### Garbage collection & finalize() method:

**Garbage Collection is the mechanism for deallocation of memory automatically when object goes out of scope.**

**When no references to an object to an object exist, that object is assumed to be no longer needed, and the memory occupied by the object can be reclaimed(destroyed).**

**The finalize () Method:**

**Sometimes an object will need to perform some action before it is destroyed. To handle such situations, java provides a mechanism called finalization. By using finalization, you can define specific actions that will occur when an object is just about to be destroyed by the garbage collector.**

**Inside the finalize() method we will specify those actions that must be performed before an object is destroyed.**

**The finalize() method Syntax:**

 protected void finalize()

 {

            // finalization code here

 }

            Here, the keyword **protected** is a specifier that prevents access to **finalize()**by code defined outside its class.

**It is important to understand that finalize() is only called just prior to garbage collection. It is not called when an object goes out-of-scope.**

**Advantages of Garbage Collection:**

* Programmer doesn't need to worry about dereferencing an object.
* It is done automatically by JVM.
* Increases memory efficiency and decreases the chances for memory leak.

#### Some Important Points to Remember

* finalize()  method is defined in **java.lang.Object** class, therefore it is available to all the classes.
* finalize() method is declare as **proctected** inside Object class.
* finalize() method gets called only once by GC threads.

#### gc() Method:

**gc()** method is used to call garbage collector explicitly. However **gc()** method does not guarantee that JVM will perform the garbage collection. It only request the JVM for garbage collection. This method is present in**System** and **Runtime** class.

#### Example for gc() method

public class GC

{

public static void main(String[] args)

{

GC c = new GC();

c=null;

System.gc();

}

public void finalize()

{

System.out.println("Garbage Collected");

}

}

# 