1. Answer: Introduce yourself?

-> I'm TriDuong with more than 5 years with experience working in .Net FW.

-> I have experience in asp.net as well as asp.net MVC.

-> I also have knowledge in jQuery, JavaScript and KendoUI Web. Sql development, and with entity fw.

2. Which projs have you recently done?

My project I have recently done is HFM. HFM is Horse Farm Management system (This is old system written by VB.Net and SQL for DB storage). We port old system to class webApp, I have worked for more than six months and used: Asp.net MVC, KedoUI web, JS, jQuery, and SqL for DB storage,...

3. What is the difference between an interface and abstract class, when we use interface and use abstract class?

a. difference between an interface and abstract class

-> Interface in a contract there are only the signatures (name, params, return type).

-> Abstract classes look like interfaces, but they have something more, you can define behavior for them and must be inherited by sub classes.

-> A class is just inherited by one abstract class. and can implement more than one interface.

b. When:

-> Interface is used when you want to describe a contract (name, params, and return type)

-> Abstract Class is used when you want to implement basic functionality and some properties/ methods that will be shared among deriving classes.

4. What are differences between List, Dictionary, Hashsets and when we use them?

-> Dictionory, List, and Hashsets are a collection of items:

-> And We use them for different purposes:

LIST are faster for adding a bunch items, easier to retrieve index item of list, and great when you are not guaranteed to have a unique key for each item and order is important.

DIC is collections of keys and values, is best when each item in the list is guaranteed to have a unique key, and is faster for looking them up by KEY.

HASHSETS is an unordered collection for contain unique elements, is great if you just need to store some collection of items, but you don't care about the order, and provide the best lookup performance.

5. What are the Default Access Modifiers in .Net?

-> Access modifiers are keywords used to define scope of a member or a type.

Public->A public access is the most permissive access level. There are no restrictions on accessing public members.

Protected-> A protected member is accessible from within the class in which it is declared, and from within any class derived from the class that declared this member.

Internal-> only members of files in the same assembly are accessible.

Private-> To prevent out class accessible.

6. Assemby, Sign Asssembly?

->Assemby is When you compile an application, the MSIL(MS Intermediate Language) code created is stored in an assembly . Assemblies include both executable application files that you can run directly from Windows without the need for any other programs, and libraries for use by other applications.

->It is a mechanism to allowing you to ensure the authenticity of an assembly. It allows you to ensure that an assembly hasn't been tampered with and indeed it origins from this author.

7. What does Intermediate Language (IL) mean?

->The IL is an oop language is designed to be used by compiler for .net fw. The IL is used by the .NET Framework to generate machine-independent code as the output of compilation of the source code written in any .NET programming language.

8. What is gabage collection in .net, why we use it?

-> GC is concept is used in managed memory usage of application.

-> Every object holds memory in the managed heap, when the heap is full the GC is called to removes the need to track and release memory allocations

9. Why Re-throw Exceptions?

->Using re-throw to custom exception if you don't want show full the stacks trace information.

10. App Domain?

->Represents an application domain, which is an isolated environment where applications execute. This class cannot be inherited.. Each application domain has its own virtual address space which scopes the resources for the application domain using that address space.

11. How to release an obj?

->We just stop all references to them, and Gabage Colletor will free them for you. (can use: using statement or try-cacth()-finnaly)

12. linkQ (Language-Integrated Query)

***-> It stands for Language Integrated Query. LINQ is collection of standard query operators that provides the query facilities into .NET framework language like C# , VB.NET. There are couples of advantage of LINQ over stored procedures***

-> Querying and updating data, and the technology can be extended to support potentially any kind of data store.

->Visual Studio includes LINQ provider assemblies that enable the use of LINQ with .NET Framework collections, SQL Server databases, ADO.NET Datasets, and XML documents.

=> type safe, debugging, deloyment

13. Lamda Expression?

->A lambda expression is an anonymous function that you can use to create delegates (on behalf of...) or expression tree types.

14. What is extension method in .net?

->This method allows us to add a new static method to the existing classes without relying on inheritance or having to change the class's source code.

-> It's clear, short, and simple to use.

15. What is the difference between a mutable and immutable string in .net?

-> The String is immutable, cannot be updated. When you alter a string (adding...), you are actually creating a new string. So, It’s spent a lot of memories.

-> The StringBuilder is mutable, if you have to alter a string many times, such as multiple concatenations then use StringBuilder

16. Reflection?

-> Reflection allows an application to collect information about itself and also to manipulate on itself. It can be used to find all types in an assembly and/or dynamically invoke methods in an assembly.

17. Identity?

-> Creates an identity column in a table, this property is used with create or update table Transact-SQL statement.

Can be used for generating key-value, guarantee uniqueness of the value (must be enforced by using a PRIMARY KEY or UNIQUE constraint or UNIQUE index). Auto increase value when insert new row in table.

18. Post and Get?

-> Get: requests have length restrictions (255characters), can be catched. GET is less secure compared to POST because data sent is part of the URL; user can see parameters data in URL. (Suitable for master - detail pages)

-> Post: requests have no restrictions on data length, are never cached. POST is a little safer than GET because the parameters are not stored in browser history or in web server logs, and hidden data in URL.

19. Session, View State?

->Session is used to store and retrieve data for the user's session in memory server of website. It will be around for longer the page's lifecycle, can be accessed across pages. (4ways: Inproc, stateServer, sqlServer, Custom)

->View state, which persisting values in current page's lifecycle and is stored in hidden fields in client side.

(Session state is saved on the server, ViewState is saved in the page.)

Maintains data between ViewData/ViewBag TempData Hidden fields Session

Controller to Controller No Yes No Yes

Controller to View Yes No No Yes

View to Controller No No Yes Yes

20. Life cycle?

-> Asp.net MVC:

1. The routable is created.

2. The UrlRoutingModule Intercepts the Request

3. The MvcHandler Executes

4. The Controller Executes

5. The RenderView Method is called

-> Asp.net web Form:

1. Start

2. Initialization

3. Load

4. Postback event handling

5. Rerendering

6. Unload

21. What difference between asp.net web forms and asp.net MVC?

Asp.Net WebForm:

-> Create designer support in VS.

-> Very rich control libraries and third party vendor support.

-> A familiar drive-event model when compared to windowForm development, and so easier for developers to pick up.

-> UI and logic coupled with the code, so difficult to separate.

Asp.net MVC:

-> Provides find control over rendered HTML

-> Cleaner generated HTML

-> Superior separation UI and code behind.

-> Can support multiple view engines.

-> Easier to Unit test.

-> Easy integration with framework like jQuery.

-> allows for reuse model to present different UIs and Interfaces

-> No VIEWSTATE( may also be a weakness)

22. Static class and static member?

-> You can define static class when guarantee it cannot be instantiated, and cannot derive or serve as the base for other type.

-> Just only contain static member

23. Difference between primary key and foreign key?

-> Primary Key: cannot be null and unique in the table. (Id)

-> Foreign Key: Values can be null and duplicate values, and it refer to another table.

24. Store Procedure?

A store procedure is a group of Transact\_SQL statements into a single execution plan.

25. Value types and Reference Type?

-> Value types include the following:

All numeric data types

Boolean, Char, and Date

All structures, even if their members are reference types

Enumerations, since their underlying type is always SByte, Short, Integer, Long, Byte, UShort, UInteger, or ULong

-> Reference types include the following:

String

All arrays, even if their elements are value types

Class types, such as Form

Delegates

26. Boxing and unBoxing?

-> Boxing is the process of converting a value type to the type object or to any interface type implemented by this value type. When the CLR boxes a value type, it wraps the value inside a System.Object and stores it on the managed heap.

-> Unboxing extracts the value type from the object.

-> Boxing is implicit; unboxing is explicit.

-> The concept of boxing and unboxing underlies the C# unified view of the type system, in which a value of any type can be treated as an object.

+.NET

1. For accuracy calculation: double and decimal, which one should be used?

2. What’s MVC stand for?

3. What are the differences between abstract and interface?

4. After creating a sql connection, how to close it?

+SQL

1. Have you used a store procedure?

2. What are the differences between cluster and non-cluster index?

3. What are the differences between left join and inner join?

4. Have you used ORM? What’s it ? Have you setup that ORM for using in your project?