Project Proposal

Course Code: CIS232

Course Title: Operating Systems

Submitted to

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Title: Linux Command-Line Adventure Game

Background:

The "Linux Command-Line Adventure Game" project aims to create an engaging and educational text-based adventure game that runs within the Linux command-line interface (CLI). The project aims to provide an enjoyable learning experience for individuals looking to enhance their Linux command-line skills while navigating a fictional world filled with challenges and puzzles.

Function List:

1. Generate a random number:

   - Generate a random number within a specified range as the target for guessing.

2. User Interaction:

   - Prompt the user to input their guess.

3. Compare the user's guess:

   - Compare the user's guess to the target number.

4. Give feedback:

   - Provide feedback to the user on whether their guess is correct, too high, or too low.

5. Score Tracking:

   - Keep track of the user's score based on the number of attempts.

6. Display High Score:

   - Display the user's highest score achieved in previous games.

UML Model:

```
┌─────────────────────────────────────┐
│         Command-Line Game           │
├─────────────────────────────────────┤
│ - targetNumber: int                 │
│ - userGuess: int                    │
│ - score: int                        │
│ - highScore: int                    │
│                                     │
├─────────────────────────────────────┤
│ + startGame()                       │
│ + playGame()                        │
│ + displayScore()                    │
│ + generateRandomNumber()            │
│                                     │
└─────────────────────────────────────┘
```

Tools:

- Bash scripting for game logic and interaction.

- Linux CLI commands to create the game environment.

- Text-based storytelling and ASCII art for visual elements.

Project Requirements:

1. Game Logic: Develop the core game logic, including the storyline, character interactions, and quest/challenge design.

2. Linux Commands Integration: Implement Linux commands creatively within the game context and ensure their intuitive usage.

3. User Interface: Create a user-friendly interface for the game that provides clear instructions and feedback.

4. Documentation: Provide comprehensive documentation or an in-game help system to guide players.