**CSE 114**
**Fall 2016**
**Fundamentals of Computer Programming**
**Assignment 4**
**Due: 25.10.2016 at 13:00**

In this assignment, you will implement a game in C. The rules of this game are as follows:

- The user will enter a number (***n***) and then s/he will try to obtain this number by throwing two dice. Your program is supposed to simulate this by using the `rand` function. ***n*** should be in the interval [5,10], inclusive.
- When the user starts playing, s/he will have an initial score (***s***) of 50 points.
- Each run of the game results in winning or losing for the user. At the end of each run, the user will be asked to enter an input regarding his/her wish to quit or go on playing.
- If the sum of the dice (***sum***) equals ***n***, the computer will respond the user, displaying the message "*You won.*" and ***s*** will be increased by 10.
- If ***sum*** is lower than 5 or greater than 10, it means that the user lost the current run. Otherwise,
    - Another test will be performed to see if |sum-n|=2.
        - If this condition is true, then the user will be allowed to throw the dice again.
        - Otherwise, if |sum-n|>2, the computer will ask the user to enter a new number ***n'***. The above procedure will be repeated for ***n' too*** . If ***n'*** cannot be obtained with the dice, the user will lose the current run.
- For each run that results with losing, ***s*** will be reduced by 10.
- If ***s*** becomes zero, the game will be terminated.

You should define a function to implement a single run of the game. All of your loops should be **while loops**. The following code [1] explains the usage of `rand` function.

```c
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int i, n;
   time_t t;
   n = 5;
   /* Intializes random number generator */
   srand((unsigned) time(&t));
   /* Print 5 random numbers from 0 to 49 */
   for( i = 0 ; i < n ; i++ )
   {
      printf("%d\n", rand() % 50);
   }
   return(0);
}
```

**References**

[1] https://www.tutorialspoint.com/c_standard_library/c_function_rand.htm