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## **Gummy Bear Arena**

# Gummy Bear Arena's Program Report

## Introduction

The Gummy Bear Arena program is a text-based game implemented in C++. The game simulates battles between player-controlled gummy bears and AI-controlled opponents. Players must strategically choose actions such as light attacks, heavy attacks, special skills, ultimate moves, and defending to defeat their opponents and emerge victorious.

## Features

1. **Battle System:** The core feature of the game is the battle system, where players and opponents take turns selecting actions and dealing damage to each other.
2. **Action Choices:** Players have the option to perform various actions, each with its own energy cost and damage output. These actions include light attacks, heavy attacks, special skills, ultimate moves, and defending.
3. **Energy Management:** Players and opponents have a limited amount of energy, which is consumed when performing actions. Defending does not consume energy, and players can only perform actions if they have sufficient energy.
4. **Damage Reduction:** When a player or opponent chooses to defend, they receive reduced damage based on their defense stat. This adds a strategic element to battles, as players must consider when to defend to minimize damage.
5. **Game Over Condition:** The game ends when either the player or the opponent's health reaches zero. The program notifies the player of the outcome of the battle and whether they have emerged victorious or been defeated.

## Implementation Details

- **Language:** C++
- **Libraries:** Standard C++ libraries

- **Development Environment:** Developed and tested in a terminal environment
- **Randomization:** Random number generation is used to simulate dice rolls and opponent actions.

### **Future Enhancements**

1. **Graphics:** Implement graphical elements to enhance the visual experience of the game.
2. **Additional Actions:** Introduce more diverse actions and abilities for gummy bears and opponents to increase gameplay variety.
3. **Training System:** Implement a training feature where players can improve their gummy bear's stats and abilities between battles.
4. **Save and Load Functionality:** Add functionality for players to save their progress and resume their game at a later time.

### **Conclusion**

The Gummy Bear Arena program provides an engaging and strategic gameplay experience for players, challenging them to outwit their opponents in turn-based battles. With its intuitive interface and diverse action choices, the game offers hours of entertainment for players of all ages.