<https://www.softwaretestinghelp.com/dot-net-interview-questions/amp/> - .Net Framework QA for Interview

<https://www.softwaretestinghelp.com/c-sharp-interview-questions/> - C# QA for interview

1) Can we use multiple model in single view MVC? -> seprtely No, but using one common model we can

2)difference between IEnumerator and IQuerable??-><https://www.c-sharpcorner.com/UploadFile/a20beb/ienumerable-vs-iqueryable-in-linq/>

3)difference between restapi and webapi?-><https://dzone.com/articles/difference-between-rest-and-soap-api>

4)How to implement delegator in our project? -> <https://www.c-sharpcorner.com/article/how-and-when-to-use-delegates-in-your-project/>

5)MVC Life Cycle -><https://www.tutorialspoint.com/asp.net_mvc/asp.net_mvc_life_cycle.htm>

6)WHat is Linq?-><https://www.tutorialsteacher.com/linq/what-is-linq>

7)How to write select using Linq?-><https://www.tutorialsteacher.com/linq/what-is-linq>

8)How to write Join in Linq?-><https://www.tutorialsteacher.com/linq/what-is-linq>

9)how to create database first apporach using Entity Framework?-> <https://www.entityframeworktutorial.net/entityframework6/create-entity-data-model.aspx>

10)difference between viewbag and viewData -> <https://www.c-sharpcorner.com/blogs/difference-between-viewdata-viewbag-and-tempdata1>

11)what is early binding and late binding?-><https://www.c-sharpcorner.com/article/concept-of-polymorphism-late-binding-in-c-sharp/>

12)Factory Design Pattern?-><https://www.youtube.com/watch?v=9DWXpn80ntA>

13)what is the meaning of NonAction Attribute in mvc?-><https://www.guru99.com/mvc-interview-questions.html>

14) how to give name of action method in mvc? -> using ActionName Attribute

15)how to call function in sql? ->using select command

16) difference between function and stored procedure?-><https://www.c-sharpcorner.com/UploadFile/996353/difference-between-stored-procedure-and-user-defined-functio/>

17)what is clustered and Non-clustered Index? <https://techdifferences.com/difference-between-clustered-and-non-clustered-index.html>

18)what is view? View is a virtual table of main Table in sql.

19) what is primary key? ->It is key. Which never allow duplicate value and per table one primary key allow to create and with that Clustered Index will create automatically.

20)difference between primary and unique key? - ><https://www.geeksforgeeks.org/difference-between-primary-key-and-unique-key/>

21) difference between Innerjoin and Outer Join?-> <https://www.geeksforgeeks.org/inner-join-vs-outer-join/>

22) difference between temp table and temp variable? -><https://www.dotnettricks.com/learn/sqlserver/difference-between-cte-and-temp-table-and-table-variable>

23) is there any mapping required for Entity Framework to access tables?-><https://www.entityframeworktutorial.net/entityframework6/create-entity-data-model.aspx>

24)Explain routing in mvc?-><https://www.tutorialsteacher.com/mvc/routing-in-mvc>

25) what is attribute routing in webapi? <https://www.c-sharpcorner.com/article/attribute-routing-in-Asp-Net-web-api2/>

26)What are the extension method?-> <https://www.tutorialsteacher.com/csharp/csharp-extension-method>

27)How to use using block?-><https://stackoverflow.com/questions/4761198/c-sharp-using-blocks>

28)How to handle exception in using block?-> <https://stackoverflow.com/questions/518292/how-do-you-catch-exceptions-with-using-in-c-sharp> , <https://stackify.com/csharp-exception-handling-best-practices/>

29)difference between using block and try catch block?-> <https://stackify.com/csharp-exception-handling-best-practices/>

30) Difference between finalize and dispose method? <https://techdifferences.com/difference-between-dispose-and-finalize-in-c-sharp.html>

31)Difference between Union and Union ALL? <https://www.c-sharpcorner.com/UploadFile/ff2f08/difference-between-union-and-union-all-in-sql-server/>

32)difference between const and readonly variable?

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

33)difference between throw and exception ex throw while handling the exception?

<https://www.c-sharpcorner.com/blogs/difference-between-throw-and-throw-ex-in-c-sharp1>

<https://www.tutorialsteacher.com/csharp/throw-csharp>

34)how to change the format from XML to JSON on client and server end in webapi?

Client end need to pass header content-type as XML type value and passing raw data in XML. And Also server end need to change the MediaTypeFOrmatter as XML.

35)How to secure the Webapi?

**Best Practices to Secure REST APIs**

1. Keep it Simple. Secure an API/System – just how secure it needs to be. ...
2. Always Use HTTPS. ...
3. Use Password Hash. ...
4. Never expose information on URLs. ...
5. Consider OAuth. ...
6. Consider Adding Timestamp in Request. ...
7. Input Parameter Validation.

<https://restfulapi.net/security-essentials/>

36)what is the meaning of public and private certificates?

37)difference between @IDENTITY and @SCOP\_IDENTITY?

The @@**identity** function returns the last **identity** created **in the** same session. The **scope\_identity**() function returns the last **identity** created **in the** same session and the same scope. The ident\_current(name) returns the last **identity** created for a specific table or view in any session

<https://www.c-sharpcorner.com/blogs/difference-between-identity-scopeidentity-identcurrent1>

38)How to handle TRY CATCH in SQL?

Begin Try

Begin Trans

Line of sql statements

COMMIT TRAN

set @Code=1

set @Message='All Data was Processed'

select @Code as Code, @Message as Message

END TRY

BEGIN CATCH

IF @@TRANCOUNT > 0 ROLLBACK

set @Code = 0

set @Message=ERROR\_MESSAGE()

select @Code as Code, @Message as Message

END CATCH

39)example of tightly couple code and loosely coupled code?

<https://www.tutorialsteacher.com/ioc/inversion-of-control>

40)how to write test case for giving scenario?

<https://www.c-sharpcorner.com/article/a-basic-introduction-of-unit-test-for-beginners/>

41) have you worked with multithreading application?

A **multithreaded application** allows you to run several threads, each thread running in its own process. So theoretically you can run step 1 in one thread and at the same time run step 2 in another thread. At the same time, you could run step 3 in its own thread, and even step 4 in its own thread.

<https://www.c-sharpcorner.com/article/introduction-to-multithreading-in-C-Sharp/>

42) difference between View state and Session state.

<https://www.c-sharpcorner.com/UploadFile/de41d6/view-state-vs-session-state-vs-application-state/>

43) Explain SQL Injection.

44) Explain performance tuning

45) Explain why we are using view in sql server

46) ADO.Net Component

<https://www.c-sharpcorner.com/uploadfile/mahesh/understanding-ado-net-components/>

47) difference between webforms and mvc

<https://www.dotnettricks.com/learn/mvc/difference-between-aspnet-webform-and-aspnet-mvc>

48) what dependency injection.

<https://www.tutorialsteacher.com/ioc/dependency-injection>

49) explain sql profiler

An **SQL** server **profiler** is a tool for tracing, recreating, and troubleshooting problems in MS **SQL** Server, Microsoft's Relational Database Management System (RDBMS). The **profiler** lets developers and Database Administrators (DBAs) create and handle traces and replay and analyze trace results.

<https://www.codeproject.com/Articles/21371/SQL-Server-Profiler-Step-by-Step>

50)difference between SOAP and REST API

<https://www.guru99.com/comparison-between-web-services.html>

<https://restfulapi.net/soap-vs-rest-apis/>

51) difference between web api and wcf

<https://stackoverflow.com/questions/43775132/difference-between-wcf-web-api-wcf-rest-and-web-service>

52) What is GET and POST? Which one is more secure?

POST is more secure..

53) What is Application Pool?

An **application pool** is a group of one or more URLs that are served by a worker process or set of worker processes. **Application pools** are used to separate sets of IIS worker processes that share the same configuration and **application** boundaries.

54) difference between sql and Dynamic sql.

<https://tutorialspoint.dev/language/sql/difference-static-dynamic-sql>

55) difference between ddl and exe.

.**exe and dll** are the compiled version of **c#** code which are also called as assemblies. .**exe is** a stand alone executable file, which means it can executed directly. . **dll is** a reusable component which cannot be executed directly and it requires other programs to execute it.

<https://www.c-sharpcorner.com/forums/assembly-and-difference-between-exe-and-dll>

56) main component of wcf.

Service, contract and binding..

<http://www.topwcftutorials.net/2012/08/wcf-faqs-part1.html>

57) What is Tableau tool?

**Tableau** is a powerful and fastest growing data visualization **tool** used in the Business Intelligence Industry. It helps in simplifying raw data into the very easily understandable format. Data analysis is very fast with **Tableau** and the visualizations created are in the form of dashboards and worksheets.

# 58) How many instances of an abstract class can be created?

# 0 instance. You should remember that it is not possible to create an abstract class because you do not have all of the right implementations to make it happen. The abstract class serves another purpose which is to make sure that you have a base for all of your subclasses.

59) Difference between Html.RenderPartial() and Html.Partial()

|  |  |
| --- | --- |
| Html.Partial() | Html.RenderPartial() |
| Html.partial return html string. | Html.renderpartial returns void |
| It injects the html string of the partial view into the main view | Html.renderpartial writes html in the response stream |
| Performance is slow | Performance is faster compared with htmlpartial(). |
| Html.partial() need not to be inside the braces. | Html.renderpartial must be inside braces @{} |

60) use of this keyword in Javascript and jquery?

<https://www.guru99.com/javascript-interview-questions-answers.html>

61) how to convert string object into Json type in jquery?

<https://www.learningjquery.com/2017/09/handling-json-with-jquery>

1. JSON.parse() - To parse a JSON string and convert it to a JavaScript object.
2. JSON.stringify() - Convert a JavaScript object into a string. You can also apply indentation by passing an optional value.

The following jQuery code formats a JSON string:

var jData = '[{"fname":"Mark", "lname":"Wood", "company":"Apple"},' +

'{"fname":"Steve", "lname":"Jones", "company":"Amazon"},' +

'{"fname":"Bill", "lname":"Peterson", "company":"HP"},' +

'{"fname":"Peter", "lname":"Jacobs", "company":"Dell"}]';

var tmpData = JSON.parse(jData);

var formattedJson = JSON.stringify(tmpData, null, '\t');

$('#dvText').append($('<pre>').text(formattedJson));

62) Difference between IEnumerable and IList

|  |  |
| --- | --- |
| IList | IENumerable |
| IList exists in System.Collections Namespace.  IList is used to access an element in a specific position/index in a list.  Like IEnumerable, IList is also best to query data from in-memory collections like List, Array etc.  IList is useful when you want to Add or remove items from the list.  IList can find out the no of elements in the collection without iterating the collection.  IList supports deferred execution.  IList doesn't support further filtering. | IEnumerable exists in System.Collections Namespace.  IEnumerable is a forward only collection, it can't move backward and between the items.  IEnumerable is best to query data from in-memory collections like List, Array etc.  IEnumerable doen't support add or remove items from the list.  Using Ienumerable we can find out the no of elements in the collection after iterating the collection.  IEnumerable supports deferred execution.  IEnumerable supports further filtering. |

63) Difference between Sealed and Static Class

**Static class:**  
1) A static class can not be instantiated. Means you can't create instance of          any static class.  
2) A static class can have only static member (e.g static method, property, and         variables).  
3) A static class restrict the user to call default constructor of the class.  
4) Static classes can only have static constructor to initialize static members.  
5) Static classes are sealed so they can not be inherited.  
  
**Sealed Class:**  
1) When a class defined as sealed it’s not possible to inherit.  
2)  A Sealed class is last class of Inheritance feature.  
3)  Use the **sealed** modifier in a class declaration to prevent inheritance of the         class.  
4) It is not permitted to use the [abstract](http://msdn.microsoft.com/en-us/library/sf985hc5%28v=vs.71%29.aspx) modifier with a sealed class.  
5) Structs are implicitly sealed; therefore, they cannot be inherited.

64) Javascript is object type or reference type

**Javascript** has 5 data **types** that are passed by value: Boolean , null , undefined , String , and Number . We'll call these primitive **types**. **Javascript** has 3 data **types** that are passed by **reference**: Array , Function , and **Object** . These are all technically **Objects**, so we'll refer to them collectively as **Objects**.Jul 1, 2017

65)How many technique have in Session State Management?

<https://www.c-sharpcorner.com/UploadFile/de41d6/view-state-vs-session-state-vs-application-state/>

66) Connection Pooling in ADO.NET

<https://www.c-sharpcorner.com/uploadfile/4d56e1/connection-pooling-ado-net/>

67) Authentication Mode in .Net Application

Form Authentication

Window Authentication

68) Difference between Business Layer and Data Access Layer

The **data layer** manages the physical storage and retrieval of **data**. The **business layer** maintains **business** rules and **logic**. The presentation **layer** houses the user interface and related presentation code.

69) Do we have multiple web config file in Application?

<https://www.c-sharpcorner.com/forums/how-many-web-configuration-file-we-can-use-in-asp-net-using-c-sharp>

70) Difference between HashTable and Dictionary

<https://www.tutorialsteacher.com/articles/difference-between-hashtable-and-dictionary-in-csharp>

|  |  |
| --- | --- |
| HashTable | Dictionary |
| Hashtable is included in the *System.Collections* namespace. | Dictionary is included in the *System.Collections.Generic* namespace. |
| Hashtable is a loosely typed (non-generic) collection, this means it stores key-value pairs of any data types. | Dictionary is a generic collection. So, it can store key-value pairs of specific data types. |
| Hashtable is thread safe. | Only public static members are thread safe in Dictionary. |
| Hashtable returns null if we try to find a key which does not exist. | Dictionary throws an exception if we try to find a key which does not exist. |
| Data retrieval is slower than dictionary because of boxing-unboxing. | Data retrieval is faster than Hashtable. |

71) Generic class and collection <T>

<https://www.tutorialsteacher.com/csharp/csharp-generics>

72) Do we use multiple catch block?

Yes , we can use for different type of exception type not for same type. And catch {} parameter less , catch(Exception ex) with parameter at last exception type.

73) Can we use try {} without catch ?

Yes we can use try{} with catch or finally{} like below

Try

{}

Finally

{}

74) Type of Authentication in Web API

75) Which is faster to retrieve data using ADO.NET Object?

**DataAdapter** is used to execute SQL statements and is used to populate the results of SQL Query into a DataSet or DataTable. **DataAdapter** gets all the rows of the executed SQL statement at once and populates into DataSet or DataTable in memory and hence **DataAdapter** is bit slower compared to **DataReader**.

<https://www.aspsnippets.com/Articles/Difference-between-DataReader-DataSet-DataAdapter-and-DataTable-in-C-and-VBNet.aspx>

76) Can we have multiple CTE in Sql?

We could not able to use nested CTE but we can define mupltiple CTE using ,

;with test as

(

select 1 as col2

--order by SRnum, gamenumber, StartOfDistribution, ApplicationNumber

),

outertest as

(

select 0 as col1

)

select col1,col2

from outertest, test;

77) Can we have multiple end point in wcf?

Yes – refer below link for example.

<https://debugmode.net/2014/06/10/dealing-multiple-endpoints-of-a-wcf-service/>

79) Can we call stored procs from Where Condition?

No, We can’t.

80) Difference between varchar and nvarchar.

Just to clear up... or sum up...

* **nchar** and **nvarchar** can store **Unicode** characters.
* **char** and **varchar** **cannot store Unicode** characters.
* **char** and **nchar** are **fixed-length** which will **reserve storage space** for number of characters you specify even if you don't use up all that space.
* **varchar** and **nvarchar** are **variable-length** which will only use up spaces for the characters you store. It **will not reserve storage like char or nchar**.
* nchar and nvarchar will take up twice as much storage space, so it may be wise to use them only if you need *Unicode* support.

81) difference between Http and Https

<https://www.tutorialsteacher.com/https/what-is-https>

82) how to combine two controllers render to one view in MVC? using MVVM

84) can we use POST method to do get, put and delete operation as well in API?

Yes, But it will not give clarification to others client end while consuming.

85) Data Integrity in SQL? - <https://www.c-sharpcorner.com/blogs/data-integrityin-sql-server>

86) Promises in JavaScript? - <https://www.w3schools.com/js/js_es6.asp> (It allows you to write asynchronous code in a more synchronous fashion)

87) Left join using Linq? - https://www.tutorialsteacher.com/linq/linq-joining-operator-groupjoin

88) dbContext in Entity Framework?

When we create a edmx file, it will have the list of entities and context class which will be derived from DB Context class.

**89) What is the role of DB Context?**

DBContext will be responsible for Insert, Update and Delete functionalities of the entities. It acts like a bridge between the database and entity classes.

90)Solid principle

Singleton

91) Lazy loading in angular 2 with code

Const routes: Routes = [

{path:’company’,loadChildren:’app/company/company.module#CompanyModule’}

]

Companyrouting.module.ts file

Const CompanyRoute : Routes [

{path:’’,

Component:CompanyCOmponent,

Children: [{ path:’company-list’,Component: CompanyListComponent}]

}

];

@NgModule({

Imports: [RouterModule.forChild(companyRoutes)],

Exports: [RouterModule]

})

92) Difference between Icomparable and IComparer - <https://dotnettutorials.net/lesson/sorting-a-list-of-complex-type-csharp/>

93) Yield function in Javascript

94) Minify in Javascript

**Minification** refers to the process of removing unnecessary or redundant data without affecting how the resource **is** processed by the browser - e.g. code comments and formatting, removing unused code, using shorter variable and function names, and so on. See preprocessing & context-specific optimizations to

* 95) What is JSON? – Java Script Object Nation, JSON is a lightweight data interchange format, JSON is language independent **\*,** JSON is "self-describing" and easy to understan

96) PLinq

var results = from c in customers.AsParallel()

where c.FirstName.StartsWith("San")

select c;

With the simple addition of the AsParallel() extension method, the .NET runtime will automatically parallelize the operation across multiple cores. In fact, PLINQ will take full responsibility for partitioning your data into multiple chunks that can be processed in parallel.

97) CTE in Sql - <https://www.c-sharpcorner.com/UploadFile/af66b7/cte/>

98) Physical table and temp table in collection approach - <https://www.sqlservercentral.com/forums/topic/temp-tables-vs-physical-tables>

99) Temp table and table variable

<https://www.c-sharpcorner.com/article/temporary-tables-and-table-variables-in-sql/>

**100) How do Observables differ from Promises?**  
**Answer**: As soon as a [promise](http://andyshora.com/promises-angularjs-explained-as-cartoon.html) is made, the execution takes place. However, this is not the case with observables because they are lazy. This means that nothing happens until a subscription is made. While promises handle a single event, observable is a stream that allows passing of more than one event. A callback is made for each event in an observable.

Const routes = Routes[

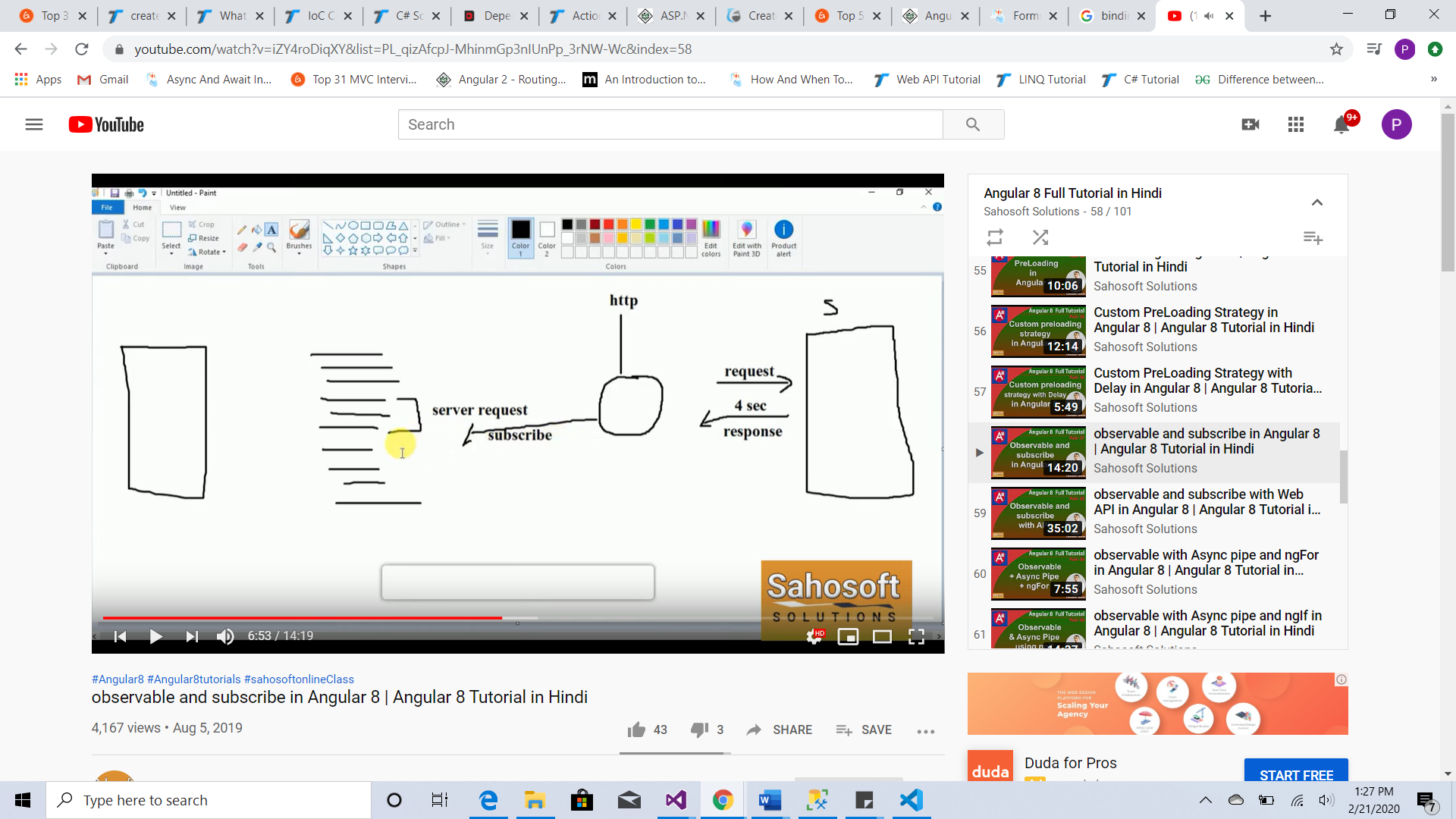
{path:’’,redirectTo:’first’,pathMatch:’full’},

{path:’first’,component:FirstComponent}

];

Export const routing: ModuleWithProviders = RouteModule.forRoot(routes);

101) Observable and Subscriber…



102) Type of data binding in Angular2?

<https://blog.eduonix.com/web-programming-tutorials/learn-different-types-data-bindings-angular-2/>

1. Event Binding

<button (click)="gotoDetail()">View Details</button>

1. One way binding

<h2 [innerText]="student.name"></h2>

1. Two-way Data Binding

<input [(ngModel)]="student.name"/>

1. Interpolation

<h2>{{vm.studentname}}</h2>

|  |  |
| --- | --- |
|  |  |

103) How to update model while database changes occur due to implemented DB First Approach in entity framework?

<https://docs.microsoft.com/en-us/aspnet/mvc/overview/getting-started/database-first-development/changing-the-database>

104) large file reading and writing process.

<https://stackoverflow.com/questions/21136753/read-a-very-large-file-by-chunks-and-not-line-by-line>

<https://www.strathweb.com/2012/09/dealing-with-large-files-in-asp-net-web-api/>

<https://social.msdn.microsoft.com/Forums/en-US/70784fe4-2b89-4d58-ae05-38bff94c3006/how-to-read-big-text-files-in-c-threads?forum=csharplanguage>

<https://www.c-sharpcorner.com/forums/c-sharp-how-to-read-a-large-1-gb-txt-file-in-net>

<https://docs.microsoft.com/en-us/dotnet/api/system.io.memorymappedfiles.memorymappedfile?redirectedfrom=MSDN&view=netframework-4.8>

105) Why REST is beneficial then SOAP.

**REST** also makes efficient use of bandwidth, as it’s much less verbose **than** **SOAP**. Unlike **SOAP**, **REST** is designed to be stateless, and **REST** reads can be cached for better performance and scalability. **REST** supports many data formats, but the predominant use of JSON means better support for browser clients.

https://www.softwaretestinghelp.com/restful-web-services-interview-question/

<https://www.softwaretestinghelp.com/restful-web-services-interview-question/>

106) LINQ Lazy loading and early loading syntax. How to do Lazy loading and early loading in Linq?

In LINQ to SQL there are two ways in which we can do Eager Loading.

* Using DataLoadOptions
* Using Projection

<https://www.c-sharpcorner.com/article/lazy-loading-and-eager-loading-in-linq-to-sql/#:~:text=Lazy%20Loading%20means%20the%20related,have%201%20or%20more%20employees>.

107) Expression Tree - <https://www.tutorialsteacher.com/linq/expression-tree>

<https://www.educba.com/angular-4-interview-questions/>

<https://www.gangboard.com/blog/angular-4-interview-questions-and-answers>