

Slay the Rain 1.0.0

50.033 Game Design and Development

Potential Alternative Names: Trash Me Not, Trash to Treasure

Authors:

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Name of Student 1 | Role

Name of Student 2 | Role

Name of Student 3 | Role

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Introduction



Slay the gloomy world of Bryan's Trash Can as you, a discarded idea, battle your way through garbage and monsters. Climb up mysterious chambers to find new treasure and accessories, and defeat vicious bosses in this 2D Action-Platformer Roguelike.

Play on PC and customise your card deck after every level to experience combat in a new way. Get stronger and unlock them to become the King of the Trash Can!

Background Study

Similar Games and Inspiration

Games we draw inspiration from include <u>Risk of Rain 2</u> and <u>Slay the Spire</u>. We use Risk of Rain to draw out the fun aspects of the hack and slash genre and Slay the Spire to inspire our card mechanics.

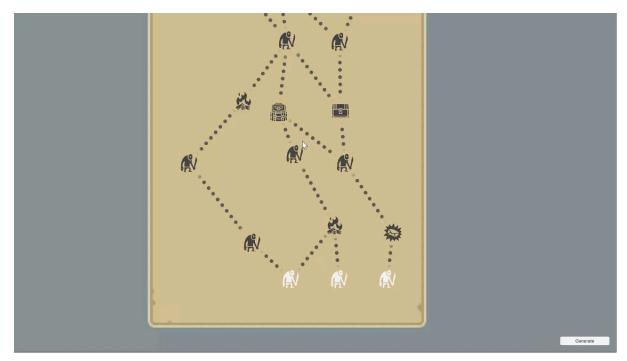


Fig. 1: Map from Slay the Spire

Slay the Spire's map shows random encounters and what each stage encounters might be, depending on the path that they take.

- 1) The game tells you what encounter types lie ahead and lets you choose what encounters to face. This element of giving the players an option of where to go to would be good, as it creates a tactical choice for the player (they must choose to avoid fighting, or face more enemies in order to get more rewards)
- 2) Most cards synergize with many other cards. Players will always be able to find something to fit their strategy.



Fig. 2: Risk of Rain (user interface)

- 1) Risk of Rain 2 has this core mechanic: staying longer in the map to kill more enemies lets you get gold to get stronger but you can also choose to leave the map earlier to reduce the risk of dying.
- 2) Players get gradually stronger as they collect different relics (power-ups) in order to get stronger.
- 3) Players can build their character according to the playstyle that they want.
- 4) The visual effects of the game make the game more addictive as the world feels more alive and dynamic. This is especially so as the games prolong, enemies get stronger and more visual effects appear on screen.

Motivation

We implement a similar map of what each stage would entail, for players to make a tactical decision on which route they should best choose in order to corroborate with the build that they are going for, but with different places.

Unlike Risk of Rain 2, there is no automatic healing after each stage. Instead, players have the option to spend points collected to get better quality cards, or use it to recover HP.

We will also be using a different card mechanic as compared to Slay the Spire. First, the players are only allowed to have 4 playable cards at once (Playable Deck). We will have a Card Draw Speed function, which will allow the players to put cards on their Reserve Deck (players are able to see up to 1 card of their Reserve Deck, which will give them the opportunity to see if it's possible for them to strategize and play other cards first, in order to synergise with the next incoming card.)



Fig. 3: Example Draw Deck (user interface)



Fig. 4: Example Reserve Deck (user interface)

The cards have interactions with one another, for example we will have a card which will apply poison, and another card will be able to triple the amount of poison present in the enemies.

This is in line with what the previous 2 games had, having cards (Slay the Spire) or builds (Risk of Rain), which synergise with one another, allowing the player to play whatever style that they prefer.

We will also include two different modes that the players can choose from story mode and rogue mode (see .

Main Core Drives

Social influence - players will constantly strive to be better in the game mode, attempting to create the best deck of cards possible for their run, to see if they can beat their friends as well, seeing who has the shortest amount of time taken in the grind time and boss time.

Accomplishment - we have implemented a timer - grind time and boss time. Players can see if they are able to beat their previous high score.

Targeted Player Types

The game that we are creating, will be mainly targeted for PC players (players will just need a keyboard and a mouse to enjoy the experience of the game)

There are 2 main player types, targeted with our game core mechanisms:

1. Strategy-lovers

- a. Try out different builds and card combinations during games, and find new fun ways to play the game.
- b. Decide where the best path(refer to Fig.3 under Rules) would be based on the current build that they are running.

2. Action-lovers

- a. Games will be increasing in pace as the game progresses, allowing players to learn the game first, before tuning into the adrenaline.
- b. Boss fights will be present, they will be harder to defeat as compared to the normal mobs. This will challenge the players to utilise the handcrafted build that they have, to defeat the enemy.

The Game

Game Description

You find yourself at the bottom of the trash bin, discarded prematurely. Maybe you are determined to prove your worth, or maybe you want to take revenge on the person who discarded you. Regardless, this motivation fuels you to scale the many floors of the trash bin in an attempt to escape.

Other discarded ideas are scattered along the path you take. Defeating them with your abilities and combo attacks will reward you with powerful cards that will help you in the quest to reach the top of the trash bin. The higher you go, the better your rewards will become. But be careful! As you go higher, the more dangerous the world around you becomes. Whenever you die you lose all your temporary progress. You will be able to improve your skills with all the items you collected throughout the run to make you stronger for your next climb out the trash bin.

At the rest zones you will be able to buy new upgrades for yourself or the game world, or just loosen up and enjoy being safe until your next round of fighting monsters.

Game Core Mechanic

- Measurement The player has to predict dash distance as they move around the map
- Strategy & Tactical Choice: player will have to weigh pros and cons, and choose between unique attack cards to add to their deck to enhance their character. Players have to choose between spending their currency to heal or to exchange for better cards. Players will choose to fight skippable sub bosses for currency/better cards, or to move on if they think they are not strong enough.

Gameplay

In the monster and boss zones, the player will be attacked by monsters which they can defeat by using card abilities which either grant the player a temporary attacking ability or is an attack itself.

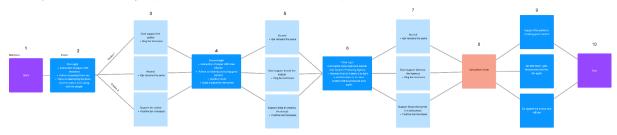
Every 5, 10 kills will be recognised as an achievement by the system, and the system will provide both auditory and visual feedback to the player.

Movement is done using the keyboard arrow keys as well as space for dashing. Card slots are bound to the hotkeys 1,2,3,4. Attacks can be dodged by movement, or simply by dashing.

See more in Controls.

In special zones like treasure and rest areas, players can choose rewards, heal, or shop.

During our game, we want the player to get slowly immersed in our game. As such, during the rest areas, we also included interactions (not during the actual gameplay but during rest areas), to allow the player to get more info as to why he was "discarded".



- 1. Story start/end nodes represent the beginning or the end of a story.
- 2. Story/event exposition nodes represent any story fragment conveyed to the players.
- 3. Story choices represent any story decision, they will be of this type:
- 4. Player choices are story choices based on the player will. The player chooses what to do.
- 5. Calculation/Evaluationn of choices that were made: Actual math TBC



Fig. 5: Morality Interaction [Appendix C]

During these interactions, we provide the player a choice, as to whether he wants to support, not support, or stay neutral to the interactions that are happening, which will ultimately fill the Support / Not Support Author bar. These 2 bars will then be calculated in the final scene, to determine what outcome the player will get.

Timer

In order for players to be able to know their progress, and how well they done in their run. We have implemented two different timers- GRIND TIME and BOSS TIME. This calculates the amount of time that players spent grinding on the monster levels, and how much time they spent fighting and defeating the boss.

Players, can try to keep both their grind time, and boss time as low as possible for subsequent runs.

Game Formal Elements

Player

The game is Player vs Game.

Modes

Story

- Difficulty increases as the player goes through more and more levels.
- Currency earned, rewards gained will increase as well proportionately to difficulty.

Objective, Boundaries, and Outcome

- The detailed objectives, every quest and side quests in the game and it's rewards
- Describe your game level boundaries or where the character can explore
- Describe the end outcome for your game
- Objectives: Both short-term and long-term objectives are clear. Quest lists are laid out clearly, and they're coherent with the storyline of the game.

Objective:

Short term

- Kill/Destroy for bosses that players have to defeat to go to the next level
- Rescue/Escape the player has to progress to the next level

Quest lists (shown to player)

- 1. Kill the enemies
- 2. Get to the portal

Long term

- Get revenge on the author (following the story line)

Boundaries:

The player can explore the whole level freely, but cannot move on to the next level until he activates the portal, usually by killing a boss monster.

Outcome:

The game has no end outcome, but for development purposes the game ends after X number of levels beaten.

Rules and Procedures

Controls

Slay the Rain is a PC game, played with keyboard and mouse

Action	Keyboard + Mouse	Notes
Walk / Run	Up, Down, Left, Right arrow keys	
Attack	С	
Choose Card	1,2,3,4	
Interact w UI	Space Bar	
Dash	Space Bar	

Procedure

Starting - Choose game mode: Story Mode or Roguelike Mode.

Progression -

- Rest area:
 - 1. Do nothing
 - 2. Spend money
 - a. Recover, heal
 - b. Buy better cards
 - c. Change/Swap current deck
 - d. View Bestiary (monster collection)
 - Monster area: (with an icon preview of what monsters you can find)
 - o Each level has a fixed number of enemies to kill, before the door will open
 - o Players can decide if they want to stay longer, or they want to leave the area
 - Kill more enemies and earn money
 - Earn more STATS such as max health, and damage if more enemies are killed.

Resolving - Successfully reach the exit of the level: Select next stage in map view.

Rules

Loot Mechanism

Killing monsters or enemies will drop different kinds of currency that can be combined and upgraded to a higher tier of currency, buying better skill cards or regaining unrecoverable health in the rest area. The currency in game of normal monster will be:

• T1 currency (lowest tier), which will be used to upgrade cards.

Card Mechanism

Instead of having a static skills choice with cooldown, players will have a deck of skill cards that can be used as regular skills, but each used card will be reshuffled back to the deck and waiting to be drawn later on.

Players will have N number of active card slots, and one pending card slot. When a player uses a skill card, that card will be reshuffled back to the skill deck, and the card in the pending slot will fill in the empty "active slot". During this process, the "fill in " action has a speed called **Card Draw Speed**, which determines the time taken for a card to fill in one active slot.

Here is the link where inspiration was taken from:

THIS WAS SO BROKEN! FUTURE GOHAN DEATH BUFFED NAMEK GOKU SOLOS T... https://legends.dbz.space/help/1 Under "Active Card Draw Speed" section

Death

In story mode, players will be able to revive in the last checkpoint when death, while in Roguelike mode players will need to restart the game after death.

Mapping

"Mapping" is a term used to explain the action of repeatedly clearing dungeon instances, possibly different types of dungeon at the same time. In Roguelike mode, players can choose their mapping path after clearing each dungeon instance.

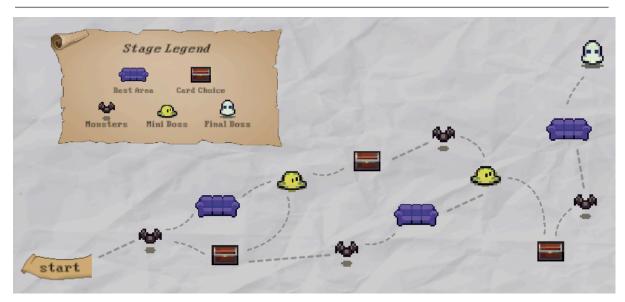


Fig. 6: Map Selection

Referring to the graph above, players can choose their own path that leads to different dungeon instances. Players can only move forward. Some dungeon instances contain monsters and or mini bosses, while some are rest areas, or treasure areas. This mechanism lets players try a style of play that is different and unique every time they start a new game.

See Appendix B for images of every level map.

Rest Area

This is a special area where player can do following actions:

- 1. Spend currency to heal health
- 2. Buy skill cards
- 3. Set your draw deck to contain cards you want
 - a. This allows the player to customise their build and how their character can attack in the area.
- 4. View bestiary to see enemy details
- 5. Interact with other discarded items to influence the end scene.

Resources and Conflicts

Resources

- Player Health: Max 500 HP
- Currency: after killing enemies, some enemies drop currency. The amount of currency dropped will vary based on the enemy that is killed, and the level the player is on. This will be based on a minimum currency and maximum currency previously set. Players can collect them during gameplay and then use it to buy skill cards, or perform other actions at the rest area.

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Level	Toast Currency	Cup Currency
Monster area 1	\$1-2	\$2-5
Mini boss 1	0.3 x \$(1-2)	0.3 x \$(2-5)
Next few areas	Multiplier of 30%	Multiplier of 30%

•

Skill cards

Cards are used only during gameplay to attack enemies.

Card Details	Image	Example
Name: 'A Sharp Pen' Type: Weapon - Melee Attack Effect: Grants a reusable attack that hits enemies in a 120 arc for 1 metre, lasts 15 seconds. Details Damage: 10 HP / hit	Reusable: Press 'C' to use. Unlimited swings for 15s.	

Name: 'Poison Tea'

Type: Buff - Poison Attack

Effect:

Grants additional damage over

time.

Details

Added damage per hit: 8 additional poison damage. Poisons enemy for 2 damage

for 4 seconds.

Name: 'Lightningy'

Type: Spell - Range Attack

Effect:

One time use attack that damages closest 10 enemies, and slows them by 50% for 2 seconds.

<u>Details</u>

Damage: -20 HP

Name: 'Fire Breath' Type: Spell - Cast on Self

Defense

Effect:

Grants a reusable attack that damages closest enemies in front of the player, (lasts 5 seconds OR 5 bullets).

Details

Damage: -25 HP / blast

Synergies

Using both Fire Breath and Poison Tea, causes an AOE poison effect at the area of impact.

Deals 2 poison damage a second, for 4 seconds.













Name: 'Barrier'

Type: Spell - Buff Skill

Effect:

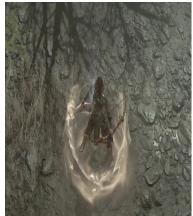
Grants a visible barrier to the player, that absorbs all incoming damage for 7 seconds

Details

Both ranged projectiles and melee damage will be absorbed.

Poison by enemies will not be absorbed.





Name: 'Pen Slash'

Type: Spell - Melee Attack

Effect:

One time use attack dash. Activate within 3 seconds of using skill.

Causes 50 damage to a wide area around player.

Details

Damage: -50 HP

Name: *Dear Leech'*Type: Spell - Buff skill

Effect:

Use with other melee attacks. Effect lasts 10 seconds.

Restores 5 HP on hit.









Buff prefab will look similar to this, since its a buff

Card Synergies

To ensure that each of our card stays relevant, and that balancing is done appropriately, we created synergies between each card,

Conflicts: The main source of conflicts and obstacles would be the layout of the map and enemies at each level. See <u>Appendix B</u> for the map design.

Combo Card	Description	Stats
Poison + Fireball	Using both fireball and poison, allows the Player to be able to create a noxious poisonous gas at the area of impact.	Health: 20 HP Damage: 10 HP Squashes you if you get too close!
Poison + Lightning	Using both lightning and poison, allows the Player to be able to create immobilise the enemies struck by the lightning.	Each second in the gas, applies the poisoned effect to enemies, the enemy in this gas will receive 20 damage over 4 seconds.
Sword Pen + Dear Leech	Using both sword pen + dear leech, allows player to suck the materials out of their enemies for himself.	Each enemy struck by the hit, will generate 3 hp for the player.
Sword Pen + Pen Slash	Using both sword pen + pen slash, allows player to perform BANKAI! Effectively stopping time during its cast.	Deals twice the amount of damage compared to simply using pen slash.
Sword Pen + Pen Slash + Dear Leech	Using both sword pen + pen slash, allows player to perform BANKAI and suck the materials from everyone around him.	All enemies struck within pen slash, will give 3 hp to the player.

Enemies

Name & Image	Description	Stats
Sneaky Toast	Toast is an accumulation of breadcrumbs, and has lived in the bin for an eternity. Weakness: no arms.	Health: 20 HP Damage: 10 HP Squashes you if you get too close!
Ninja Toast	Upgraded Toast	Health: 30 HP Damage: 15 HP

Sir Cup	Sir Cup has been through a lifetime of abuse by the author, and has a lot of pent up rage. Weakness: water ball travels as slow as he is.	Health: 100 HP Damage: 30 HP Shoots a water ball from straw.
Golem	Golem is an accumulation of all the hatred and frustrations by both the author and his ideas. All of these slowly made up the different parts of his bodies, ultimately forming the GOLEM.	Health: 3000 Fire Orb: Deals 50 damage to Player, applies a slowness, to the player as well. Slowness lasts for 3 seconds, and slows the player for 50% of his speed. Poison Mist: Apply poison element to player that lasts for 5 seconds, and deals 7 damage per second

Enemy modifiers will be added per level

Level	Toast / Cup health	Toast/ Cup damage
Monster area 1	20/ 100	10 / 30
Mini boss 1	0.3 (20 / 100)	0.3 (10 / 30)
Next few areas	Multiplier of 30%	Multiplier of 30%

Dilemmas

- Players will need to decide which items to buy using currency in the rest area.
- Players will need to choose the path they want, either a path with better rewards but more enemies, or an easier path but with lesser rewards.

- Players need to build their skill deck, thus players need to choose to save currency or avoid some areas.
- Players will increase their max health and damage for every 5 and 10 kills respectively. At the same time, enemy spawn rate will increase, players have to decide if the reward gained in stats is worth them staying longer to fight more enemies.

Level	Enemy Type	Health Increase	Damage Increase	Enemy spawned	Required kills
Monster 1	Toast	5	-		5
Monster 1	Toast	-	2		10
Mini Boss	Toast, Cup	20	-	30% difficulty increase	5
Mini Boss	Toast, Cup	-	5	30% difficulty increase	10
Every level after	Toast / Cup / Ninja Cup	Increment of 10 additional hp for every level increase	-		5
Every level after	Toast / Cup / Ninja Cup	-	Increment of 5 additional damage for every level increase		10
Boss	Boss, Toast, Cup	-	-	Boss starts.	Boss

Level Design

Each level will have specific:

- types of enemies
- number of spawn points
- enemies spawned at each spawn point
- Required enemy kill count to open the portal and exit the level

Level Enemy Type No.	of spawn points Enemy spawned	Required kills
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Monster	Toast	6	3-5 / 10 seconds	20
Mini Boss	Toast, Cup	5	3-5 / 10 seconds	30
Boss	Boss, Toast, Cup	3	Boss starts.	

Level	Enemy Type	No. of spawn points	Enemy spawned	Required kills
Monster	Toast	6	3-5 / 10 seconds	20
Mini Boss	Toast, Cup	5	3-5 / 10 seconds	30

Morality Counter

In every encounter in the Rest Area, there will be a choice given to the players to make. Based on the dialogue, he can choose to side with, or go against the author. The choice that he chose will affect the final ending that he gets.

If at the end of the final scene, when the player has defeated the boss golem, if his morality counter is negative (goes against the author) or positive (supports the author).

NOTE SPOILERS AHEAD

Negative (Dont support author)

The Player found the author, and slays him.

Positive (Supports author)

Player accepts his life in the bin, and is content with his life.

User Testing

This section exists only for final GDD and not draft GDD. You may ignore this if you're submitting a draft GDD in Week 5.

You are to conduct **at least two rounds of testing**, on separate occasions, with 2-3 users minimum each time. The users must be people from *outside* of your group in the **second** round.

You may export your game and send it to others to try so you don't particularly have to meet them in person.

You should:

- Describe the main hypothesis for your testing, i.e: if there's anything in particular that you are testing or looking to improve or get feedback from.
- Describe the testing procedure
 - Round 1 testing:
 - Describe the results from Round 1 testing with 2-3 users (minimum)
 - Discuss the outcome in relation with your main hypothesis
 - Discuss if you observe additional, unforeseen results from the test
- Describe how you improve the game based on Round 1 testing, i.e. what parameters are changed?
 - Round 2 testing:
 - Describe briefly if the testing procedure changed
 - Describe the results from Round 2 testing with 2-3 users (minimum)
 - Discuss the outcome in relation with your main hypothesis
 - Discuss if you observe additional, unforeseen results from the test
- Describe the final improvements or changes you made on your game

For our testing, the main thing which we were looking out for in particular, would be the playability of the game (or more specifically, the first round). We wanted players to be able to give us feedback whether the mechanics that are currently available were smooth, and whether there was a need for us to provide any guidance for them to start the game

Round 1 testing

To begin, we allowed the our Test Subjects to play the game, while giving some context beforehand (informing them to read the Control scheme, in order to get familiarised with the controls)

Player 1:

The damage of the card seems abit too strong, fireball seems too OP and pen slash like meh

Modifications:

Tried to find a balance between the cards, making such that each card has their own strong points.

To this end, besides scaling the damage and cost of the cards in the shops, we also tried to implement synergies between each card to ensure that each card, despite their damage and abilities, are able to stay relevant in the game.

Player 2:

Not enough cards to play around with, like that lor

Modifications:

Implemented a Lightning card that slows the enemy upon damage.

Round 2 testing

For the second round of testing, there were more SFX and VFX present in the game, with modifications from the previous game added. A rest area with dialogue is also present here.

Player 1:

Dialogue between can, and the shop font is different.

Gameplay wise, player seems too op, being able to run very fast, and dodge all the enemy projectiles like matrix.

Modifications:

Did not decrease the speed of the player, but increased the speed of the projectile. So that the game will still seem fast-paced, and that the game thrives on adrenaline by the player.

Player 2:

Combat at start confusing.

Can convo interesting

Sometimes walk past money but money not collected.

Modifications:

Intended to create a tutorial scene, in order to give the player a sense of how to play the game first, and tie in with the storyline.

However, prof nat commented that we had no time but should focus on making the game playable. Hence we decided to simply create a Controls scheme - which details the controls that the player has, and the synergies present between each card.

Fixed money collider bug which caused it to not be detected.

Task Distribution

Bryan Sitoh | Game Logic

- Story interactions
- Lore building
- Character movement and game mechanism
- Card functions
- SFX and VFX
- Testing

Christopher Lye | VFX SFX

- Attack Card(s) design
- Character and Enemy Design
- VFX and SFX to enhance game

Constance Chua | VFX SFX

- Story setting and plot development
- Character and Enemy design
- VFX and SFX to enhance game

Goo Jun Xi | Game Logic

- Overall ideation and systematic game design
- Boss Design and skills

Sharryl Seto | Level Design

- Map and area design
- Card and attack design

Appendix

Asset Source Documentation

Document the **source** of all assets that you used in your game in this section. We need to credit the rightful owners.

- Characters
- Game World Objects
- Story (if it is adapted from a source)
- Sound files
- Code
- Animation, etc

If some of your assets are your/your friends' **original work**, state the name of the team members/friends who did work to honour them.

Asset Source Documentation

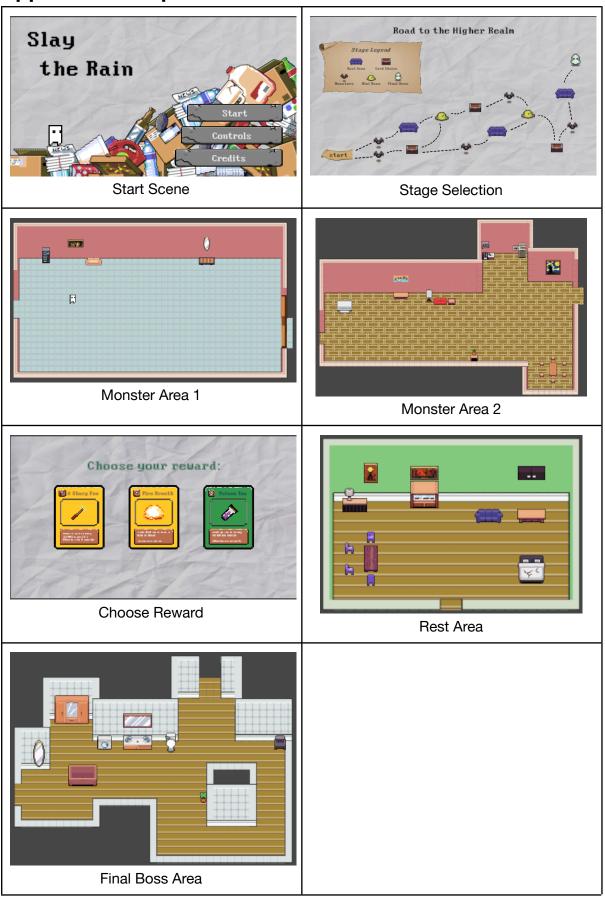
Name	Source
	Main Character
Player	https://0x72.itch.io/pixeldudesmaker
	Enemies & NPCs
Recycled items	https://opengameart.org/content/recycle-items-set
Sneaky Toast	https://opengameart.org/content/sneaky-toast & Christopher Lye
Styrofoam Cup	Christopher Lye
Golem	https://assetstore.unity.com/packages/2d/characters/enemy-galore-1-pixel-art-208921
	Attack Cards and User Interface
Crumpled paper background	https://stock.adobe.com/sg/search?k=%22crumpled+paper+texture %22
Icons Card sprites	https://game-icons.net/ https://opengameart.org/content/pixel-card-assets
Font	https://assetstore.unity.com/packages/2d/fonts/hana-pixel-font-29725

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https://www.fontspace.com/blue-screen-font-f66908 Magic (fire, etc.) https://opengameart.org/content/gothicvania-magic-pack-9 Skulls, potions https://opengameart.org/content/pixel-art-skull https://opengameart.org/content/heart-pixel-art Heart, health bar https://github.com/Brackeys/Health-Bar Icons https://opengameart.org/content/game-icons Мар 2.5D Tileset https://opengameart.org/content/tiny-16-basic 2.5D Furniture https://sierrassets.itch.io/pixel-art-furniture-pack

Appendix A: Sources

Appendix B: Map



Appendix C: Diagrams

Diagram	Link (if any)
Fig. 4 Morality Interaction	https://www.figma.com/file/GDmZ7iT32Fb gK2VGSHyjIK/STR?type=whiteboard&node -id=0-1&t=HNdeE30ZBctVJVjK-0

Appendix D: Code

We researched tutorials for how to create an RPG game, and received the most inspiration from Alex Dev.

https://www.youtube.com/@unityalexdev