Requirements and Analysis

Functional Requirements

- The system shall store word pairs (foreign word + translation)
- The system shall categorize vocabulary (beginner, intermediate, advanced)
- The system shall allow adding /editing vocabulary lists

Non-Functional Requirements

Performance :
- Minimum FPS should be stable 60.
- Maximum load time should be less than 3 seconds.

Usability :
- Clear feedback for correct/incorrect answers.
- Easy-to-read pixel art font.

Reliability :
- No game-breaking bugs.

Aesthetics :
- Pixel art style
- Coherent color palette and design

Constraints

- Must run on standard desktop hardware
- Built in Java
- 2D pixel art style
- 1 month to finish
- Only free assets will be used
- Need to learn Java game development frameworks/libraries (LWJGL, OpenAL, JavaFX…) and game programming concepts.