Summary: This is a cheat sheet of the game's overall design.

Ultimate Design

(Structure Based Off of My Previous Ultimate Design doc:
https://studio.eecs.umich.edu/confluence/display/PWW2/Ultimate+Dungeon+Objective+Design)

Setting:

The player is in a futuristic building setting. The player and enemies use guns. Ultimately this is a game that goes from point A to point B.

1st Actionable Goal: Get from point A to point B. You have no status effects. You wake up with a laser gun. You use the laser gun to plow through enemies to get to point B.

2nd Actionable Goal: Get from point A to point B. You have a status effect. As you get through a little bit of the level you have a deja vu flash of a new part of the level. You go further this time, where the new point B is. Since the status effect *impacts vision*, the new level challenge is a *vision challenge*.

3rd Actionable Goal: Get from point A to point B. You have a status effect. As you get through a little bit of the level you have a deja vu flash of a new part of the level. You go further this time, where the new point B is. Since the status effect *impacts mobility*, the new level challenge is a *mobility challenge*.

4th Actionable Goal: Get from point A to point B. You have a status effect. As you get through a little bit of the level you have a deja vu flash of a new part of the level. You go further this time, where the new point B is. Since the status effect *impacts health*, the new level challenge is a *health challenge*.

5th Actionable Goal: Get from point A to point B. You have a status effect. As you get through a little bit of the level you have a deja vu flash of a new part of the level. You go further this time, where the new point B is. Since the status effect impacts *urgency/feeling*, the new level challenge is a *time challenge*.

Objective:

The Objective is broken up into 5 parts: 1st Goal, 2nd Goal, 3rd Goal, 4th Goal, 5th Goal. These mirror the setting Actionable Goals, yet goes into more details about the specific *level design*.

Escape (Stage 1): Your sole objective is to run to the end! You have no idea what is happening, why things are shooting at you, and where the story will go once you reach the end. Then you start again once you reach point B. If you die then you simply start "Escape" again.

Escape Again (Stage 2): What the heck? You just escaped; why are you here again? Your sole objective is to run to the end! You have no idea what is happening, why things are shooting at you, and where the story will go once you reach the end. Then you start again once you reach point B. If you die then you simply start "Escape Again" again.

This time your vision is slightly blurred. As you're about halfway through the level a deja vu scene plays out where you see part of the new section of the level. When you get there it is a sight challenge. This sight challenge may be: (1) target practice, **(2) finding a hidden object that opens a path to point B**, (3) finding point B.

Moving Slower (Stage 3): What the heck? You just escaped; why are you here again? Your sole objective is to run to the end! You have no idea what is happening, why things are shooting at you, and where the story will go once you reach the end. Then you start again once you reach point B. If you die then you simply start "Moving Slower" again.

This time your movement is slowed. Ditto second paragraph in "Escape Again" until challenge descriptions.This mobility challenge may be: (1) moving along wall while dodging gunfire or obstacles, (2) moving through obstacle course with stomp thingies, (3) jumping to point B.

Ouch (Stage 4): What the heck? You just escaped; why are you here again? Your sole objective is to run to the end! You have no idea what is happening, why things are shooting at you, and where the story will go once you reach the end. Then you start again once you reach point B. If you die then you simply start "Ouch" again.

This time your health is halved. Ditto second paragraph in "Moving Slower" until challenge descriptions.This endurance challenge may be: (1) fighting lots of enemies, (2) traversing obstacles with penalties damaging health, (3) surviving to point B.

Run! (Stage 5): What the heck? You just escaped; why are you here again? Your sole objective is to run to the end! You have no idea what is happening, why things are shooting at you, and where the story will go once you reach the end. If you die you start in "Run!" again at point A.

This time you race the clock with a level time limit. Ditto the second paragraph in "Ouch" until challenge descriptions. This time challenge may be: (1) kill enemies in time limit, (2) time limit throughout entire level and/nor challenge variant 1, (3) a secondary time challenge (e.g., survive last room for a few minutes)

Gameplay Mechanics

The player and gameplay mechanics have been taken into account so they enhance the player's experience of the game rather than being nuisances that get in the way.

Player Default Mechanics: (In Priority from Top to Bottom)
- Melee and Shooting - Obvious combat mechanics. This is a must!
- Double-Jump - Player can double-jump to get out of tough situations when surrounded.
- Dash - This can help speed gameplay as well as make for cool combat sequences.
- Grapple - This can help the player in the movement challenge and with traversing.
- Glide - This might be cool. Could create a chasm/canyon effect in level.

Non-Default Mechanics:
- Power-Ups
  - Pumpkin
  - Double Damage
  - Invincibility
  - Invisibility
  - Health (first-aid kit)
  - Shield (to overlay health bar/HP in new color like in Halo)
  - Spread Gun
- Guns
  - Laser Gun
    - OHKOs enemies
  - Gatling Gun
    - Lots of bullets. Like lots if you didn't get it first time.
  - Assault Rifle
    - Classic machine gun. Frequent reloads.
  - DMR
    - Slow yet still hits marks/high damage yields per bullet.
  - Pistol
    - Just bad. It's not really good believe it or not.

Audio

Sound Effects: The sound effects for this game will be made with BFXR sounds which are then mixed into Studio One Pro 5, then uploaded into UE 4.26.2.

Music: The music for this game will be made with Studio One Pro 5. However, as a failsafe should we need it, we will then rely upon free assets.

Music Iteration Process:
A simple short yet repetitive main theme will work great for the main menu screen. The main song throughout the game will be reminiscent of the main theme yet will be more complex.

There will be 5 versions of the main song in the game, each slightly different. To make the player feel more uneasy over time some characteristics of later song variants include:
- Tempo change (faster or slower depending on challenge)
- Dissonance (more dissonant after each subsequent thing unless want it all clean)
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Additionally there will be a sappy, emotional, gushy, feel-good epilogue. Two variants:
- Good ending - The song everyone wants to hear
- Bad ending - The song everyone doesn't want to hear (same song, missing parts of the good ending variant so sounds sad)

The music will be created with electronic and synth sounds in mind. Overall the goal is cohesion, NOT talent/complexity (yet that's a good side quest if we have time).

Enemy Design

Overall Theme: Enemies get tougher in each subsequent challenge. To differentiate their abilities and challenges we will be relying upon the mechanism of stark color contrasts (for colorblind individuals). Difficulty factors will include damage output per bullet, speed of firing rates, speed of movement rates, randomness of movement patterns (maybe), etc.

Difficulty: These are the <u>features</u> that will determine different difficulties per enemy unit type.
- Damage Output: The amount of HP each bullet takes away upon contact.
- Speed of Shooting: Higher level enemy types will shoot faster.
- Movement Speeds: Higher level enemy types will move faster (e.g., walking).
- Movement Variability: Higher level enemy types will move "more random"
- Hitboxes: ALL hitboxes are the same if we use the same(ish) sprites
- Jumps: Higher level enemy types can jump and some double-jump
- HP: Higher level enemy types have more HP (2x scale probably)

Mechanics:
- Motion:
  - 360∘ Movement available to enemies *within their rooms*.
  - Cannot traverse into other rooms/stages.
- Combat:
  - A "shoot" animation
  - Hurt-boxes are around their bodies OR very close to around their bodies
  - A "melee" animation if scope allows it
  - Similar mechanics and physics as player employs actually

Units:
- Classic Bot - DMR or Pistol style of shot. Can't jump, moves slow.
  - Stage 1 & above unit
- Sniper Bot - Shoots rarely, can jump around, yet if get hit you're dead or 90'd.
  - Stage 3 & above unit
- Leader Bot - Assault Rifle
  - Stage 4 & above unit
- Boss Bot - Laser Gun
  - Stage 5 only Bot; only 1 in existence (if kill once then killed for all future attempts at Stage 5)

Level Design

Summary: These are the specifics for the design of each level within each level. Refer to each level segment drawn out on the Dungeon Painter Studio rough draft for Layout specs.
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Stage 1: Overall Stage 1 will be a square or rectangular arena style place. There will likely be 3 parts: an intro/landing part, a main combat part (largest), and a transition part (to Stage 2).

Specific Challenges - Combat and getting used to the game. Like Portal we want the player to learn over time through action and necessity of survival rather than through obvious text.
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Stage 2: Overall Stage 2 will be a smaller square or rectangular arena style place than Stage 1. It will likely comprise two parts: a challenge area, and a transition part (to Stage 3).

Specific Challenges - This is a vision challenge. Namely the player will enter a misty/dark room where it is tough to find an object (key) and see enemies as well. Vision is blurred/limited.
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Stage 3: Overall Stage 3 will be a smaller square or rectangular arena style place than Stage 1. It will likely comprise two parts: a challenge area, and a transition part (to Stage 4).

Specific Challenges - Player has to get to the other side of level whilst a sniper or two are trying to, well, yanno, snipe 'em! Mobility is slowed, yet there are objects so you can survive!
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Stage 4: Overall Stage 4 will be a smaller square or rectangular arena style place than Stage 1. It will likely comprise two parts: a challenge area, and a transition part (to Stage 5).

Specific Challenges - This will be a mini-arena, much like one of my design concepts for Caduceus. If every dungeon has a slightly different shape, then this will be like a Greek pantheon arena. It will have different sides of obstacles/objects: both sides will be littered with the same enemies. One side has lots of cover; the other side has some platforming.
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Stage 5: Overall Stage 5 will be a larger square or rectangular arena style place like Stage 1. It will also comprise 3 parts: an intro/enter part, a combat arena part, and an ending part that gets narrower, leading into the epilogue.

Specific Challenges - There will be a boss fight. You will have a time limit to kill the boss, a time limit to survive the challenge, and the overarching time limit that's been going on throughout the entire level. Fail at the boss time limit, you die and restart Stage 5; fail at the survival time limit, then you die and restart Stage 5; if the entire level time limit fails you keep going, and can still beat the game.
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Ending(s): There are two endings, both of which are narrative and not level-relevant. These endings are determined by whether player beat the game within Stage 5 level time limit or not.

Narrative (Order)

Structure:

Stage 1 - A pitch black screen. Some wind noises. Then you see your surroundings. A short text box pops up explaining you had amnesia. You have this gut feeling however that if you escape this gauntlet then you will do what you need to do. In a Sci-Fi world you see a robot shooting at you. There is a gun near the middle of the map.

Stage 2 - You reached the end of Stage 1! Then…. A pitch black screen. Some wind noises. Then you see your surroundings. A short text box pops up explaining you had amnesia. You have this gut feeling however that if you escape this gauntlet then you will do what you need to do. ***The beginning of the level looks different; however, you soon realize it is the same as in Stage 1.*** In a Sci-Fi world you see a robot shooting at you. There is a gun near the middle of the map. You pick it up. ***When you arrive at the Stage 2 challenge you have a memory/vision: you see some of the challenge. When you get there you find the challenge to be a bit more than what you saw. Regardless you complete it.***

Stage 3 - You reached the end of Stage 2! Then…. A pitch black screen. Some wind noises. Then you see your surroundings. A short text box pops up explaining you had amnesia. You have this gut feeling however that if you escape this gauntlet then you will do what you need to do. ***Now you're confused, beginning to get a bit angry.*** The beginning of the level looks different; however, you soon realize it is the same as in Stage 1. In a Sci-Fi world you see a robot shooting at you. There is a gun near the middle of the map. You pick it up. When you arrive at the Stage 3 challenge you have a memory/vision: you see some of the challenge. When you get there you find your vision didn't capture all challenge. Regardless complete it!

Stage 4 - You reached the end of Stage 3! Then…. A pitch black screen. Some wind noises. Then you see your surroundings. A short text box pops up explaining you had amnesia. You have this gut feeling however that if you escape this gauntlet then you will do what you need to do. ***Now you're angry, yet starting to get scared.*** The beginning of the level looks different; however, you soon realize it is the same as in Stage 1. In a Sci-Fi world you see a robot shooting at you. There is a gun near the middle of the map. You pick it up. When you arrive at the Stage 3 challenge you have a memory/vision: you see some of the challenge. When you get there you find your vision didn't capture all challenge. Regardless complete it!.

Stage 5 - You reached the end of Stage 4! Then…. A pitch black screen. Some wind noises. Then you see your surroundings. A short text box pops up explaining you had amnesia. You have this gut feeling however that if you escape this gauntlet then you will do what you need to do. ***Now you're desperate to escape!*** The beginning of the level looks different; however, you soon realize it is the same as in Stage 1. In a Sci-Fi world you see a robot shooting at you. There is a gun near the middle of the map. You pick it up. When you arrive at the Stage 4 challenge you have a memory/vision: you see some of the challenge. When you get there you find the challenge to be a bit more than what you saw. Regardless you complete it.

Narrative (Story)

Content: The content/speech bubbles are design-wise (and hopefully style-wise) like BoTW.

<u>Game Prologue -</u>

<u>Stage 1 Text Boxes -</u>

INTRO: ... *Where am I? … No, **who** am I?* It is clear you've had an amnesia event that happens only to the best of heroes. *Huh, there's a gun right up ahead.*

(If died and restart Stage): Repeat Intro of Stage 1 Text Box. Follow that with this: *That's odd, thought I died. Maybe I did… Only way of any hope to find out is to move forward and make progress.*

Complete Stage:

<u>Stage 2 Text Boxes -</u>

INTRO: *The wind whistles by.* *Where am I? … No, **who** am I?* It is clear you've had an amnesia event that happens only to the best of heroes. *Huh, there's a gun right up ahead.* After you pick it up… … … *Wait a second, have I done this before?* You shrug your shoulders and march onwards; even if it seems weird there's no stopping what the setting of the reality is.

(If died and restart Stage): Repeat Intro of Stage 1 Text Box. Follow that with this: *That's odd, thought I died. Maybe I did… Only way of any hope to find out is to move forward and make progress.*

When Get to Certain Part in Level: *Huh!* *waaaaaaaaaaaarrrrrrrrrrrrp* you see a mini-video play showing part of the Stage 2 challenge. *waaaaaaaaaaaarrrrrrrrrrrrp* You go back to the game. *That was weird.* *Shrugs shoulders* *Carry on dude.*

Complete Stage: Screen gets really, really bright. Then pitch black. Then a fragment of your memory!

<u>Stage 3 Text Boxes -</u>

INTRO: *The wind whistles by.* *Where am I? … No, **who** am I?* It is clear you've had an amnesia event that happens only to the best of heroes. *Huh, there's a gun right up ahead.* After you pick it up… … … *Wait a second, have I done this before?* You stare into the setting. The wind eerily sways by, as if to answer. You shrug your shoulder and march onwards; even if it seems weird there's no stopping what the setting of the reality is.

(If died and restart Stage): Repeat Intro of Stage 1 Text Box. Follow that with this: *That's odd, thought I died. Maybe I did… Only way of any hope to find out is to move forward and make progress.*

When Get to Certain Part in Level: *Huh!* *waaaaaaaaaaaarrrrrrrrrrrrp* you see a mini-video play showing part of the Stage 2 challenge. *waaaaaaaaaaaarrrrrrrrrrrrp* You go back to the game. *That was weird.* *Shrugs shoulders* *Carry on dude.*

Complete Stage: Screen gets really, really bright. Then pitch black. Then a fragment of your memory!

Stage 4 Text Boxes -

INTRO: *The wind whistles by.* *Where am I? … No, **who** am I?* It is clear you've had an amnesia event that happens only to the best of heroes. *Huh, there's a gun right up ahead.* After you pick it up… … … *Wait a second, have I done this before?* You stare into the setting. The wind eerily sways by, as if to answer. You shrug your shoulder and march onwards; even if it seems weird there's no stopping what the setting of the reality is.

(If died and restart Stage): Repeat Intro of Stage 1 Text Box. Follow that with this: *That's odd, thought I died. Maybe I did… Only way of any hope to find out is to move forward and make progress.*

When Get to Certain Part in Level: *Huh!* *waaaaaaaaaaaarrrrrrrrrrrrp* you see a mini-video play showing part of the Stage 2 challenge. *waaaaaaaaaaaarrrrrrrrrrrrp* You go back to the game. *That was weird.* *Shrugs shoulders* *Carry on dude.*

Complete Stage: Screen gets really, really bright. Then pitch black. Then a fragment of your memory!

Stage 5 Text Boxes -

INTRO: *The wind whistles by.* *Where am I? … No, **who** am I?* It is clear you've had an amnesia event that happens only to the best of heroes. *Huh, there's a gun right up ahead.* After you pick it up… … … *Wait a second, have I done this before?* You stare into the setting. The wind eerily sways by, as if to answer. You shrug your shoulder and march onwards; even if it seems weird there's no stopping what the setting of the reality is.

(If died and restart Stage): Repeat Intro of Stage 1 Text Box. Follow that with this: *That's odd, thought I died. Maybe I did… Only way of any hope to find out is to move forward and make progress.*

When Get to Certain Part in Level: *Huh!* *waaaaaaaaaaaarrrrrrrrrrrrrp* you see a mini-video play showing part of the Stage 2 challenge. *waaaaaaaaaaaarrrrrrrrrrrrp* You go back to the game. *That was weird.* *Shrugs shoulders* *Carry on dude.*

Complete Stage: Screen gets really, really bright. Then pitch black. Then a fragment of your memory!

Game Epilogue -

Good Ending:
You reach point B. A person is in the way, holding something. It is a book. This book is your memory book; you remember you took it with you on your flight.

"Is this yours?"

"Yes. Thank you!"

"No problem."

"Why has every day seemed the same?"

"Because, your army chopper crash landed in our field, which is hosting an experimental new technology. In essence, we are in a virtual setting."

"Oh."

The wind whistles by.

"

Bad Ending:
Before you leave, you see one thing blocking your way: a pumpkin! You wonder why it's there. It beckons you forth: It is too late hero. I don't understand… Of course you don't, yet you may now: here, your final memory… … … … WAKE UP!!!

AAAAHHHH!!!! You wake up in a much cheerier world than the one you were in. *Phew, just a dream! I can't wait to see what today holds!*

You're a man of the military; you strut confidently towards your place in the army runabout. As you're humming to yourself you fail to notice the "S1560" mark on the helicopter. You sit down, excited for the unexpected--but is it unexpected?! INSERT S1560 Picture in Game

Narrative (Art)

Content:

Stage 1 -

Stage 2 -

Stage 3 -

Stage 4 -

Stage 5 -