

# Introduction to Programming 1

## Lab: 8

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- 1) A standard deck of playing cards consists of 52 cards as shown in the following table.

SUIT	Rank
Clubs	Ace ... King
Diamonds	Ace ... King
Hearts	Ace ... King
Spades	Ace ... King

Create an array of 52 structures to match a new deck of cards by simulating the following the pseudo code given below.

Algorithms shuffle

1. Loop through each card in the deck.
  - Get a random number in the range of 0 to 51.
  - swap the current card with the card at random position.
2. End loop

End algorithm

- 2) Write a function that calculates the area of one of the geometric figures shown in the table below.

Figure Type	Components		
Rectangle	Length	Width	
Circle	Radius		
Triangle	Side1	Side2	Side3

The function receives one parameter, a structure that contains the type of figure and the size of the components needed for the calculation structured as a union. Use an enumerated type for the figure type.

After that write an interactive test driver that prompts the user for the type of figure to be entered and the appropriate components. It then calls the area function and prints the area before looping for the next input.