

Korescape

Game Design Document
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Design History

Version 1

Version 1 includes all desired information as short-unedited jot points, with the intention of later expanding on the information stated in them.

First laid out a list of game objects. Where we have the non-playable characters and items in the game. Brainstormed how many characters we will input in the game and the rooms we will need to design.

Created a rough copy layout of the map on a sheet of paper. There are diagonal paths and zig zagged hallways

Version 2

Diagonal paths were illustrated in the initial map layout design. The pathways/halls were changed to only horizontal and vertical directions.

The cafeteria is added along with the playable character designs.

The design of the the playable character's hat is transparent. There is a slight spot on the hat which you can see through as you control and move the character to different room designs in the background.

Version 3

There is an awkward motion between the side perspective steps of the playable character. It was edited in the files but not imputed in the game due to meeting deadlines

More map designs are added in the game

Dialogue textbox, inventory, and main menu included

Story added with more character interactions

Game Overview

Philosophy

This game is intended to be a relatively simple RPG with an emphasis on trading items. Games with this type of premise are rare however not entirely new or genre defining. It is, however, intended such that audiences of all ages and backgrounds should be able to play it. It's also difficult in regards to mechanics so people of all skill levels and some physical abilities should be able to play it.

Common Questions

What is this game?

This game is a simple RPG that takes place in a school by the name of Koral High School. You place an unnamed student who had his phone taken by the principal and now you must get it back from his office. You will accomplish this by finding and trading items for other items in order to obtain the key to the principal's office.

Why create this game?

This game was created because we had to create a game as per the class's requirements. The reason we chose to make this game specifically is because we(the members of this group) all like RPG's and the premise of this game came up during a brainstorming session and we were all happy with it.

Where does this game take place?

The game takes place in Koral High, although the name has High in it the education level of the school is left intentionally ambiguous. The school has many rooms to explore such as a classroom, cafeteria, gym, library, foyer, office and basement.

What do I control?

You control an unnamed student character who can walk, run, pick up items and talk to NPCs.

How many characters do I control?

Just one, as described above.

What is the main focus?

The game has one mechanic which all other mechanics and functions serve: trading. The player can pick up items so he can trade them. The player can talk to NPCs so he can see what they want to trade said item.

What's different?

Apart from the fact that unlike most RPGs ours doesn't have any form of combat, it also does not have any money. This game solely focuses on trading items for items which, at least in my limited experience, has not been done before.

Feature Set

General Features

1. **Vibrant Pixel Art**
2. **Explorable Map**
3. **Comedic Dialogue**

Gameplay

1. **Trading Objects**
2. **Pick Up Items**
3. **Interactive NPCs**
4. **Interactive environment**

Controls

W → Move up

A → Move left

S → Move down

D → Move right

L-Shift → Hold to sprint while moving

I → Open Inventory

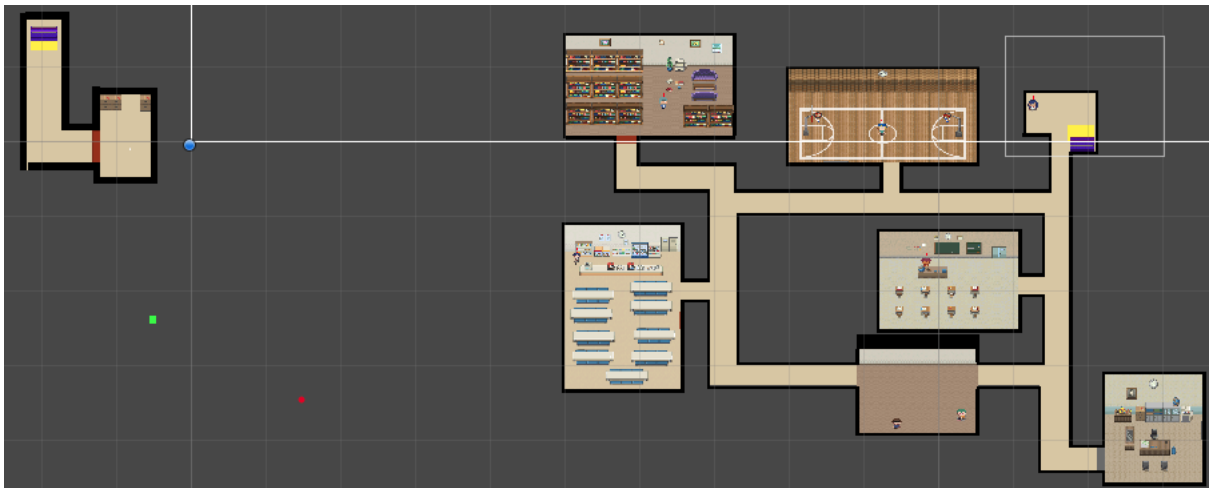
E → Interact with object / NPC

Esc → Exit menu

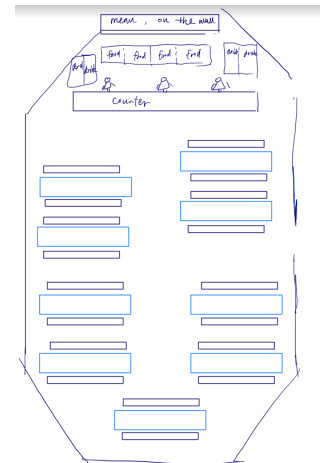
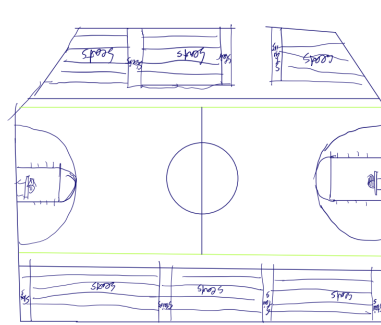
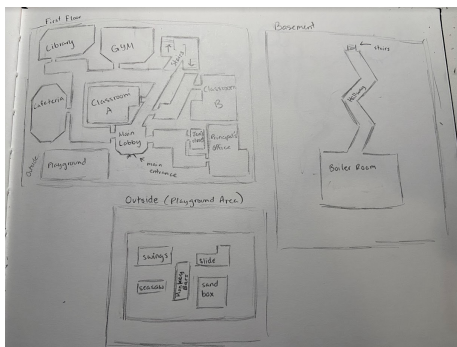
Game World

Overview

The game world consists of two levels in a school setting. Level one consists of many rooms which are the foyer, the cafeteria, the classroom A, the library, the gym and the principal's office. There are stairs connecting level one and level two. Level two has a single hall leading to a locked room.



View of the game world in the Unity Editor



Some early sketches of layout of maps

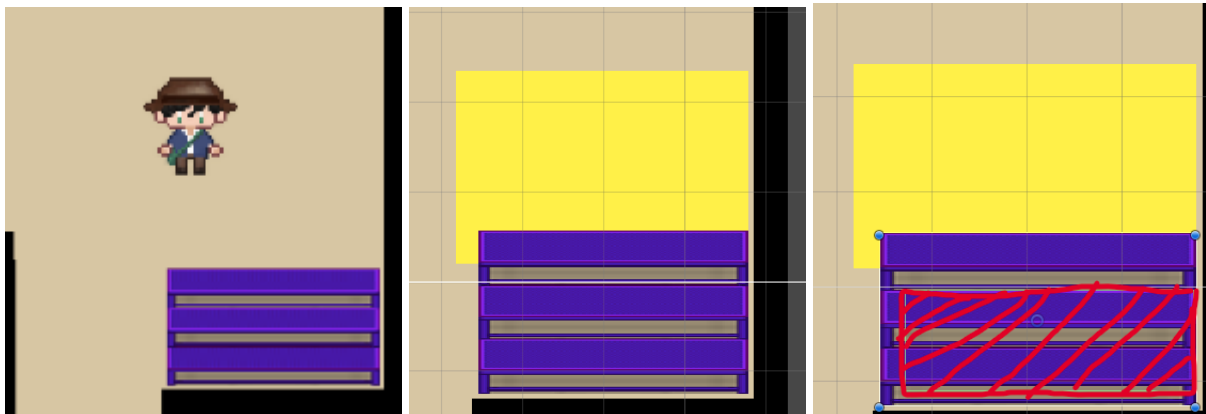
The Physical World

Travel

Traveling in the game is done two ways, either the player can walk/run from place to place normally, or they can take stairs to get between levels.

Player movement is implemented quite simply, the game checks for input and once it detects that either W,A,S,D or ↑, ↓, ←, → has been pressed. Once any of those have been pressed the player's position vector is updated relative to time and predetermined speed.

Stairs have two components, the actual collider part, highlighted in the right image, and the destination position, the yellow block. When the player collides with the collider they get teleported (by changing the player's position vector) to the position of the opposite set of stairs yellow block.



Above are three images to show what stairs look like in-game(left) and in the Unity Editor(center and right).

Doors

Doors are solid blocks with a collider. They have 2 properties, first a boolean “isLocked” that checks to see if the door is locked, and second a keycode x, the player needs to have a key with the same keycode to unlock the door. If the player walks up to an unlocked door and presses ‘E’ the door becomes opaque and the player can walk through it, if the player presses ‘E’ again at the open door the door closes and becomes solid in color. If the player walks up to a locked door and presses ‘E’, if they have a key the door opens otherwise nothing happens.



Player at closed door (left). Player at open door (right).

Scale

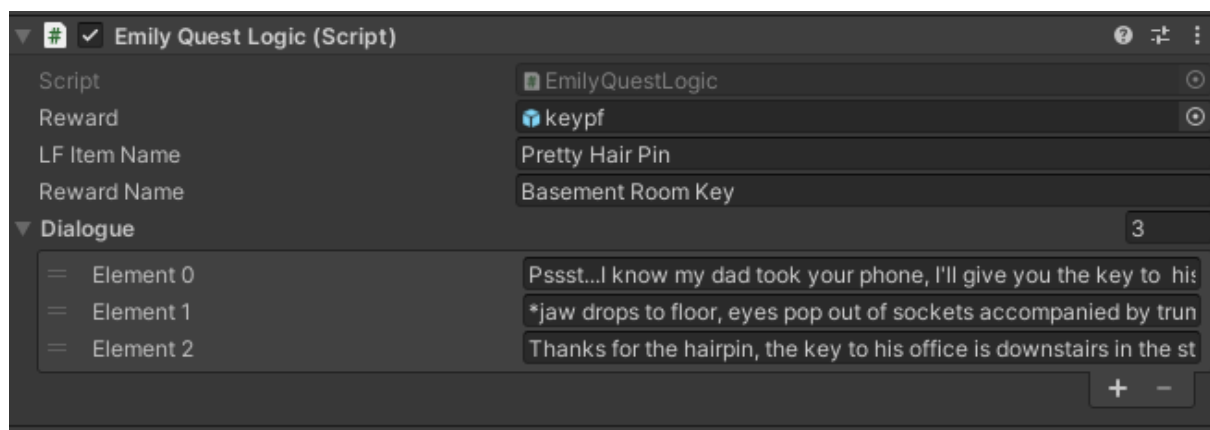
We found some reference sprite sheets on the internet and made our sprites relatively the same size.

Items

1. Quest

Most objects are dynamically created based on whatever the quest says. Since the items picked up or traded into serve no ingame purpose(apart from keys) they are made from the same prefab and simply renamed. The keys work the same except they have a corresponding code value which determines which door they open.

As you can see in the component below the reward name is “Basement Room Key” and the reward is keypf. So upon quest completion the game creates a new “keypf” (key prefab) , renames it “Basement Room Key ” and then inserts it into the players inventory. Since, quests and doors only check if items/keys have the correct name and keys go one step further and check key codes which are set the same way.



Component corresponding to Emily's Quest

2. Pick-Up

Pick-up items, such as Coffee, work similarly except instead of receiving the item via quest the game simply checks if the player is near, using some vector math, and has pressed E.

On-screen pick up items look like shiny stars.

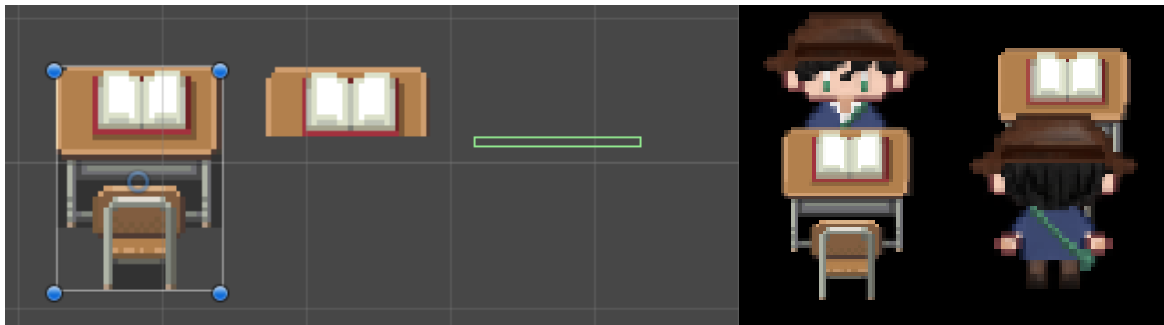
3. Disposal

Items are not deleted when they are removed as that would give accessibility errors in the code so instead they are moved to a very far off distance from the map.

In-World Objects

In-world objects are drawn in 3 layers, the first is the full sprite of the object (left) which is drawn on the layer below the player so that if the player and object overlap the player is always drawn on top. On the second layer is a thin invisible bar which determines player collision, this is drawn on the same layer as the player. Finally, on the third layer is a sprite which is the top half of the full sprite which is placed on the layer above the players so that when the player overlaps with it, it is drawn on top.

This results in the character looking like they're behind and in front of the objects correctly as shown in the two right images below.



The 3 Components of a Desk / Resulting Camera Perspective

NPC Interaction

NPCs should be able to do 3 things.

1. If the player gets close then they should draw an exclamation mark over their head.
2. They should have functional dialogue boxes.
3. They should be able to give and take items for quests.

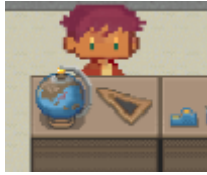
The NPCs can determine if the player is close by some simple math, if the distance between the NPC and the player is small then make the exclamation mark visible.

The dialogue box is always there, just not visible when not in use. So, the NPC just needs to edit the text component of the dialogue box then make it visible.

The players inventory is a list so the NPC simply adds and removes using C# add and remove functions.

NPCs

Teacher



The teacher can be found in the Classroom.

Dialogue:

“Hmmm...sooo tired...*YAAWWNNN*”

“Oh! Did you get me coffee? Thanks! Have this...”

“*SLURP* *GLUG* *GLUG*”

If the player has a “Coffee” item in their inventory, the teacher will take it and give an “Amazing Octopus Pencil” item in return.

Tim



Can be found in the foyer.

Dialogue:

“Guess what? I’m watching the new Amazing Octopus move this Friday”

“Oh wow! Can I get that cool pencil for this paper crane?”

“Thanks I love the pencil!”

If the player has a “Amazing Octopus Pencil” item in their inventory, then Tim will take it and give a “Paper Crane” item in return.

Jack



Can be found in the Gym.

Dialogue:

“My parents are making me exercise to get the new BagMon Game...”

“●●... Can please have that BagMon Game, You can have this pin I found!”

“UwU... now I play my DS while my parents think I'm exercising, win-win!”

If the player has a “BagMon Game Cartridge” item in their inventory, then Jack will take it and give a “Pretty Hair Pin” item in return.

Emily



Can be found in the Stairwell.

Dialogue:

“Pssst...I know my dad took your phone, I'll give you the key to his office if you get me something pretty!”

“*jaw drops to floor, eyes pop out of sockets accompanied by trumpets, heart beats out of chest, awooga awooga sound effect* That hairpin is so nice!”

“Thanks for the hairpin, the key to his office is downstairs in the storage room.”

If the player has a “Pretty Hair Pin” item in their inventory, then Emily will take it and give a “Basement room key” item in return.

Principal Emantsal



Can be found in the Cafeteria.

Dialogue:

“Hmmm...what snack to get?”

Hanna



Can be found in the library.

Dialogue:

“I wish I had some small decor for my table at home...”

“Hey I really like that paper crane, wanna trade it for this game?”

“Thanks this will look perfect on my table!”

If the player has a “Paper Crane” item in their inventory, then Hanna will take it and give a “BagMon Game Cartridge” item in return.

Behind the Scenes

Camera

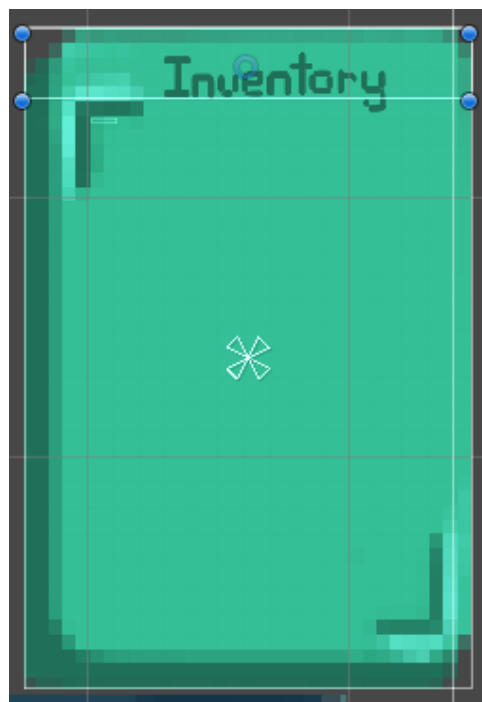
The camera is just the Unity 2D starting camera with the background set to the color of the walls so the background and walls look the same, just black. It also has a script that makes it follow the player.

Walls

There are collidable black border walls surrounding each room and hall to ensure that players won't be able to walk off the map.

Player Inventory

The player inventory is a simple list that has functions which add and remove items by either reference or name. There is also a script in the UI Inventory Box which makes it so that it displays the players inventory. There is another script that makes it so that the inventory box and all the text components in it are made visible and invisible on a key press 'I'.



The Inventory box has 3 components. A background. A text that says "Inventory" and a text that displays all items in the player's inventory.

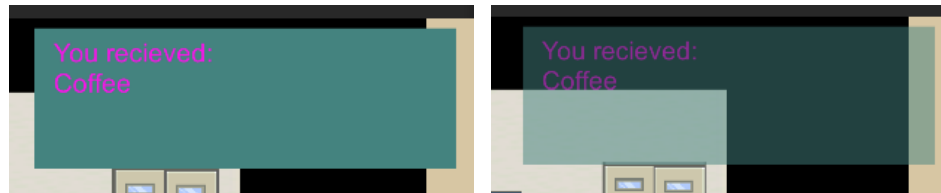
Questing/Story Order

- 1) The player opens the game and presses the start button on the title screen.
- 2) The player sits through a prologue that gives a backstory to what is happening in the game.
- 3) The player talks to the teacher who says they are tired.
- 4) The player goes to the cafeteria to get coffee to give to the teacher.
- 5) The teacher gives the player an Amazing Octopus pencil as a reward.
- 6) The player talks to Tim in the foyer who says is watching the The Amazing Octopus movie this Friday.
- 7) The player trades his pencil for Tims paper plane.
- 8) The player goes to the cafeteria and finds a key in the bottom left of the room.
- 9) The player opens the door to the library.
- 10) The player talks to Hanna in the library who says she is looking for some decor for her table at home.
- 11) The player trades his paper crane for Hanna's video game.
- 12) The player talks to Jack in the gym who says his parents are making him exercise to earn a new video game.
- 13) The player trades his video game to Jack for a pretty hair pin.
- 14) The player talks to Emily who says she will give the player a key if he gets her something pretty.
- 15) The player trades Emily his pretty hair pin for her key.
- 16) The player uses the key to open the room in the basement.
- 17) The player finds the office key inside the basement.
- 18) The player takes the office's key and uses it to open up the principals offices.
- 19) The player takes their phone back and wins the game.

UI

1. Notification Ping

A small box pops up in the corner of the screen that informs what the player received in their inventory whenever they either pick up an item or get traded an item. The box slowly fades out.



A fresh notification (left), and a fading notification (right)

2. Inventory Box

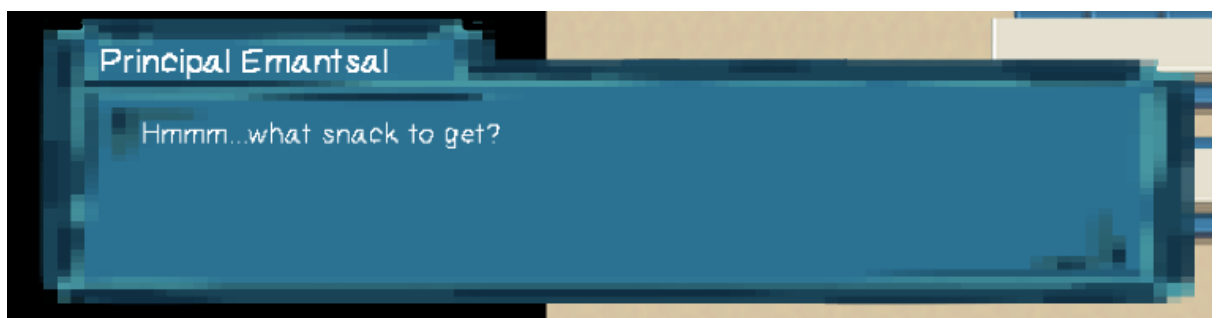
The UI elements have already been described above in the player inventory section of “Behind the Scenes”.

3. Dialogue Box

The dialogue box pops up whenever the player presses ‘E’ in front of an NPC. The dialogue updates whenever the player presses ‘E’ and disappears if either the player exhausts the NPC’s dialogue or walks away. The dialogue box consists of 3 components.

- 1) The background.
- 2) The name text showing the NPC’s name.
- 3) The dialogue text showing the NPC’s dialogue.

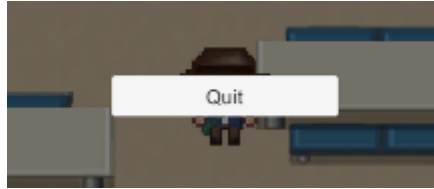
The text inside the dialogue box is a custom font that we made ourselves that’s meant to look like a child’s handwriting.



The principal’s dialogue box inside the cafeteria.

4. Quit Scene

Should the player press the escape key at any point in the game the screen gets a gray layer over it with a white button in the center saying quit. If the player presses quit then the game exits.



Showing the gray background and Quit button.

Unimplemented Features

Math Mini-Game

It was intended that when the player was in the classroom they could talk to the teacher to play a mini-game which was basically a drag-and-drop tetris, should they win they would have received an item. This was unimplemented due to time constraints.

Basketball Mini-Game

It was intended that should the player talk to Jack in the gym the player would get the option to play a flick basketball game with him for an item reward. This was unimplemented due to time constraints.

Scheduled NPC Movement

It was intended that the NPCs would walk around and would also go to certain classes together at certain times of the day. This was unimplemented due to time constraints.

Playground

This was intended to be another room in the map that the player could go to, no activity nor NPC had specifically been planned for it. This was unimplemented because it was deemed unnecessary.

Audio

1. Background Music

2. SFX

- a. Walking
- b. Item Pick Up
- c. Door Open

3. NPC Speaking

Was intended to sound like beeps and boops in the exact same fashion as undertale, however this feature went unimplemented due to time constraints.

Title Screen

A static image of the school with a button at the center of the screen. If the button is pressed the prologue begins.



Prologue

Meant to explain the backstory for the players goal and intention in the game. Dialogue is...

Internal monologue:

"Ah... another day at Koral High."

"My grandma's going to start her surgery soon."

Pulls out phone

"I should check up on her before classes start"

Principal Emantsal:

"Excuse me, classes are about to start"

"Such gadgets are prohibited to use at this time"

"I will have to discard it from you..."

"I am taking your phone this instant!"

Which then sends the player into the main game.

End Screen

A screen with the text "Congratulations! You defeated Principal Emanstal and took back your phone!" and an exit game button which quits out of the game.

