**Assembly in C#.NET**

An assembly is a file that is automatically generated by the compiler upon successful compilation of every .NET application. It can be either a Dynamic Link Library or an executable file. It is generated only once for an application and upon each subsequent compilation the assembly gets updated. The entire process will run in the background of your application;

**Manifest:**Assembly manifest is a data structure which stores information about an assembly  
Assembly Metadata is stored in the Manifest.

**Metadata:**is a data about data.

There are 2 types of assemblies.  
**1. Private Assembly  
2.Shared Assembly (Public) – C:\windows\assembly**By default, assemblies are private.

**A private assembly** is used only by a single application, and is stored in application folder, or in a subfolder.  
When the .net code gets compiled it generates an assembly which is stored in **bin** folder.

**Shared assemblies** (also called strong named assemblies) are copied to a single location (usually the Global assembly cache)  
– Shared assembly can be used by multiple application and has a strong name.  
– Strong name indicate the assembly, Version number, culture identity and public key token.