CS611
Legends: Monsters and Heroes

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UML diagram
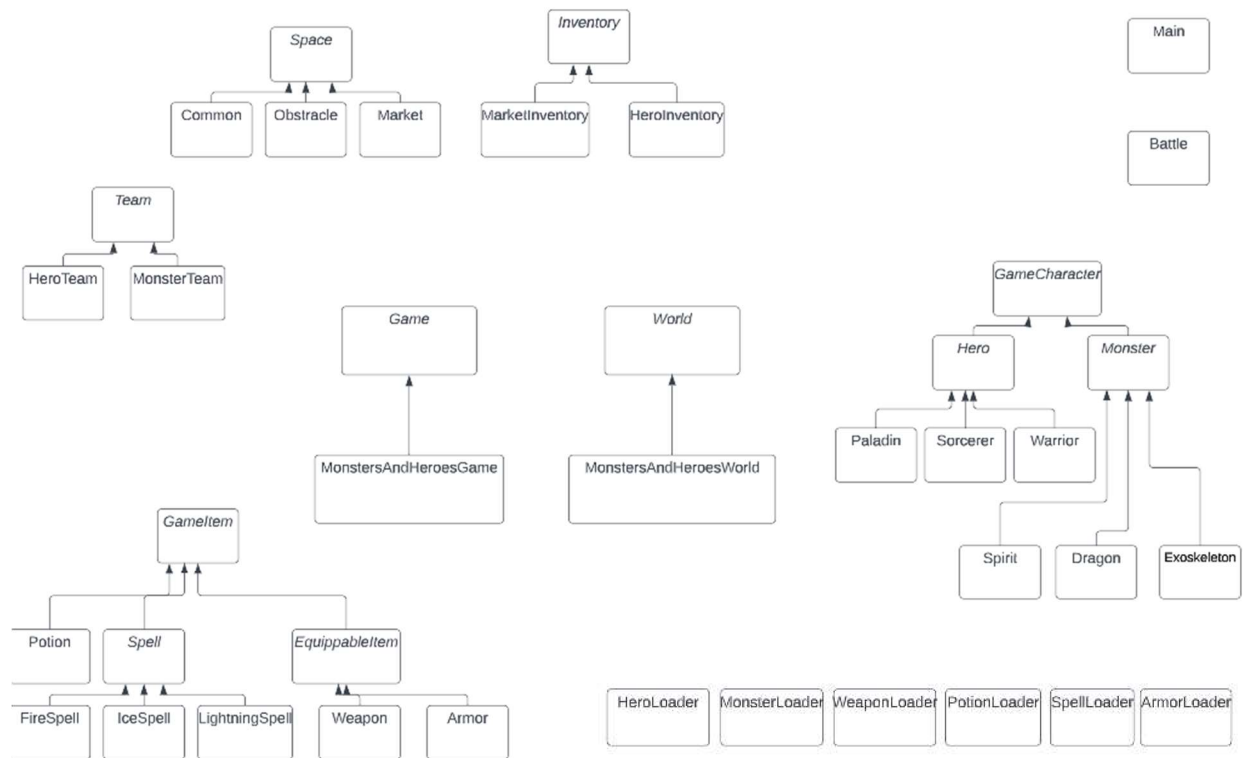
Description of classes:
    There are generally 4 kinds of classes in my project:
    1. Logic
Where the main process or game logic are implemented

    Including: Main, Battle, MonstersAndHeroesGame, MonstersAndHerosWorld

    2. Abstract
I used these classes to make my design more structural and extendable.
With this design, other types of games, different types of grids of the World, or other kinds of
Monsters and Heroes can be easily added into this project in future.

    Including: Game, World, GameCharacter, GameItem, EquippableItem, Hero, Monster, Team,
Inventory, Space, Spell

    3. Concrete
Some of these classes are concrete classes that are mainly used to store data; There are also
classes that can handle parts of the game logic and perform actions/functions which are within
one's scope of responsibility

    Including: Weapon, Armor, Potion, FireSpell, IceSpell, LightningSpell; HeroInventory,
MarketInventory, HeroTeam, MonsterTeam; Common, Obstacle, Market; Paladin, Warrior,
Sorcerer, Dragon, Exoskeleton, Spirit

    4. Utilities
These are utility classes for reading data from config files

    Including: WeaponLoader, ArmorLoader, PotionLoader, SpellLoader, HeroLoader,
MonsterLoader

Changes made to the data files: no change was made

Instructions for running the program:
        1. Unzip the files
        2. Update the file path to '/src' in Main(line3):
        static String SRC_FILEPATH =
        3. compile and run Main
        javac -d bin ./*.java
        java -cp bin Main

Bonus:
        1.Some statistics about the hero team is tracked, i.e. how many monsters were defeated
        2.Colorful prompt messages using ANSI

Input/output example

```
                armor=Unequipped}
                16: Warrior
                {name="Undefeated_Yoj", level=1, health=100, mana=400,
                strength=800, agility=400, dexterity=700,
                money=2500, experience=7,
                weapon=Unequipped,
                armor=Unequipped}
                17: Warrior
                {name="Eunoia_Cyn", level=1, health=100, mana=400,
                strength=700, agility=800, dexterity=600,
                money=2500, experience=6,
                weapon=Unequipped,
                armor=Unequipped}
                Please enter the size of your party (1~3):
                3
```

```
3
You created a party of heroes! They are:
0: Paladin
{name="Sehanine_Moonbow", level=1, health=100, mana=300,
strength=750, agility=700, dexterity=700,
money=2500, experience=7,
weapon=Unequipped,
armor=Unequipped}
1: Paladin
{name="Garl_Glittergold", level=1, health=100, mana=100,
strength=600, agility=500, dexterity=400,
money=2500, experience=5,
weapon=Unequipped,
armor=Unequipped}
2: Paladin
{name="Caliber_Heist", level=1, health=100, mana=400,
strength=400, agility=400, dexterity=400,
money=2500, experience=8,
weapon=Unequipped,
armor=Unequipped}

+-+-+-+-+-+-+-+-+
|H|M|M|M|O| | |M|
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=================================================
```

```
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Move your hero using W/A/S/D; I - info; M - Market; Q - quit:
 d

 +-+-+-+-+-+-+-+-+
 | |M|M|M|O| | |M|
 +-+-+-+-+-+-+-+-+
 |M|O|M|O|M| |O|M|
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 | | | | | | |O| |
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 +-+-+-+-+-+-+-+-+
 | | | |M| |M| |
 +-+-+-+-+-+-+-+-+
 ===============================================
 Encountered a monster team
 Monster power scaled according to HeroTeam's average level of 1
 /*******************Heroes' Turn*****************/
 /**********************************************/
 It's Sehanine_Moonbow's turn.
 Please choose an action:
 1. Attack
 2. Cast spell
 3. Use potion
 4. Equip item
 5. Display stats (won't consume this turn)

 |
```

```
/**********************************************/
It's Garl_Glittergold's turn.
Please choose an action:
1. Attack
2. Cast spell
3. Use potion
4. Equip item
5. Display stats (won't consume this turn)

1
Choose a target (enter index):
0: Dragon{name="TheScaleless", level=7, health=350, damage=700, defence=600, dodge_chance=75}
1: Dragon{name="Phaarthurnax", level=6, health=300, damage=600, defence=700, dodge_chance=60}
2: Dragon{name="TheWeatherbe", level=8, health=400, damage=800, defence=900, dodge_chance=80}
2
Garl_Glittergold attacked TheWeatherbe
TheWeatherbe received 1020damage!
/**********************************************/
It's Caliber_Heist's turn.
Please choose an action:
1. Attack
2. Cast spell
3. Use potion
4. Equip item
5. Display stats (won't consume this turn)

1
Choose a target (enter index):
0: Dragon{name="TheScaleless", level=7, health=350, damage=700, defence=600, dodge_chance=75}
1: Dragon{name="Phaarthurnax", level=6, health=300, damage=600, defence=700, dodge_chance=60}
0
Caliber_Heist attacked TheScaleless
TheScaleless received 680damage!
/*****************Monsters' Turn*****************/
/**********************************************/
It's TheScaleless's turn, but TheScaleless is defeated and cannot move!
/**********************************************/
Phaarthurnax attacked Sehanine_Moonbow
Sehanine_Moonbow received 300damage!
/**********************************************/
It's TheWeatherbe's turn, but TheWeatherbe is defeated and cannot move!
Auto-regen for Garl_Glittergold: HP+20, MP+20 applied!
Auto-regen for Caliber_Heist: HP+20, MP+80 applied!
/*****************Heroes' Turn*****************/
```