

Create the following data types.

- **PlayingCard** has
  - A **value** attribute (string)
  - A **suite** attribute (char)
  - A **display** method – write the value and suite to the console.
  - A **default constructor** – make the value “Joker” and the suite a space
- **Deck** has
  - A list of 52 **cards** (array of PlayingCard)
  - A count of the number of **cardsDealt** from the deck. (Should be initialized to 0 in the constructor.)
  - A default constructor that initializes the 52 cards (I have given you the code for this)
  - A method that returns the number of **cardsAvailable** in the deck. (52 - cardsDealt)
  - A method to **shuffle** the deck. (I have given you the code for this.)
  - A method to **display** the all of the cards remaining in the deck.
  - A method **dealCard** to get the next card from the top of the deck.
    - Takes a PlayingCard by reference as an argument. Set the values of the playing card passed in to those of the next available card in the deck. Increment the **cardsDealt** variable.
  - A method **deal** to distribute the cards amongst 4 players.
    - Receives an array of 4 Payer objects. Distribute the 52 cards to the 4 players in a round robin fashion. Be sure to use the **dealCard** method to accomplish this.
- **Player** has
  - A **name** (string)
  - 13 **cards** (will get useful values when Deal is called)
  - A method to **display** the players name and list of playing cards.

Start with [www.harding.edu/dsteil/170/examples/CardGame.cpp](http://www.harding.edu/dsteil/170/examples/CardGame.cpp) and complete the “todo” comments.

**\*A method is a function that is part of a user-defined-type.**