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Game Design Team

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Project Fog

Master Design Document

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# User Interface

## Menu Interface

### Main Menu

The main menu will be displayed once the program is opened, it will display the title of the game on it and contain buttons.

**Button:** Connect to Server

Display a dialog box to the user. This dialog box will contain:

* **Input Field:** Name
  + This field defines a name that other users will use to identify you once a lobby has been entered. This name will only be used for user identification, not system identification.
* **Input Field:** IP Address
  + This field defines an Internet Protocol Address that the system will use to connect to a game lobby**.**
* **Button:** Enter
  + This button submits the dialog box contents to the system. On success, display the ‘Lobby Menu’. On failure, display error message, then display ‘Main Menu’.
* **Button:** Cancel
  + Display ‘Main Menu’.

**Button:** Options

Display the ‘Options Menu’.

**Button:** Exit

Close the program.

### Options Menu

This menu will be populated with any customizable technical or aesthetic aspects of the game, as per the needs and capabilities of the implementation teams.

### Lobby Menu

This menu can only be displayed upon successful connection to a server via the ‘Connect to Server’ Button on the ‘Main Menu’ or upon completion of a gameplay round. The menu will be populated with a visual table, a chat box, and buttons.

**Display:** Leaderboards Table

This chart will display information on the current users in the lobby, and will contain:

* Ping: In relation to the user’s connection with the server.
* Username: The name the user chose when submitting the ‘Connect to Server’ dialog.
* Role: Displays the role of the player in the previous match. Either Vessel, Deity, or Soul. This value defaults to Soul.
* Ability: Displays the abilities of the player during the previous round. Icons representing Aspects if the player was a Deity, and an icon representing a class if the player was a Vessel. This value defaults to blank.
* Score: Displays the score of the player in the previous round. This value defaults to 0.

This table is sorted by score (Descending), then by Username (Ascending).

**Display:** Chat Messages

This box will display the chat messages of everyone in the lobby that have occurred since the user joined the lobby.

**Input Field:** Chat input box

This input field will accept ASCII characters and digits and, once the Enter/Return key is pressed, display the message in the ‘Chat Messages’ box with the player’s Username identifier.

**Button:** Vessel

Display ‘Vessel Class/Abilities Selection Menu’

**Button:** Deity

Display ‘Deity Aspects Selection Menu’

**Button:** Ready

This button will alternate between green and red, and will mark the user as ready to the server. This button defaults to red.

### Vessel Class/Abilities Selection Menu

This menu will allow players the select the class and abilities for the next round, should they be chosen to play as a Vessel. It will be populated with buttons, and an icon display.

**Display:** Current Class and Abilities

This array of icons will display the currently selected class and abilities for the player. It will change dynamically as different ‘Class’ and ‘Ability’ buttons are clicked. The order the abilities are displayed matters, as it will affect gameplay. Clicking a class or ability icon will deselect it.

**Multiple Buttons:** Class

Clicking a ‘Class’ button will select the class as the player’s choice for the next round. There will be a class button for every class the player could choose.

**Multiple Buttons:** Ability

Clicking an ‘Ability’ button will select the ability as the player’s choice for the next round. There will be an ability button for every ability the player could choose. Three abilities can be chosen at any given time. The ability will fill the first unoccupied ability slot.

### Deity Aspects Selection Menu

This menu will allow players the select the aspects for the next round, should they be chosen to play as a Deity. It will be populated with buttons, and icon displays.

**Display:** Current Aspects

This array of icons will display the two currently selected aspects for the player. It will change dynamically as different ‘Aspect’ buttons are clicked. The order of aspects does not matter. Clicking an aspect icon will deselect it.

**Multiple Buttons:** Aspect

Clicking an ‘Aspect’ button will select it, and its cluster of abilities, as the player’s choice for the next round. There will be an aspect button for every aspect the player could choose.

**Multiple Displays:** Abilities

For each ‘Aspect’ button, there will be a display of three ability icons. These icons will provide basic information when the cursor hovers over them. (See Deity Abilities)

## Gameplay Interface

### Vessel Display

The Vessel Display appears during a Round, when the player is playing as a Vessel. When this display occurs, it is mutually exclusive with the other Gameplay Interfaces. This display contains the following information.

**Graphic:** Health

The Vessel’s current health, in a bar format, with a clear digit display of CURRENT HEALTH / TOTAL HEALTH.

**Graphic:** Experience

The Vessel’s current experience, in bar format, with a clear digit display of CURRENT EXPERIENCE / EXPERIENCE TO NEXT LEVEL.

**Graphic:** Ability Bar

The Vessel’s weapon and ability icons are displayed In sequence, with an indicator of their current cooldown.

**Visual Indication:** Buffs

The Vessel’s currently active buffs, positive and negative, must be visually represented.

**Visual Indication:** Entity Health

Any Vessel or Gatekeeper entity must have a small health bar displayed above their figure on the screen. This indicator will be similar the Vessel’s own Health graphic.

**Graphic:** Chat box

The Vessel chat box must become visible whenever the player presses the Enter/Return key. The small prompt will accept ASCII text and digits and submit with another press of the Enter / Return key.

### Deity Display

The Deity Display appears during a Round, when the player is playing as a Deity. When this display occurs, it is mutually exclusive with the other Gameplay Interfaces. This display contains the following information.

**Graphic:** Mini-map

This small map graphic will contain real time positions of the Vessels in the game. It responds to cursor input by moving the Deity viewport to the location clicked.

**Graphic:** Abilities

This array of icon displays the abilities of the Deity, they icons identifying them from one another, an indication of cooldowns, and a tooltip with basic information. (See Deity Abilities)

**Visual Indication:** Entity Health

Any Vessel or Gatekeeper entity must have a small health bar displayed above their figure on the screen. This indicator will be similar the Vessel’s own Health graphic.

**Display:** Chat Messages

This box will display the chat messages of all deities, vessels, and souls.

**Input Field:** Chat input box

This input field will accept ASCII characters and digits and, once the Enter/Return key is pressed, display the message in the ‘Chat Messages’ box with the player’s Username.

### Soul Display

The Soul Display appears during a Round, when the player is playing as a Soul. When this display occurs, it is mutually exclusive with the other Gameplay Interfaces. This display contains the following information.

**Graphic:** Mini-map

This small map graphic will contain real time positions of the Vessels in the game. It responds to cursor input by moving the Deity viewport to the location clicked.

**Visual Indication:** Entity Health

Any Vessel or Gatekeeper entity must have a small health bar displayed above their figure on the screen. This indicator will be similar the Vessel’s own Health graphic.

**Display:** Chat Messages

This box will display the chat messages of all deities, vessels, and souls.

**Input Field:** Chat input box

This input field will accept ASCII characters and digits and, once the Enter/Return key is pressed, display the message in the ‘Chat Messages’ box with the player’s Username.

# Mechanics

**Mechanics**

**Player**

This should contain all possible things that involves a vessel.

Vessels are activated by:

* Round starting

Vessels are deactivated by:

* Round ending
* Death
* Losing connection to the server
* Quitting the game

**VARIABLES / STATS**

Any of these could be increased upon level-up, classes will have hard-coded values

Any of these could be temporarily altered with a buff / debuff

* Health
  + bar format
    - numbers, not shapes
    - different colors as it is diminished
* Movement speed
* Weapon
  + each class has 1 *doesn’t change*
  + time between uses; weapon attack speed
  + Projectile
    - damage value
    - velocity
    - size (radius)
    - size increase overtime
    - start point
    - end point
* Current effects
  + Buff
    - attribute increased
    - value increase
  + Debuff
    - attribute decreased
    - value decreased
* Ability
  + 3 abilities per vessel
    - same pool for all classes
      * defense
        + buffs / healing
      * offense
        + special projectile
      * all abilities in the pool are equal
    - abilities are selected in order
      * unlocked as level progresses
        + 1, 2, 4
        + power multiplied by level unlocked at

if a chosen in first slot: 1 X A

if a chosen in third slot: 3 X A

* + - * + also scales with level experience

if A chosen in first slot, and vessel is level 3:

1 X 3 X A

if A chosen in third slot, and vessel is level 3:

3 X 3 X A

**EXPERIENCE**

Intended to be balanced that level-up occurs 2 - 3 times in the first 2 minutes

Level-up occurs to a maximum of 5 - 6

* Gained by:
  + Killing a minion
  + Killing a mini-boss
  + Killing a boss
  + Killing another vessel
* Result:
  + Raises stats
    - static value; hardcoded number for each stat
      * heath gain is active health
    - different between every class
    - Unlocks abilities

**MOVEMENT**

* Vessels can move 8 directions
  + + and x
* Uses WASD

**ATTACKING**

* Vessels click in the direction they want to attack
  + 360o around the vessel
  + regardless of vessel movement
* Attacks with currently selected weapon
  + utilize one mouse button with each weapon *under discussion*
* Projectile travels until:
  + reaches its max range
  + hits a wall
  + hits an obstacle
  + hits a vessel
  + hits a demon

**SCORING**

* Gained by:
  + Killing a minion
  + Killing a mini-boss
  + Killing a boss
  + Killing another vessel
  + Levelling up
  + Living longer than the other vessels

**UI / VISION**

* Vessel has a rectangular viewport centered on his character
  + moves as he moves
  + not aware of any entities outside his viewport
* UI displays:
  + personal health bar
  + health bar above heads of demons and other vessels when in view
  + some indication of current buffs / debuffs
    - be some effect or in a list somewhere on screen
  + weapon damage / stats
    - whether constantly displayed
    - or has a symbol for each weapon and stats appear as tool-tip
  + current experience
  + minimap *not entirely necessary*
* button should display leaderboard overlay
  + current scores
  + user type; vessel, deity, ghost
  + vessel level
  + deity aspects

This should contain all possible things that involves a deity.

Deities are activated by:

* Round starting

Deities are deactivated by:

* Round ending
* Losing connection to the server
* Quitting the game

**ASPECTS**

* Cluster of 3 abilities
  + Small
    - minimal effect
    - 10s cooldown
  + Med
    - more effect
    - 30s cooldown
  + Large
    - wrathful
    - 60s cooldown
* Aspect theme
  + three abilities have an effect similar to theme
* Aspects have 3 ability types
  + Buff
    - anything that gives a positive effect
      * speed, damage, healing, etc
    - can be applied to champions and monsters
  + Debuff
  + Summoning
    - anything that adds a new entity into the arena
      * demons, static hazards
    - cannot be summoned directly on a champion
* Aspects start the round on cooldown

**SCORING**

* Different from ability to ability
* Will be based on how effectively they use their ability

**UI / VISION**

* Deity has a rectangular viewport centered on his character
  + moves as he moves
  + not aware of any entities outside his viewport, except champions
* UI displays:
  + abilities
    - cooldown indication
  + health bar above heads of demons and champions when in view
  + mouse over champions:
    - some indication of current buffs / debuffs
    - weapon damage / stats
    - current experience
  + minimap
    - should have real-time champions running around
* button should display leaderboard overlay
  + current scores
  + user type; champion, deity, ghost
  + champion level
  + deity aspects

This should contain all possible things that involves a ghost.

Ghosts are activated by:

* User joins lobby during active round
* Champion dies

Ghosts are deactivated by:

* Round ending
* Losing connection to the server
* Quitting the game

**UI / VISION**

* Deity has a rectangular viewport centered on his character
  + moves as he moves
  + not aware of any entities outside his viewport, except champions
* UI displays:
  + health bar above heads of demons and champions when in view
  + mouse over champions:
    - some indication of current buffs / debuffs
    - weapon damage / stats
    - current experience
  + minimap
    - should have real-time champions running around
* button should display leaderboard overlay
  + current scores
  + user type; champion, deity, ghost
  + champion level
  + deity aspects

**Map**

This should contain all possible things that occurs in a free for all round.

Pre-made map, randomized entities

* Each Player begins in a different corner
* Hazards and Minions Scattered all over the map
* MiniBosses in set locations, but which MiniBoss is randomized
* BigBoss in center, with reliable identity
* Black fog circle slowly encroaches center,  does damage overtime to anything within

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| P |  |  |  |  |  |  |  | P |
|  |  |  | MB |  | MB |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | MB |  | MB |  | MB |  | MB |  |
|  |  |  |  | BB |  |  |  |  |
|  | MB |  | MB |  | MB |  | MB |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  | MB |  | MB |  |  |  |
| P |  |  |  |  |  |  |  | P |

* Grey tiles are random
  + random minion spawn

**Gatekeepers**

This should contain all possible things that involves a gatekeeper.

Gatekeepers are activated by:

* Round starting spawn
* Summoned by deity

Gatekeepers are deactivated by:

* Killed by champion
* Killed by deity

**VARIABLES / STATS**

Any of these could be temporarily altered with a buff / debuff

* Health
  + bar format
    - numbers, not shapes
    - different colors as it is diminished
* Movement speed
* Weapon
  + has 1
  + time between uses; weapon attack speed
  + Projectile
    - damage value
    - velocity
    - size (radius)
    - size increase overtime
    - start point
    - end point
* Current effects
  + Buff
    - attribute increased
    - value increase
  + Debuff
    - attribute decreased
    - value decreased
* SPECIAL: Boss Gatekeeper
  + has ability
  + fires as often as possible
    - will use on first enemy it sees

**ATTACKING**

* Upon seeing a champion
  + beelines towards champion until attack range
  + attacks until one of them is dead
* Projectile travels until:
  + reaches its max range
  + hits a wall
  + hits an obstacle
  + hits a champion

**BEHAVIOUR**

* gatekeepers graze randomly after spawning
  + move, stop, move; not intended to be far
* gatekeepers will flee from the circle of fog
  + if it’s in vision
* Gatekeepers collide with and block the movement of Vessels

**BACKLOG ITEMS**

* Special enemy types
  + enemies that move around the map
  + enemies that teleport; special movement
    - kiting
    - cowardice; run away
  + enemies with abilities
    - offensive
    - defensive

**Content**

All measurements will be in meters (m), seconds (s), and meters per second (m/s).

Format: Base value/+increase per level

**CHART OF CLASS STATS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Class | Health | Movement Speed | Weapon / Projectile | Weapon Cooldown |
| Warrior | 150/+25 | 5/+0.25 | Spear | 0.75 |
| Shaman | 75/+10 | 6/+0.3 | Fireball | 1.25 |
| Hunter | 100/+15 | 6/+0.4 | Javelin | 0.75 |
| Scout | 125/+20 | 7/+0.5 | Dagger | 0.5 |

**CHART OF PROJECTILE STATS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Projectile | Damage | Travel Speed | Range | Size / Radius | Size increase | Champ Point | Cursor Point |
| Spear | 30/+5 | 30 | 2 | 0.2 | 0 | 0,0 | 1,1 |
| Fireball | 40/+7 | 8 | 8 | 0.4 | 0 | 0,0 | 1,1 |
| Javelin | 25/+3 | 15 | 10 | 0.2 | 0 | 0,0 | 1,1 |
| Dagger | 25/+3 | 30 | 1 | 0.3 | 0 | 0,0 | 1,1 |

**VESSEL ABILITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ability | Effect type | Effect value | Duration | Cooldown |
| Rage | Damage dealt & Move speed | Weapon level += level &  +0.2\*level | 2+level | 25 |
| Healing | Burst heal | (10 + 2\*level)% heal | instant | 20 |
| Quick Fingers | Weapon cooldown | -0.05 \* level | 5+(level/2) | 30 |
| Poison Dart | Damage & Dot | 15 + 2 \* Level & 2 + Level  (Size:0.1, Range:10, Speed:15 ) | 2+Level | 15 |
| Dash | Move Speed | 2+level | 1 | 20 |

**DEITY ASPECTS**

|  |  |  |  |
| --- | --- | --- | --- |
| Aspect | Quick Ability | Common Ability | Grand Ability |
| Life | Shield | AoE Heal over Time | Burst Healing |
| Death | Damage Received Up | AoE Damage over Time | Targeted Damage over Time |
| Augmentor | Attack Speed Up | Move Speed Up | Damage Dealt Up |
| Debilitator | Attack Speed Down | Move Speed Down | Damage Dealt Down |
| Gatekeeper | Buff Minion | Summon Lost | Buff Guardian |
| Soul | Debuff Minion | Damage Gatekeeper | Debuff Guardian |

**GATEKEEPER INDEX**

All measurements will be in meters (m), seconds (s), and meters per second (m/s).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| The Lost | | | | | | | |
| Archetype | Health | Move Speed | Damage | Range | Projectile Speed | Projectile Width | Attack Cooldown |
| Fast Melee | 60 | 5 | 20 | 1 | 30 | 0.3 | 0.625 |
| Melee | 80 | 4 | 30 | 2 | 30 | 0.4 | 0.75 |
| Tough Melee | 100 | 3 | 40 | 3 | 30 | 0.5 | 1.0 |
| Fast Range | 40 | 4 | 10 | 6 | 7 | 0.1 | 0.75 |
| Range | 60 | 3 | 20 | 8 | 8 | 0.2 | 0.875 |
| Tough Range | 80 | 2 | 30 | 10 | 9 | 0.2(x3) | 1.0 |
| The Guardians | | | | | | | |
| Archetype | Health | Move Speed | Damage | Range | Projectile Speed | Projectile Width | Attack Cooldown |
| “Plant” | 400 | 0 | 40 | 12 | 15 | .4 (x5) | .75 |
| “Bull” | 400 | 5 | 60 | 4 | 30 | .8 | 1.25 |
| “Bear” | 600 | 4 | 80 | 3 | 30 | 1 | 1.25 |
| “Insect” | 300 | 4 | 50 | 8 | 8 | .6 | 1.0 |
| The Arbiter | | | | | | | |
| Archetype | Health | Move Speed | Damage | Range | Projectile Speed | Projectile Width | Attack Cooldown |
| Boss | 2000 | 2 | 100 | 15 | 10 | 1.25 | 1.5 |
| Arbiter Abilities | | | | | | | |
| Archetype | Description | | Damage | Range | Projectile Speed | Projectile Width | Attack Cooldown |
| Sweep | multi-shot spread | | 75 | 10 | 5 | 1 (x7) | 5 |
| Snipe | quick bolt | | 40 | 20 | 20 | .4 | 6 |