

1. (字母檢查) 寫一個程式，執行下列操作。(40%)

- a) 從鍵盤讀取一串字串(最多 20 個字元)。
- b) 輸入想要統計個數的字元，如'a'。
- c) 輸出字串中所包含的字元個數。

2. (猜數字 1A2B) 請撰寫一個 C 程式來進行猜數字的遊戲。說明

如下：你的程式先產生一個一維整數陣列 `int num[4]`，每個元素為 0~9，且不重複。請使用迴圈來決定是否要再玩次。(60%)

猜的人便輸入第一次猜的數字，然後你的程式應對此數字去比對結果，顯示 **XAXB**，**A** 表示數字與位置都對，**B** 表示數字對，但位置不對。

1. (**Letter Checking**) Write a program that performs each of the following operations. (40%)
 - a) Read a string (at most 20 characters in length).
 - b) Read a letter, e.g. 'a'.
 - c) Calculate the number of the above letter found in the input string.

2. (**Guess the Number**) Write a C program that plays the game of “guess the number” as follows: (60%)

Your program chooses the number to be guessed by selecting an integer array at random. Note each element is different and in the range 0 to 9.

The player then types a guess. The program responds with one of the following: If the player's guess is incorrect, your program should loop until the player finally gets the number right. Your program should keep telling the player XAXB to help the player. [Note: 'A' means the number of matching digits. 'B' means that the guessed digits are in the random number.]

By using loop, the user can decide if he wants to play the game again.