Assignment 3

1. What are the six combinations of access modifier keywords and what do they do?

Ans:

* Public: The code is accessible for all classes
* Private: The code is only accessible within the same class
* Protected: The code is accessible within the same class, or in a class that is inherited from that class. You will learn more about inheritance in a later chapter
* Internal: The code is only accessible within its own assembly, but not from another assembly. You will learn more about this in a later chapter
* Protected internal: The type or member can be accessed by any code in the assembly in which it's declared, or from within a derived class in another assembly.
* Private protected: A private protected member is accessible by types derived from the containing class, but only within its containing assembly.

1. What is the difference between the static, const, and readonly keywords when applied to a type member?

Ans:

Static: Static members can be accessed using ClassName.StaticMemberName, but cannot be accessed using object.

Readonly: Readonly members can be accessed using object, but not ClassName.ReadOnlyVariableName.

Const: Const members can be accessed using ClassName.ConstVariableName, but cannot be accessed using object. Constant variables cannot be modified after declaration.

1. What does a constructor do?

Ans: Constructor is a special method which would be invoked when we trying to create a new instance of class.

1. Why is the partial keyword useful?

Ans: partial keyword let you separate different logic into different files but within a same class, it could make code more readable.

1. What is tuple?

Ans: Tuple provides concise syntax to group multiple data elements in a lightweight data structure.

1. What does the C# record keyword do?

Ans:

Record keyword let you create a immutable data type.

1. What does overloading and overridding mean?

Ans:

* Overload: you can have same method name with different parameters within a class.
* Override: Sub-class can override it’s super-class’s method with different implementations.

1. What is the difference between a field and a property?

* Field: field is a variable (that can be of any type) that is defined inside a class. It can be used to define the characteristics of an object or a class.
* Property: property is a member of the class that provides an abstraction to set (write) and get (read) the value of a private field.

1. How do you make a method parameter optional?

Ans: You can do this by setting default value to parameter.

1. What is an interface and how is it different from abstract class?

* Abstract class can have state, Interface can’t.
* Abstract class can provide default implementation for method, interface could only declare method to be implemented.

1. What accessibility level are members of an interface?

Ans: All members of a interface are public.

1. True
2. True
3. False
4. True
5. False
6. True
7. True
8. False
9. False
10. True
11. False
12. True