

ADO.NET ASSIGNMENT (THEORY QUESTIONS)

ques1) Describe all the data provider objects with sample code. (sample code in ques1.aspx.cs file)

ans1) various data providers are:

- 1) Command object
- 2) Connection object
- 3) Data reader object
- 4) Data adapter object

Command object :

The ADO Command object is used to execute a single query against a database. The query can perform actions like creating, adding, retrieving, deleting or updating records.

Connection object :

The ADO Connection Object is used to create an open connection to a data source. Through this connection, you can access and manipulate a database. If you want to access a database multiple times, you should establish a connection using the Connection object.

Data reader object :

DataReader Object in ADO.NET is a stream-based , forward-only, read-only retrieval of query results from the Data Sources , which do not update the data. The DataReader cannot be created directly from code, they can be created only by calling the ExecuteReader method of a Command Object.

Data adapter object :

The DataAdapter works as a bridge between a DataSet and a data source to retrieve data. DataAdapter is a class that represents a set of SQL commands and a database connection. It can be used to fill the DataSet and update the data source.

ques4) What are the two architecture in ado .net for connection create a connection, implement both architecture and show the difference. (code in ques4.aspx.cs file)

ans4) Two types of architecture:

- 1) Connected architecture (Datareader() method)
- 2) Disconnected architecture(Dataadapter() method)

Connected architecture:

In connected architecture, the connection must be opened to access the data retrieved from the database. It was built on the classes connection, command, datareader and transaction.

Disconnected architecture:

In disconnected architecture, the data retrieved from database can be accessed even when connection to the database was closed. It was built on classes connection, dataadapter, commandbuilder and dataset and dataview.

ques8)What are the diff. between DataReader, DataAdapter and DataSet?

DataReader:

DataReader Object in ADO.NET is a stream-based , forward-only, read-only retrieval of query results from the Data Sources , which do not update the data. The DataReader cannot be created directly from code, they can be created only by calling the ExecuteReader method of a Command Object.It is a connected architecture.

DataAdapter :

The DataAdapter works as a bridge between a DataSet and a data source to retrieve data. DataAdapter is a class that represents a set of SQL commands and a database connection. It can be used to fill the DataSet and update the data source.It is a disconnected architecture.

DataSet:

The DataSet object is central to supporting disconnected, distributed data scenarios with ADO.NET. The DataSet represents a complete set of data, including related tables, constraints, and relationships among the tables.

ques9) What are the methods of XML dataset objects?

ans9) **1) GetXml()** : Retrieves the XML representation of the data in the DataSet as a single string.

2) ReadXml() : Reads XML data from a file or a TextReader, XmlReader, or Stream object, and uses it to populate the DataSet. The XML document can include an inline schema.

3) ReadXmlSchema() : Reads an XML schema from a file or a TextReader, XmlReader, or Stream object, and uses it to configure the DataSet (for example, creating Constraint and DataColumn objects).

4) WriteXml() : writes the contents of the DataSet to a file or a TextWriter, XmlWriter, or Stream object. You can choose to write the schema inline.
