Interactive Hangman

USING OOP C++ AND SFML

Group Members:
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1. Introduction

• **Background**: This project focuses on basic game development using C++ and SFML, emphasizing interactive UI and object-oriented design.

• **Problem Statement**: Many beginner programming projects lack interactive visuals and real-time feedback. This project addresses that by applying OOP to create a game that improves logic-building skills.

• **Objectives**:

- Implement a hangman game using C++ and SFML.
- Demonstrate class-based design (GameLogic, TextRenderer, etc.).
- Provide an engaging interface for guessing words.

2. Scope of the Project

• **Inclusions:** Game logic for guessing letters. Visual representation of the hangman. Hint system. Word bank including animals and countries.

• **Exclusions:** Online multiplayer or high-score saving. Audio feedback or advanced animations.

3. Project Description

• **Overview:** A graphical hangman game built with OOP concepts: encapsulation (class design), abstraction (game states), and inheritance (extendable UI).

• **Technical Requirements:** Microsoft Visual Studio, SFML library, C++

• **Project Phases:** 1. Research and planning 2. Designing classes and structure 3. Implementing and testing 4. Presentation and documentation

4. Methodology

• **Approach:** Break work into sprints. Each member will focus on tasks like UI, logic, or documentation.

• **Team Responsibilities**:

Nimra: Overall coordination, HangmanRenderer and class structure.

Shorouq: GameLogic, word bank integration, and testing.

Hafsa : Text rendering, UI text elements, and color theme.

5. Expected Outcomes

• **Deliverables:** Working hangman game (exe), Source code with comments, project report and brief demo.

• **Relevance:** Demonstrates understanding of C++ OOP, event-driven programming, and visual design.

6. Resources Needed

• **Software:** SFML library, Visual Studio, GitHub (optional for version control)

• **Other Resources:** Online C++/SFML tutorials, Support from the instructor for setup/debugging