

# C Programming

## Day05.B

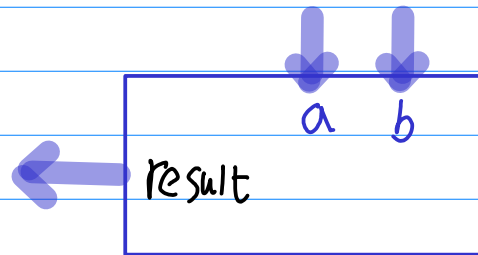
Functions  
call-by-value  
call-by-reference  
scanf("%d", &a);

Copyright (c) 2015 Young W. Lim.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.2 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

```
int func1(int a, int b) {
    int result;

    result = a + b;
    return(result);
}
```



```
int main(void) {
```

```
    int S;
```

```
    S = func1(3, 5);
```

```
    printf("S=%\n", S);
```

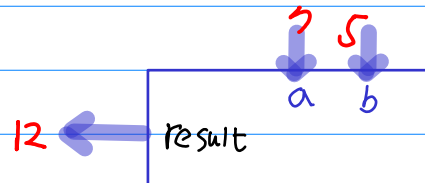
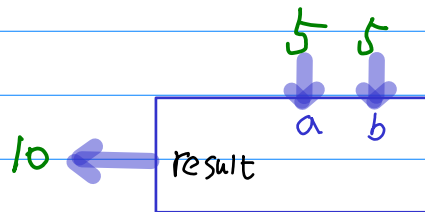
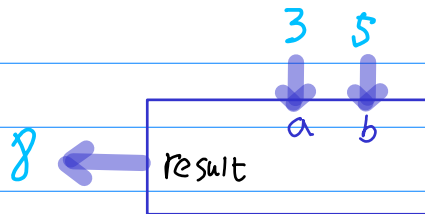
```
    S = func1(5, 5);
```

```
    printf("S=%\n", S);
```

```
    S = func1(7, 5);
```

```
    printf("S=%\n", S);
```

```
}
```



```
int func1(int a int b) {  
    int result;  
    result = a + b;  
    return(result);  
}
```

a, b

different

```
int main(void) {
```

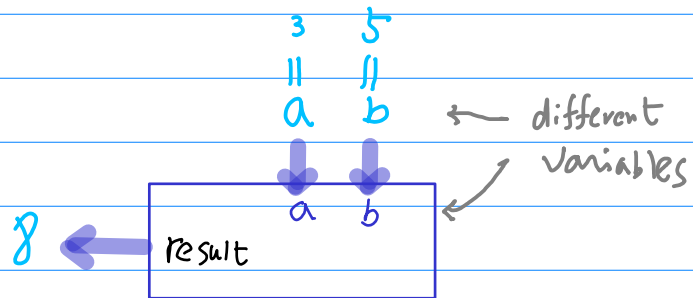
a, b

```
    int S;  
    int a = 3;  
    int b = 5;
```

```
    S = func1(a, b);
```

```
    printf("S=%\n", S);
```

```
}
```



```
int func1(int a, int b) {
    int result;

    result = a + b;

    a = 0; b = 0;

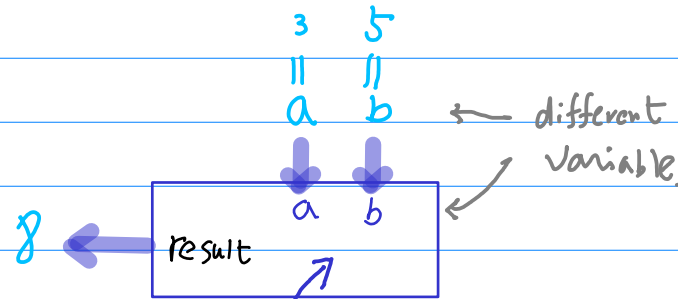
    return(result);
}
```

a, b  
different

```
int main(void) {
    int S;
    int a = 3;
    int b = 5;

    S = func1(a, b);
    printf("S=%\n", S);
}
```

a, b



local to func1()

a = 0, b = 0

does not make

local to main()

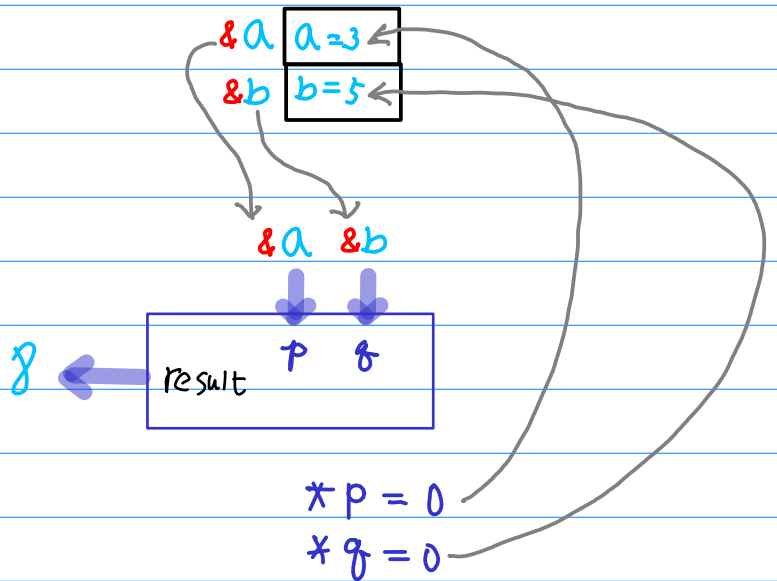
a = 0, b = 0

in main()

```
int func2(int *p, int *q) {
    int result;
    result = (*p) + (*q);
    (*p) = 0; (*q) = 0;
    return(result);
}
```

```
int main(void) {
    int S;
    int a = 3;
    int b = 5;

    S = func2(&a, &b);
    printf("S=%\n", S);
}
```



\* func2 change  
variable a & b to zero

```

int func2(int *a, int *b) {
    int result;

    result = (*a) + (*b);

    (*a) = 0; (*b) = 0;

    return(result);
}

```

```

int main(void) {

```

```

    int S;
    int a = 3;
    int b = 5;

```

```

    S = func2(&a, &b);

```

```

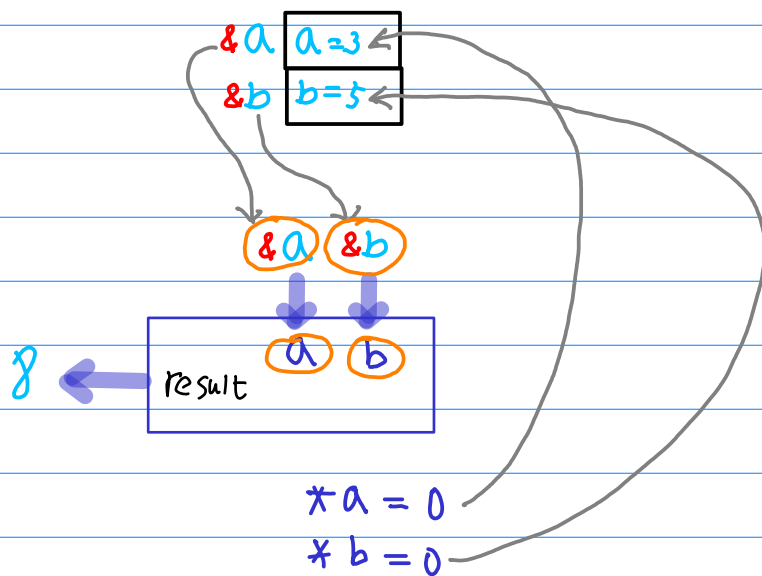
    printf("S=%\n", S);

```

```

}

```



\* `func2` change  
variable `a` & `b` to zero

( `a, b` integer pointer type  
`a, b` integer type  
different variables











