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| Day17 Morning Assignment  By  Anusha Bellala  15-2-2022 |

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| 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 file depending upon the project that we choose.  Assemblies are basically two types:   * Private Assembly * 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.   1. 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. |

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| 2. In a tabular format write the access modifiers and explain  (as I did in the class, create two assemblies with 3 classes in first assembly, 2 classes in other assembly) |

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|  | Within Assembly | Other Assembly |

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|  | 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 |

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| **MyBaseClass:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace AnuLibrary  {  public class MyBaseClass  {  public int a;  private int b;  protected int c;  internal int d;  protected internal int e;  public void MyBaseClassMethod()  {  a = 5;  b = 10;  c = 15;  d = 20;  e = 30;  }  }  public class MyDerivedClass : MyBaseClass  {  public void MyDerivedClassMethod()  {  a = 5;  // b = 10; // Here the private Access Modifier is not accessed in the Derived Class  c = 15;  d = 20;  e = 30;  }  }  public class MyOtherClass  {  public void MyOtherClassMethod()  {  MyBaseClass mb = new MyBaseClass();  mb.a = 5;  // mb.b = 10; Here the private Access Modifier is not accessed in the other Class in Same Assembly  // mb.c = 15; Here the protected Access Modifier is not accessed in the other Class in Same Assembly  mb.d = 20;  mb.e = 30;  }  }  } |
| MyPublicClass:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using AnuLibrary;  namespace PublicLibrary1  {  internal class MyPublicLibraryDerivedClass : MyBaseClass  {  public void MypublicLibraryDerivedClassMethod()  {  a = 5;  //b = 10;// Here the private Access Modifier is not accessed in the Derived Class in Other Assembly  c = 15;  //d = 20;// Here the internal Access Modifier is not accessed in the Derived Class in Other Assembly  e = 30;  }  }  public class MyPublicLibraryOtherClass  {  public void MypublicLibraryOtherClassMethod()  {  MyBaseClass mpd = new MyBaseClass();  mpd.a = 5;  // mpd.b = 10;\\Here the private Access Modifier is not accessed in the other Class in Other Assembly  // mpd.c = 15;\\Here the protected Access Modifier is not accessed in the other Class in Other Assembly  // mpd.d = 20;\\Here the internal Access Modifier is not accessed in the other Class in Other Assembly  // mpd.e = 30;\\Here the protected Internal Access Modifier is not accessed in the other Class in Other Assembly  }  }  } |
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