**[Interview Questions in ASP.NET,C#.NET,SQL Server,.NET Framework](http://www.aspdotnet-suresh.com/2010/05/interview-questions-in-aspnetcnetsql.html)**

**Difference between stored procedure and function**

1) Procedure can return zero or n values whereas function can return one value which is mandatory.  
2) Procedures can have input, output parameters for it whereas functions can have only input parameters.  
3) Procedure allows select as well as DML statement in it whereas function allows only select statement in it.  
4) Functions can be called from procedure whereas procedures cannot be called from function.  
5) Exception can be handled by try-catch block in a procedure whereas try-catch block cannot be used in a function.  
6) We can go for transaction management in procedure whereas we can't go in function.  
7) Procedures cannot be utilized in a select statement whereas function can be embedded in a select statement.

**What are differences between function and stored procedure?**

**Ans:**

**1)** Function returns only one value but procedure returns one or more than one value.

**2)** Function can be utilized in select statements but that is not possible in procedure.

**3)** Procedure can have an input and output parameters but function has only input parameters only.

**4)** Exceptions can be handled by try catch block in procedures but that is not possible in function.

**Difference between Abstract and Interface**

**Abstract Class:**  
-Abstract class provides a set of rules to implement next class  
-Rules will be provided through abstract methods  
-Abstract method does not contain any definition  
-While inheriting abstract class all abstract methods must be override  
-If a class contains at least one abstract method then it must be declared as an “Abstract Class”  
-Abstract classes cannot be instantiated (i.e. we cannot create objects), but a reference can be created  
-Reference depends on child class object’s memory  
-Abstract classes are also called as “Partial abstract classes”  
-Partial abstract class may contain functions with body and functions without body  
-If a class contains all functions without body then it is called as “Fully Abstract Class” (Interface)  
  
**Interface:**  
-If a class contains all abstract methods then that class is known as “Interface”  
-Interfaces support like multiple inheritance  
-In interface all methods r public abstract by default  
-Interfaces r implementable  
-Interfaces can be instantiated, but a reference cannot be created

**What are the differences between Abstract and interface?**

**Ans:**  1) Abstract cannot be instantiated but we can inherit. Interface it cannot be inherit it can be instantiate

2) Interface contain only declarations no definitions. Abstract contain declarations and definitions.

3) The class which contains only abstract methods is interface class. A class which contains abstract method is called abstract class

4) Public is default access specifier for interface we don’t have a chance to declare other specifiers. In abstract we have chance to declare with any access specifier

**What are differences between Array list and Hash table?**

**Ans:** 1) Hash table store data as name, value pair. While in array only value is store.

2) To access value from hash table, you need to pass name. While in array, to access value, you need to pass index number.

3) you can store different type of data in hash table, say int, string etc. while in array you can store only similar type of data.

**What are differences between system.stringbuilder and system.string?**

The main difference is system.string is immutable and system.stringbuilder is a mutable. Append keyword is used in string builder but not in system.string.

Immutable means once we created we cannot modified. Suppose if we want give new value to old value simply it will discarded the old value and it will create new instance in memory to hold the new value.

|  |  |
| --- | --- |
| **String** | **StringBuilder** |
| It’s an immutable | It’s mutable |
| Performance wise string is slow because every time it will create new instance | Performance wise stringbuilder is high because it will use same instance of object to perform any action |
| In string we don’t have append keyword | In StringBuilder we can use append keyword |
| String belongs to **System** namespace | Stringbuilder belongs to **System.Text** namespace |

**What are the different types of indexes?**

**Ans:** Two types of indexes are there one is clustered index and non-clustered index

**How many types of memories are there in .net?**

**Ans:** Two types of memories are there in .net stack memory and heap memory

**Is it possible to set the session out time manually?**

**Ans:** Yes we can set the session out time manually in web.config.

**What is the difference between primary key and unique key with not null?**

**Ans:** There is no difference between primary key and unique key with not null.

**What is boxing and unboxing concepts in .net?**

**Ans:** Boxing is a process of converting value type into reference type

Unboxing is a process of converting reference type to value type.

**What are the differences between value type and reference type?**

**Ans:** Value type contain variable and reference type are notcontaining value directly in its memory.

Memory is allocated in managed heap in reference type and in value type memory allocated in stack. Reference type ex-class value type-struct, enumeration

**Why we go for page rendering in Asp.Net Page life cycle?**

**Ans:** Browser understands an only html control that’s why in page rendering we will convert the aspx controls into html controls.

**What are difference between GET and POST Methods?**

**Ans:**

**GET Method ():**   
  
1) Data is appended to the URL.   
2) Data is not secret.   
3) It is a single call system   
4) Maximum data that can be sent is 256.   
5) Data transmission is faster   
6) this is the default method for many browsers   
  
**POST Method ():**   
  
1) Data is not appended to the URL.   
2) Data is Secret   
3) it is a two call system.   
4) There is no Limit on the amount of data. That is characters any amount of data can be sent.   
5) Data transmission is comparatively slow.   
6) No default and should be explicitly specified.

**What are difference between truncate and delete?**

**Ans:** 1) Delete keep the lock over each row where Truncate keeps the lock on table not on all the row.  
2) Counter of the Identity column is reset in Truncate where it is not reset in Delete.   
3) Trigger is not fired in Truncate where as trigger is fired in Delete.

4) In TRUNCATE we cannot rollback.

5) In DELETE we can rollback

**What are the different levels of State management in ASP.NET?**

**Ans:**

State management is the process by which you maintain state and page information over multiple requests for the same or different pages.

There are 2 types State Management:   
  
1. Client – Side State Management   
This stores information on the client's computer by embedding the information into a Web page, a uniform resource locator (url), or a cookie. The techniques available to store the state information at the client end are listed down below:   
  
a. View State – Asp.Net uses View State to track the values in the Controls. You can add custom values to the view state. It is used by the Asp.net page framework to automatically save the values of the page and of each control just prior to rendering to the page. When the page is posted, one of the first tasks performed by page processing is to restore view state.   
  
b. Control State – If you create a custom control that requires view state to work properly, you should use control state to ensure other developers don’t break your control by disabling view state.   
  
c. Hidden fields – Like view state, hidden fields store data in an HTML form without displaying it in the user's browser. The data is available only when the form is processed.   
  
d. Cookies – Cookies store a value in the user's browser that the browser sends with every page request to the same server. Cookies are the best way to store state data that must be available for multiple Web pages on a web site.   
  
e. Query Strings - Query strings store values in the URL that are visible to the user. Use query strings when you want a user to be able to e-mail or instant message state data with a URL.   
  
2. Server – Side State Management   
a. Application State - Application State information is available to all pages, regardless of which user requests a page.   
  
b. Session State – Session State information is available to all pages opened by a user during a single visit.   
  
Both application state and session state information is lost when the application restarts. To persist user data between application restarts, you can store it using profile properties.

**Abstract Class:**

Abstract class is a class which can’t be instantiate. Class should have “Abstract” key word with the name.  In any one of the method of class having abstract method with in it, then it should be define as abstract class. The class which derived the abstract class should have definition of the abstract method. These classes which derived the abstract class and implement the abstract methods call concrete class.  
Abstract class may have the definition of function or may not.  Below is the simple example of an abstract class

public abstract alass AbstractStudent  
    {  
        String Roll  
        {  
            get;  
            set;  
        }  
  
        String FirstName  
        {  
            get;  
            set;  
        }  
          
        String LastName  
        {  
            get;  
            set;  
        }  
          
  
        Public String GetStudentDetails()  
             {  
  
                  // Implementation of Method      
             }  
  
        public String SaveStudentDetails ()  
            {  
                  // Implementation of Method      
             }  
  
        public abstract String CalculateWage();  
  
    }

So, the class having one abstract method so we need to mention the class as "abstract" .

**Difference between Abstract Class and Interface?**

Abstract class is a class which *can’t be instantiated* and which can have methods with definition as well as declaration also. This can be inherited.    
  
As for Example:

public abstract class AbstractStudent  
    {  
        String Roll  
        {  
            get;  
            set;  
        }  
  
        String FirstName  
        {  
           get;  
           set;  
        }  
     
        String LastName  
        {  
           get;  
            set;  
        }  
  
        Public String GetStudentDetails()  
            {  
                 // Implementation of Method     
             }  
  
        public String SaveStudentDetails ()  
            {  
                  // Implementation of Method     
            }  
  
        public abstract String CalculateWage();  
  
    }

Interface can only contain the methods declaration and can be implemented in the class.  
  
As for Example:

Public interface IStudnet  
    {  
        String Roll  
        {  
           get;  
            set;  
        }  
  
        String FirstName  
        {  
            get;  
            set;  
        }  
      
        String LastName  
        {  
            get;  
            set;  
        }  
     
        String GetStudentDetails();  
        String SaveStudentDetails ();  
    }

**Below are the few main difference between Abstract Class and Interface**  
  
a.    In abstract class method can have definition as well as declaration also. But Interface should have only definition.  
b.    All the Methods are Public as default and don’t have any access Modifier Controls in interface, whereas for abstract class we can have access modifier for methods.  
c.    Abstract class can have constructor or destructor, whereas interface not.  
d.    Abstract class can’t be part of multiple inheritance and we can implement multiple interface.

**What do you mean by String objects are immutable?**

String objects are immutable as its state cannot be modified once created. Every time when we perform any operation like add, copy, replace, and case conversion or when we pass a string object as a parameter to a method a new object will be created.  
  
**Example:**

String str = "ABC";

str.Replace("A","X");

Here Replace() method will not change data that "str" contains, instead a new string object is created to hold data "XBC" and the reference to this object is returned by Replace() method.  
  
So in order to point *str* to this object we need to write below line.

str = str.Replace("A","X");

Now the new object is assigned to the variable str. earlier object that was assigned to str will take care by garbage collector as this one is no longer in used.

**What is difference between constants, read-only and, static?**  
Constants: The value can’t be changed

Read-only: The value will be initialized only once from the constructor of the class.

Static: Value can be initialized once.

<http://www.c-sharpcorner.com/UploadFile/c210df/difference-between-const-readonly-and-static-readonly-in-C-Sharp/>

<http://www.dotnettricks.com/learn/csharp/difference-between-constant-and-readonly-and-static>

**What is difference between array and array list?**

| **Array** | **ArrayList** |
| --- | --- |
| Array is strongly typed. This means that an array can store only specific type of items\elements. | ArrayList can store any type of items\elements. |
| Array stores fixed number of elements. Size of an Array must be specified at the time of initialization. | ArrayList grows automatically and you don't need to specify size. |
| No need to cast elements of an array while retriving because it is strongly type and stores specific type of items only. | Items of ArrayList need to be cast to appropriate data type while retriving. |
| Use static helper class Array to perform different tasks on the array. | ArrayList itself includes various utility methods for various tasks. |

<http://www.aspdotnet-suresh.com/2013/09/difference-bw-array-and-arraylist-in-csharp-example.html>

|  |  |
| --- | --- |
| **Arrays** | **ArrayLists** |
| These are strong type collection and allow to store fixed length | Array Lists are not strong type collection and size will increase or decrease dynamically |
| In arrays we can store only one datatype either int, string, char etc… | In arraylist we can store all the datatype values |
| Arrays belong to System.Array namespace | Arraylist belongs to System.Collection namespaces |

**What is the difference between .tostring(), Convert.tostring()?**

**Ans:** The basic difference between them is “Convert” function handles NULLS while  
“.ToString()” does not it will throw a NULL reference exception error. So as a good coding  
practice using “convert” is always safe.

**What is the difference between Primary key and unique key?**

**Ans:** Primary key does not allow the null values but unique key allows one null value.

Primary key will create clustered index on column but unique key will create non-clustered index by default.

**What is the Difference between read only and constant variables?**

**Ans:** Read only can assign the values at runtime only.

Constant will assign the values at compile time only.

We cannot modify the both variable values.

**What is difference between constants, read-only and, static?**  
Constants: The value can’t be changed

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