

Lab #05

Date: 2014/03/19

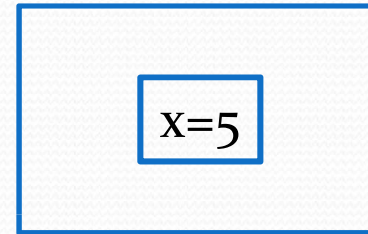
Slide

- <http://goo.gl/P5x3EE>

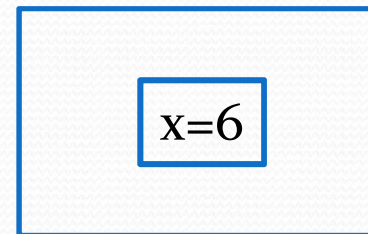
Call by Value

- ```
int main() {
 int x = 5;
 add(x);
 cout << x;
}
```
- ```
void add(int x) {  
    x++;  
}
```

main



add



Function Overloading

```
int add(int x){  
    x++;  
    return x;  
}  
  
int add(int x, int y) {  
    x++;  
    y+=x;  
    return y;  
}
```

```
#include <iostream>  
using namespace std;  
  
int add(int x);  
int add(int x, int y);  
  
int main() {  
    int x = 1, y = 2;  
    int z = add(3, y);  
    cout << add(y);  
  
    return 0;  
}
```

Header and Source

- Open a **project** for including all the files that will be used.

The screenshot displays a C++ IDE with a project named "maxScore". The project structure shows three files: `maxSc_header.h`, `maxSc_main.cpp`, and `maxSc_source.cpp`. The `maxSc_main.cpp` file is open, showing the following code:

```
1 #include <iostream>
2 #include "maxSc_header.h"
3 using namespace std;
4
5 int main () {
6     int score[MAX_S_COUNT] = {0};
7     inputScore (score);
8     cout << maxScore (score);
9
10    system("pause");
11    return 0;
12 }
```

The `maxSc_source.cpp` file is also open, showing the implementation of the `inputScore` and `maxScore` functions:

```
1 #include <iostream>
2 #include "maxSc_header.h"
3 using namespace std;
4
5 int main () {
6     int score[MAX_S_COUNT] = {0};
7     inputScore (score);
8     cout << maxScore (score);
9
10    system("pause");
11    return 0;
12 }
```

The IDE shows a linker error in the output window:

```
[Linker error] undefined reference to `inputScore(int*)'
[Linker error] undefined reference to `maxScore(int*)'
ld returned 1 exit status
```


rand() and srand()

- int rand(void)
- void srand(unsigned seed)

srand(time(o));

```
int main () {  
    int ranNum=0;  
  
    for(int i=0;i<30;i++){  
        ranNum=rand() %500;  
    }  
    cout<<ranNum<<" ";  
  
    return 0;  
}
```

```
int main () {  
    int ranNum=0;  
  
    srand(1);  
    for(int i=0;i<30;i++){  
        ranNum=rand() %500;  
    }  
    cout<<ranNum<<" ";  
  
    return 0;  
}
```

Lab practice

- Go for Lab14-05