Day 17 Assignment by M.Pallavi

**1. Research and write what is assembly in C#.**

An Assembly is a basic building block of .Net Framework applications. It is basically a compiled code that can be executed by the CLR. An assembly is a collection of types and resources that are built to work together and form a logical unit of functionality. An Assembly can be a DLL or exe depending upon the project that we choose.

Assemblies are basically the following two types:

1. Private Assembly
2. Shared Assembly

**1. Private Assembly**

It is an assembly that is being used by a single application only. Suppose we have a project in which we refer to a DLL so when we build that project that DLL will be copied to the bin folder of our project. That DLL becomes a private assembly within our project. Generally, the DLLs that are meant for a specific project are private assemblies.

**2. Shared Assembly**

Assemblies that can be used in more than one project are known to be a shared assembly. Shared assemblies are generally installed in the GAC. Assemblies that are installed in the GAC are made available to all the .Net applications on that machine.

However, there are two more types of assemblies in .Net, Satellite Assembly, and Shared Assembly.

**GAC**

GAC stands for Global Assembly Cache. It is a memory that is used to store the assemblies that are meant to be used by various applications.

2. In a tabular format write the access modifiers and explain

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Within Assembly | | Other assembly | | |
|  | within class | Derived class | Other class | Derived class | Other class |
| public | yes | yes | Yes | Yes | Yes |
| private | yes | No | No | No | No |
| protected | yes | yes | No | Yes | No |
| internal | yes | yes | yes | No | No |
| Protected internal | yes | yes | yes | Yes | No |

Explanation:

|  |
| --- |
| Pallavi:mybaseclass  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace pallaviLibrary  {  public class mybaseclass  {  public int a;  private int b;  protected int c;  internal int d;  int e;  public void method()  {  a = 1;  b = 2;  c = 3;  d = 4;  e = 5;  }  }  public class myderivedclass : mybaseclass  {  public void myderivedmethod()  {  a = 1;  b = 2;  c = 3;  d = 4;  e = 5;    }  }  public class Otherclass  {  public void otherclass()  {    mybaseclass mb = new mybaseclass();  mb.a = 1;  mb.b =2;  mb.c=3;  mb.d=4;  mb.e=5;    }  }  }    Another library:  using System;  using pallaviLibrary;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace publiclibrary  {  public class Class1 : mybaseclass  {  public void derivedmethod()  {  a = 1;  b = 2;  c = 3;  d = 4;  e = 5;  }  }  public class otherclass  {  public void othermethod()  {  mybaseclass m=new mybaseclass();  m.a = 1;  m.b = 2;  m.c = 3;  m. d = 4;  m.e = 5;  }  }  } |