

Week 9 Lab: Observer Pattern

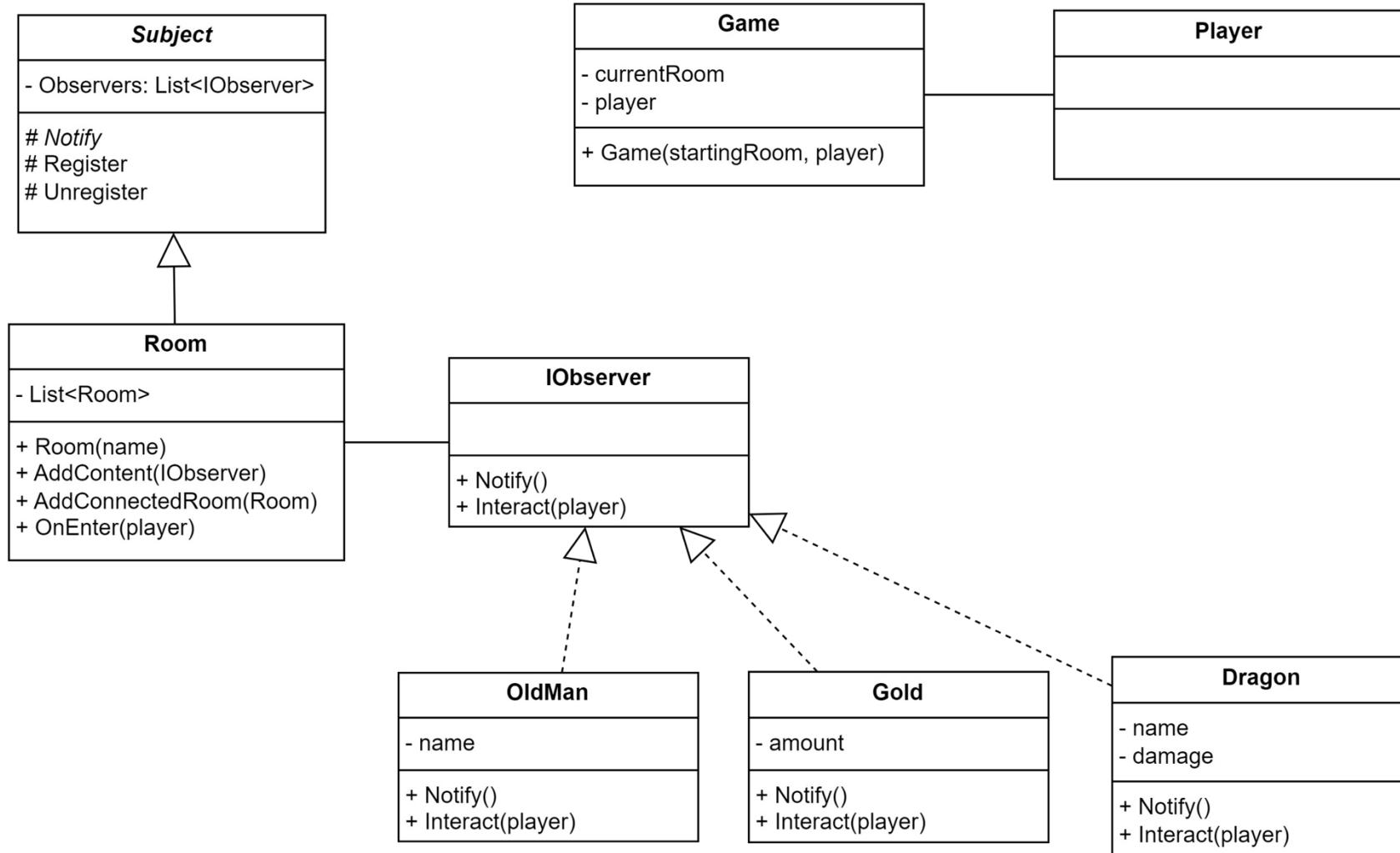
LCSCI5202: Object Oriented Design Week 9

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Tasks

- Design a simple text-based adventure game using the observer pattern. In this game, a player will explore various rooms, each with interactive elements such as NPCs or objects that respond when the player enters. The rooms should notify their contents (objects or characters) about the player's presence, and each content item should react or interact with the player in a unique way.
- Guidelines:
 - Create a Player class and a Game class to manage the game flow and interactions.
 - Implement a base Observer class and a Subject class.
 - Each room should be a Subject and notify its contents (observers) when the player enters.
 - Different interactive elements in the rooms (such as characters or treasures) should inherit from the Observer class.
 - Allow the player to move between connected rooms

Tasks



Example use

```
// Room definition
Room staircase = new Room("staircase");
staircase.Add(new OldMan("Gerald"));

Room hallway = new Room("hallway");

Room dragonsRoom = new Room("dragons room");
dragonsRoom.Add(new Dragon("Draconis Rex", 10));

Room treasureRoom = new Room("treasure room");
treasureRoom.Add(new Gold(500));
treasureRoom.Add(new Dragon("Smaug", 15));

// Map
staircase.AddConnectedRoom(hallway);
hallway.AddConnectedRoom(staircase);
hallway.AddConnectedRoom(dragonsRoom);
dragonsRoom.AddConnectedRoom(hallway);
dragonsRoom.AddConnectedRoom(treasureRoom);
treasureRoom.AddConnectedRoom(dragonsRoom);

// Start the game
Player player = new Player();
Game game = new Game(player, staircase);
game.StartGame();
```

