

Lesson 12. Scope of Variable

Defining Scope of a Variable (定义变量范围)

Scope = Lifetime

The area under which a variable is applicable or alive (变量适用或有效的区域)

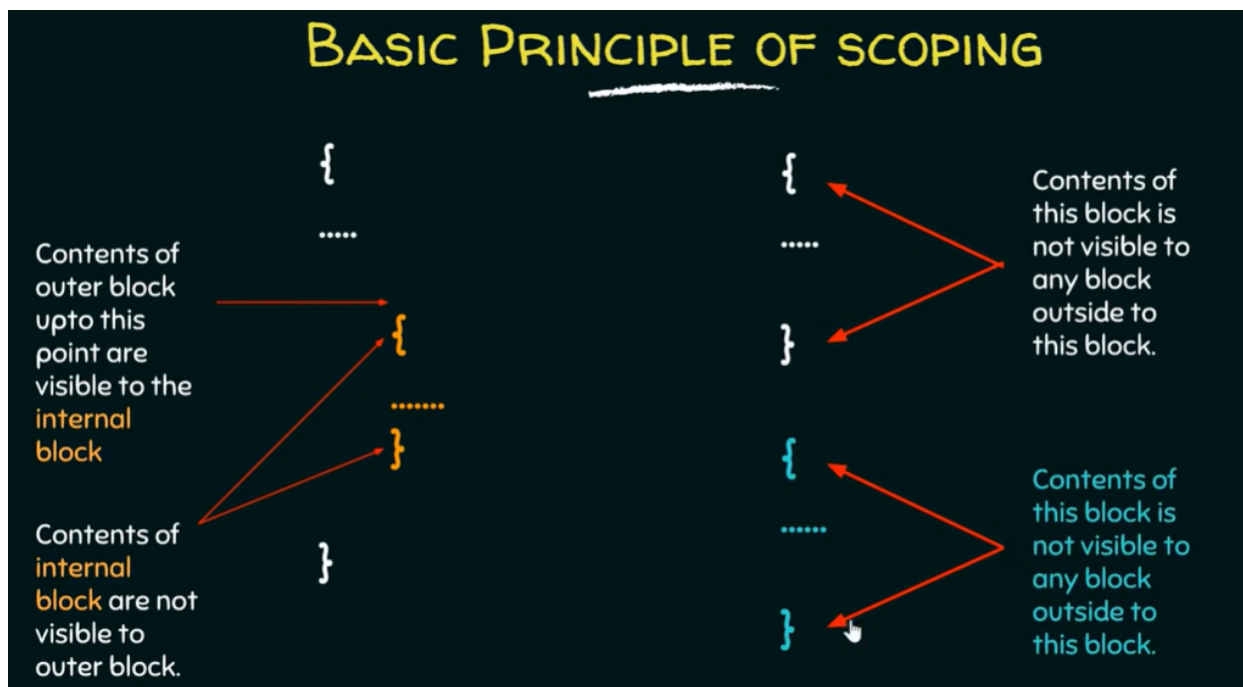
Strict Definition: a block or a region where a variable is declared, defined and when a block or a region ends, variable is automatically destroyed. (声明、定义变量的块或区域，当块或区域结束时，变量将自动销毁。)

Local Variable (局部变量)

```
#include <stdio.h>

int main(){
    int var = 34;
    //Scope of this variable is within main() function only. Therefore called LOCAL
    to main() function.
    printf("%d", var);
    return 0;
}

int fun(){
    printf("%d", var);
    //Trying to access variables 'var' outside main() function
    //OUTPUT: error:'var' undeclared (first use in this function)
}
```



Global Variable (全局变量)

```
#include <stdio.h>
int fun();

int var = 10;
//This variable is outside of all functions. Therefore called a GLOBAL variable

int main(){
    int var = 3;
    printf("%d\n", var); //OUTPUT: 3 (局部变量优先与全局变量)
    fun(); //调用fun函数, OUTPUT: 10
    return 0;
}

int fun(){
    printf("%d", var); //It will access the GLOBAL variable
}
```