**Storage class C++:**

Automatic Storage Class

It is the default storage class for all local variables. The auto keyword is applied to all local variables automatically. If you not write auto in front of local variable inside a function it is automatically auto variable.

{

auto **int** x;

**float** y = 3.45;

}

auto can only be used within functions. Its deleted from memory when function execution completed. its default value is garbage value.

## Static Storage Class

The static variable is initialized only once and exists till the end of a program. It retains its value between multiple functions call.

The static variable has the default value 0 which is provided by compiler.

**void** func() {

**static** **int** i=0; //static variable

**int** j=0; //local variable

}

## External Storage Class

The extern variable is visible to all the programs. It is used if two or more files are sharing same variable or function. Default value is 0. Life till the end of the main program .

**extern** **int** counter=0;

## Register Storage Class:

## Register keyword is used for register variable. Its memory allocation in inside cpu register memory(A processor register (CPU register) is one of a small set of data holding places that are part of the computer processor. A register may hold an instruction, a storage address, or any kind of data ) default value is garbage value. And register variable is local only. We can access them much faster then auto variable. If you want to use any variable reputedly then recommended variable is register variable. Like counter++ .

## register int counter=0;

## Friend function: friend function is not a member function of a class to which it is a friend.

## Friend function is declared in the class with friend keyword. It must be define outside the class to which it is friend.

## ---------------------------------------------------------------------------------------------------------------------

# **C++ Recursion**

When function is called within the same function, it is known as recursion in C++. The function which calls the same function, is known as recursive function.

## Void display(int x)

## {

## If(x<=5)

## {

## Cout<<x;

## Display(x+1);

## }

## }