Assignment 9

05 April 2011

due Tuesday 5 April at 01:00 AM

In the game of blackjack, the cards 2 through 10 are counted at their face values, regardless of suit, all face cards (jack, queen, and king) are counted as 10, and an ace is counted either as a 1 or an 11, depending on the total count of all the cards in a player's hand.

The ace is counted as 11 only if the total value of all cards in a player's hand does not exceed 21, else it is counted as a 1.

Using this information, write a C program that uses a random number generator to select three cards (a 1 initially corresponding to an ace, a 2 corresponding to a face card of two, and so on), calculate the total value of the hand appropriately, and display the value of the three cards with a printed message.

```
Welcome to Blackjack!
You drew the:
Three of Spades
Jack of Clubs
Ace of Hearts
```

Your score is: 14

From class on 3/31

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int deal_a_card();
int rank_to_score(int rank);
int main()
{
        int c1, score;
        srand(time(NULL));
        c1 = deal_a_card();
        score = rank_to_score (c1);
        printf("(score was %d)\n", score);
        return 0;
}
int deal_a_card()
{
        int r;
```

```
int s;
        r= rand();
        int rank =(r%13)+1;
        s= rand();
        int suit =(r\%4)+1;
        switch (rank)
        {
                case 1:
                        printf("Ace");
                        break;
                case 11:
                        printf("Jack");
                        break;
                case 12:
                        printf("Queen");
                         break;
                case 13:
                        printf("King");
                        break;
                default:
                        printf("%d", rank);
                        break;
        }
        switch (suit)
        {
                case 1:
                        printf(" Of Hearts");
                         break;
                case 2:
                        printf(" Of Spades");
                         break;
                case 3:
                         printf(" Of Clubs");
                         break;
                case 4:
                         printf(" Of Diamonds");
                        break;
        }
        return rank;
int rank_to_score (int rank)
```

}

{

}

```
switch (rank)
{
     case 11:
     case 12:
     case 13:
        return 10;
        break;
     default:
        return rank;
}
```