

COS 126 Precept

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Agenda

- ▶ Quick Review of Classes
- ▶ Discussion of GuitarHero



War.java (Client of Card and Player)

- ▶ Creates a shuffled deck of cards
- ▶ Creates two players, and passes out cards to each player
- ▶ Draws a window
- ▶ Until all cards are drawn:
 - ▶ Draw the cards
 - ▶ Each player draws a card
 - ▶ compare which card is better
 - ▶ the winner gets a point
- ▶ At the end, declare a winner!



Exercise

- ▶ **Card.java**

- ▶ Represents a single card
- ▶ Need to represent:
 - ▶ Suit
 - ▶ Rank
 - ▶ Image for Front
 - ▶ Image for Back

- ▶ **'this'**

- ▶ Represents the object which is currently executing the current function
- ▶ Calling `this.someFunction()` is same as calling `someFunction()`
- ▶ Can also call a constructor (see `Card(int, String, String)`)



Card.java

- ▶ **Card(#,FrontFile,BackFile)**
 - ▶ Takes in card # (from 0 - 51)
 - ▶ Filename for image on front of card
 - ▶ Filename for image on back of card
- ▶ **drawFront(x,y)**
- ▶ **drawBack(x,y)**
- ▶ Usage: `java -cp .:cards.jar Card`



Player.java

- ▶ **Player.java**
 - ▶ Maintains set of Cards
 - ▶ Lets guess its API:
 - ▶ `Player("Name",PositionX, PositionY)`
 - ▶ `dealTo()`
 - ▶ `drawHidden()`
 - ▶ `dealFrom()`
 - ▶ `drawFront(x,y)`



Player Variables

- ▶ **Final Variable: MAX_CARDS**
 - ▶ This is a constant value, you cannot change MAX_CARDS in any way. It is fixed at 52
- ▶ **Array of Cards**
- ▶ **Number of Cards**
- ▶ **Deck Location (x,y)**
- ▶ **Player Name**



Player.java Constructor

- ▶ Remember this for Next Assignment
 - ▶ This is how you instantiate an array of objects
 - ▶ `Object [] arrayName = new Object [Number]`
 - ▶ For `I = 0` to `Number`
 - ▶ `arrayName[i] = new Object(Some Arguments)`



What to fill in for Player.java?

▶ Constructor

- ▶ Set N = to MAX_CARDS
- ▶ Create all MAX_CARDS # of cards
 - ▶ Storing them in the array 'cards'

▶ Shuffle

- ▶ Loop over all Cards
 - ▶ Choose a random index (this corresponds to a card)
 - ▶ Swap card in each index with the randomly chosen card

▶ drawHidden

- ▶ StdDraw.text(xpos,ypos,StringToPrint);
- ▶ Call drawing method of card object



Guitar Hero

- ▶ Guitar Hero Description

