Sprint 2

Rules
In this sprint we include Rules for Things, e.g. it’s ok to pick up the bird if you have the cage (and not the Rod).

Bird rule
The bird can be picked up iff (if and only if):
● The player has the Cage in her/his inventory
● The player does NOT have the Rod in her/his inventory

Pirate Chest rule
You can pick up (and unlock and win the game) the Pirate Chest, only if you have all the keys.

The rules are created and added to the RuleBook in the new version of CaveInitializer. Download it if you have a version without this feature.

There is also a test, se.itu.game.test.ThingRuleTest which tests that a fake rule works for picking up a key, and then a test for picking up the Pirate Chest without and with all the keys.

New responsibilities (and behavior) for Player
● +describeCurrentRoom() : String
● +currentRoomThings() : Thing [*]
● +canSeeRoomIn(Room.Direction) : boolean

Two new Exception classes added
● IllegalMoveException - for when some one tries to make the Player go in an illegal direction
● RuleViolationException - for when some one tries to make the Player pick up a Thing against the ThingRule for the Thing in the RuleBook

New protocol for Player’s go(Room.Direction) method
The method now throws IllegalMoveException if some one tries to go in a Room.Direction for which there is no connected Room
New interface added - ThingRule

A new interface will be added - se.itu.game.cave.ThingRule. This interface declare one abstract method:
+apply() : boolean {exceptions=RuleViolationException}

New class - RuleBook

We will add a class, RuleBook, which will hold all the ThingRules and which we can query for the ThingRule for a Thing. See UML for details. The ThingRules will be added automatically from the CaveInitializer, provided by the teachers.

New implementation of Player's takeThing(Thing) method

The method now declares that it throws RuleViolationException (see above), because it now gets the ThingRule, from the RuleBook, for the Thing to take, and applies the rule. If the ThingRule doesn't allow the thing to be taken, the ThingRule throws a RuleViolationException - which will be thrown from the takeThing(Thing) method. The GUI now must perform player.takeThing(thing) in a try-block which catches RuleViolationException.

Changes to the GUI

The GUI must be updated to reflect these new design decisions:

- player.go(Direction) must now be put inside try-catch(IllegalMoveException)
- player.takeThing(Thing) must now be put inside try-catch(RuleViolationException)
- We shouldn't use the Player's currentRoom any more, but rather use
  - player.describeCurrentRoom()
  - player.currentRoomThings()
  - player.canSeeDoorIn(Direction)

TODO: for the teachers

- Implement death-rooms - where it’s Game Over if the Player enters
  - Will be implemented in CaveInitializer - some rooms will be dead-ends with no connecting rooms and a description of “Game Over”

Excluded objects and other stuff (in this version/sprint):

- Snake
- Dragon
- Room rules (room rules)