HW 2 Design
Greg Attra

<<Interface>>
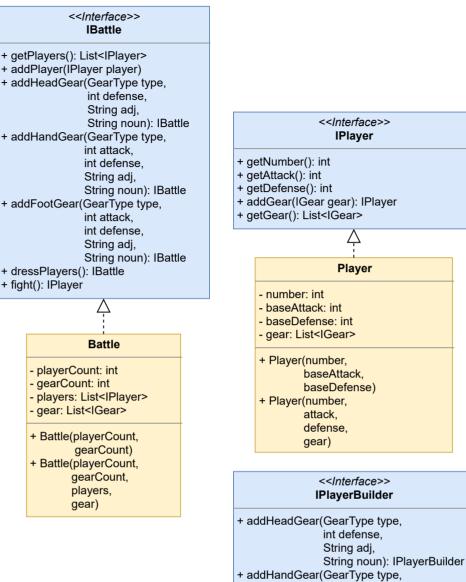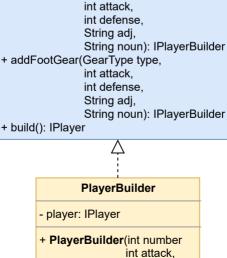**IHeadGear**

<<Interface>>
IHandGear

<<Interface>>
IFootGear

<<Interface>>
IGear

+ getType(): GearType
+ getAttack(): int
+ getDefense(): int
+ getAdjective(): String
+ getNoun(): String
+ getName(): String
+ combine(IGear type): IGear
+ combinedWith(): Optional<List<IGear>>
+ isCombined(): boolean

AbstractGear

- type: GearType
- adjective: String
- noun: String
- isCombined: boolean
- combinedWith: List<IGear>
- attackValue: int
- defenseValue: int

+ Gear(type,
    attack,
    defense,
    adjective,
    noun)
+ Gear(type,
    attack,
    defense,
    adjective,
    noun,
    combinedGear)

HeadGear

+ combine(IGear gear): IGear

HandGear

+ combine(IGear gear): IGear

FootGear

+ combine(IGear gear): IGear

<<Interface>>
IBattle

+ getPlayers(): List<IPlayer>
+ addPlayer(IPlayer player)
+ addHeadGear(GearType type,
    int defense,
    String adj,
    String noun): IBattle
+ addHandGear(GearType type,
    int attack,
    int defense,
    String adj,
    String noun): IBattle
+ addFootGear(GearType type,
    int attack,
    int defense,
    String adj,
    String noun): IBattle
+ dressPlayers(): IBattle
+ fight(): IPlayer

Battle

- playerCount: int
- gearCount: int
- players: List<IPlayer>
- gear: List<IGear>

+ Battle(playerCount,
    gearCount)
+ Battle(playerCount,
    gearCount,
    players,
    gear)

<<enum>>
GearType

HAT
HELMET
VISOR
GLOVE
SWORD
SHIELD
BOOT
SNEAKER
HOVERBOARD

+ gearClass: GearClass

<<enum>>
GearClass

HEADGEAR
HANDGEAR
FOOTGEAR

<<Interface>>
IPlayer

+ getNumber(): int
+ getAttack(): int
+ getDefense(): int
+ addGear(IGear gear): IPlayer
+ getGear(): List<IGear>

Player

- number: int
- baseAttack: int
- baseDefense: int
- gear: List<IGear>

+ Player(number,
    baseAttack,
    baseDefense)
+ Player(number,
    attack,
    defense,
    gear)

<<Interface>>
IPlayerBuilder

+ addHeadGear(GearType type,
    int defense,
    String adj,
    String noun): IPlayerBuilder
+ addHandGear(GearType type,
    int attack,
    int defense,
    String adj,
    String noun): IPlayerBuilder
+ addFootGear(GearType type,
    int attack,
    int defense,
    String adj,
    String noun): IPlayerBuilder
+ build(): IPlayer

PlayerBuilder

- player: IPlayer

+ **PlayerBuilder**(int number
    int attack,
    int defense)