HW 2 Design

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IGear<T> `<<Interface>>`
- + getBaseAttack(): int
- + getBaseDefense(): int
- + getAggregateAttack(): int
- + getAggregateDefense(): int
- + getBaseAdjective(): String
- + getAggregateAdjective(): String
- + getNoun(): String
- + getName(): String
- + getCombinedGear(): Optional<IGear<T>>
- + isCombined(): boolean
- + combine(IGear gear)

IHeadGear `<<Interface>>`

IHandGear `<<Interface>>`

IFootGear `<<Interface>>`

IGear<IHeadGear>
IGear<IHandGear>
IGear<IFootGear>

AbstractGear<T>
- - adjective: String
- - noun: String
- - isCombined: boolean
- - combinedGear: IGear<T>
- - attackValue: int
- - defenseValue: int
- + Gear(attack, defense, adjective, noun)
- + Gear(attack, defense, adjective, noun, combinedGear)

AbstractGear<IHeadGear>
AbstractGear<IHandGear>
AbstractGear<IFootGear>

HeadGear
- + combine(IHeadGear): IHeadGear

HandGear
- + combine(IHandGear): IHandGear

FootGear
- + combine(IFootGear): IFootGear

IPlayer `<<Interface>>`
- + getNumber(): int
- + getBaseAttack(): int
- + getBaseDefense(): int
- + getAggregateAttack(): int
- + getAggregateDefense(): int
- + addHeadGear(IGear gear): IPlayer
- + addHandGear(IGear gear): IPlayer
- + addFootGear(IGear gear): IPLayer

IBattle `<<Interface>>`
- + getPlayers(): List<IPlayer>
- + fight(): IPlayer

Battle
- - players: List<IPlayer>
- + Battle(players)

Player
- - number: int
- - baseAttack: int
- - baseDefense: int
- - headGear: IGear<IHeadGear>
- - handGear: List<IGear<IHandGear>
- - footGear: List<IGear<IFootGear>>
- + Player(number, baseAttack, baseDefense)
- + Player(number, baseAttack, baseDefense, headGear, handGear, footGear)