Project Notes

> For speed looking up things while writing the doc.

In Planning Document

Enemies

Random spawning, variants

Bosses

Red light hinted weak spot Respective Elemental

- **Fire** Ninja Swordsman
    - Robotic
    - Melee
    - Fast
    - High DPS
    - Low HP
- **Earth** Gunslinger
    - Stony Cowboy / Ancient Mech

- Flint Lock Pistol / Sandstorm limiting player sight
      - Slow
      - High DPH but Low Fire rate -> Low DPS
      - Normal HP (?)
  - **Ice** Shaman
      - Robotic Monk
      - Close Combat / Healing totem, destroyed on weak spot hit

NPC

- Shopkeeper
- Trial Master as tutorial guy and storyteller

Mechanics

Player Control

- Doom style permanent run
- Jump
- Blink to dodge
- Aim and shoot

RougeLite

- Levelling up give only perk points
- Perk points give permanent buffs and can re-spec
- Can choose to keep / bring one gun after every run
- Limited gun storage in hub

Elements

Have damage multiplier between non-physical elements

- **Fire** Ignites nearby enemies
- **Ice** Slows enemies
- **Earth** Splash damage
- **Physical** Chance to do crits

Shop / 'Choose one' Room

Select only one from the guns or restore HP

Weapons

Attributes

- Primary
    - Damage
    - Fire rate

- Accuracy
- Handling
- Magazine size
- Reload time
- Secondary
  - Crit specs
  - Elemental specs
  - Fire mode
  - Other

Components / Accessories

- Body
  - Type and Rarity -> All base specs
  - Available attachments
- Grip / Element
  - Elemental specs
- Barrel
  - Range -> Damage Curve
- Magazine
  - Size
  - Reload time
- Sight *optional*
  - Aim sight
- Stock *optional*
  - Handling
- Muzzle *optional*
  - Accuracy
- Other Attachment *optional*
  - Special effects

Exotic guns are based on this model but not restricted to it

From the Tutorials

Gun Stats

- Damage

  - Damage-Distance Curve
    - Constant
    - Linear Decrease
    - Segment
  - Hit Point Damage Multiplier
  - DOT / Debuff

- Bullet

- Per shot
  - Burst Fire / Shotgun
- Fire rate / Fire interval
- Ammo
- Reload Time
  - One by One / Mag
- Reload Finish Time
- Mode Switching
- Bullet Speed
- Bullet Drop
- Bullet Type

- Feel

  - Recoil
    - Reset Speed
    - Distribution
    - Stand / Crouch / Prone
  - Crosshair
    - Min / Max Spread
    - Reset Speed
    - Stand / Crouch / Prone
  - Sight
    - Aim Speed
    - Scope Multiplier
  - Breath Shaking
  - Switching Guns
  - Affect Movement Speed

- Accessories

- Cost

  - Resource
  - Possibility

Numerical Setup

Combat

- Battle
- Class
- Ability
- Level

Combat experience is built around a certain model

- **Subtraction Model**
  - marginal effect

- Upper and Lower bound
        - 'Armour break' point
    - **Multiplication Model**
        - Accumulation of stats
        - stable payback from stat increase
        - no 'Armour break' point

Progression

Levelling up and Exp curve

Max level -> Time need to max level -> Approx. segment time -> Curve fitting

$ Time_for_Level = K \times Level^3 + B $

-> Pace of Battle -> Figure out factors influencing levelling up speed -> Nail down game experience upon the curve

Class / Play style

Tags by different aspects, endgame builds -> mix and combine

Economy

In Group Discussion

Style-based perk system

Each style has some levels, when maxed out gain a special perk

- Sentry

    - Armour
    - Assault Rifle and LMG Efficiency
    - **Restore Armour after Kill**

- Rouge

    - Movement Speed
    - Charge of Blinks
    - Shotgun and SMG Efficiency
    - **Blink and Jump share charges with a larger count, kill reduces CD**

- Gunslinger

    - All mighty Efficiency
    - *Especially* Pistol and Sniper Efficiency
    - **Gain the ability of slow motion, kill reduce CD**

Random thoughts along the way

- Exp Curve need to be flat
  - Referring to *Hades*