

User Defined Functions :

The functions which are created by user for program are known as 'User defined functions'.

There are two ways to call a function (used when invoking functions)

❑ Call by Value:

- Copy of argument pass to a function
- Changes in function do not effect original

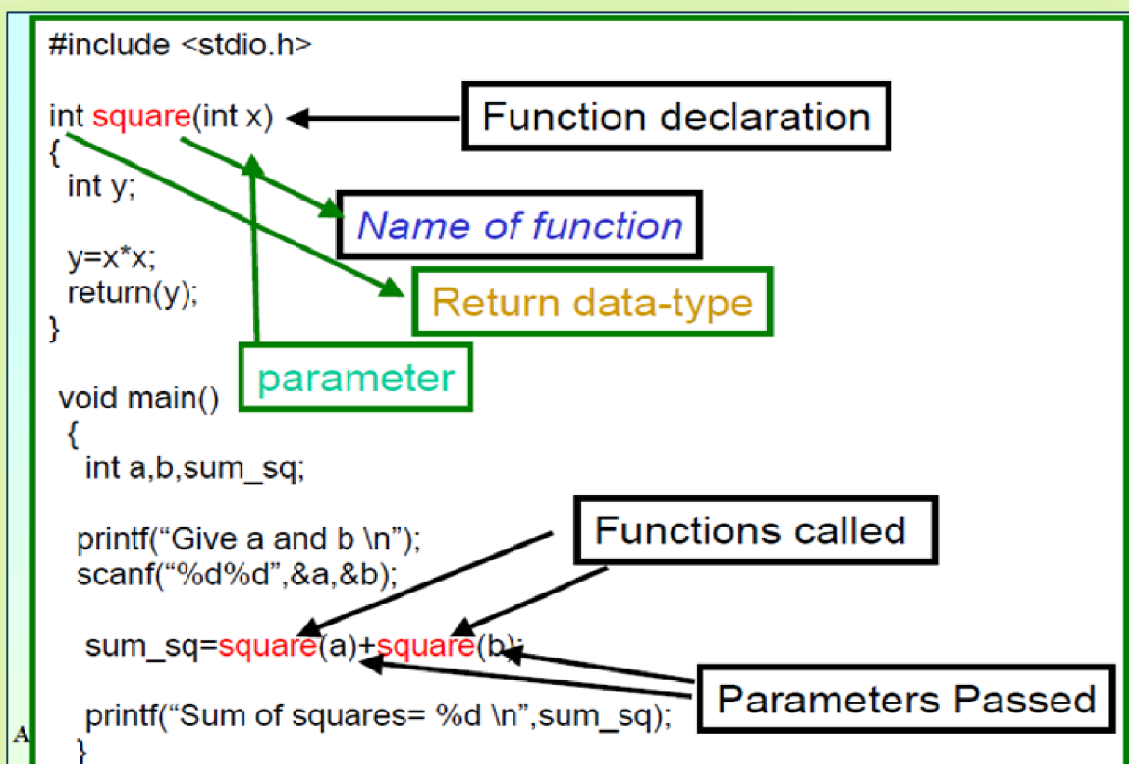
❑ Call by reference:

- Passes original arguments to a function
- Changes in function effect original

Syntax:

```
// Function definition
<return_type> <function_name>(argu_list);
void main()
{
    // Function Call
    <function_name>(<arguments>);
}
// Function declaration
<return_type><function_name>(<argu_list>)
{
    <function_body>;
}
```

Example : Call by Value



Here the some example of call by value

Example 1: Write a function to input any number and print the factorial value of the number.

```
#include<stdio.h>
#include<conio.h>
int fact(int);
void main()
{
    int x,y;
    clrscr();
    printf("Enter any number \n");
    scanf("%u",&x);
    y=fact(x);
    printf("%d",y);
    getch();
}
int fact(int j)
{
    int k;
    for(k=1;j>1;j--)
        k=k*j;
    return(k);
}
```

Example 2: Write a function to input any number and check the number is even or odd.

```
#include<stdio.h>
#include<conio.h>
int even(int);
void main()
{
    int x,y;
    clrscr();
    printf("Enter any number\n");
    scanf("%d",&x);
    y=even(x);
    y==1 ? printf("Number is even") : printf("Number is odd");
    getch();
}
int even(int z)
{
    if(z%2==0)
        return 1;
    else
        return 0;
}
```

Example 3: Write a function to input any two numbers and check which number is greater.

```
#include<stdio.h>
#include<conio.h>
int greate(int,int);
void main()
{
    int x,y,z;
    clrscr();
    printf("Enter any two number\n");
    scanf("%d%d",&x,&y);
```

```
z=greater(x,y);
z==1 ? printf("x is greater number ") : printf("y is greater number");
getch();
}
int greater(int a,int b)
{
if(a>b)
return 1;
else
return 0;
}
```

Try Yourself:

1. Write a function to input any year and check the year is leap year or not leap year.
2. Write a function to input any number and check the number is positive or negative.
3. Write a function to input the selling and cost price and check the profit or loss.