Parameter Passing – Pass by address

Pass by address:

- In the given code below the target is to swap the values of x & y using pass by address method.

(Note: * is pointer , & this is address)

```
Void Swap (int *a, int *b).  //creating function swap with printers
{
Int temp;
temp = *a;
*a = *b;
*b = temp;
}
Int main ()
{
    int x=10, y= 20;
Swap (&x, &y);
Cout<<x<<" "<<y;
}
```

Memory functionality :

- The complete code is in Code section of memory.
- As soon as main function is executed an activation record is created in stack of memory, With integer types variables x=10 and y=20 at some address like 200/1 , 210/11 respectively.
- Another activation record is created as soon as function 'swap' is called with variables 'a' and 'b' pointing towards 'x' and 'y' address.

- Now the swap function is in execution, first value of ‘a’ holding address of ‘x’ that is 200/1 is copied in temp because (temp=*a) and ‘*b’ holding address of ‘y’ that is 210/11 and it copies it’s values to *a because (*a=*b) and now *a becomes 20, Similarly *b becomes 10 because of (*b=temp).

- The function is accessing the variables of another function because of pointers.
  Pointer gives power to a function to access parameters of a calling function

- Thus we have successfully achieved pass by address mechanism.