GEDIZUNIVERSITY
izmir

Faculty of Engineering and Architecture

Computer Engineering Department

COM 101 – INTRODUCTION TO PROGRAMMING

Homework #3

Academic Year : Fall 2015-2016
Due Date : December 4, 2015 hr. 5pm (Thursday)
Course Instructor : Inst. Gökhan Akyol
Course Assistants : Res.Asst. Arzum Karataş & Res. Asst. Feyza Galip

Question 1: (20 points)

In the following code, there may be/ may be not some logical and syntactic errors. Please, remove the all errors inside of the code if there are any.

```c
#include <stdio.h>
#include <stdlib.h>
/*
    Author: Feyza Galip
    Date: 26/11/2015
    This program is a game that is based to estimate the randomly generated number.
*/
int randomNumber(int);
void checkNumber(float,float);
int main()
{
    int number, guess=0, check=0;
    char choice='Y';
    number = randomNumber();
    printf("%d\n",number);

    while(1)
    {
        switch(choice)
        {
        case 'Y':
            printf("GUESS THE NUMBER THAT IS BETWEEN 1-20:\n");
            scanf("%d",&guess);
            checkNumber(number,guess);
            break;

        case 'N':
            printf("BYE BYE....\n");
            break;

        default:
           printf("Please enter a valid choice\n");

        }
```

```
    if(check == 0 && choice == 'Y')
    {
        printf("***************\nDO YOU WANT TO CONTINUE TO GUESS THE NUMBER?(Y/N)\n"
        scanf(" %c",&choice);
        printf("***************\n");
    }
    else
        break;
    }

    return 0;

    int randomNumber()
    {
        return (rand()%10);//generate random number between 1-20
    }
}


void checkNumber()

    if(n < g)
    {
        printf("GUESS A LOWER VALUE!\n\n");
        return 0;
    }

    else if(n > g)
    {
        printf("GUESS A HIGHER VALUE!\n\n");
        return 0;
    }
    else
    {
        printf("****CONGRATULATIONS, YOU GUESSED THE NUMBER****\n\n");
        return 1;
    }
```

Question 2: (35 points)

Generate Random Words :

Write a C program that prints a different word(meaningful or meaningless) at each run. The letters that constructs the word are generated randomly. Length of a word is between 5 and 10, no more or no less.You can use English alphabet. Note that word length is determined randomly and you are supposed to write functions to achieve this task.

Question 3: (45 points)

A Primary School Game : It is a three-player chance game. That means there is no specific player strategy in the game. Let's assume that our players are Player-A, Player-B and Player-C and the game is played like this:

1. Initially, each player holds a lucky number for (him/her)self in between 1 and 40. Their lucky numbers must be different each other, otherwise they have to hold another luck number again.
2. k is a constant in the game, and it is initially 2.
3. Lucky numbers of the players are divided by k.
4. If only one player's lucky number is divided by k without any residue, that player is WINNER!
5. Otherwise increase k by 1, then follow Step3 and later.

Note that you are supposed to divide the program into meaningful subparts/functions.

P.S.:
1. You are required to work alone. Teamwork is NOT allowed. Copy detection will done and it is punished strictly.

2. In your codes, you are expected to use good programming practices like naming conventions, indentations and comments. They will be graded, too.

3. Put your homework projects into **a** zipped folder(.zip or .rar are accepted). Do NOT send separate zip file for each question. Use the following convention for this folder.

COM101_HmwX_StudentName.zip
Ex: COM101_Hmw3_AliceBlack.zip

4. You should submit your homework to **gedizcom101lab@gmail.com**

5. Late submissions will be graded by using the formula $100 - 10*d^2$ where d is the number of late submission days.