

OOPII CONCEPT QUESTION ANSWERS

1. Objects are the things you think about first in designing a program
2. Encapsulation is the bundling of data with the methods that operate on that data
3. Abstraction is the process of filtering out – ignoring - the characteristics of patterns that we don't need in order to concentrate on those that we do.
4. Private, public, internal, protected and protected Internal.
5. Inheritance is the mechanism in C# by which one class is allowed to inherit the features (fields and methods) of another class.
6. by using interfaces
7. The derived class doesn't "inherit" the private members of the base class in any way - it can't access them, so it doesn't "inherit" them.
8. Polymorphism the ability of objects of different types to provide a unique interface for different implementations of methods.
9. Method overloading is the ability to redefine a function in more than one form.
10. If we need to do the same kind of the operation in different ways
11. Method Overriding is a technique that allows the invoking of functions from another class (base class) in the derived class.
12. A constructor is a special method of the class which gets automatically invoked whenever an instance of the class is created.
13. Constructor of a class must have the same name as the class name in which it resides
 - A constructor cannot be abstract, final, and synchronized.
 - Within a class, you can create only one static constructor.
14. Private constructor is a special instance constructor. It is generally used in classes that contain static members only.
15. No, object of a class having private constructor cannot be instantiated from outside of the class.
16. Private constructors are used to prevent creating instances of a class when there are no instance fields or methods
17. A static constructor is used to initialize any static data, or to perform a particular action that needs to be performed only once.

18. Destructors are methods inside the class used to destroy instances of that class when they are no longer needed.

19. Namespace is a set of signs that are used to identify and refer to objects of various kinds.

20. The virtual keyword is used to modify a method, property, indexer, or event declared in the base class

The override modifier extends the base class virtual method, and the new modifier hides an accessible base class method.

The new operator creates a new instance of a type.

21. Structs are value types, allocated either on the stack or inline in containing types while classes are reference types, allocated on the heap and garbage-collected.

22. Interface is a shared boundary across which two or more separate components of computer system exchange information.

23. Because it allows us to easily interchange one component for another which is using the same interface.

24. What is implicit interface implementation?

24. Interfaces are implemented implicit by declaring a public member in the class with the same signature of the method as defined in the interface and the same return type.

25. An explicit interface implementation is a class member that is only called through the specified interface.

26. An abstract class is a class that is declared abstract—it may or may not include abstract methods.

27. Abstract classes cannot be instantiated, but they can be sub classed.

28. Abstraction is the method of hiding the unwanted information. Whereas encapsulation is a method to hide the data in a single entity or unit along with a method to protect information from outside

29. Abstract classes cannot be declared sealed

30. Yes, an abstract class can have a constructor.

31. No, abstract method can't be private

32. Yes, abstract class can have Static Methods.

33. No it doesn't support multiple interfaces

34. False

35. An abstract class is used if you want to provide a common, implemented functionality among all the implementations of the component.

36. The sealed modifier prevents a class from being inherited and the abstract modifier requires a class to be inherited.

37. The abstract keyword enables you to create classes and class members that are incomplete and must be implemented in a derived class.

38. Operator overloading Is a specific case of polymorphism, where different operators have different implementations depending on their arguments

39. Yes it is possible by using the static variable

40. No you can't inherit.

41. You can use extension methods to extend a class or interface

42. No, you can't return multiple values from a function

43. Constants are immutable values which are known at compile time and do not change for the life of the program.

44. It indicates that the assignment to the fields is only the part of the declaration or in a constructor to the same class.

45. Static means something which cannot be instantiated.

46. A Static read only type variable's value can be assigned at runtime or assigned at compile time and changed at runtime.