Exercise #06

- You don't need to turn in your homework, but you should practice all problems because they may probably appear in the later exam. 作業自己練習不用交，之後考試可能會出現類似題目

Problem 1.

- ☐ ***(Guess the Number)*** Write a C program that plays the game of "guess the number" as follows: Your program chooses the number to be guessed by selecting an integer at random in the range 1 to 1000. The program then types:

```
I have a number between 1 and 1000.
Can you guess my number?
Please type your first guess.
```

- ☐ The player then types a first guess. The program responds with one of the following:

```
1. Excellent! You guessed the number!
2. Too low. Try again.
3. Too high. Try again.
```

Problem 2.

- ☐ ***(Rolling an unfair dice)*** A dice has six face numbers. Write a function named **dice_roll(win_num),** give a integer variable **win_num,** to simulate a dice roll by generating a random number between 1 and 6. However, the probability of the number **win_num** should be **three times** than those of other numbers. In the main program, input win_num, call dice_roll(win_num) 10,000 times, calculate the probability of each number, and print these probabilities. For example, call dice_roll(1) It may look like
  - ◘ 設計一個丟不公平骰子 function dice_roll(**win_num**), 使得數字 **win_num** 出現機率是其他數字的三倍, 每呼叫一次, 回傳一個數子, 主程式 input win_num, 呼叫 dice_roll(win_num) 10000 次，然後統計每一數字出現的機率, 並輸出, 例如 call dice_roll(1)

```
face 1, probability 0.3736
face 2, probability 0.1281
face 3, probability 0.1289
face 4, probability 0.1254
face 5, probability 0.1252
face 6, probability 0.1188
```