ADO.Net Interview Questions

- 1) Describe ADO.net?
- 2) List the two important objects of ADO.net and also list the namespaces that are commonly used in ADO.net to aid in connection to a database.
- 3) List some of the common data providers for ADO.net framework.
- 4) What do you understand by the terms DataReader Object and DataSet Object?
- 5) What do you mean by Object Pooling?
- 6) What is Connection Poolingin Ado.Net?
- 7) Differentiate between DataSet and DataReader
- 8) Enlist all the components of an ADO.net framework
- 9) Differentiate between SQLClient OLEDB and providers
- 10) List some of the classes used by System. Data Namespace.
- 11) What are some of the commonly used commands in SQLCommand?
- 12) Differentiate between Response. Expires and Response. Expires Absolute?
- 13) What is the importance of closing an ADO.net application?
- 14) Describe two uses of the "using" statement during the operation of C#

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ADO.Net

Interview Questions

Many multinational companies and big organizations have a constant need to access a large amount of data at one point when different applications might be running. To help such companies ease their workload, ADO.net frameworks are used. Therefore, companies are looking for software engineers, who can provide them with fast yet efficient solutions for such problems. Companies are mainly looking for capable candidates who have an education background for working with ADO.net and those who have adequate hands-on training. Some of the main responsibility looked for include good communication skills and most importantly, the ability to convey the problems and identify the right solution at the right time. In order to find the right candidate, companies ask a multitude of ADO.net interview questions that not only test the knowledge but also their ability to provide solutions.

People who are thriving to get a job in the software sector must prepare a good amount of **ADO.net interview questions** that would help them ace their dream job. Apart from providing solutions to software problems, those who answer well the **ADO.net interview questions** are also expected to build codes and configure systems from scratch that can completely fit in the framework for customers. They are also expected to revise, refactor, debug and update codes whenever required. The ability to improve already existing software using ADO.net framework will definitely land the candidate his/her dream job.

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1) Describe ADO.net?

ADO.net is an acronym for ActiveX Data Objects, which is commonly used as a part of the .net framework. ADO.net framework describes the set of categories that are utilized to manage data access by connecting to different databases such as Oracle, SQL, etc.



2) List the two important objects of ADO.net and also list the namespaces that are commonly used in ADO.net to aid in connection to a database.

Two of the most important objects of ADO.net are the DataReader and DataSet. Some of the commonly used namespaces that can help in connecting to a database are:

- System.Data.OleDb namespace
- System.Data.SQLClient namespace
- System.Data namespace

3) List some of the common data providers for ADO.net framework.

Some of the common data providers for ADO.net framework include:

- The .net framework data provider for Oracle
- The .net framework data provider for OLE DB
- The .net framework data provider for ODBC
- The .net framework data provider for SQL server

4) What do you understand by the terms DataReader Object and DataSet Object?

DataReader is an object specific to ADO.net that aims in providing quality access to data from a particular and specified source of data. It is mainly composed of classes that are sequentially read from one data source such as Access, SQL or Oracle. While on the other hand, DataSet is different sets of the collection of data that are arranged in a tabular representation where each column represents a variable and each row represent a value assigned to the variable.

5) What do you mean by Object Pooling?

Object pooling in terms of ADO.net framework is a repository of objects stored in memory cells that are can be used later. The benefit of using object pooling is that it reduced a load of the creation of new objects each time when required. When the user required any object, the manager of the object pool considers a request and processes it accordingly.

6) What is Connection Poolingin Ado.Net?

Connection pooling is a set of database connections that are used or reused when required after processing a request. The merit of utilizing a connection pooling database is that it increases the performance of execution of database commands. It also decreases the time and effort taken to carry out operations.

7) Differentiate between DataSet and DataReader

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S.No DataSet		DataReader
1.	Works on loops	Works on forward only
2.	Has disconnected recordsets	Has ample of connected recordsets
3.	Can carry out both addition and deletion	Can perform only read-only activities
4.	Can store XML data	There is no facility for storage of XML data
5.	There are multiple tables involved	Only requires a single table
6.	There must be a relationship between the table	s No relationship between the tables required
7.	Requires more memory space	Requires only less memory space

8) Enlist all the components of an ADO.net framework

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The components of an ADO.net framework include:

- Connection object: It is a representation of the connection to the databases
- DataReader: It performs only forward and read-only activities on the record set
- DataAdapter: It acts as a bridge between the database and dataset
- Command object: It is used to execute and store procedures and commands that are required on a database
- ExecuteNonQuery: This component is used to execute commands but it does not return any value
- ExecuteScalar: Performs execution and returns of single value
- ExecuteReader: Performs execution and returns result sets

9) Differentiate between SQLClient OLEDB and providers

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SQLClient providers are used by ADO.net in order to access the SQL server database and because it provides excellent performance in comparison to other providers. OLEDB providers are used in order to access any database that provides flexibility in changing the database at any given time. SQLClient providers are preferred over OLEDB providers as it gives better connection with SQL database servers.

10) List some of the classes used by System. Data Namespace.

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Some of the classes available in System.Data Namespace include Constraint, Dataset, DataColumn, DataRow, DataTable, and DataRelation

11) What are some of the commonly used commands in SQLCommand?

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Some of the commonly used commands in SQL command in ADO.net framework include:

- Cancel: used when the user wants to cancel a request
- ExecuteScalar: used to execute and return a set of single values
- ResetCommandTimeout: used in order to reset any timeout property
- ExecuteReader: used for execution and returning data back into the DataReader
- ExecuteNotQuery: this command is used by the user in order to execute and does not require any result set in return
- ExecuteXMLReader: used when the user requires the execution and requires the resultant data in the XMLDataReader object

Response. Expires is a property that is specific to the minutes that a particular page has in caches right from the time of the request that has been placed from the server. While on the other hand, Response. Expires Absolute is a property that helps in providing the exact time at which a particular page cache has expired.

For instance:

- Response.Expires is set to 10 minutes and the page is directed to stay in cache for 10 minutes from the time it has been requested.
- Response.ExpiresAbsolute gives information like 13 January 15:48:30. This time specifies when the page was in cache.

13) What is the importance of closing an ADO.net application?

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Closing an application in the ADO.net framework is essential because it can negatively affect the reliability and scalability of the network. In case of open connection, there is always the possibility of attack from various sources of other open connections.

14) Describe two uses of the "using" statement during the operation of C#

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The "using" statement in C# is used:

• To import a namespace. The following coding is coded:

using System;

using System. Collections.Generic;

using System. ComponentModel;

using System. Data;

using System. Drawing;

using System. Linq;

using System. Text;

using System. Threading, Tasks;

using System. Windows. Forms;

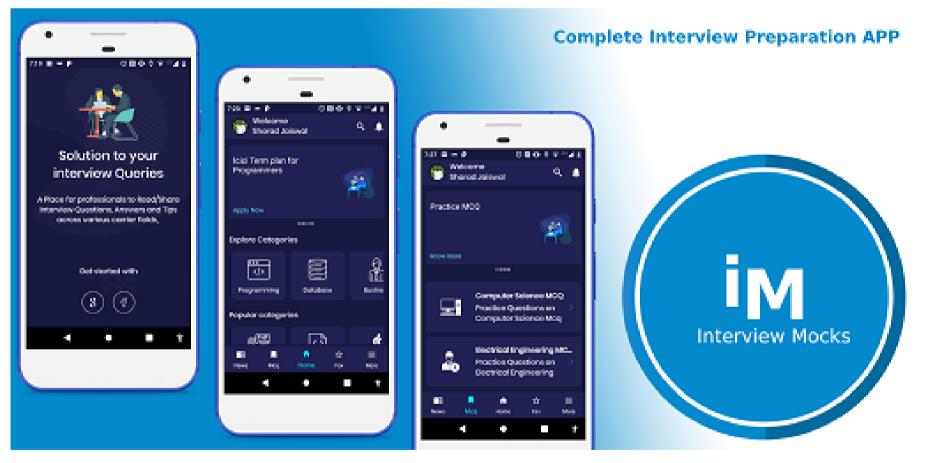
using System. Data. OLEDB;

- To close a running connection efficiently. The following coding is used:
- using System;
- using System. Collections.Generic;
- · using System. ComponentModel;
- · using System. Data;
- · using System. Drawing;
- using System. Linq;
- using System. Text;
- using System. Threading, Tasks;
- using System. Windows. Forms;
- using System. Data. OLEDB;

namespace WindowsFormsApp1

```
{
  public partial class Form1: Form
  {
   public Form1()
   {
     InitializeComponent();
   }
   private void Form1_Load(object sender, EventArgs e)
   {
     String constr = "Provider=Microsoft.ACE.OLEDB.12.0;} +
        "Data Source=***" +
        "Jet OLEDB: Database Password=***";
        using (OLEDBConnection con = new OLEDBConnection (constr))
   {
        con.Open();
        MessageBox.Show("Connection is Opened!);
    }
   }
}
```

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Question

Answer

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Describe Databinding

Databinding is a unique process, which carries out binding of data along with respective graphical elements. Once the process of binding is the data in the form of a window is completed, the user can navigate amongst the various records with the help of different binding navigator controller. One of the greatest merits of using data binding is that the user is not required to write each code explicitly for establishing different connections and creating a variety of data sets.

Features of ADO.net framework

- 1. A large number of data can be copied from data source to an alternative without any hassle.
- 2. Regular updates improve the quality of performance of the ADO.net <u>framework</u>.
- 3. Details regarding the connection can be obtained using the RetrieveStatistics and reset statistics.
- 4. DataSet can be set to binary according to the user's application, which helps in improving the performance with respect to serialization and describination of the operations.
- 5. Data can be loaded or saved into either DataReader or DataTable.
- 6. Latest features such as DataGridView, DataNavigator, etc are constantly being introduced and updated.

Pros of ADO.net framework

- 1. Has the ability to communicate across a wide variety of frameworks and environments.
- 2. Users using ADO.net have the capability to serve a number of clients without lowering the overall performance of the system.
- 3. Robust and quick response to given commands.
- 4. High-quality performance.

Cons of ADO.net framework

- 1. ADO.net cannot be used to communicate with COM.
- 2. It has a limited number of data providers.
- 3. The architecture of ADO.net cannot be retrieved using anything but can only be managed with the help of codes.
- 4. ADO.net is not as easy as its previous versions such as ADO.

