**Introduction**

DUNEGON LOOTER is an interactive text based hack and slash video game where the player is given full freedom on their character’s stats, class, weapon and armour. We play as a Hero who enters a dungeon with many rooms and enemies, and we need to fight our way through various situations and gain items.

**Game**

**Hero**

In game we have two different hero classes. Brawler and Warrior. All classes have base damage.

**Warrior**

Warrior is the one of the most classic classes. Using weapons and armors. Warrior’s damage increase with weapons.   
Warrior Stats:

MAXHP: 400 Base Damage: 35

Weapons: Lumberjack Axe Armor: Leather Armor

**Brawler**

Brawler is a bruiser type class. Brawlers can not use weapons. They can only equip armors. Their damage will be increase depends on his Armor and MAXHP. Their damage calculate formula: Armor\*2 + 1/10\*MAXHP Brawler Stats

MAXHP: 500 Base Damage: 15

Weapon: Can’t use Armor: Ranger Armor

**Townspeople**

There are two types townspeople: Doctor and villager type. When you save townspeople, you get 10 points for each, it doesn't matter if it's a doctor or a villager. Townspeople have a 40% chance to give you 0-100 gold, have a %10 chance to give you an Artifact. Each artifact has a different score points and drop rate. When you save Doctors, they will recover 40 HP of your character. If your HP is full, they will give you a magical Heart Crystal. This crystal will increase your MAXHP by 20.

**Items**

There are three type of items: Weapons, Armor and Artifacts. Each Weapon, Armor and Artifact has different drop rates. Weapons and Armor drop from Darkraces. Artifacts are given to you by Townspeople with a 10% chance.

**Artifact List:**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Drop Rate | Weight | Value |
| Book of Harry Potter | %50 | 1 | 0 |
| Diamond | %15 | 1 | 100 |
| Dragon Ball | %12 | 5 | 200 |
| Lich King’s Helm | %10 | 5 | 120 |
| Philosopher’s Stone | %8 | 2 | 150 |
| Shards of Narsil | %4 | 3 | 200 |
| The One Ring | %1 | 1 | 700 |

**System**

We used Java to program our game which is an Object Oriented Programming Language. We tried to take full advantage of Java’s principles by trying to reuse as much code as possible. For example, we created different objects for Armor, Weapon etc for the player to equip and use. We have also taken advaIntage of different mechanisms of Object Oriented Programming. Here are some examples:

**Inheritance:** There are many classes for our main character, Hero. All of these classes are implemented into the system using “inheritance”. They all extend the Hero class.

**Polymorphism:** : In “Actions” class, we use “Beaten” mutually between “Hero” and “Darkraces”. Secondly, we used it on Inventory for weapons and armors.

**Composition:** We used the Composition on Characters. Warrior, Brawler and Darkraces have Weapons and Armor. We also used on Map class. Map class has Room.

**Interfaces:** We use “Alive” interface to determine if the characters are Alive.

**Exceptions:** We used try catch methods in “main” class to avoid unexpected system errors, Fighter’s weapon null errors and used it on sleep method.

**Strings:** We communicate to the player through various dialogues and take a lot of information from the player input with Strings, such as Hero name. We also use Strings to handle room generation.

**Files:** We used the files to write player’s score to txt. Methods calculate the scores and write it to the file.

**UML Diagram**

