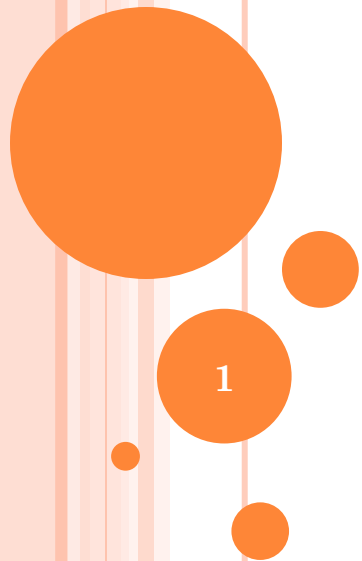


HW4- NUMBER GUESSING



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 $xAyB$ 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, if not then end the program.

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 **%** ?

