### Exercise 1:

The goal of this game is to make a player (for example the classmate sitting next to you) to guess a number of your choice which he do not know. Using the while/do..while statements do:

1. You will initialize a ”secret” number (between 1 and 100) with a value that you code ”hard” in your program.
2. Your program will then ask the player to guess this number.
3. At each attempt, the program will have to say ”bigger” or ”smaller” or ”won!”. The loop stops when the number has been found. Whatever the case, the program must display the number of attempts used to guess the number:
   1. 1 attempt: accuse the user of cheating or paranormal clairvoyance and advise him to play the lottery.
   2. between 2 and 5 attempts: warmly congratulate the user
   3. between 6 and 9 attempts: tell the user that it as not bad
   4. 10 attempts: tell the user; it was just right
   5. more than 10 attempts, tell the user; he’s a big loser;-)
4. repeat the questions 1 to 3 by using for loops

这个游戏的目标是让一个玩家（例如坐在你旁边的同学）猜出你的一些他不知道的选择。使用while/do..while语句可以执行以下操作：

您将初始化一个“秘密”数字（在1到100之间），并在程序中编码“hard”。

然后你的程序会让玩家猜出这个数字。

在每次尝试中，程序都必须说“大”或“小”或“赢！”。当找到该数字后，该循环将停止。无论什么情况，程序必须显示用于猜测数字的尝试次数：

1次尝试：指责用户欺骗或超自然的洞察力，并建议他玩彩票。

2到5次尝试：热烈祝贺用户

6到9次尝试：告诉用户它还不错

10次尝试：告诉用户，它刚刚正确

十多次尝试，告诉用户；他是个大输家

通过使用循环来重复问题1到3

### Exercise 2:

**Recall; a prime number is divisible only by 1 and by itself. With your neighbour, determine an algorithm to test whether a given number is a prime number or not.**

1. Write a function called isPrimeNumber that will determine whether a number is prime or not. This function will return 1 (to mean true) if the given number as parameter is actually prime and 0 otherwise.
2. Then test it by calling it from your main function main with the values: 7, 12, 17, 8, 2, 1 and 0.
3. Then modify the main function main to display the first 100 prime numbers

编写一个名为素数的函数，它将确定一个数字是否为素数。如果给定的数字作为参数实际上为素数，则此函数将返回1(均值为true)，否则为0。

然后用主函数主调用值如下、7、12、17、8、2、1、和0来测试它。

然后修改主函数主，以显示前100个素数

### Exercise3:

We call Syracuse series a series of natural integers defined as follows: We start from an integer number greater than zero;

if it is even, we divide it by 2; if it is odd, multiply it by 3 and add 1.

Expected display:

**u0 = 22**

**u1 = 11**

**u2 = 34**

**u3 = 17**

**u4 = 52**

**u5 = 26**

**u6 = 13**

**u7 = 40**

**u8 = 20**

**u9 = 10**

**u10 = 5**

**u11 = 16**

**u12 = 8**

**u13 = 4**

**u14 = 2**

**u15 = 1**

This series eventually reaches the value of 1 regardless of the original U0: display the terms of this suite until it gets the value of 1 for Un+1

我们称锡拉丘兹级数为一系列自然整数，定义如下：我们从一个大于零的整数开始；

如果是偶数，我们除以2；如果是奇数，则乘以3，再加1。

预期显示：

无论最初的U0如何，该系列最终的值都为1：显示此套件的条款，直到获得Un+1的值为1