Lab 11

In this lab, we will learn to define a struct data type and use it to form an array of struct type.

Your program will implement the preparation routine used in a card game, called “Hearts”. To play the game, first your program will create a deck of (52) cards.

Each card is described by its suit, value, and points in game. Define a structured data type CardType with the following components: suit (string type with values: "Diamond", "Club", "Heart", and "Spade"), value (int), and points (int).

Define a function FormCards that creates the deck of cards:
The deck of cards should be represented as an array of CardType. The size of the array is 52.

- Each card is described by its suit, value, and points in game.
- A card value is the face value of the card which is from 1 to 13, i.e., 11 for Jack, 12 for Queen, and 13 for King.
- For card points in game, all the cards of HEART suit have points: each HEARTS card of less than 10 face value has 5 points; HEARTS of 10, Jack, Queen, and King have 10 points.
- All Spade, Diamond, and Club cards have a value 0, except that the Queen of Spade has a point of 100, Jack of Diamond has a point of -100.

Special Requirements:
The card array should be declared in the main function, Your main function calls the following two functions:

- a function "FormCards" that forms the deck of cards, i.e., assigns the values to the cards, and
- the second function "DisplayCards" to display the cards on screen.

Here is an example output of the program:

```
Here is the deck of cards:
 SUIT       VALUE       POINTS
 Diamond      A          0
 Diamond      2          0
 Diamond      3          0
 Diamond      4          0
 Diamond      5          0
 Diamond      6          0
 Diamond      7          0
 Diamond      8          0
 Diamond      9          0
 Diamond     10          0
 Diamond      J          -100
 Diamond      Q          0
```

Diamond	K	0
Club	A	0
Club	2	0
Club	3	0
Club	4	0
Club	5	0
Club	6	0
Club	7	0
Club	8	0
Club	9	0
Club	10	0
Club	J	0
Club	Q	0
Club	K	0
Heart	A	5
Heart	2	5
Heart	3	5
Heart	4	5
Heart	5	5
Heart	6	5
Heart	7	5
Heart	8	5
Heart	9	5
Heart	10	10
Heart	J	10
Heart	Q	10
Heart	K	10
Spade	A	0
Spade	2	0
Spade	3	0
Spade	4	0
Spade	5	0
Spade	6	0
Spade	7	0
Spade	8	0
Spade	9	0
Spade	10	0
Spade	J	0
Spade	Q	100
Spade	K	0