**Feature: Dungeon Building**

**Brief Explainer Summary:** Dungeons in The Forge are combat-based missions where players send their characters to engage in auto-battles across multiple stages. The mission’s outcome is determined by the characters' stats, Aura multipliers, skill usage priority, passive effects, and battle mechanics. Each dungeon features a reward curve based on the number of stages completed, with specific loot drops tied to difficulty and elemental themes.

**Comprehensive Description:**

### **Dungeon Structure**

* Each dungeon consists of **8 sequential stages**.
* A **mini-boss** appears on **Stage 4**, and a **final boss** appears on **Stage 8**.
* **New enemies spawn** at the start of each stage.
* **Enemy difficulty increases progressively** with each stage.
* All characters (both allies and enemies) begin the dungeon at **full HP**.
* **Allies retain HP** between stages.
* **Status effects do NOT carry over** between stages.
* When a character is **defeated**, they **remain defeated** unless revived via skill or item.

### **Character Team Setup**

* Players can assign **up to 4 characters** to a dungeon mission.
* Each character is equipped with a unique **Aura** that determines:  
  + Stat multipliers
  + Available Basic, Advanced, and Ultimate skills

### **Attack Meter & Turn System**

* Each unit has an **Attack Meter** which fills based on **total Speed** (including buffs, debuffs, status effects, and Aura bonuses).
* The meter uses a **smooth ticker system** (minimum 50+ ticks).
* When the meter reaches **100%**, the unit takes an action, and the meter resets to **0%**.
* **Characters with 120 Speed** charge their meter **3x faster** than those with **40 Speed**.
* **Tiebreakers** (two or more units ready on the same tick) are resolved by Speed, then random roll if tied.

### **Skill Priority System**

* Skills are selected in the following priority:  
  + **Ultimate Skill** (if available)
  + **Advanced Skill** (if available)
  + **Basic Attack** (default)
* Advanced and Ultimate skills have individual **cooldowns**.  
  + Cooldowns **reset to max** at the **start of each stage**.
  + **Cooldowns are also reduced by 1** when progressing to the next stage.
* **Cooldown logic** includes usage tracking and manual overrides per skill if needed.

### **Skill Effects and Targeting**

* Most skills may include:  
  + **Damage**
  + **Healing**
  + **Buffs**
  + **Debuffs**
  + **Status Effects**
* **Smart Targeting AI** determines optimal skill use, unless a skill has predefined logic.  
  + Examples: target with lowest HP, highest Attack, random enemy, etc.

### **Healing Logic**

* Healing logic must define:  
  + Whether the **healing amount is based on**:  
    - Target's max HP
    - Caster's max HP
    - Caster's Attack stat
  + How the **target is selected**:  
    - Ally with lowest HP %
    - Ally with lowest absolute HP

### **Status Effects**

* Status effects are triggered by skill logic and RNG.  
  + Logs must include: skill used, chance to apply, actual roll, result.
* Status effects **tick when the target's Attack Meter reaches 100%**.  
  + Effects such as **Poison/Burn** trigger just before the unit acts.
  + Effects like **Minor Slow / Minor Weakness** decrement after the unit's action.
* **Stacking rules:**
  + **Poison/Burn** can stack independently (e.g., 4 stacks of Poison with 3 turns each).
  + **Non-stackable effects** (e.g., Minor Weakness) can only be reapplied if the new effect has **equal or longer** duration.

### **Interrupt Effects**

* Effects like **Stun** or **Silence** prevent action when a meter reaches 100%.  
  + The meter still resets.
  + Effect duration decrements by 1.

### **Turn Meter Modification**

* Some skills may **increase or reduce** a unit's turn meter.  
  + Examples: "Reduce target meter by 25%" or "Gain 50% meter instantly"
  + Values must be clamped to a 0% - 100% range.

### **Stage Transition Rules**

* After a stage is completed:  
  + New enemies spawn.
  + All character meters reset to **0%**.
  + Skill cooldowns are reduced by **1** (but not below 0).
  + All defeated characters remain defeated.

### **Rewards System**

* Players earn rewards **based on stages completed**:  
  + A loot roll system determines **reward tiers** based on progress.
  + Example Roll Table:  
    - 0 Stages = Roll 0 to 0
    - 1 Stage = Roll 1 to 20
    - 2 Stages = Roll 10 to 30
    - ...
    - 8 Stages = Roll 50 to 100
* Reward Tiers:  
  + Tier 1: Roll ≥1
  + Tier 2: Roll ≥15
  + Tier 3: Roll ≥25
  + ...
  + Tier 10: Roll ≥95
* **Loot Crates** will reflect tier, difficulty, and elemental dungeon theme.

### **Elemental Dungeon Themes**

* Dungeon themes include: **Fire, Water, Wind, Earth**.
* Each theme affects:  
  + Loot table (e.g., Fire Essences)
  + Possibly aura drop rates or theme-specific status effects

### **Rest Periods**

* Characters rest after completing a dungeon.
* **Defeated characters** require **longer rest periods**.
* **Forge Tokens** or consumables can reduce rest time.

### **Dungeon Refresh & Limits**

* Dungeons **refresh every 15 minutes**.
* Only **one active mission per difficulty** allowed at a time.
* Higher **Dungeon Building Level** increases:  
  + Concurrent dungeon missions
  + Available difficulty tiers

### **Battle Summary and Logs**

* Players receive:  
  + **Summary**: Total damage, healing, damage received per character
  + **Reward Report**: Earned + missed rewards
  + **Battle Log**:  
    - Timestamped entries per action
    - Skill used, damage dealt/healed, status effect attempts, buffs, etc.

### **Frontend Features**

* **Dungeon UI**
  + List of dungeons with available levels and themes
  + Team setup for up to 4 characters
  + Live stage progress bar
  + Timer per stage
  + Rewards view (earned + missed)
  + Interactive battle log viewer
* **Rest UI**
  + Progress bars for each resting character
  + Token use buttons

### **Backend Endpoints**

* GET /dungeons – Fetch list of dungeons
* POST /assign-dungeon – Assign characters to dungeon
* GET /dungeon-progress – Return real-time status
* POST /complete-dungeon – Finalize outcome, deliver rewards
* POST /character-rest – Update rest timers

### **Battle Logic Requirements**

* Calculate:  
  + Damage = Attack \* Aura Multiplier \* Skill Modifiers
  + HP = Vitality \* 8 (adjustable server-side)
* Handle:  
  + Turn meter logic
  + Status effects and stacks
  + Skill cooldown tracking
  + Passive skills (when implemented)
  + Death and revival states
* Logging:  
  + Every action with timestamp
  + Skill usage
  + Damage/healing done
  + Buffs/debuffs
  + RNG rolls for status effects

### **Sample Database Structure**

{

"dungeon\_id": "dungeon\_001",

"elemental\_theme": "Fire",

"stages": [

{ "stage\_number": 1, "status": "completed", "damage\_dealt": 320, "damage\_received": 45 },

{ "stage\_number": 4, "status": "completed", "boss\_type": "mini\_boss", "damage\_dealt": 450 }

],

"rewards": [

{ "type": "Crafting Material", "name": "Fire Essence", "tier": 2 },

{ "type": "Aura", "name": "Flame Chain", "tier": 3 }

],

"battle\_summary": {

"total\_damage\_dealt": 1200,

"total\_healing\_done": 300,

"battle\_log": [

{ "time": "00:05", "event": "Kleos attacked with Flame Strike, dealt 120 damage" },

{ "time": "01:00", "event": "Frank healed with Heal Aura, restored 50 HP" }

]

}

}

### **Future Considerations**

* World Boss Events
* Guild-Specific Dungeons
* Dungeon Terrain Effects
* Skip-to-Key-Moments Button
* Replay Save & Share
* Advanced AI behavior modules
* Status Immunity / Resistance Systems
* Combat Metrics Export (CSV, API)
* MVP / Damage Leader Highlight

Here’s a clean set of layout and UX design instructions that balances clarity with engagement, ensuring players get all key info without visual clutter. I’ll break this into **HUD Zones** and include design notes for clarity, readability, and flow.

## **🔧 Dungeon Battle Layout Design Instructions**

### **🧭 Top HUD – Dungeon Overview**

* **Location:** Top center
* **Contents:**
  + **Dungeon Name** (e.g., “Inferno Spire”)
  + **Current Stage Indicator:** “Stage 3 / 8”
  + **Timer** (optional): Counts down if time-limited fights exist
  + **Elemental Theme Icon** (optional, shows fire/water/etc.)
* **Design Notes:**
  + Use bold, readable font with subtle background card (semi-transparent black with 80% opacity)
  + Include subtle stage transitions with quick fade-in/fade-out stage banners

### **👥 Ally + Enemy Zones**

#### **Ally Zone (Bottom Half)**

* **Layout:** 4 characters left-to-right in a horizontal row
* **Each Character Frame Includes:**
  + **Avatar** (centerpiece, clickable or hoverable)
  + **Character Name** (top of frame)
  + **Health Bar:** Thin green bar under name, turns red if <30%
  + **Attack Meter Bar:** Thinner bar under health, fills left to right
  + **Status Effects Icons:**
    - Appear under the avatar
    - Max 5 visible, tooltip on hover
    - Tooltip shows effect name, turns remaining, and stack count if relevant
  + **Passive Skill Icons:**
    - Small and semi-transparent, grouped in corner or toggleable
    - On hover or tap: show tooltip with passive effect
  + **Glow Effect:** Light blue when Ultimate is available
* **Click / Hover Actions:**
  + Show full skillset: Basic, Advanced, Ultimate with tooltips (cooldown shown)

#### **Enemy Zone (Top Half)**

* **Same layout logic as Ally Zone**, but reversed
* **Enemy avatars** should be visually distinct (e.g., red border or shadow)
* Show **boss markers** on mini/final bosses

### **🎯 Middle Zone – Battle Feed**

* **Location:** Bottom-center or side toggle panel
* **Live text log** showing recent actions:  
  + “Kleos used Flame Bolt – 218 dmg to Ember Imp”
  + “Frank healed Zara – +45 HP”
  + “Poison failed (35% chance, rolled 71)”
* Show **last 5–10 events**, with scroll or expand
* Highlight **critical hits, deaths, stuns** with subtle color flash or icon

### **🔄 Turn Meter Visual (Optional, Advanced View)**

* Horizontal timeline bar across the top or bottom:  
  + Avatars of all units appear along timeline based on current Attack Meter %
  + Shows who's about to act and gives clarity on turn order
* Optional toggle to disable for minimal mode

### **🧰 Skill Info Panel (Right Side or Pop-up)**

* Show current skill being cast with:  
  + Icon
  + Name
  + Description
  + Cooldown remaining (if not a Basic skill)
  + Target (displayed dynamically)
* Passive effects can be toggled on/off in UI (to reduce clutter for power users)

### **💬 UX Tips**

* **Quick action effects**: highlight damage numbers in red, healing in green, buffs in blue
* Option to **pause, speed up (2x / 4x)**
* **Battle MVP summary** at the end: who dealt most damage, most healing, etc.