# Cheatography

# ECE160 Test 2 Cheat Sheet

by omghansda via cheatography.com/19854/cs/2798/

## Functions

Used to break problem down to small, bite sized pieces

Have an optional type of return value, a name and optional arguments

Functions return at most, ONE value

Functions must be prototyped or declared before usage

## Call by Address

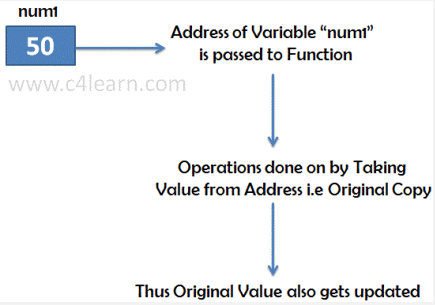
```
#include<stdio.h>
void interc han ge(int*num1,int
num2)
{
        int temp;
        temp = *num1;
     num1 = num2;
         *num2 = temp;
}
int main() {
        int num1=5 0,n um2=70;
         int erc han ge( &n -
um1 ,& num2);
         pri ntf ("\n Number 1 :
%d", num1);
         pri ntf ("\n Number 2 :
%d", num2);
         ret urn(0);
}
```

OUTPUT

Number 1 : 70

Number 2 : 50

## Call Value




## Extra Types

| | |
|---|---|
| int | −2,147,483,648 to +2,147,48-3,647 |
| unsigned int | 0 to 4,294,967,295 |
| int64 | -9,223,372,036,854,775,808 to +9,223,372,036,854,775,807 |

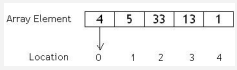
## Switch

```
switch ( <condition> )
{
case <value> :
      <statements>
      [break; ]
case <value> :
      <statements>
      [break; ]
      :
[default:
      <statements>
      [break; ]]
}
```

## CBR vs CBV

| Point | Call by Value | Call by Reference |
|---|---|---|
| Copy | Duplicate Copy of Original Parameter is Passed | Actual Copy of Original Parameter is Passed |
| Modification | No effect on Original Parameter after modifying parameter in function | Original Parameter gets affected if value of parameter changed inside function |

## Array Sample




a[0] = 4;

a[1] = 5;

a[2] = 33;

a[3] = 13;

a[4] = 1;

## Call-By-Value Steps

Copy of original parameter is created & passed to the called function

Updates inside method will NOT affect the original value of the variable in the calling function

## Call-By-Value Steps (cont)

scope is limited, therefore it cannot alter values inside main function

## Call by Value

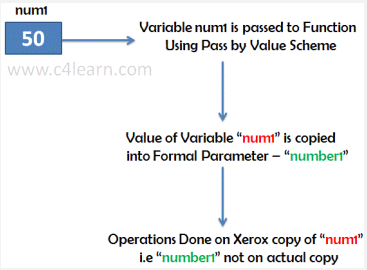
```
#include<stdio.h>
void interc han ge(int number -
1,int number2)
{
        int temp;
        temp = number1;
         number1 = number2;
         number2 = temp;
}
int main() {
        int num1=5 0,n um2=70;
         int erc han ge( num -
1,n um2);
         pri ntf ("\n Number 1 :
%d", num1);
         pri ntf ("\n Number 2 :
%d", num2);
         ret urn(0);
}
```

OUTPUT

Number 1 : 50

Number 2 : 70

## CallRef




Call by ref = call by address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