Requirements for Grammar Game

1. The game shall be a standalone 2D application built in the Unity engine.
    1.1. The game shall run on standard Windows, Mac, and Linux computers meeting Unity's minimum specifications.
    1.2. The computer must be able to receive input from a keyboard.
    1.3. The computer must be able to receive input from a mouse or trackpad.
2. The game shall provide a comprehensive menu system.
    2.1. The game shall display a Start Menu upon launch.
    2.2. The Start Menu shall provide options to start a new game and access other menus.
        2.2.1. The Start Menu shall give the player the ability to select the difficulty level (e.g., Easy, Medium, Hard).
    2.3. The game shall have a Controls Menu that displays the input mappings to the player.
    2.4. The game shall have a Pause Menu, accessible during gameplay.
        2.4.1. The Pause Menu shall be activated by a dedicated key press (e.g., the ESC key).
        2.4.2. The Pause Menu shall provide options to resume, quit, and view the Controls Menu.
    2.5. Upon completing the game, an End Game menu shall display the score the player managed to achieve.
    2.6. The game shall have a High Score menu that displays the saved users previous best five runs.
3. The game shall feature a player character that can be controlled to navigate the environment.
    3.1. The player character shall be moved using the keyboard(e.g. WASD or the arrow keys).
    3.2. The player character's movement shall be constrained by the environment.
        3.2.1. The character shall not be able to move through walls.
        3.2.2. The character shall not be able to move through locked doors.
        3.2.3. The character shall not be able to move through objects.
    3.3. The player character shall be able to move between rooms or levels.
4. The core gameplay shall involve solving grammar based puzzles to progress through multiple levels while avoiding enemies.
    4.1. The game shall consist of multiple levels, with the grammatical complexity and puzzle difficulty increasing in later levels.
    4.2. Each level shall contain key items that are solutions to grammar problems.
        4.2.1. Key items shall be visually distinct and placed throughout the level.
        4.2.2. Key item types shall include, but are not limited to: Nouns, Verbs, Adjectives, Adverbs, Punctuation Marks, and Correctly Spelled Words.

4.3. The game shall present grammar problems to the player (e.g., on locked doors, via non-player characters).

    4.3.1. Interactable objects that present problems shall display descriptive text to the player.

4.4. To solve a problem, the player must find and use the correct key item.

5. The game shall feature enemies that can detect the player using a cone-based field of view, pursue them in a line, and deal damage on contact.

    5.1. The enemies must have a visual cue for detection.

6. The grammar questions shall be appropriate for the 4th to 6th grade level.

    6.1. The grammar questions shall be randomly selected from pools of questions separated by difficulty (eg. Easy, Medium, Hard).

        6.1.1. Question difficulty shall correspond with the player's selected difficulty on the Main Menu.

    6.2. All questions shall have a clear and defined answer.

7. The game shall provide clear visual feedback to the player based upon user actions.

    7.1. Descriptive text shall appear when the player interacts with key objects, including locked doors, key items, and non-player characters.

    7.2. The game shall provide clear visual or audio feedback upon successful or failed puzzle attempts.