**Supplementary Specification**

**Introduction**

This document captures non-functional requirements, constraints, and supplementary features for the Rokue-Like Game project. These requirements define the overall quality attributes and design constraints for the system.

**Usability**

**User Interface Design**:

* Intuitive UI with minimal complexity for players of all experience levels.
* Real-time visual indicators for:
  + Remaining time (timer display).
  + Player lives.
  + Collected enchantments and their effects.

**Player Feedback**:

* Sound and visual cues for important actions, such as:
  + Finding a rune.
  + Successfully using an enchantment.
  + Being hit by a monster.

**Accessibility**:

* Ensure text and visuals are clear and easy to read, even on smaller screens.
* Avoid color combinations that may be problematic for colorblind users.

**Reliability**

**Recoverability**:

* In the event of a crash or unexpected shutdown, allow the game to restore progress from the last hall completed.

**Fault Tolerance**:

* Handle errors such as failed resource loading or invalid user input without crashing the game.

**Performance**

**Loading Times**:

* Ensure hall transitions and Build Mode load times are under 3 seconds on supported hardware.

**Real-Time Responsiveness**:

* Maintain frame rates of at least 30 FPS during gameplay to ensure smooth player interactions.

**Scalability**:

* Support generation of halls with increasing complexity without significant performance degradation.

**Supportability**

**Extensibility**:

* Modular design to allow future expansions, such as:
  + New hall themes.
  + Additional enchantments or monsters.
  + Multiplayer functionality.

**Configuration**:

* Allow customization of Build Mode parameters (e.g., maximum and minimum objects per hall).

**Compatibility**:

* Ensure the game runs smoothly on all desktop platforms, with minimal differences in user experience.

**Implementation Constraints**

**Technology Stack**:

* Use Java as the primary programming language.
* Use Java Swing as the gui library.

**Hardware Requirements**:

* Minimal hardware is enough.

**Interfaces**

**Player Interface**:

* Provide a main menu with the following options:
  + Start Game.
  + View Help Screen.
  + Exit Game.
* In-game interface must display:
  + Timer and life counters.
  + Collected enchantments.
  + Pause and return main menu buttons

**Application-Specific Domain Rules**

**Rune Collection Rules**:

* Each hall must contain exactly one rune, hidden within an interactive object.
* The player cannot exit a hall without first collecting the rune.
* Rune can be teleported away to another object by a specific monster.

**Monster Rules**:

* Monsters must behave consistently based on their types:
  + Archer Monsters shoot at the player if within range.
  + Fighter Monsters pursue the player when nearby.
  + Wizard Monsters teleport runes periodically.

**Enchantment Rules**:

* Storable enchantments must be usable at any point after collection.
* Immediate enchantments (e.g., Extra Time, Extra Life) take effect as soon as collected.