in handy in the future.

Upgrades & Additions – Combo / PSY Potions.

The battles are now far more complex affairs that utilize a combo system with a mutation [spell system]. Each mutation used on an enemy is saved in the combo system and subsequent mutations used in battle can either enhance the damage sustained, fizzle the spell combo completely or have some other effect on the Player's battle stats. They operate on the elements: fire, acid, ice, electricity and healing. In addition to that, the player now uses PSY [psychic] points which are essentially Magic Points that keep a running tally of the extent to which the player can use the spells in any one battle. The PSY points run out rather quickly and thus I added a 'charging' option which allows the user to regain a random number of PSY points during battle, however, charging does carry some risk and can either totally fail or worse cause an undesired effect. PSY potions or Culta-Colas can now be purchased at Vending Machines which exist in the game overworld. They fully regenerate the player's PSY points and can be used at anytime during battle without turn penalty. To make the game a little more difficult, I made it so that that player is only given one life and therefore must choose their actions in battle wisely.

The Overworld

A few things that were added to the Overworld were disappearing tiles, switches and items. The maps in version 1 were pretty empty. After learning how to write scripts and use triggers I was able to place areas on the map that tripped flags which in term opened doors or revealed new sections of the map. The sewer for instance requires that a force field door to be opened by flipping a switch in the middle of the map. Once inside another 2 switches must be turned on for the water to be drained from the final section and a key obtained to open the exit stairway to escape the sewer section. Once inside the town, the player can also meet up with a crazed police officer who tells him to search for a key near the gas bar. Once the key is obtained, the player, can then backtrack to the police officer and open the parking lot doors to obtain a new weapon. Later once the player arrives in the town park, the water is drained away to reveal an ambush and provide a pathway to the StarCharger. Another tile triggers the StarCharger entrance and the Player boards the vessel and later presses a button which takes them to the end screen. The addition of these triggers is really a game changer for the Overworld. It enables new tiles to be added or removed over the primary layer, making the Overworld a bit more dynamic.

Added Actions

I added a mechanic where some actions with certain creatures do not trigger their turn, it is up to the player to find out the correct combinations. I find it speeds up the game when the player can execute several actions or attacks on their turn as opposed to the usual back and forth that is common to RPG games.

Vending Machine Candies and Colas

The vending machines also sell Heal potions in the form of Candy Bars and PSY potions in the form of culta-colas which can also be used during battle to replenish the Player's Hit Points / Life Points. The battles near the end are fairly challenging and can be quite frequent so an ample supply of PSY and HP items are necessary.

User Interface

I've added a HUD in the left hand corner, it consists of two bars and a counter. The first bar is to track the Player's Hit Points, the second tracks how close they are to going up a level and the third tracks the amount of money held. Prior to this submission, I didn't have a 'currency' and I didn't want to concentrate all effort on buying weapons and gear to make the player better. Instead I feel that the abilities are more interesting and make for a quicker game and having weapons hidden throughout the levels encourages exploration. This RPG isn't supposed to take more than an hour or so to really complete. It's more a game to demonstrate what I can do inside UNITY to a potential employer. Also I wanted to focus more heavily on the story. The teacher suggested a mini-map but I feel like this robs the player of exploration as does the constant hand holding of a defined goal/objective. To be honest I resent adding the 'goal' in the top right of the screen. I grew up in the days of pen and paper RPGs and very rarely did a DM tell you exactly what you were supposed to be doing at every juncture. It was up to the player to find the paths and piece together the story through dialog. We didn't have detailed instruction manuals, hints or strategy guides. Games were played through a series of trial and error and in the early days of the Commodore 64 Gold Box RPGs, you were essentially foisted into an Open World setting and you had to discover the path for yourself. The JRPG sort of dumbed down this mechanic for a younger audience and while that was fine in the NES era, its sad that the 'minimap' and constant quest reminders became an RPG staple.

Battle Effects

The Battle Scene has a re-done HUD with graphics purchased from unTied Games Mechanical pixel UI set that I re-purposed from my first assignment. I added a special type of shader through the ALL IN ONE sprite shader asset and tweaked it with the JuiceFX tool. Each time the player misses successfully dodges a shot, a beam of white light passes through him. When the player is hit, he flashes red to indicate damage. When he uses his attack, a battle animation is shown of him holding the last weapon they picked up. I didn't want the use of weapons to be the specific focus of this game so I didn't include a buying/selling system for upgrades. I don't think 'weapons' and their availability fit the universe that I've constructed. I also added a status window that updates the player as to whats happening in text. There are 7 different types of mutations/spells each with their own animation that plays over the image of the enemy. Each time a mutation is used the player splits into 3 images RGB to indicate the use of the mutation/psychic power. Those were made in JuiceFX by tweaking some of the available pre-sets.

Enemies

I added several new enemies by purchasing additional packs from Malibu Darby's Horror City set and DithArts' Sci Fi Character set. Since the game has a horror/science fiction feel. I wanted the enemies to start off as cult members for the 'parasites' and slowly change into the Augger aliens that are trying to hunt down the parasite princess.

The StarCharger

I wanted the aliens in the game to have a strange organic/horrific feel to them so instead of flying around in spaceships made of metal, I bought the finalbossblues' Time Fantasy: Inside The Monster's Belly pack and used the beating heart as the 'spaceship' and the included tiles to build a room with grotesque control surfaces. In further iterations of the game in VR, I'll use the tiles to really 'flesh out' the StarCharger for further adventures.

The StarCharger Crew

I used enemy sprites from the finalbossblues' Time Fantasy: Inside The Monster's Belly pack. I thought they looked like a fitting bunch of aliens that would fly an organic spaceship. I didn't want to make them enemies, instead I prefer them as set pieces to this 'invasion'.

NPCs

There are a few NPCs roaming around. I used sprites from Malibu Darby's Horror City Character Pack and Sprite Packs. Although I have a few NPCs around, I didn't want to make them central to the theme, simply because the cities are supposed to look vacant after the 'invasion' happens. It would be strange to have NPCs walking around talking as if nothing was happening. That's why there are only a few in each level.

Game Story

The game story remains largely unchanged except for the addition of more dialog between the character [Adam] and the parasite that inhabits him. The entire plan for the story is that these parasites are being forcefully injected into the human population so that they can re-grow their bodies from within their human host. The player character [Adam] accidentally hits a car carrying one of the parasite V.I.P.s. He brokers a deal with the cruel life form after threatening to kill himself. The parasite informs him that if they can get aboard a 'StarCharger [spaceship]' which is waiting in the town ahead, they can pull her out and put her into a new body. Once aboard the game ends and tells the Player to wait for the sequel to continue following Adam and the parasite on their adventures.

Target Audience

The target audience will be developers and game designers from local software companies. With the overall aim of scoring a job or a work contract for UNITY game programming. .

Additional

All assets were purchased through the Unity asset store and Itch.io. Not all of the components were useable when I tried them. And many of the more popular assets will require a significant time investment to be added.

Conclusion - The Prototype

I've decided to rebuild my adventure in VR. I have a Vive and I've purchased all the necessary tools in UNITY to do it. I'm going to build the world out of the same tiles but give it a 3-D effect akin to Paper Mario: TTYD and the VR game Compound.

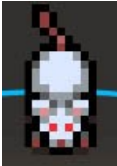




Game Items

Item Name	Item Picture	Item Details
Life Gem		Permanently increases the players life total.
XP Gem		Adds 100 experience points towards a new level
Spike ATK Gem		Permanently increases the players ATK stat.

Spike DEF Gem		Permanently increases the players DEF stat.
Spike Bomb		Can be used in battle.
Sewer Key		Used to open the Sewer Exit
Coin		Currency Pickup
Police Parking Lot Key		Opens the Parking Lot on the TOWN level.
Twig		The starting weapon, weak.
Weight Set		+2 Damage Bonus
Shovel		+5 Damage Bonus
Star Charger Teeth		+10 Damage Bonus

Star Charger Cannon		+15 Damage Bonus
Hand Cannon		+20 Damage Bonus

Enemy Items

Enemy Name	Enemy Picture	Enemy Stats	Enemy Additional
Evil Rat		Damage: 1 Life Points: 2 Experience Points:4	Found on every level
Evil Janitor		Damage: 4 Life Points: 9 Experience Points:16	Found in the SEWER
Mad Scientist		Damage: 4 Life Points: 8 Experience Points:12	Found in the SEWER
Evil Doctor		Damage: 2 Life Points: 10 Experience Points:8	Found in the ACCIDENT
Evil Police Officer		Damage: 6 Life Points: 15 Experience Points:22	Found in the TOWN

Augger v1		Damage: 10 Life Points:40 Experience Points:30	Found in the TOWN
Augger v2		Damage: 18 Life Points: 30 Experience Points:100	Found in the TOWN

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