**Interview questions**

Oops Concepts

1. What is the difference between interface and Abstract class ? Have you ever used/created in project? Where you have used?
2. What is a Static Class? Did memory is allocated for every object creation?
3. What are the difference between Read only and Constant Variables?
4. Can we have multiple inheritance in c#?
5. What are the access modifiers used in interface?
6. How to avoid a class should not be inheritance ?--sealed
7. What are types of inheritance?—single,multiple,multilevel,hirerachal,hybrid,multipath
8. What is virtual keyword mean? Override the method in child class
9. Can we have a method with same name and same parameters in a class? no
10. What is operator overloading?
11. What is a sealed class?
12. If we have a base class and a child class inheriting base class, if we create a object of child class?

Does it go to base constructor first or child constructor first?

C# Questions

1. What are extension methods?
2. What are partial classes and its advantages?
3. What is the differences between the dictionary and Hashtables?
4. Write a syntax to declare an array and array list?
5. What are generics? And its advantages?
6. What are async and await keywords mean? Can we declare a method a async without await ?
7. Have you ever written a delegate? What is it and its use?
8. Write a program to reverse a string without using built in functions
9. Write a program to swap two consecutive numbers in an array? Also all the ways to increase the performance
10. Write a program to return the triplets of an array whose sum is equal to 10?
11. Write a program to merge two arrays into one?
12. Explain Anonymous methods in c#?
13. What are all the available collections in C#?
14. What are the Access Modifiers available in c#?
15. What is the difference between string and stringbuilder?
16. What are boxing and unboxing?
17. What are reference types and value types?

.Net Questions

1. What are state management techniques?
2. How to declare a cookie?
3. How is asp.net achieves Memory management? Generations of Garbage Collector?
4. What are the different ways to implement authentication?

* **Time-based One-Time Password (TOTP)**
* **Short Message Service (SMS)**
* **Electronic Mail (Email)**
* **Push Notifications**

1. Which Design patterns have you used in your project?
2. What is a Factory Pattern?
3. What are Solid Principles?
4. What is Singleton pattern? Where did you used in your project?
5. What is Dependency Injection? How do you implement it?

**ANS:**Dependency Injection is a practice where objects are designed in a manner where they receive instances of the objects from other pieces of code, instead of constructing them internally. This means that any object implementing the interface which is required by the object can be substituted in without changing the code, which simplifies testing, and improves decoupling.

1. Why do we write the Unity config file in MVC? Purpose?
2. What is the difference between finalize and dispose?
3. How did you implement exception handling?
4. Can we execute multiple catch blocks?
5. What is the output of this below program?

Try

{

Response.redirect(page1.aspx);

}

Catch(exception)

{

Response.redirect(page2.aspx);

}

Finally

Response.redirect(page3.aspx);

1. What is the difference between throw and throwex?
2. What is the difference between Ref and Out parameters?
3. What is Reflection? Explain?

Asp.Net Questions

1. What are the page life cycle events?
2. What is the difference between a user control and custom control? Which is easy to built?
3. What is the difference between classic asp.net and asp.net mvc?
4. What are Model , View and Controllers? Explain?
5. How to share data between MVC?
6. What are Master Pages? Do we have similar concept in MVC?
7. What are partial Views?
8. Explain Routing? Can we can change a default route like action/controller etc?
9. What are action filters? Explain authorize filter?
10. How to give multiple names to a action in controller?
11. What is a Razor view?
12. How to a declare a block in Razor view?
13. Which validators have you used in your project?
14. If we doesn’t want to expose an action in a controller, how can we achieve it?

Web API Questions

1. What is the difference between Asp.net MVC and Web API?
2. What are the advantages of Web API?

**ANS:**

**WEB API** is a best fit to create a resource-oriented services using HTTP/Restful and it works well with MVC-based applications. WCF was created to develop SOAP-based services and bindings. Since WCF is SOAP based, which uses standard XML schema over HTTP, it could lead to slower performance

1. What are the differences between GET and POST ?

**ANS:**

HTTP: **POST** requests supply additional data from the client (browser) to the server in the message body. ... The method specified determines how form data is submitted to the server. When the method is **GET**, all form data is encoded into the URL, appended to the action URL as query string parameters.

1. How do you implemented security in Web API?

Authentication

Authorization

Session management

1. How did you to maintain sessions in Web API?
2. What is meant by OAuth?

**OAuth** (Open Authorization) is an open standard for token-based authentication and authorization on the Internet. **OAuth**, which is pronounced "oh-auth," allows an end user's account information to be used by third-party services, such as Facebook, without exposing the user's password.

1. What is attribute based routing?

Using the route attribute to define routes is called attribute routing

Advantages:

Attribute routing gives more control over the url’s than conventional routings

1. How did you handled the exceptions?

LINQ and Entity Framework related questions

1. What is LINQ? And its advantages?
2. What is Enumerator?
3. What is the difference between IEnumerable and IQueryable mean?
4. Have you ever used Lambda expressions?
5. Write a lambda expression to get a top 3 salaried employee?
6. What are the advantages of using Entity /framework over ADO.NET?
7. What is Lazy Loading and Eager Loading?
8. Explain Database First and code first approaches?
9. How did you implemented transactions in Entity Framework?
10. If it is huge database, is Entity framework suggested? Why?
11. What is the differences between DefaultorFirst and First in LINQ?

SQL Server related Questions

1. What is the difference between a function and Stored procedure?
2. What is the difference between Unique and Primary Keys?
3. If you have given a query to optimize the performance? What is your approach?
4. Write a query to Top 5 th Highest Salaried Employee?
5. What is CTE?
6. What is the difference between temp table, table variable and a global temporary table?
7. Write a query to get the totals salaries of employee based on dept?
8. What is Cursor ? and its disadvantages?
9. What are the types of Triggers?
10. Write a query for Bulk insert?
11. Where do we Use Merge statement?
12. What is Clustered Index?
13. Have you every checked Query Execution plan? Or Tracing?
14. What is the advantage and disadvantages of Index? Can we have index on a non numeric column?
15. How can we achieve increase in performance (index scan, table scan and portioning etc)
16. What is Row\_Number ? and Dense Ranking?
17. What are Correlated Queries? Sub queries?
18. What is Left Join and Inner join?
19. What is the difference between union and unionall?
20. How to remove duplicates from a query?
21. Write a query to get the manager name and salary (manager is also an employee use Self join)

DataStructures

1. What is the difference between Binary Search tree and Binary tree?
2. Write a program to traverse anode in binary search tree?
3. Write a program to reverse a linked list?
4. Write a program to sort the elements in an array?
5. Write a program to swap the numbers in an array?
6. Write a program to reverse elements in an array?
7. Write a program to check a number is palindrome or not?