C#

- What is **Using** statement in c#
- What is `string[]args` in main()
- What is **Namespace**
- What is **Static** Keyword
- Can we use **this** operator inside a static function? why?
- What is Access modifiers in c#
- What is Internal Access Modifier
- What Sealed Keyword ?
- What is the difference between Constant and Readonly
- What is Boxing & unboxing ?
- What is Call By Value and call By Reference
- What is Garbage collection
- What is CLR
- What is Enum
- Difference Between Struct and Class
- What is Main()
- Datatypes in c#
- What is Delegates
    - Delegates are used to pass methods as arguments to other methods

OOP

- ➔ What is OOP & OOP concepts
- ➔ Diffrent types of inheritance
- ➔ Class , Object Real Life Examples
- ➔ What is Abstract Class
- ➔ What is sealed keyword
- ➔ What is Polymorphism
- ➔ What is Constructor
- ➔ What is Singleton Constructor
- ➔ What is Destructor
- ➔ Inheritance
- ➔ Different Types of inheritance
- ➔ Multiple inheritance ?
- ➔ How to implement Multiple inheritance in c#
- ➔ What is Interface
- ➔ What is data abstraction
- ➔ Difference between interface and abstract class
- ➔ How to prevent a class being inherited
- ➔ Base keyword ?
- ➔ Can we override a constructor - no but can overload
- ➔ Can we set a constructor final - no
- ➔ Can we set constructor static - yes
- ➔ What is composition
- ➔ What is aggregation

➔ What is Association

Exception Handling

- ☐ Difference between Exception and Errors
- ☐ Different Types of Exceptions ?
- ☐ How to handle exception in c#
- ☐ What is defensive programming ?
- ☐ Use Of finally block
- ☐ Can we Write multiple Try blocks and Multiple Catch Blocks?
- ☐ What is Throw keyword
- ☐ Different exceptions with example?
- ☐ Difference between throw exception and throw ?
    - In C#, throw preserves the original stack trace of an exception, while throw ex resets the stack trace.
    - Here's some more information about throw and throw ex:
    - throw: Rethrows the original exception and preserves its original stack trace.
    - throw ex: Throws the original exception but resets the stack trace.

➔

SQL

1. What is the use of distinct keyword in sql ?

Ans: It is helpful when there is a need of avoiding duplicate values present in any specific columns/table. When we use distinct keyword only the unique values are fetched.

2. What is HAVING Clause ?

Ans : Used to filter data according to the conditions provided. Having clause is only used within the select clause.

3. What is BETWEEN Command ?

Ans : Used to select values within a given range. The values can be Number,text,dates.

Eg : Select * from Tablename

Where Price Between 10 And 20 ;

2. what is the use of var keyword?

Ans : var is a statically typed variable. It results in a strongly typed variable, in other words the data type of these variables are inferred at compile time.

3. What is database?

Ans. A database is an organised collection of structured information, or data, typically stored electronically in a computer system.The **main purpose** of the database is to operate a large amount of information by storing, retrieving, and managing data.There are many databases available like MySQL, Sybase, Oracle, MongoDB, Informix, PostgreSQL, SQL Server, etc.

5.what is View?

Ans:Create a virtual table using required fields of existing one or more tables.

6 Difference between union and union all?

Ans: The main difference of UNION and UNION ALL is that ‘UNION’ only keeps unique records while ‘UNION ALL’ keeps all records including duplicates.

7. what is ajax?(asychronous javascript and Xml)

Ans: update a webpage without reloading the page

8. Difference between delete and truncate?

Ans : Truncate is a DDL command and used to delete al rows or tuples from a table . Unlike Delete command the truncate command does not contain where clause.Delete is a DMLl command

9. Difference between unique and primary key constraint?

Ans : PrimaryKey is accepted as a unique or sole identifier for every record in the table. In the case of a primary key,we cannot save null values .in the case of a unique key we can save a null values, only one null value is supported.

10. difference between commit and rollback?

Ans:Commit: commit using to change in a stored procedure.

Ans:Rollback: using to undo the changes in stored procedures.

11.what is check constraint?

Ans:Ensure that the values in a columns satisfy a specific conditions.

12. what is use of Executenonquery?

Ans:

- This method is used to execute sql commands or stored procedure to perform INSERT,DELETE OR UPDATE operations.
- It does not return any data from the database,instead it returns an integer specifying the no.of rows updated or deleted.

13.what is distinct keyword?

Ans: the select distinct is used to return only distinct different values.

Syntax: select distinct col_1,col_2,....

From table_name.

14.What is SQL JOINS?

Ans : A JOIN clause is used to combine rows from two or more table,based on a related column between them.

Types of JOINS ➖

- INNER JOIN
- LEFT JOIN

- RIGHT JOIN
- SELF JOIN

- ➔ What is Sql
- ➔ DML , DDL DCL with example
- ➔ Is Select DML or DDL
- ➔ What is Primary Key
- ➔ Difference between primary key and Unique constraint
- ➔ How to change name of a field in a table
- ➔ Can we change the data type of a field of a table in sql
- ➔ What is truncate
- ➔ Difference between drop and truncate
- ➔ Drop table if exist ?
- ➔ How to show tables of a database?
    - ◆ Ans : select * from information_schema.tables
- ➔ What is Stored Procedure
- ➔ Desc keyword?
- ➔ What is
- ➔ Difference Between Truncate and delete
- ➔ What is TSQL
- ➔ What is a transaction ? benefit ?
- ➔ What is Commit , Rollback
- ➔ What is Function in sql
- ➔ Difference between functions and stored procedures
- ➔ What is Trigger
- ➔ How to clear all record of a table
- ➔ Difference between Alter and Update
- ➔ What is GroupBy ? example?
- ➔ Having Having VS Where
- ➔ Distinct - use?
- ➔ Input ,Output ,Optional Parameters
- ➔ Can we write transactions inside the StoredProcedure ? Yes
- ➔ Can we write transactions inside Function ? No
- ➔ Difference between char and varchar
- ➔ Difference between Delete and Drop ?

Delete	Truncate
The DELETE command is used to delete specified rows(one or more).	While this command is used to delete all the rows from a table.

It is a DML(Data Manipulation Language) command.	While it is a DDL(Data Definition Language) command.
There may be a WHERE clause in the DELETE command in order to filter the records.	While there may not be WHERE clause in the TRUNCATE command.
In the DELETE command, a tuple is locked before removing it.	While in this command, the data page is locked before removing the table data.
The DELETE statement removes rows one at a time and records an entry in the transaction log for each deleted row.	TRUNCATE TABLE removes the data by deallocating the data pages used to store the table data and records only the page deallocations in the transaction log.
DELETE command is slower than TRUNCATE command.	While the TRUNCATE command is faster than the DELETE command.
To use Delete you need DELETE permission on the table.	To use Truncate on a table we need at least ALTER permission on the table.
The identity of the fewer column retains the identity after using DELETE Statement on the table.	Identity the column is reset to its seed value if the table contains an identity column.

The delete can be used with indexed views.	Truncate cannot be used with indexed views.
This command can also active trigger.	This command does not active trigger.
DELETE statement occupies more transaction spaces than Truncate.	Truncate statement occupies less transaction spaces than DELETE.

Webfroms

- What is page event lifecycle
- Asp.net validators
- What is directives
- Page directive
- What is Postback
- Different validators
- What is codebehind
- Masterpage
-

Ado.net

In ADO.net architecture, we use a two-tier model to create a bridge between ASP.net and the backend database, through which applications can access various types of data using the same methodology and connect to a SQL Server database using a different set of classes

Ado.net steps

The ADO.NET architecture comprises six important components. They are as follows:

1. Connection

2. Command
3. DataReader
4. DataAdapter
5. DataSet
6. DataView

What is a transaction in ADO.NET?

In ADO.NET, transactions are used when you want to bind several tasks together and execute them in the form of a single unit.
advantages??

- Namespace for ado. Net
  System. Data

difference between executenonquery executescalar and executereader in c#

ExecuteScalar() only returns the value from the first column of the first row of your query.
ExecuteReader() returns an object that can iterate over the entire result set.
ExecuteNonQuery() does not return data at all: only the number of rows affected by an insert, update, or delete

- ➔ What is Connection pooling
- ➔ What is Data Adapter
- ➔ What is Data Table
- ➔ What is Data Reader
- ➔ What is DataSet
- ➔ What are dataproviders in ado.net
- ➔ What is Serialization
- ➔ What is CommandType.TableDirect

MVC

- Session in mvc
- View data, temp data, view bag
- Return types of a controller action method

View result
Javascript result
reDirect result
Json result
Content result
ActionResult

- Difference between view data and viewBag
- Validation in mvc
- Name space for validation
- System.ComponentModel.DataAnnotations
- Peek and keep in tempdata

- Dependency injection
- Add scoped,AddTrancient,AddSingleton
- Session in. Net core
- Exception handling in. Net core
- Middleware and exception handler
- Monolithic and microservices
- Polymorphism

Dependency Injection (DI)

a software design pattern that allows us to develop loosely coupled code.

addScoped
addTrancient
addSingleton

Different Types of DI

There are three types of DI: Construction Injection, Setter Injection, Interface based Injection.

Difference between early binding and late binding