C Programming
Lab 2: Expressions

Lecturer: *Dr*. Wan-Lei Zhao

Spring Semester 2022

Email: wlzhao@xmu.edu.cn,

Outline

1 Expressions

Formatted Output (1)

- Print out 6 numbers in two rows
- Three numbers in each row
- Each number occupies 5 digits and left-aligned

```
123   451   332
271   74    54
```

The octal and Hexadecimal form of a number (1)

- Given an integer number, output its octal form
- Given an integer number, output its hexadecimal form

```c
#include <stdio.h>
int main()
{
    int a = 0;
    scanf("%d", &a);
    return 0;
}
```

Conditional Operator (1)

- Problem:
  - Accept two integer inputs **a** and **b** from user
  - Output the square-root of the **maximum one**
- Hints:
  - Function for square-root is root=sqrt(val)
  - The header file is “math.h”

Take the average of several numbers (1)

- Accept four real numbers from user, output their average

Capitalize the character (1)

- Accept the input from user a character
- Output a character in upper case if the input is in 'a'∼'z' range
- Otherwise output the original character
- For example, input ‘a’, output ‘A’
- input 'Z', output 'Z'; input ';', output ';'

Swap values of two variables (1)

- Given variable a=31 and b = 17, swap the value of these two
- Output the values before and after the swapping
- You need another variable in order to fulfill the swapping

```
1 a = 31, b = 17
2 a = 17, b = 31
```