Static Design Model of Whist
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Whist

- version: String
- random: Random
- nbStartCards: int
- winningScore: int
- enforceRules: boolean
- thinkingTime: int
- lead: Suit
- trumps: Suit
- width: int
- height: int
- fontSize: int
- nbPlayers: int
- playerProperties: Arraylist<String>
- players: ArrayList<Player>
- deck: Deck
- winner: Player
- winningCard: Card
- selected: Card

+ rankGreater(Card, Card): boolean
+ randomEnum(Class<T>): T
- initPlayers(): void
- printHand(ArrayList<Card>): String
- initScore(): void
- updateScore(Player): void
- initRound(): void
- checkSuit(Player): void
- drawTrick(Hand): void
- getNextPlayer(Player): Player
- currentWinner(Card, Suit): boolean
- lead(Player, Hand, Suit): void
- follow(Player, Hand, Suit): void
- removeTrick(Hand): void
- playRound(): optional<Integer>
- setProperties(String): void

Player

- hand: Hand
- score: int
- playerID: int

+ incrementScore(): void
+ chooseCard(boolean, Card): void
+ getStatusText(String): String

plays 1 ... 2..4

Human

hand: Hand

+ chooseCard(boolean, Card): void
+ getStatusText(String): String

AI

- thinkingTime
- filterStrat: IFilterStrat
- selectStrat: ISelectStrat

+ chooseCard(boolean, Card): void
+ getStatusText(String): String
+ randomCard(ArrayList<Card>): Card

<<creates>>
<<creates>>

<<Enumeration>>
Suit

SPADE
HEARTS
DIAMOND
CLUBS

<<Enumeration>>
Rank

ACE
QUEEN
KING
JACK
TEN
NINE
EIGHT
SEVEN
SIX
FIVE
FOUR
THREE
TWO

AIStratFactory

- aiStratFactory: AIStratFactory

+ getInstance(): AIStratFactory
+ getFilterStrat(): IFilterStrat
+ getSelectStrat(): ISelectStrat

contains 1

<<creates>>
<<creates>>
<<creates>>

uses
uses

<<interface>>
ISelectStrat

+ select(Hand, Card): Card

<<interface>>
IFilterStrat

+ getFilteredHand(Hand): Hand

Implements

HighestRankSelectStrat

+ select(Hand, Card)

RandSelectStrat

+ select(Hand, Card)

SmartSelectStrat

+ select(Hand, Card)

NoFilterStrat

+ getFilteredHand(Hand): Hand

TrumpFilterStrat

+ getFilteredHand(Hand): Hand

NaiveFilterStrat

+ getFilteredHand(Hand): Hand