main + main(String[]) : void

<< ItemListener >> **TimedCardsViewer**

- + NUM_CARDS_PER_HAND : int
- + NUM_PLAYERS : int
- + computerLabels : JLabel[] + playedCardLabels : JLabel[]
- + playLabelText : JLabel[]
- + humanButtons : JToggleButton[]
- + myCardTable : CardTable
- + myGUICard : GUICard
- + timer : JLabel
- counter : int
- + start : JButton + stop : JButton
- + noPlay : JButton
- + leftButton : JButton + rightButton : JButton
- + TimedCardsViewer()
- + addControlButtons(ActionListener listener) : void
- + updateTimer(): void + upDatePlayArea(Card left, Card right, ActionListener listener) : void
- + updateCompHand(Hand hand): void
- + updateHumanHand(Hand): void
- + refreshScreen(): void
- + itemStateChanged(ItemEvent e) : void
- buttonsFromHand(Hand hand) : JToggleButton[] - labelsFromHand(Hand hand) : JLabel[]
- backLabelsFromHand(Hand hand) : JLabel[]

<< Thread >> **UpTimer**

- timer : Timer
- + controller : TimedCardsController
- + UpTimer(TimedCardsController)
- + run(): void
- + startTimer(): void + stopTimer(): void
- + doNothing(int): void

GUICard

- iconCards : Icon[][]
- iconBack : Icon + iconsLoaded : boolean
- + turnIntIntoCardValue(int k) : String + turnIntIntoCardSuit(int j) : String
- + loadCardIcons(): void
- valueAsInt(Card card) : int
- suitAsInt(Card card) : int
- + getIcon(Card card): Icon + getBackCardIcon(): Icon

- + serialVersionUID : long + MAX_CARDS_PER_HAND : int
- + MAX_PLAYERS : int - numCardsPerHand : int
- numPlayers : int
- + pnlComputerHand : JPanel
- + CardTable(String title, int numCardsPerHand, int numPlayers)

CardTable

- setPanelVars(JPanel panel, String name): void

Deck

- + NUM_DECKS : int + DECK_SIZE : int
- + MAX_CARDS : int - masterPack : Card[]
- cards : Card[]
- topCard : int - numPacks : int
- + Deck()
- + Deck(int newNumPacks) + init(int numPacks) : void
- + addCard(Card) : boolean + getNumCards(): int
- + sort(): void + shuffle(): void
- + topCardAccessor() : int + removeCard(Card card) : boolean
- + dealCard() : Card
- + inspectCard(int index) : Card - allocateMasterPack() : void

Card

- + Suite: enum
- + values : char[]
- + valueRanks : char[] - value : char
- suit : Suit
- errorFlag : boolean
- + Card() + Card(Card copyCard) + Card(char value, Suit suit)
- + arraySort(Card[] cards, int arraySize) : void + rank(char value) : int
- + getValue() : char
- + getSuit() : Suit
- + getErrorFlag() : boolean
- + set(char newValue, Suit newSuit) : boolean + toString(): String
- isValid(char value, Suit suit) : boolean

TimedCardsModel

- + NUM_CARDS_PER_HAND : int
- + NUM_PLAYERS : int
- compHand : Hand - humanHand : Hand
- + myCardGame : CardGameFramework

+ addCardToPile(int index, Card card) : boolean

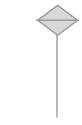
- + piles : Hand[]
- + humanScore : int
- + compScore : int
- + TimedCardsModel()
- + dealToPiles(): boolean
- + getTopCardInPile(int index) : Card
- + drawCompCard(): boolean
- + drawHumanCard(): boolean
- + getCompHand() : Hand + getHumanHand(): Hand

<< ActionListener >> TimedCardsController

- + NUM_CARDS_PER_HAND : int
- + NUM_PLAYERS : int
- + myViewer : TimedCardsViewer + myModel : TimedCardsModel
- + myTimer : UpTimer + deckEmpty : boolean + computerStuck : boolean

+ humanStuck : boolean

- + TimedCardsController(TimedCardsViewer v, TimedCardsModel m) + setTimer(UpTimer timer) : void
- + run(): void
- + updateTimer(): void
- updateHands(): void + updatePlayArea(): void
- + unStickPlayers(): boolean + checkStuck(): void
- + computerMove(): void + processGameEnd(): void
- + processNoPlay(): void
- + processUserPlay(int pile) : boolean
- + actionPerformed(ActionEvent e) : void



CardGameFramework

- MAX_PLAYERS : int
 - numPlayers : int

- deck : Deck - hand : Hand[]

- numPacks : int
- numJokersPerPack : int - numUnusedCardsPerPack : int - numCardsPerHand : int
- unusedCardsPerPack : Card[]
- + CardGameFramework(int numPacks, int numJokersPerPack, int numUnusedCardsPerPack, Card[] unusedCardsPerPack, int numPlayers, int numCardsPerHand)
- + CardGameFramework()
- + getHand(int k) : Hand
- + getCardFromDeck() : Card + getNumCardsRemainingInDeck(): int
- + newGame(): void + deal(): boolean
- + sortHands(): void + playCard(int playerIndex, int cardIndex) : Card
- + takeCard(int playerIndex) : boolean

Hand

- + MAX_CARDS : int
- myCards : Card[] - numCards : int
- + Hand()
- + sort(): void
- + resetHand(): void
- + takeCard(Card card) : boolean + playCard(int index) : Card
- + toString(): String
- + getNumCards(): int
- + inspectCard(int k) : Card