Program Design

- Up to now, we have given you the function prototypes to implement
- Your turn design!!!!!
- Time to break up a problem into well-defined functions

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The Problem

- Write a program that deals 4 random bridge hands
- Sounds simple enough!!!
- Huh????
- Where to begin??
- Never played bridge!!!
- Have played poker and war ☺ ☺
- Might as well create a design that can play all card games with a deck and hands

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How to design

- Need to break up the problem into smaller problems
- Like what?
- What do we need to create and play cards in the abstract?
- How do these abstract concepts help us create an actual C++ program for card playing?

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Break up into groups

1. Break up into groups of 2 or 3
   a. Discuss all of the abstract terms you will need for a game of cards (e.g. Card)
   b. Figure out how you will represent all of your abstract terms in C++
   c. In visual studio, write ALL of the function prototypes that will be needed to create and print four bridge hands
   d. Using your function prototypes, see if you can deal a hand of cards and print the hand
   e. Print out and turn in your function prototypes and calls

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Hints

- We have learned a great deal of C++ and know a fair about of mathematics
- Ummmm????
- Consider the integers 1, 2, 3, … 52
- card's suit ((card - 1) / 13)
- card's denomination (card % 13)
- ASCII Extended Control Characters
  - Heart is '\3' Diamond is '\4' Club is '\5' Spade is '6'

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