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Monopoly Project
Fall 2018

ImagePanel

- img: Image

+ ImagePanel(img: String)
+ ImagePanel(img: Image)
+ paintComponent(g: Graphics): void

Monopoly

+ die1: Die
+ die2: Die
+ board: Board
+ x: int
+ y: int

+ Monopoly(totalPlayer: int)
+ main(args: String[]): void
+ createPlayers(totalPlayers: int, game: Monopoly)
+ createGUI(game: Monopoly): void
+ startGame(panel: JPanel, thimble: JPanel, racecar: Jpanel, tophat: JPanel, boot: JPanel, battleship: JPanel, frame: JFrame)
+ isGameEnd(): boolean

Util

+ print(player: Player, msg: String): void

Player

+ turn: int
+ position: int
+ id: int
+ name: String
+ piece: String
+ broke: boolean
+ jail: boolean
+ money: Money

+ Player(id: int, name: String, piece: String)
+ getTurn(): int
+ tossDice(die1 : Die, die2: Die)
+ getCurrrentPosition(): int
+ setPostion(): void
+ nextTurn(): void
+ getName(): String
+ getMoney(): Money
+ getID: int
+ setIsBroke(broke: boolean): void
+ isBroke(): boolean
+ setInJail(jail: boolean): void
+ isInJail(): boolean
+ getPiece(): String

Chance

+ typeOfCard: int

+ Chance(typeOfCard: int, name: String)

+ doAction(player: Player, board: Board)

CommunityChest

+ typeOfCard: int

+ CommunityChest(typeOfCard: int, name: String)

+ doAction(player: Player, player: Player)

Square

+ name: String

+ owner: int

+ Square()
+ Square(name: String)
+ Square(name: String, owner: int)
+ getName(): String
+ getOwner(): int
+ doAction(player: Player, board: Board)

TaxSquare

+ name: String
+ tax: Double
+ typeOfCard: int

+ TaxSquare()
+ TaxSquare(typeOfCard: int, name: String)
+ getName(): String
+ getTaxPrice(): Double
+ doAction(player: Player, board: Board)

FreeParking

+ typeOfCard: int

+ FreeParking(typeOfCard: int, name: String)

+ doAction(player: Player, board: Board)

GoSquare

+ typeOfCard: int

+ GoSquare(typeOfCard: int, name: String)

+ doAction(player: Player, board: Board)

GoToJailSquare

+ typeOfCard: int

+ GoToJailSquare(typeOfCard: int, name: String)

+ doAction(player: Player, board: Board)

JailSquare

+ typeOfCard: int

+ JailSquare(typeOfCard: int, name: String)

+ doAction(player: Player, board: Board)

Card

+ name: String

+ Card()

+ Card(name: String)

+ getName(): String

Board

+ currentTurn: int
+ totalPlayer: int
+ players: Player[]
+ squares: Square[]
+ names: StringTokenizer[]
+ howMany: int
+ commCardsArray: Card[]
+ chanceCardsArray: Card[]
+ pieces: String[]

+ Board(totalPlayer: int)
+ movePlayer(player: Player, face: int): Square
+ movePlayer(player: Player, face:int, count: boolean)
+ hasWinner(): boolean
+ getWinner(): Player
+ getPlayersMostMoney(): Player
+ normalizePosition(player: Player, position: int)
+ getCurrentPlayer(): Player
+ getPlayers(): Player[]
+ nextTurn(): void
+ getPlayer(id: int): Player
+ getTotalSquare(): int

BuyableSquare

+ owner: int

+ price: Double

+ BuyableSquare()
+ BuyableSquare(name: String, initPrice: Double)
+ BuyableSquare(name: String, ownerID: int, initPrice: Double)
+ setOwner(owner: int): void
+ getPrice(): Double
+ doAction(player: Player, board:Board): void

RailRoadSquare

+ typeOfCard: int
+ price: Double
+ rent: Double

+ RailRoadSquare(name: String, price: Double)
+ RailRoadSquare(typeOfCard: int, nameOfCard: String, price: Double, rent: Double)
+ setOwner(owner: int): void
+ getPrice(): void
+ doAction(player: Player): void

Die

+ rollDie(): int

UtilitySquare

+ multiplier: int
+ die1: Die
+ die2: Die
+ typeOfCard: int

+ UtilitySquare(name: String, price: Double, multiplier: int)
+ UtilitySquare(typeOfCard: int, nameOfCard: String, price: Double, multiplier: int)
+ setOwner(owner: int): void
+ getPrice(): void
+ doAction(player: Player): void

PropertySquare

+ houses: int
+ availHouse: Boolean
+ typeOfCard: int
+ color: String
+ price: Double
+ rent: Double
+ rentWitOne: Double
+ rentWitTwo: Double
+ rentWitThree: Double
+ rentWitFour: Double

+ PropertySquare()
+ PropertySquare(name: String, price: Double)
+ PropertySquare(typeOfCard: int, nameOfCard: String, color: String, price: Double, rent: Double, rentWitOne: Double, rentWitTwo: Double, rentWitThree: Double, rentWitFour: Double)
+ setOwner(owner: int): void
+ getOwner(): int
+ getPrice(): Double
+ houseAvail(): Boolean
+ buyHouse(): void
+ doAction(player: Player, board: Board): void