C Function Arguments

While calling a function, the arguments can be passed to a function in two ways, Call by value and call by reference.

Call By Value:-

1. The actual parameter is passed to a function.
2. New memory area created for the passed parameters, can be used only within the function.
3. The actual parameters cannot be modified here.

Call By Reference:-

1. Instead of copying variable; an address is passed to function as parameters.
2. Address operator(&) is used in the parameter of the called function.
3. Changes in function reflect the change of the original variables.

Call by Value

Example:

```
#include<stdio.h>


/* function declaration */int addition(int num1, int num2);


int main()

{

    /* local variable definition */    int answer;

    int num1 = 10;

    int num2 = 5;
    /* calling a function to get addition value */    answer = addition(num1,num2);


    printf("The addition of two numbers is: %d\n",answer);

    return 0;

}


/* function returning the addition of two numbers */int addition(int a,int b)

{

    return a + b;

}
```

Program Output:

```
The addition of two numbers is: 15
```

Call by Reference

Example:

```
#include<stdio.h>


/* function declaration */int addition(int *num1, int *num2);


int main()

{

    /* local variable definition */    int answer;

    int num1 = 10;
    int num2 = 5;


    /* calling a function to get addition value */    answer = addition(&num1,&num2);


    printf("The addition of two numbers is: %d\n",answer);

    return 0;

}


/* function returning the addition of two numbers */int addition(int *a,int *b)

{

    return *a + *b;

}
```

Program Output:

```
The addition of two numbers is: 15
```