

Solo Leveling: D&D Dungeon Game

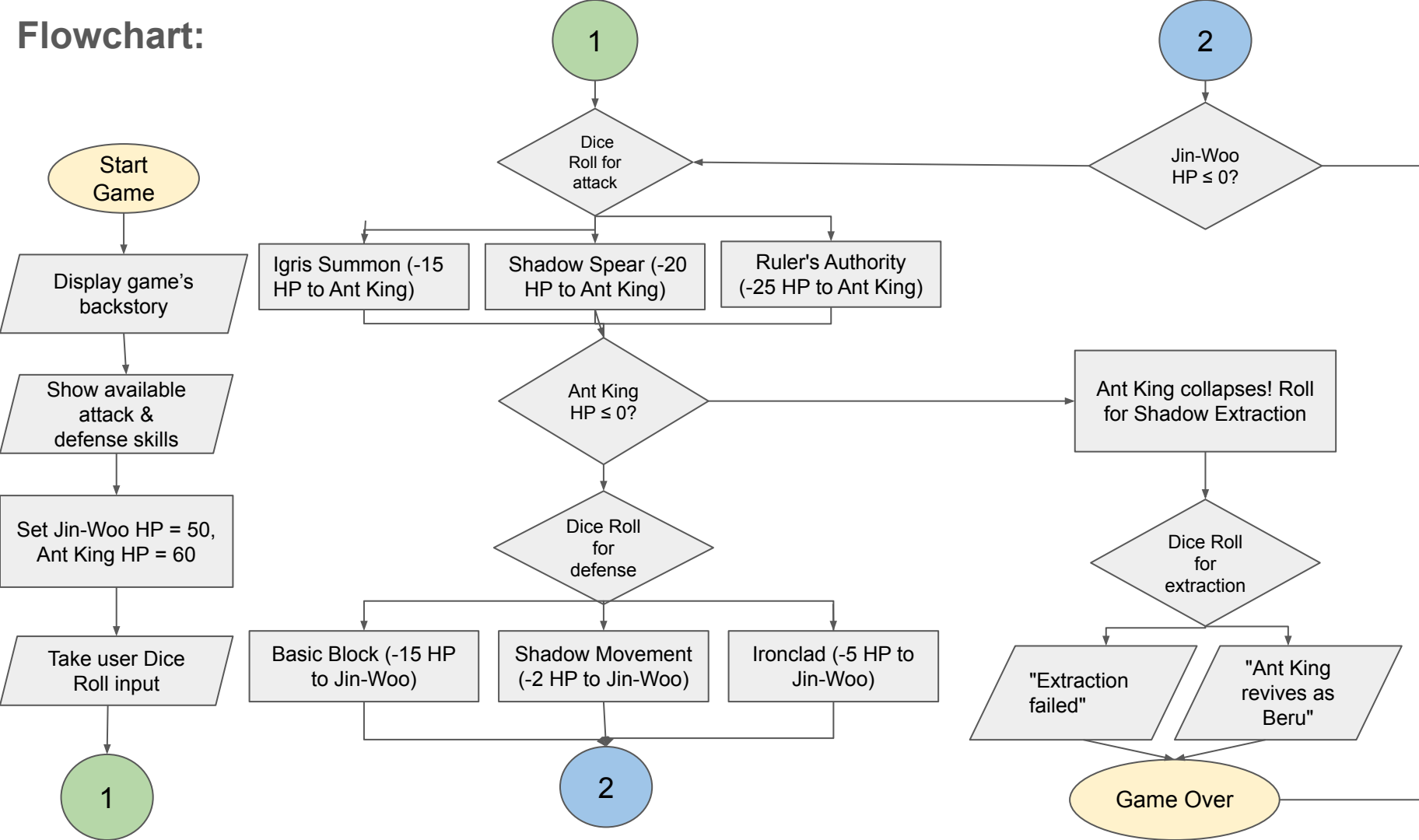
Introduction

This presentation explains the implementation of a text-based game inspired by "**Solo Leveling**." The player takes on the role of Sung Jin-Woo, the **Shadow Monarch**, battling the powerful **Ant King** in a **turn-based dice roll combat system**. The game involves strategic attack and defense based on dice rolls.

Algorithm

1. Display a welcome message introducing the game.
2. Show the available attack and defense skills.
3. Initialize the health points for Sung Jin-Woo and the Ant King
4. Start a loop where:
 - a. The player rolls a dice for an attack move.
 - b. Damage is inflicted based on the roll value.
 - c. If the Ant King's HP reaches 0, the game ends in victory.
 - d. If the Ant King is still alive, it counterattacks.
 - e. The player rolls a dice to defend.
 - f. Damage is mitigated based on the defense roll.
 - g. If Sung Jin-Woo's HP reaches 0, the game ends in defeat.
5. If the player wins, they roll a dice for "Shadow Extraction."
6. Display the game outcome based on the final roll

Flowchart:



Code:

```
#include <stdio.h>
```

```
// Function to get user dice roll input
```

```
int getUserDiceRoll() {  
    int roll;  
    while (1) {  
        printf("Enter your dice roll (1-6): ");  
        scanf("%d", &roll);  
        if (roll >= 1 && roll <= 6) break;  
        printf("Invalid input! Please enter a number between 1 and  
6.\n");  
    }  
    return roll;  
}
```

```
void displaySkills() {  
    printf("Sung Jin-Woo's Skills:\n");  
    printf("Attack Skills:\n");  
    printf("1. Ruler's Authority (Dice 5-6) - AoE Damage\n");  
    printf("2. Shadow Spear (Dice 3-4) - High single-target  
damage\n");  
    printf("3. Igris Summon (Dice 1-2) - Heavy damage minion\n");  
    printf("Defense Skills:\n");  
    printf("1. Ironclad (Dice 5-6) - High defense shadow knight\n");  
    printf("2. Shadow Movement (Dice 3-4) - High dodge  
chance\n");  
    printf("3. Basic Block (Dice 1-2) - Minimal defense\n");  
}
```

```
int main() {  
    printf("Welcome to Solo Leveling: D&D Dungeon!\n");  
    printf("You are Sung Jin-Woo, the Shadow Monarch. You step into the Jeju Island  
Dungeon, the air thick with danger. \nThe corpses of fallen hunters lie around.  
Suddenly, a terrifying presence emerges from the darkness...\n\n");  
    displaySkills();  
    printf("\nThe Ant King appears, radiating pure malice!\n");  
}
```

```
int antKingHP = 60;  
int jinWooHP = 50;
```

```
while (antKingHP > 0 && jinWooHP > 0) {  
    printf("\nRoll dice for attack...\n");  
    int attackRoll = getUserDiceRoll();  
    printf("You rolled: %d\n", attackRoll);  
  
    if (attackRoll >= 5) {  
        printf("Sung Jin-Woo uses Ruler's Authority! AoE damage dealt!\n");  
        antKingHP -= 25;  
    } else if (attackRoll >= 3) {  
        printf("Sung Jin-Woo uses Shadow Spear! The Ant King takes a heavy hit!\n");  
        antKingHP -= 20;  
    } else {  
        printf("Sung Jin-Woo summons Igris! Igris slashes the Ant King!\n");  
        antKingHP -= 15;  
    }  
}
```

```

if (antKingHP <= 0) break;

printf("\nAnt King attacks! Roll dice for defense...\n");
int defenseRoll = getUserDiceRoll();
printf("You rolled: %d\n", defenseRoll);

if (defenseRoll >= 5) {
    printf("Sung Jin-Woo summons Ironclad! He blocks
most of the damage!\n");
    jinWooHP -= 5;
} else if (defenseRoll >= 3) {
    printf("Sung Jin-Woo uses Shadow Movement! He
dodges the attack!\n");
    jinWooHP -= 2;
} else {
    printf("Sung Jin-Woo tries to block, but takes heavy
damage!\n");
    jinWooHP -= 15;
}
}

if (jinWooHP > 0) {
    printf("\nThe Ant King collapses! Sung Jin-Woo stands
over its corpse.\n");
    printf("Roll dice for Shadow Extraction...\n");
    int ariseRoll = getUserDiceRoll();
    printf("You rolled: %d\n", ariseRoll);

```

```

if (ariseRoll >= 4) {
    printf("Sung Jin-Woo raises his hand... \"Arise.\\n\"");
    printf("The Ant King kneels before him as a new shadow
soldier! A huge humanoid shadow ant with a light purple glow,
neon eyes, sharp claws, and smoky wings\nPraise thee Shadow
Monarch!\nSung Jin-Woo says, \"Hereby I bestow upon you the
name Beru.\\n\\n\"");
    } else {
        printf("The shadow extraction failed. The Ant King fades
away...\\n\\n");
    }
} else {
    printf("\nSung Jin-Woo has fallen! The dungeon claims
another hunter...\\n");
}

return 0;

```

Output:

Welcome to Solo Leveling: D&D Dungeon!

You are Sung Jin-Woo, the Shadow Monarch. You step into the Jeju Island Dungeon, the air thick with danger.

The corpses of fallen hunters lie around. Suddenly, a terrifying presence emerges from the darkness...

Sung Jin-Woo's Skills:

Attack Skills:

- 1. Ruler's Authority (Dice 5-6) - AoE Damage
- 2. Shadow Spear (Dice 3-4) - High single-target damage
- 3. Igris Summon (Dice 1-2) - Heavy damage minion

Defense Skills:

- 1. Ironclad (Dice 5-6) - High defense shadow knight
- 2. Shadow Movement (Dice 3-4) - High dodge chance
- 3. Basic Block (Dice 1-2) - Minimal defense

The Ant King appears, radiating pure malice!

The Ant King appears, radiating pure malice!

Roll dice for attack...

Enter your dice roll (1-6): 2

You rolled: 2

Sung Jin-Woo summons Igris! Igris slashes the Ant King!

Ant King attacks! Roll dice for defense...

Enter your dice roll (1-6): 6

You rolled: 6

Sung Jin-Woo summons Ironclad! He blocks most of the damage!

Roll dice for attack...

Enter your dice roll (1-6): 4

You rolled: 4

Sung Jin-Woo uses Shadow Spear! The Ant King takes a heavy hit!

Ant King attacks! Roll dice for defense...

Enter your dice roll (1-6): 3

You rolled: 3

Sung Jin-Woo uses Shadow Movement! He dodges the attack!

Roll dice for attack...

Enter your dice roll (1-6): 5

You rolled: 5

Sung Jin-Woo uses Ruler's Authority! AoE damage dealt!

The Ant King collapses! Sung Jin-Woo stands over its corpse.

Roll dice for Shadow Extraction...

Enter your dice roll (1-6): 5

You rolled: 5

Sung Jin-Woo raises his hand... "Arise."

The Ant King kneels before him as a new shadow soldier! A huge humanoid shadow ant with a light purple glow, neon eyes, sharp claws, and smoky wings

Praise thee Shadow Monarch!

Sung Jin-Woo says, "Hereby I bestow upon you the name Beru."

Conclusion:

This game successfully implements a turn-based combat system with random dice rolls determining the outcome of attacks and defenses. It provides an engaging interactive experience inspired by the "Solo Leveling" series, allowing the player to strategize their attacks and defenses while battling the Ant King. In the game code I used **functions** for programme modularity. Also used **if-else** for turn based attack and defence based on Physical Dice Roll value taken from USER. Also **initialized HP variable** with a fixed value and changed at execution time based on damage taken.