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**Introduction**

In this Project we are creating a program that Stimulates Classic Card Game. Where two users play cards. The game is about users drawing each card from a deck of cards. Maximum card wins. A winner is decided in the form of the best of three. The entire deck is shuffled before players draw their cards. The highest denomination between the cards determines the winner.

If two cards of the same denomination are drawn, the card suit determines who wins. The color is ranked spades, hearts, diamonds and clubs, where spades are the highest color. It is clear which cards have been drawn before the winner is decided. It is clear who leads the current game and who is decided as the winner. There must be a points system that says how many times a player has won and lost.

**Problem**

Our Problem was we need to make a program where two users play cards. The game is about player draw 1 cards from deck of cards each players get 1 cards and Maximum card wins the match. Best of 3 matches wins the Game.

Some External problem we faced are:

* We need stimulate preparing a card Deck.
* We need to stimulate shuffling of Deck before drawing the cards
* We need to store Number of Round Won for each player.
* We need to store Points of player.
* We need to make sure every time a Random card is draw.
* We need to divide program in smaller function.

**Solution**

We need to make the backbone for the program for that we need to breakdown the program into smaller pieces:

* We need to make Input () Function for Taking User Input.
* We need to make response () Function to store the Deck.
* We need to make shuffle () Function for shuffling the Deck.

Detail Explanation of the Code:

\*\*\*\* int input () INPUT FUNCTION:

1. We need to Initialize Integer variable to take input from user.

        cout<<"ENTER YOUR CARD NUMBER 1 to 52\n";

        int input1;

        cin>>input1;

        return input1-1;

\*\*\*\* response () RESPONSE FUNCTION:

1. We need to Initialize a 2D Array to store Cards with Color and Ranks.
2. We need to return the deck value.

        cout<<"HE DRAWS: "<<*deck*[*input*].second<<" of "<<*deck*[*input*].first<<"\n\n";

        return *deck*[*input*];

\*\*\*\* shuffle () SHUFFLE FUNCTION:

1. We need to shuffle the deck using vectors from top and end.

random\_shuffle(*deck*.begin(),*deck*.end());

\*\*\*\* int main () MAIN FUNCTION:

1. We need to use srand () Function so that we get random values.
2. We need to send data of deck to the function response ()
3. We need to declare String Array Suit and card to store values.
4. We need to create a deck with for loop which fill the array from 1 to 13

        for(int i=0;i<4;i++){

                for(int j=0;j<13;j++){

                        deck.push\_back({suit[i],card[j]});

                        m[card[j]]=j;

                }

                m2[suit[i]]=i;

        }

1. We need to Declare Integer Score variable to store the value.
2. We need to take data from user

int input1=input();

1. We need to draw card from the deck.

pair<*string*,*string*> response1=response(input1,deck);

1. If Player one card is higher than Player two he wins.

                if(m[response1.second]==m[response2.second]){

                        if(m2[response1.first]<m2[response2.first]){

                                cout<<"PLAYER A WINS THE ROUND "<<i<<"\n";

                                scoreA++;

                        }else{

                                cout<<"PLAYER B WINS THE ROUND "<<i<<"\n";

                                scoreB++;

                        }

                }else if(m[response1.second]>m[response2.second]){

                        cout<<"PLAYER A WINS THE ROUND "<<i<<"\n";

                        scoreA++;

                }else{

                        cout<<"PLAYER B WINS THE ROUND "<<i<<"\n";

                        scoreB++;

                }

1. We need to display the Score of both Players

cout<<"SCORE OF ONE = "<<scoreA<<"\tSCORE OF TWO = "<<scoreB<<"\n";

1. We need to compare both Player score to declare the Winner

        if(scoreA>scoreB){

                cout<<"\nPLAYER A WINS THE GAME\n";

        }else{

                cout<<"\nPLAYER B WINS THE GAME\n";

        }

}

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