

# Dome

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## Overview

### Theme / Setting / Genre

- Roguelike, mini-rpg, exploration game set in a dystopian world.

### The Elevator Pitch

Dome is a top down roguelike game in which the player must explore the Forbidden Lands and uncover the mystery of Azbin.

### Influences (Brief)

- **Rogue Legacy**
  - Video Game
  - Rogue Legacy is basically the only Roguelike game I have ever played. The mechanics of this game made it very challenging, yet rewarding to play. When I played this game had a good run, I felt very empowered. This is why I have chosen to take the “perma-death” and “offspring” system from Rogue Legacy and adopt it into my game.
- **Maze Runner**
  - Movie

- Maze Runner's four mile high wall of concrete was the origin of the Dome idea. Similar to Maze runner, the outside does contain creatures that the player must be cautious of when exploring the world.
- **Don't Starve**
  - Video Game
  - Don't Starve's exploration and survivability was an influence in two of this game's core mechanics. The toxic atmosphere is similar to Don't Starve's darkness as it drains the character's Sanity without the helmet equipped. In addition, like Don't Starve's sanity meter, if the sanity meter is depleted the player will begin to lose health until they restore their sanity to a threshold.
- **Hearthstone**
  - Children's card game (video game)
  - The idea of choosing between 3 new procedurally generated characters rather than being force-fed one comes from Hearthstone's discover mechanic, a great example of controllable RNG
- **Samus**
  - Video Game
  - The idea of power suits, guns, and futuristic environment is mostly from Samus.
- **Realm of the Mad God**
  - Video Game
  - Originally we had more complex combat mechanics like rolling, jumping, blocking, etc. planned out. However, we later decided that it would be better to make the game "simple to learn, hard to master," after seeing a game like Realm of the Mad God, which has very simple mechanics (move was WASD shoot projectiles with the mouse) but can be very difficult.

### **Core Gameplay Mechanics (High-Level)**

- Melee/Ranged Combat
- Sanity/Helmet
- Respawn/Upgrades

### **Targeted platform**

- Windows / Mac

### **What sets this project apart?**

- Find your old remains to pick-up items + clues.
- Never seen a top-down game with a similar world.
- Player has the ability to play the game in multiple ways.
- Covers many genres.

## Player Interaction Patterns and Modes

- **<Player Interaction Pattern>**

- 1 player game
- Top down, 3rd person view on a 2d isometric world
- Travel the world eliminating enemies/collecting gems + clues

- **<Player Modes>**

- **Combat Mode**

- The player controls a small character moving around an isometric 2d world, finding enemies, exploring dungeons, and collecting gems. Based on the geography of the map, there will be chests, enemies (ranged, melee, boss), and obstacles. Some obstacles will deal damage or outright kill you. Enemies also drop health potions, which are used on being stepped over.

- **Upgrade Screen**

- Upon death, the player will have the opportunity to upgrade their dome, giving them better stats, equipment, and/or abilities in their next life. Players receive a new character on death, however this character retains all previous upgrades.
- For the upgrade screen we wanted it to look something like the Rogue Legacy upgrade tree

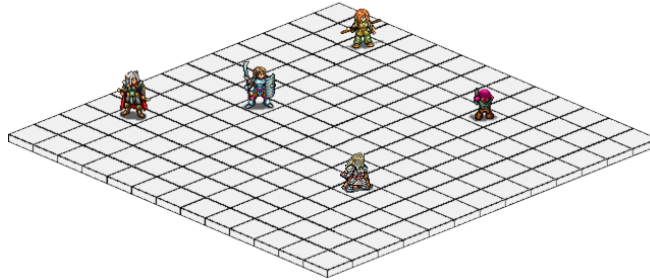


- But, obviously it should be more futuristic and have a Dome instead of a castle.
- The Dome would grow in height and radius with more upgrades

- **Level Select Screen**

- Immediately upon exiting the Upgrade Screen, the player will be presented with 3 paths to 3 different level words, desert, snow, and forest. Players move around in this mode the same way as in combat mode, but cannot attack or use abilities.

- For both the combat mode and the level select screen the world would be laid out like the picture below (taken from <https://gamedev.stackexchange.com/questions/44021/can-it-be-done-with-2d-engine-or-is-it-real-3d>)



## Objectives

- **Story Progression**
  - The main objective of the game will be to progress in the story to figure out the story of Azbin and how the Forbidden Lands and isolated civilizations came to be. This will be done by finding clues around the map, which can be activated by walking over.
- **Gem Collection**
  - Players will actively seek gems to use for upgrades for their next character(s). Gems can be obtained from eliminating enemies or exploration. There will be chests that spawn around the map, if a player is next to one, depending on a die roll, they receive rewards.
- **Upgrades**
  - Players will be given the possibility to upgrade equipment/stat/abilities using gems found from defeating enemies and exploration. Abilities generally will be passive, like increased gem drops or hp regeneration, until later stages of the game
- **Combat**
  - Players will actively look to eliminate enemies for items or allies.

## Procedures/Actions

<Describe the control scheme and what actions a user can take in the game.>

### Computer Controls

- WASD - Movement
- Left Click - ranged attack, projectile is shot in direction of mouse pointer
- Right Click - melee attack
- E - toggle helmet
- L-Shift - cycle between active abilities

- ESC - game menu
- Spacebar - use active ability (you may only have three at a time)

We didn't want too many buttons, so that the player could more or less have a finger on every button at the same time and focus on gameplay. Since the left hand is already being used for movement and the right hand for aiming attacks, there wasn't much hand real estate left for abilities - so we cut it to at most 3 at a time.

## Rules

<Describe the rules of the world in relatively high-level detail.>

- Player loses sanity while they do not have a Helmet equipped (you can toggle this).
- The player's combat without a helmet is melee and upon defeating an enemy will give a chance for them to become a follower and aid you in your battles, otherwise combat is ranged projectile based
- Followers are computer controlled, can die, and do not return when they die (or the player dies)
- Each of your attacks, both ranged and melee, deal damage in a range of numbers, and have a chance to both miss and crit as well. NPCs always do a fixed amount of damage, however, and do not crit/miss.
- When your sanity reaches 0 you start to lose HP instead.
- Sanity regenerates while you wear your helmet, to a cap
- You also lose hp from taking hits from enemies.
- There are two main classes of enemies, melee and ranged.
- Ranged enemies are projectile based and can be dodged.
- Player dies if their HP reaches 0.
- Player eliminates enemies by reducing their HP to 0.
- Enemies drop gems, health potions, and sometimes special items or clues on death.
- Enemies slain with your helmet off the whole time drop an increased amount of gems/health potions.
- Player must return to the Dome to spend gems, but powerups are used upon pickup

## Resources

<What resources are available to the player that they make use of? How does this affect gameplay?>

- Health - Player's life force. Player must maintain this resource by not being hit by enemy units and finding potions.
- Gems - Player's currency for upgrades after death. Player will be incentivized to search for Gems by combat and exploration. Accumulation of gems will ultimately make the combat experience easier.
- Clues - Clues are needed for story progression. They are ultimately responsible for the player knowing where to go to next in terms of story. Adds a puzzle aspect to the game, so players feel like they actually are solving the mystery of Azbin. Some special enemies may drop clues as well.
- Sanity - the sanity meter measures how long you can take your helmet off without losing hp.

## Objects/Entities

<What other things are in the world that you need to design?>

- Enemies/Bosses
- Architecture/Environment
- Unit sprites
- Forbidden Lands
- Gems
- Clues

## Core Gameplay Mechanics (Detailed)

- **Melee/Ranged Combat**
  - <Details>
    - With melee, the player has the potential to convert enemy human units to ally/follower units. In addition, in the melee combat style enemies will tend to drop more potions. However, combat difficulty is increased in the melee combat style.  
With ranged, the player has no potential to convert enemy units and always eliminates them. Enemies are also typically easier to kill with the ranged combat style.

- We considered adding a type weakness for enemies, for starters just being weak to either ranged/melee and adding onto that. However this is most likely unneeded complexity for what is already a very loaded game.
- Players can have up to 3 active abilities at a time, like a temporary shield or teleportation.
- <How it works>
  - The player can dynamically change between using ranged and melee combat mid combat. Melee is short ranged, but will deal higher damage. If your helmet is off if an enemy was defeated solely with melee (or at least 100% of its max hp was dealt with melee, if we want to consider special enemies with hp regen) you have a small chance to convert them to your side.
  - For the player, damage dealt is on a range, with a small chance of critting. We considered allowing attacks to be blocked/miss enemies as well depending on a dice roll, but since they are projectile based they can already literally miss depending on player skill, and it would be very frustrating to “hit” the projectile but have the game tell you you missed. For melee, we wanted it to be difficult and rewarding, but adding a chance to randomly miss doesn’t reward good players. There are other ways to make melee more difficult that are more tactical, like hitting a weak spot for certain enemies.
  - Damage will be equally distributed throughout the range. We considered making the damage normally distributed around the mean with a standard deviation of half the range of my attack (e.g. if my attack damage range is 10-20 the distribution would be centered on 15 with a standard deviation of 5) to give the player a bigger feeling of “luckiness” when they roll high on an attack, but attacks come out so fast this would hardly be noticeable. Crits serve this purpose much better.
  - Abilities are used with the space bar, and the current selected one can be rotated through with L-Shift.
  - Health potions dropped by enemies are used the instant they are stepped over and heal a percentage of your max health (to make your character’s base stats relevant).

## ● Respawn/Upgrades

### <Details>

- The death/respawn system is designed to make each life the player plays unique and rewarding. Each life you choose a new character from a choice of 3 procedurally generated characters. We wanted to avoid having players pick the same character over and over and not exploring other types of characters, but also didn’t want to lock them into one kind of new character each time they died.
- <How it works>
  - When a player dies they will be sent to the upgrade screen after a short death animation, where they can spend their gems on skills or items. Gems are kept



through death, but your original character is not. The player will be given a choice of 3 new characters with random traits.

- Originally we only gave the player a choice of one character, i.e. no choice, however meaningful choice is important for a game. We originally made the characters random to keep the game fresh, however having a choice between 3 keeps the freshness while not having the player feel like they are being forced one character. It also allows room for potential upgrade trees that allow you to influence what kind of characters you get to choose from, even in silly, cosmetic ways, or giving rerolls.
- Currently the three traits are the kind of gun (shotgun, uzi, sniper, assault rifle), kind of melee attack (stab, short sweep, punch which knocks enemies back), and tankiness scale. Tanky characters move more slowly but have a higher max health, and characters are put somewhere on a sliding scale. Upgrades you buy generally are percentage base, so that the base stats of your character matters each time.
- The player is always respawned in their Dome's gateway to the Forbidden Lands. The player will have the choice to regain their items. Death acts as a stepping stone to improving in the game. You can work out strategies for the most optimal path and understand how enemies behave in certain situations.

- **Sanity/Helmet**

- <Details>

- Helmet system was designed to keep a limitation on the melee combat style, so that players could not just keep gaining ally units, which might make the game trivial for skilled melee users. Players can equip/unequip the helmet while in combat. The helmet must be off for the whole time the player was in combat with the enemy. If the enemy does not join the player it will drop an increased amount of gems to compensate.
    - Originally there was no benefit for defeating an enemy without your helmet if it did not join you, but we changed this because we felt it dissuaded risky play too much, and also would feel really bad to sometimes be screwed over by RNG for 0 reward. It also makes some degree of sense since you can see better with it off.
    - When the player has the helmet equipped, they are unable to gain allies through melee combat. However, they will lose sanity, and after a losing all sanity they begin to lose hp.

- <How it works>

- The helmet is tied to the sanity meter, which depletes in a linear fashion over time while the helmet is off. When players hit 0 sanity they will have a few seconds before their health starts to drain, to encourage riskier play and not penalize too hard for slightly incorrectly estimating how long it takes to kill an enemy without your helmet.

- The sanity bar is out of 100, and is displayed in the HUD when it is not full (but hidden when it is full).
- When Sanity is depleted to 0, the player begins to lose HP until they put their helmet back on and regenerate sanity. You only need at least 1/100 sanity to stop taking damage. We thought about having the amount of sanity you have scale to something or mean something, but we decided it was unnecessary and didn't really serve a purpose besides complicating things.

## Story and Gameplay

### Story (Brief)

Civilization is isolated by a thought to be impenetrable Dome that protects its citizens from the outside world. Our hero ventures to the outside, and must uncover the truth of this world.

### Story (Detailed)

Civilization as people know it is encased in a dome essentially isolating humans from the outside world. It is said that the Wise One is the one who created the Dome, to protect civilization from the dangers of the outside; the Dome is thought it be impenetrable. Leaving the Dome strictly off limits unless an individual is chosen for the bi-annual "Selection" ceremony and is given a Shield Suit. The suit is said to protect from the toxic atmosphere of the outside world and provide protection from the creatures of the Forbidden Lands. Upon being selected at the ceremony, our hero ventures to the outside world. During the first (introduction) "boss" battle, our hero loses his helmet to see that the boss is not a creature but another individual from another civilization (blame AR). This is the introduction of the Passive vs. Aggressive system where the player can potentially gain a follower at the cost of a more difficult battle. At this point the player's goal becomes to survive while collecting clues to solve what exactly is going on in this world. Slowly as our hero uncovers the truth of the world, it is revealed that the Wise One has been responsible for creation of the Forbidden Lands and has been a puppet of the upper-class/government of all civilization.

### Gameplay (Brief)

Player explores the worlds while eliminating enemies and collecting resources. Enemies can be eliminated passively or aggressively. When a player dies they drop everything, but have the opportunity to upgrade their stats and equipment.

## Gameplay (Detailed)

The player always starts off at the gates of their civilization, with bare-bones equipment for all of their lives. From there they must explore the map to discover clues (which are puzzles) to piece together where they must explore next to continue their story. While exploring, the player will combat many enemies and must choose their approach as to how to eliminate them (SEE Helmet Mechanics ). They can eliminate them with their helmet off + melee to potentially gain an ally or ranged/melee with helmet for an easier combat experience. Only Human enemies can become allies and are seen by unequipping the helmet.

Slain enemies can drop health packs, gems, or clues. The player must maintain their health to continue their journey. They can do this through using their potions and effectively using their stamina. The gems that the player collects can be used to upgrade their character's abilities or armor. The player must return to the civilization to be able to use the gems they have collected.

Upon death the player will have the chance to upgrade their character's trait/upgrade their starting equipment with any gems they have hoarded. The player's original character is gone, but he/she can then choose between 3 different heroes, with certain randomized traits like base movement speed, ranged weapon type, attack speed, and tankiness, and will retain previous upgrades on top of these traits. The player can spend any remaining gems in the city. (SEE Player Life/Respawn mechanic)

## Assets Needed

- **2D**
  - Textures
    - Armor/Equipment
    - Hair
    - Facial Details
    - Building texture
  - Environment Textures
    - Trees
    - Buildings
    - Rocks
    - Water
    - Forbidden Lands

- **3D**

- **Characters List**

- Player
    - Creatures
    - Human Enemies
    - Civilization Humans
    - Elite Humans

- **Environmental Art Lists**

- Civilization Buildings
    - Forbidden Lands
    - Dome
    - Terrain (Trees, Grass, etc)

- **Sound**

- Sound List (Non-player)

- Area (Background)
      - Civilization Area
      - Forbidden Lands
      - Combat
      - Death
      - Upgrade Screen
    - Enemy
      - Attack
      - Damage
      - Movement

- Sound List (Player)

- Character Movement Sound List
      - Move/Sprint
      - Roll
    - Character Hit / Collision Sound List
      - Melee
      - Guns
      - Bow/Arrow
      - Shield
    - Character on Injured / Death sound List
      - Character hit
      - Character death
    - Others
      - Potion use
      - Style Change
      - Pick up item
      - Open Inventory
      - Dialogue

Template based on work by: Benjamin Stanley and Alec Markarian