**Antra Assignment 3 C#**

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**Knowledge**

1.**public**: Access is not restricted.

**protected**: Access is limited to the containing class or types derived from the containing class.

**internal**: Access is limited to the current assembly.

**protected internal**: Access is limited to the current assembly or types derived from the containing class.

**private**: Access is limited to the containing type.

**private protected**: Access is limited to the containing class or types derived from the containing class within the current assembly.

2. We use the static modifier to declare a static member, which belongs to the type itself rather than to a specific object. We use the const keyword to declare a constant field or a constant local. Constant fields and locals aren't variables and may not be modified. Constants can be numbers, Boolean values, strings, or a null reference. In a field declaration, readonly indicates that assignment to the field can only occur as part of the declaration or in a constructor in the same class. A readonly field can be assigned and reassigned multiple times within the field declaration and constructor.

3. A constructor is special member function shares the name of the class. Constructor is used to create instance of the class. Constructor can be overloaded with multiple parameters. If there is no constructor then compiler provides a default constructor. A default constructor is always replaced by the custom customer. Constructor is used to initialize the class fields. Constructor cannot have any return type not even void.

4. The partial keyword indicates that other parts of the class, struct, or interface can be defined in the namespace. All the parts must use the partial keyword. All the parts must be available at compile time to form the final type.

5. The word Tuple means “a data structure which consists of the multiple parts”. So, tuple is a data structure which gives you the easiest way to represent a data set which has multiple values that may/may not be related to each other.

6. We use the record keyword to define a reference type that provides built-in functionality for encapsulating data.

7. Overloading occurs when two or more methods in one class have the same method name but different parameters. Overriding occurs when two methods have the same method name and parameters. One of the methods is in the parent class, and the other is in the child class.

8. Properties expose fields. Fields should (almost always) be kept private to a class and accessed via get and set properties. Properties provide a level of abstraction allowing you to change the fields while not affecting the external way they are accessed by the things that use your class.

9. We can make a parameter optional by assigning default values for that parameter.

10. Interface is a collection of methods which are by default abstract and will be implemented by the derived classes. One class can implement multiple interfaces. Abstract class provides a base class to its subclasses -- use when we have a clear class hierarchy; interface defines common behaviors or functionalities that can be implemented by any class -- contract. One class can only inherit from one base class, but one class can implement multiple interfaces. Methods in abstract class can be abstracts methods or concrete methods, but methods in interface are by default abstract.

11. The default member accessibility of interface is public. The allowed declared accessibilities of the member are public, protected, internal, private, protected internal and private protected.

12. True

13. True

14. False (Override )

15. False (Must be in abstract class)

16. True

17. True

18. True

19. False (Must be virtual or abstract)

20. False (All members must be implemented)

21. True

22. False (Only one base class)

23. True