Dungeon POO-COO

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I- The game

1- *The goal of the game*

This game is a dungeon, you are a player lose in this dungeon. You need to exit it. For that, you can explore it by travel in its rooms. But you need to be prudent because there is foe in this dungeon. You can fight them thanks to the weapons you are going to find in the chest. Sometimes there is sometimes, the door between two rooms can be close and for open it you need to find a key. But beware some rooms are trapped you can disable it, but you need to be fast to disable it before it triggers. When you finally get to the last room, you are going to have to beat the final boss to get out of this dungeon.

2- *List of functionalities*

a. Obligatory features

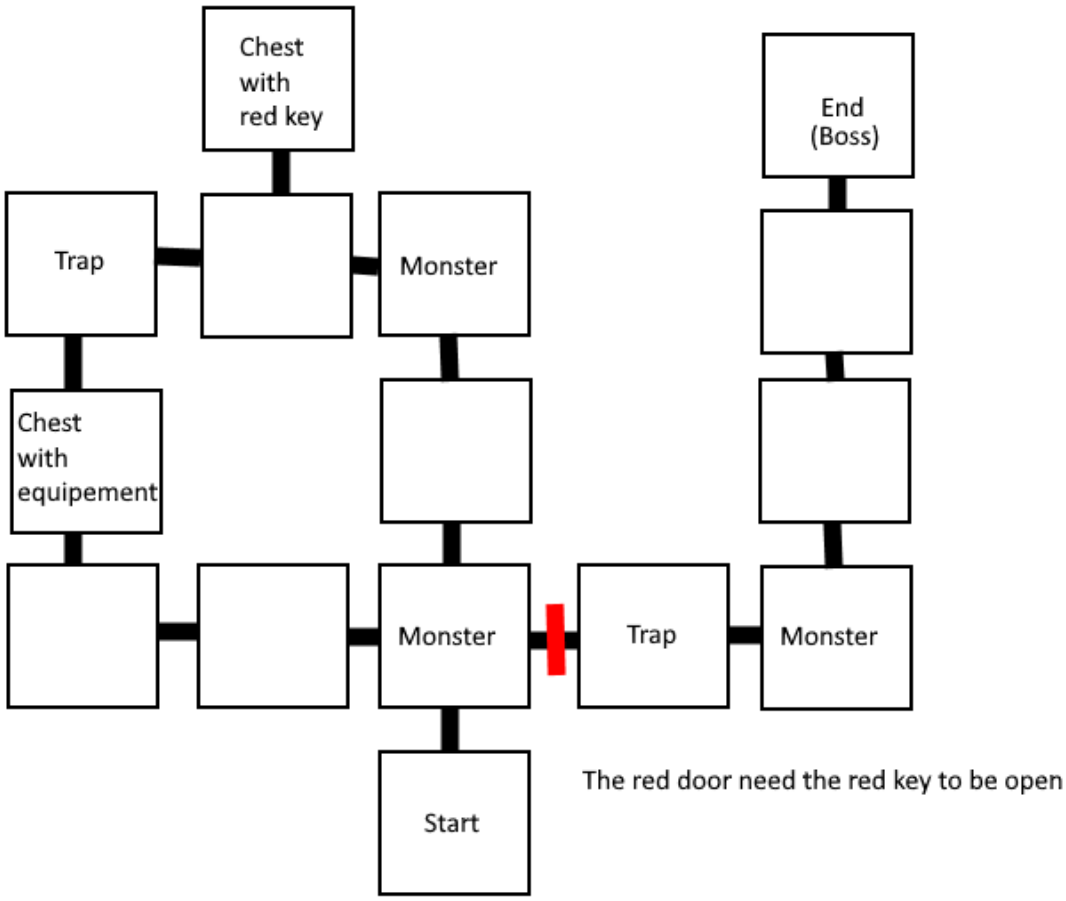
- The player can go in all 4 directions (North, South, East, West)
- The dungeon has a pre-built map to try all the functionalities. (You can see the map on c.)
- The end of game work. If the player dies, there is a “Game Over”. And if the player beat the boss, there is “You win”.
- The player interacts with the dungeon with controls who are represented by character of the keyboard.

b. Optional features

- If you don’t want to play on the pre-built map. This game contains a feature to generate dungeon randomly. The random dungeon contains all the features.
- Some doors are close thanks to a key. There is a color on the key. The color of the door needs also to be the same.
- When you start the game, you are on the main menu, on it you can choose on which dungeon you want to play. And when you die, quit, or win you are in the main menu to restart a new dungeon or quit the game.
- Each room have a context, if you are in a room where there is a chest to open, the view purpose you to open it.
- The player and the foes have health points (hp) for fight.
- In some rooms, there is foe, you can fight him with a rock-paper-scissors. The one who win the round hit the other. The first who have 0 hp die.
- Before play, the first round of the rock-paper-scissors in a fight, you can try to flee. But there is a chance to flee. If you flee, you go bat to the last room, if you don’t flee you need to fight, and you can’t try to flee again.
- There are rooms with chest, in the chest you can find keys or weapons. If you find a weapon, you can equip it in your inventory.
- If you kill a foe, it will not reappear.
- Some rooms are trapped, but you can disable it if you’re fast.
- The inventory of the player has a feature to drop some weapons that the player doesn’t want.

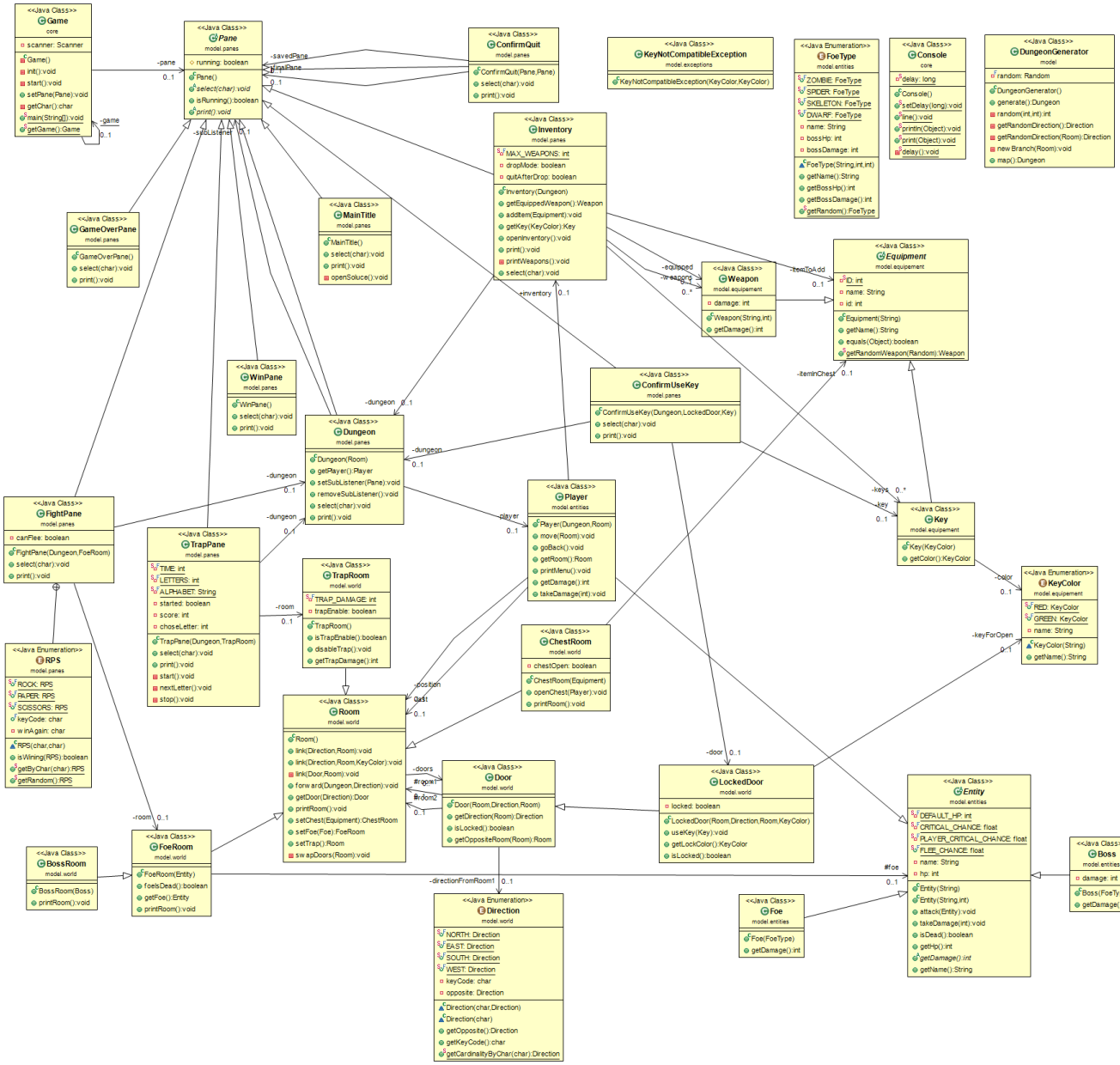
c. Pre-built map of the dungeon

Before start, I draw a dungeon with the functionalities I want to do.



II- Code documentation

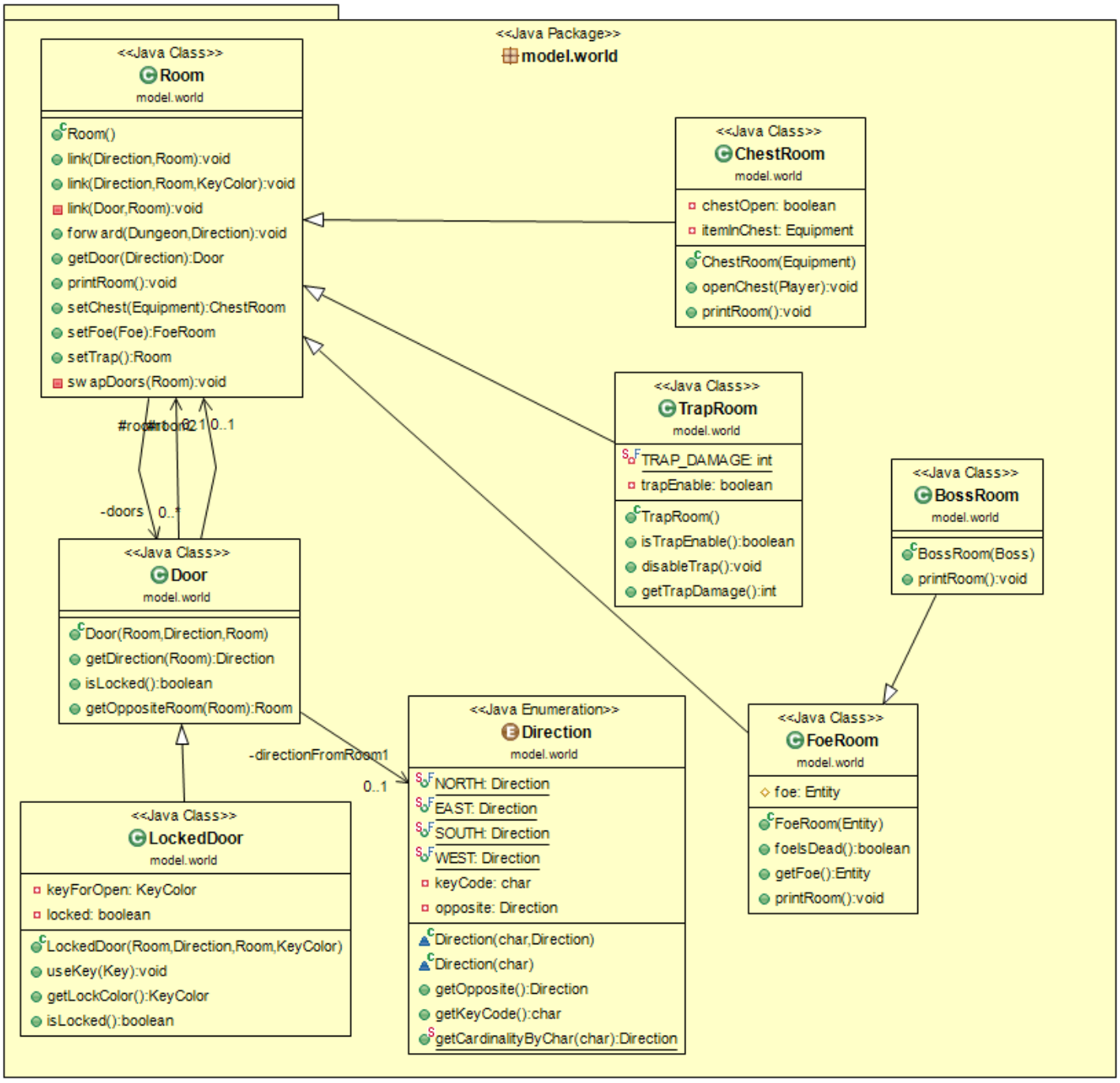
1- *The global class diagram*



This diagram is complex, so I'm going to separate it into several parts.

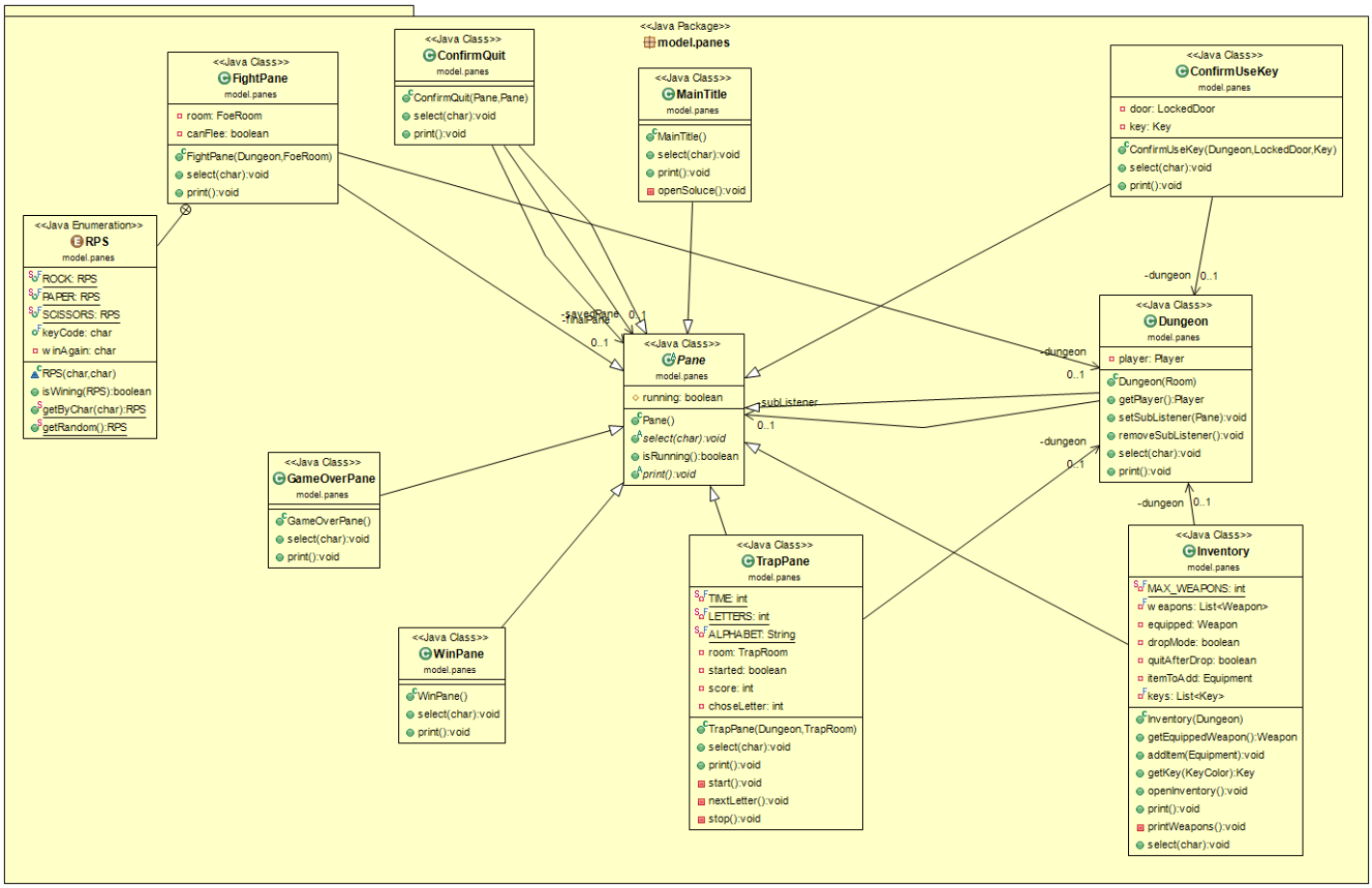
2- *World class diagram*

This class diagram represents all the world around the player.



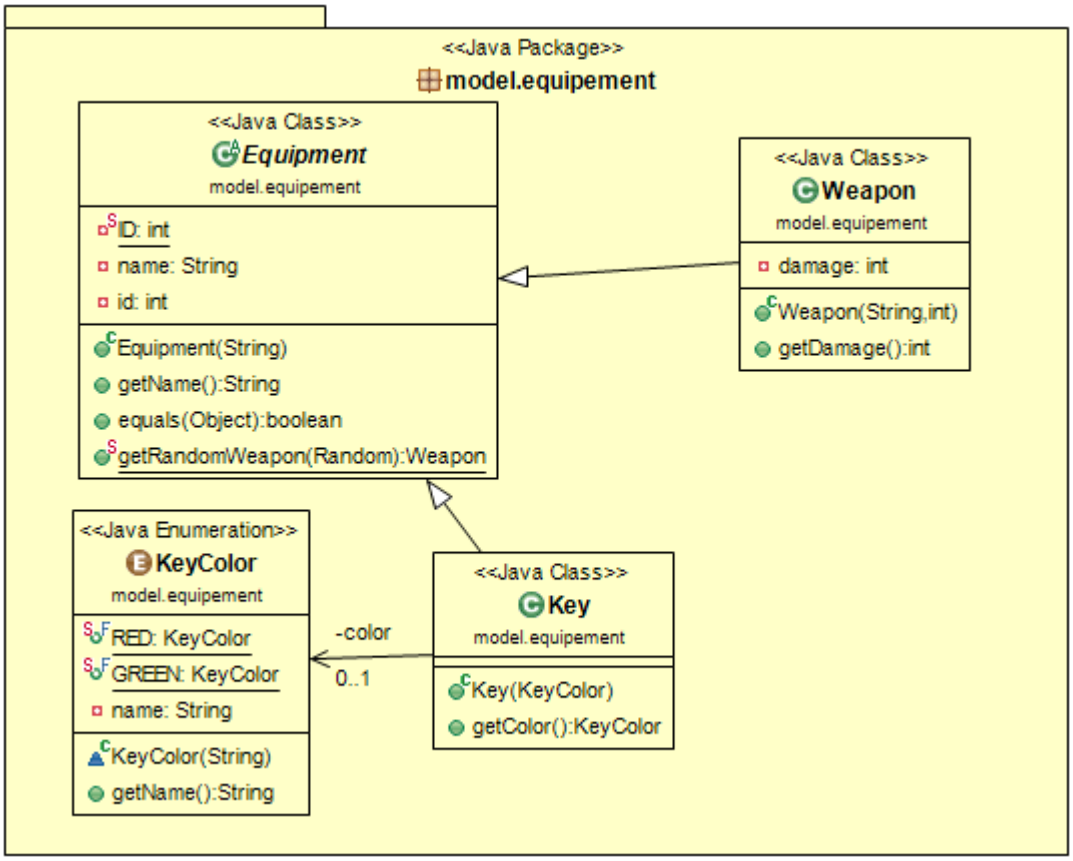
3- Panes class diagram

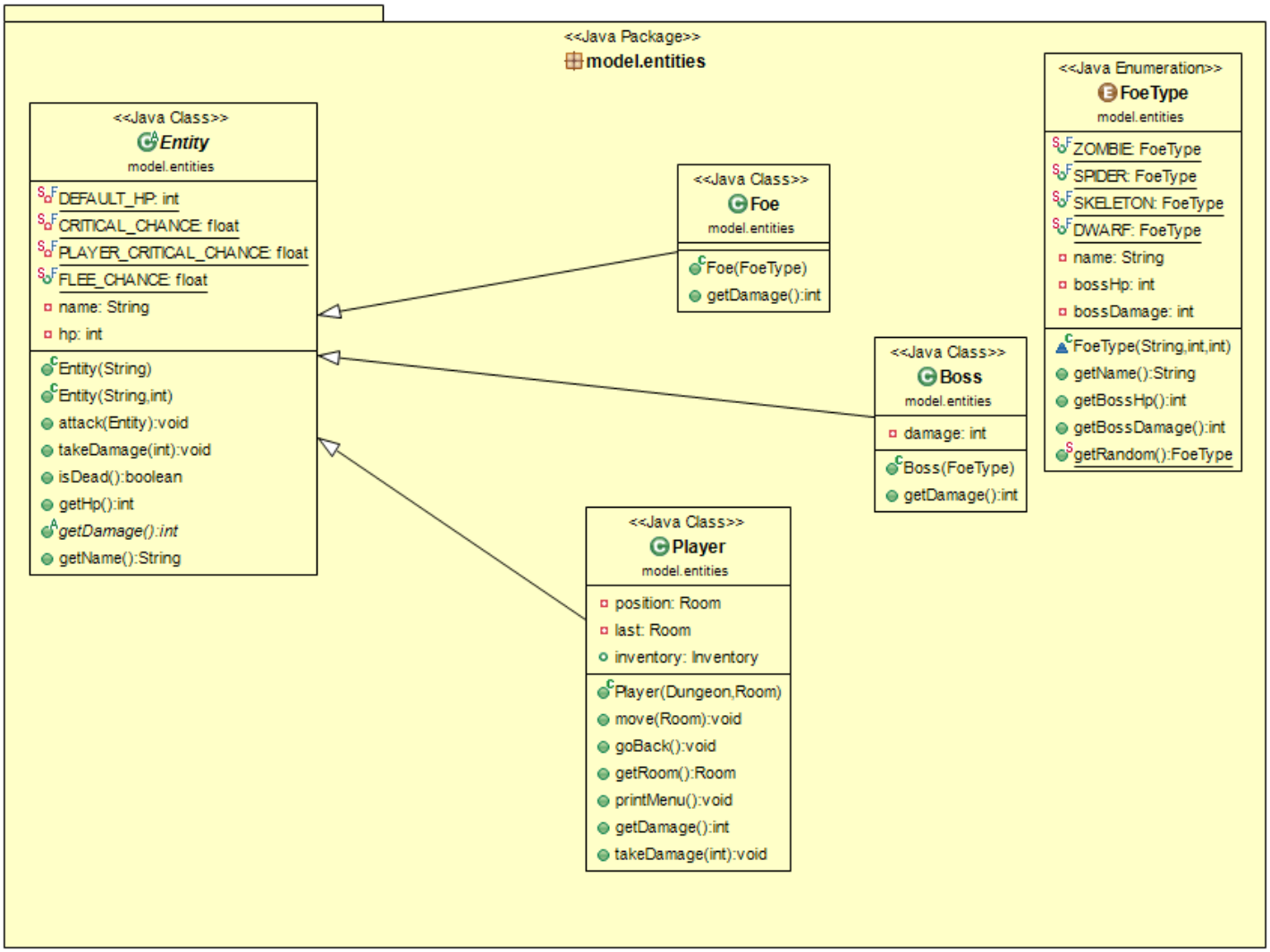
The panes process the keyboard entry of the player.



4- *Equipment class diagram*

In the player's inventory, some equipment can be stored.



5- *Entities class diagram*

The entities class diagram represents all the entities in the game. The FoeType enumeration represent the different types of foe with their data.