Access Modifiers

Access modifiers act like a gate on our code, thereby allowing only specific things can get to the code. They restrict the availability of objects, methods and classes/members into the program or application. We can control the scope of the members by using success specifiers which are used to provide security to applications. There are several modifiers that we have access to and that we are going to go over.

1. Public
2. Private
3. Protected
4. Internal
5. Protected internal

**Public**

Public is the most used access specifier in C#. It can be access from anywhere, that means there is no restriction on accessibility. The scope of the accessibility is inside class as well as outside. The type or member can be accessed by any other code in the same assembly or another assembly that references it.

some key points

Members of public access specifier can be accessed

1. Within the class in which they are declared.
2. Within the derived classes of that class available within the same assembly.
3. Outside the class within the same assembly.
4. Within the derived classes of that class available outside the assembly.
5. Outside the class outside the assembly.

**Private**

The scope of the accessibility is limited only inside the classes or struct in which they are declared. The private members cannot be accessed outside the class and it is the least permissive access level.

some key points

the members of Private access specifier can be accessed

1. Only Within the class in which they are declared.

**Protected**

The scope of accessibility is limited within the class or Struct and the class derived from this class.

some key points

Members of Protected access specifier can be accessed

1. Within the class in which they are declared.
2. Within the derived classes of that class available within the same assembly.
3. Within the derived classes of that class available outside the assembly.

**Internal**

The internal access modifiers can access within the program that contain its declarations and access within the same assembly level but not from another assembly.

some key points

Members of Internal access specifier can be accessed

1. within the class in which they are declared.
2. Within the derived classes of that class available within the same assembly.
3. Outside the class within the same assembly.

**Protected Internal**

Protected internal is the same access levels of both protected and internal. It can access anywhere in the same assembly and in the same class also the classes inherited from the same class.

some key points

Members of protected Internal access specifier can be accessed

1. Within the class in which they are declared.
2. Within the derived classes of that class available within the same assembly.
3. Outside the class within the same assembly.
4. Within the derived classes of that class available outside the assembly.