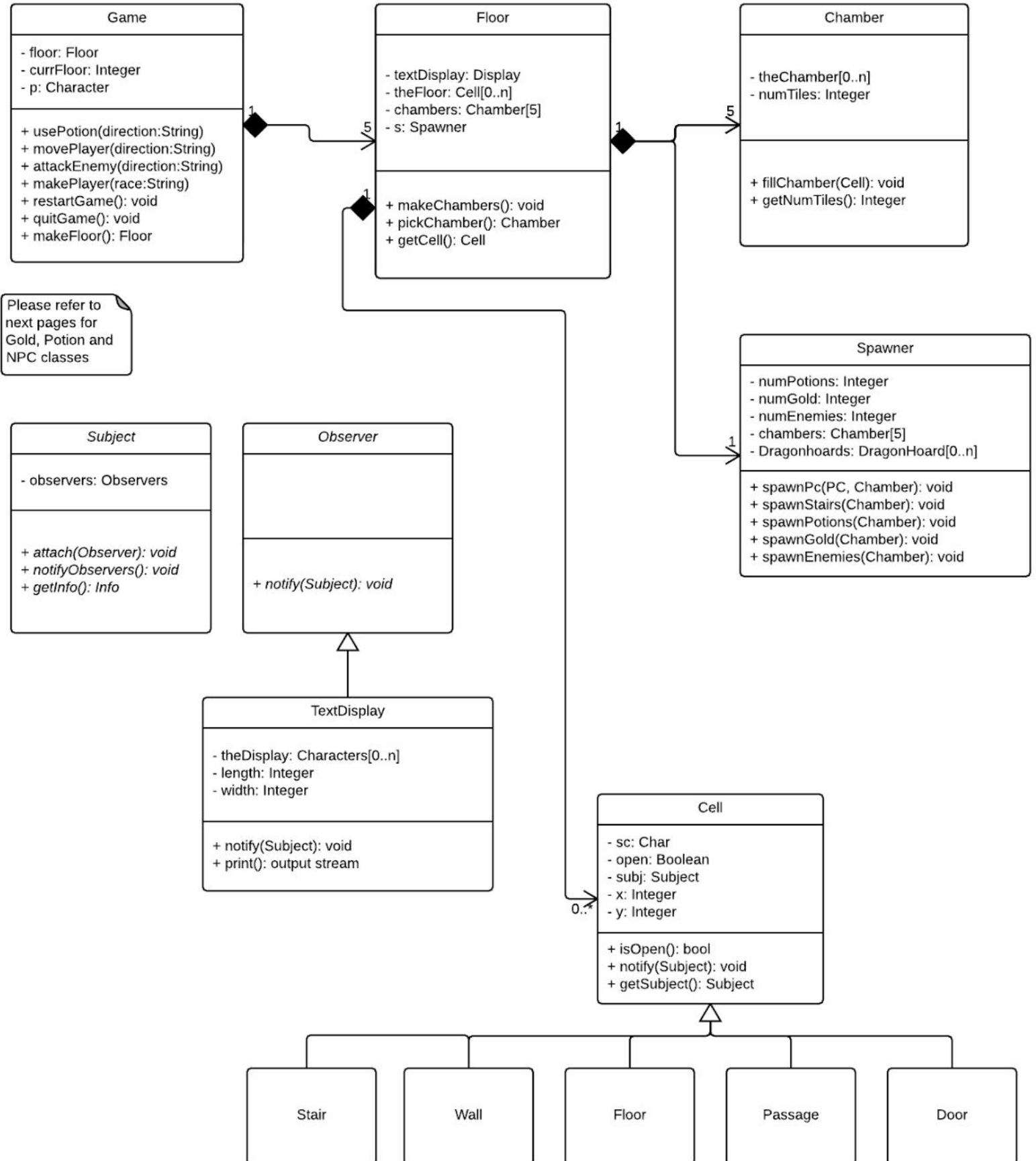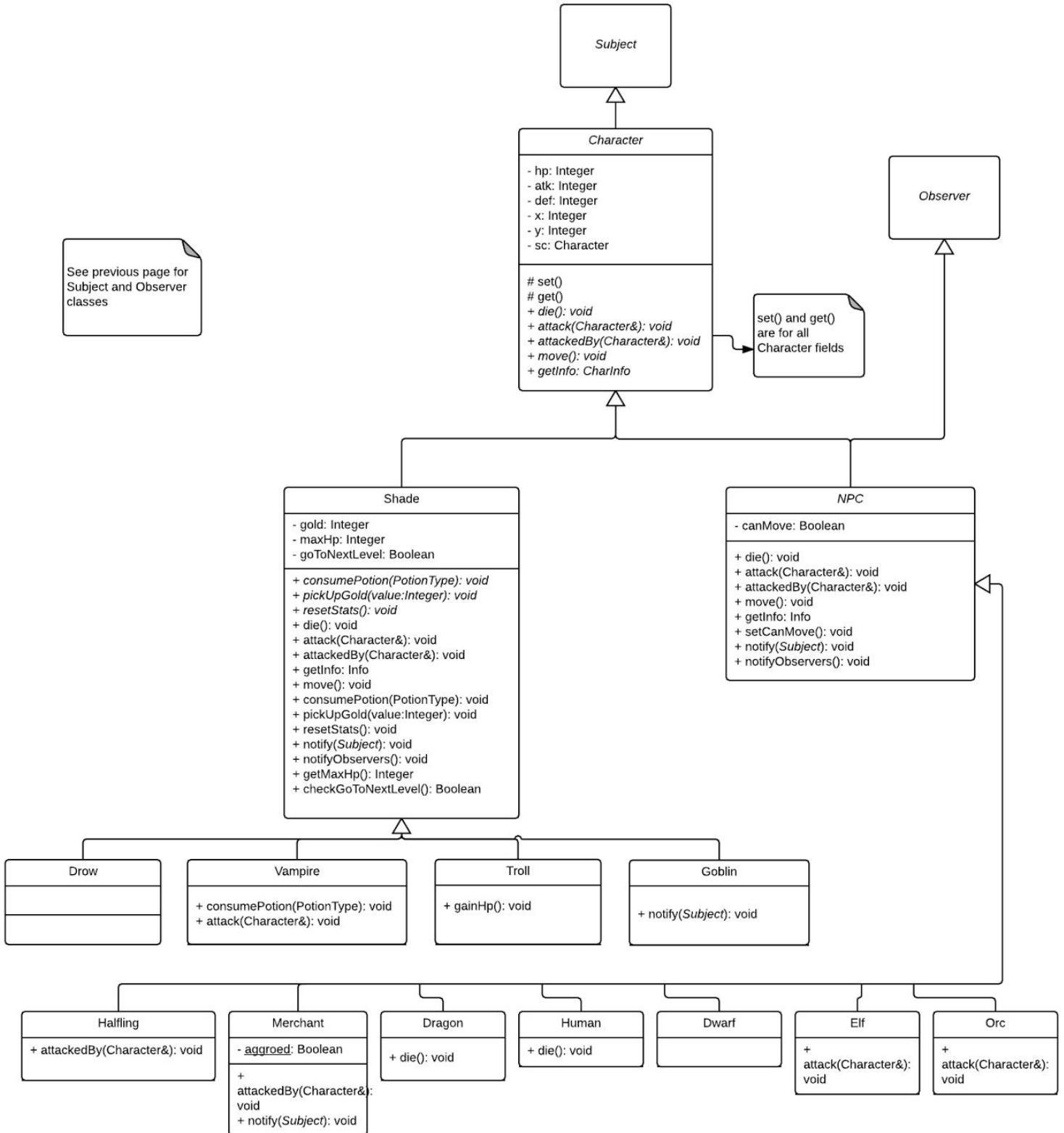# Game, Floor, Chamber, Spawner, TextDisplay, Cell, Subject, Observer

Game

- floor: Floor
- currFloor: Integer
- p: Character

+ usePotion(direction:String)
+ movePlayer(direction:String)
+ attackEnemy(direction:String)
+ makePlayer(race:String)
+ restartGame(): void
+ quitGame(): void
+ makeFloor(): Floor

Floor

- textDisplay: Display
- theFloor: Cell[0..n]
- chambers: Chamber[5]
- s: Spawner

+ makeChambers(): void
+ pickChamber(): Chamber
+ getCell(): Cell

Chamber

- theChamber[0..n]
- numTiles: Integer

+ fillChamber(Cell): void
+ getNumTiles(): Integer

Please refer to next pages for Gold, Potion and NPC classes

Spawner

- numPotions: Integer
- numGold: Integer
- numEnemies: Integer
- chambers: Chamber[5]
- Dragonhoards: DragonHoard[0..n]

+ spawnPc(PC, Chamber): void
+ spawnStairs(Chamber): void
+ spawnPotions(Chamber): void
+ spawnGold(Chamber): void
+ spawnEnemies(Chamber): void

Subject

- observers: Observers

+ *attach(Observer): void*
+ *notifyObservers(): void*
+ *getInfo(): Info*

Observer

+ *notify(Subject): void*

TextDisplay

- theDisplay: Characters[0..n]
- length: Integer
- width: Integer

+ notify(Subject): void
+ print(): output stream

Cell

- sc: Char
- open: Boolean
- subj: Subject
- x: Integer
- y: Integer

+ isOpen(): bool
+ notify(Subject): void
+ getSubject(): Subject

Stair

Wall

Floor

Passage

Door

Character

Subject

Character

- hp: Integer
- atk: Integer
- def: Integer
- x: Integer
- y: Integer
- sc: Character

set()
get()
+ *die(): void*
+ *attack(Character&): void*
+ *attackedBy(Character&): void*
+ *move(): void*
+ *getInfo: CharInfo*

Observer

See previous page for Subject and Observer classes

set() and get() are for all Character fields

Shade

- gold: Integer
- maxHp: Integer
- goToNextLevel: Boolean

+ *consumePotion(PotionType): void*
+ *pickUpGold(value:Integer): void*
+ *resetStats(): void*
+ die(): void
+ attack(Character&): void
+ attackedBy(Character&): void
+ getInfo: Info
+ move(): void
+ consumePotion(PotionType): void
+ pickUpGold(value:Integer): void
+ resetStats(): void
+ notify(*Subject*): void
+ notifyObservers(): void
+ getMaxHp(): Integer
+ checkGoToNextLevel(): Boolean

NPC

- canMove: Boolean

+ die(): void
+ attack(Character&): void
+ attackedBy(Character&): void
+ move(): void
+ getInfo: Info
+ setCanMove(): void
+ notify(*Subject*): void
+ notifyObservers(): void

Drow

Vampire

+ consumePotion(PotionType): void
+ attack(Character&): void

Troll

+ gainHp(): void

Goblin

+ notify(*Subject*): void

Halfling

+ attackedBy(Character&): void

Merchant

- aggroed: Boolean

+ attackedBy(Character&): void
+ notify(*Subject*): void

Dragon

+ die(): void

Human

+ die(): void

Dwarf

Elf

+ attack(Character&): void

Orc

+ attack(Character&): void

Item

Subject

Observer

See previous page for Subject and Observer classes

Item

- x: Integer
- y: Integer
- sc: char

+ getItemInfo(): ItemInfo

Potion

- stat: Character
- value: Integer

+ getDrunk(Character): void
+ notify(Subject): void
+ notifyObservers(): void

RH

BA

BD

PH

WA

WD

Gold

- amount: Integer

+ getPickedUp(Character): void
+ notify(Subject): void
+ notifyObservers(): void

Small

Normal

Merchant

DragonHoard

- isDragDead: Boolean

+ notify(Subject): void

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Please see other page for Dragon

Dragon