Discussion 4

Some sample about Control Flows

- When we want to skip some special case in the loop without terminating it, we can use continue:
- Using break with for loop inside another for loop.
- Using continue with for loop inside another for loop.

#define and #undef

- The #define creates a macro.
- Association of an identifier or parameterized identifier with a token string
- After the macro is defined, the compiler can substitute the token string for each occurrence of the identifier in the source file.
- Value: #define TRUE 1
- function:
- #define getMax(a, b) (a>b?a:b)
- #define multiply(a, b) (a*b)

#define and #undef

- Removes a name previously created with #define.
- #define TRUE 1
- #define PI 3.1415926
- #define absdif(a,b) (a>b?(a-b):(b-a))
- ……
- #undef absdif
- #undef PI
- #undef TRUE

global variables

- Variables which are declared outside of a function.
- Accessible by all functions that come after them.
- Once changed, it will be seen everywhere.
- Carefully use global variables (or don't use it)

scopes

- Scopes determine what variables are accessible by a function:
  - Global variables
  - It's arguments
  - Variables it declares
- Example:

Functions

- When we create functions:
  - Split complex algorithm into self contained parts.
    - Conceptual relevance between these parts.
- + Others easier to understand your code.
- + Re-use these functions.
- + Easier for debug

Example

- Least Common Multiple (LCM):
- Find the GCD with Euclid's Algorithm: GCD(a, b).
- LCM(a, b) = (a x b) / GCD(a, b);

Print Triangle

- How to print these triangles? examples