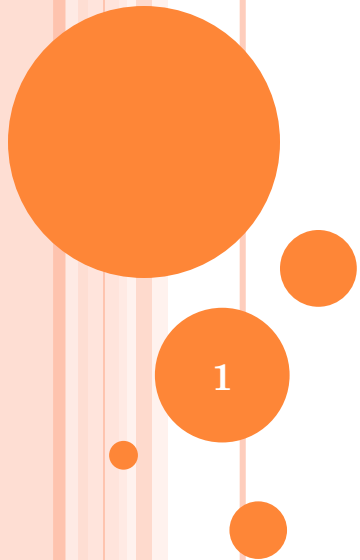# HW4-
Number Guessing

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INTRODUCTION OF NUMBER GUESSING

- System generates an initial 4-digit number from 1 to 9.

- 4 digits cannot be the same.

- If one digit of the guessed number is at the same position and with the same value with the Initial number, mark 1A.

- If one digit of the guessed number is at wrong position but with the same value with the Initial number, mark 1B.

Example:
  Initial number:4681
  Guess number:1284 1A2B
  Guess number:7639 1A

REQUIREMENTS

- Please write a program that randomly generate an initial **4**-digit number, each from 1~**9**
  - These 4 numbers cannot be the same.
  - 1234 (**O**), 1233 (**X**)

- The program asks the user to guess the number. The user input a 4-digit number, each from 1~9
  - These 4 numbers cannot be the same.
  - 1234 (**O**), 1233 (**X**)

REQUIREMENTS

- The program response errors or xAyB, where x and y are numbers.

  - If the input format is wrong, the program outputs errors and asks the user to input again.

  - If the input type is correct, the program outputs **xAy**B and keeps asking the user to guess.

  - If the result is 4A0B, the program outputs "you win!" and asks the user whether he/she wants to continue or not.

EXAMPLE

○ Program output format

```
Please  input 4 digit number:1122
1122:Input error! different please!
Please  input 4 digit number:1234
1234:0A2B
Please  input 4 digit number:_
```

HINT

- How to get input number without using array:

- int input=0;
- cin>>input;
- int a1 = input **/** 1000;
- int a2 = ?
- int a3 = ?
- int a4 = ?

- What is the difference between **/** and **%** ?