

.NET Interview Questions
7th Edition

By
Shivprasad Koirala

(Around 700 plus
Interview questions from
real C# and .NET Interviews)

Introduction	21
Foreword	22
Resume,Mockinterview, 100 .NET videos and Interview rating Sheet	24
Chapter 1: Top 50 technical and Non-technical questions	25
Can you explain architecture of your current project?.....	25
What role did you play in your project and company?	25
What's your salary expectation?	26
Why do you want to leave your previous organization?.....	26
How much do you rate yourself between 1 to 10?	27
Can you speak about yourself?	27
How can we improve performance of .NET?	28
What is the difference between .NET 1.X, 2.0, 3.0, 3.5, 4.0 and 4.5?	28
What is ILcode,JIT,CLR, CTS, CLS and CAS?	29
What is a garbage collector?	29
What is GAC?	29
What are stack,heap,value, reference types, boxing and unboxing?	30
How are exceptions handled in .NET?	30
What are different types of collections in .NET?	31
What are generics?	31
Explain Abstraction, encapsulation, inheritance and polymorphism?	31
How is abstract class different from aninterface?	32
What are the different types of polymorphism?	32
How does delegate differ from an event?	32
What are different access modifiers?	33
Can you explain connection, command, datareader and dataset in ADO.NET ?	34
How does "Dataset" differ from a "Data Reader"?	34
How is ASP.NET page life cycle executed?	35
What are Httphandlers and HttpModules and difference between them?	35
What are different kind of validator controls in ASP.NET ?	36
How is 'Server.Transfer' different from 'response.Redirect' ?	36
So when to use "Server.Transfer" and when to use "Response.Redirect" ?	37
What is importance of "preserveForm" flag in "Server.Transfer"?	38
Response.Redirect(URL,true) vs Response.Redirect(URL,false) ?	38
Can you explain windows, forms and passport authentication?	39
What is difference between Grid view, Data list, and repeater?	39
Which are the various modes of storing ASP.NET session?	40
How can we do caching in ASP.NET?	40
What is ViewState?	40
What are indexes and what is the difference between clustered and non-clustered?	40
How is stored procedure different from functions?	40
What's the difference between web services and remoting?	40
What's the difference between WCF and Web services?	41
What are end point, contract, address, and bindings?	41
What is WPF and silverlight?	42
What is LINQ and Entity framework?	42

What's the difference between LINQ to SQL and Entity framework?	43
What are design patterns?	43
Which design patterns are you familiar with?	43
Can you explain singleton pattern?	44
What is MVC, MVP and MVVM pattern?	44
What is UML and which are the important diagrams?	44
What are different phases in a software life cycle?	45
What is Ajax and how does it help?.....	45
How did you do unit testing in your project?	45
What is Agile?.....	46
How did you do code reviews?	46
How did you convert requirements to technical document?	46
Chapter 2: Basic .NET Framework	46
What is an IL code?	46
Why IL code is not fully compiled?	46
Who compiles the IL code and how does it work?	47
How does JIT compilation work?	47
What are different types of JIT?	47
What is Native Image Generator (Ngen.exe)?	47
So does it mean that NGEN.EXE will always improve performance?.....	48
Is it possible to view the IL code ?	48
What is a CLR?	48
What is the difference between managed and unmanaged code?	48
What is a garbage collector?	48
What are generations in Garbage collector (Gen 0, 1 and 2)?	49
Garbage collector cleans managed code, how do we clean unmanaged code?	49
But when we create a destructor the performance falls down?	49
So how can we clean unmanaged objects and also maintain performance?	49
Can we force garbage collector to run?	50
What is the difference between finalize and dispose?	50
What is CTS?	51
What is a CLS (Common Language Specification)?	51
What is an Assembly?	51
What are the different types of Assembly?	51
What is Namespace?	52
What is Difference between NameSpace and Assembly?	52
What is ILDASM?	52
What is Manifest?	52
Where is the version information stored of an assembly?	52
Is versioning applicable to private assemblies?	53
What is the use of strong names?	53
What is Delay signing?	54
What is GAC?	54
How to add and remove an assembly from GAC?	54
If we have two versions of the same assembly in GAC how to we make a choice?	54
What is Reflection and why we need it?	55

How do we implement reflection?	55
What are the practical uses of reflection?	56
What is the use of Dynamic keyword?	56
What are practical uses of Dynamic keyword?.....	58
What is the difference between Reflection and Dynamic?	58
Explain the difference between early binding and late binding?	59
What is the difference between VAR and Dynamic keyword?	60
Explain term type safety and casting in C#?	60
Explain casting, implicit conversion and explicit conversion?	61
What are stack and heap?	62
What are Value types and Reference types?	62
What is concept of Boxing and Unboxing?	63
How performance is affected due to boxing and unboxing?	63
How can we avoid boxing and unboxing?	63
How to prevent my .NET DLL to be decompiled?	63
What is the difference between Convert.ToString and .ToString () method?	64
What is the difference between String vs string ?.....	64
So when both mean the same thing why are they different?	65
So when to use “String” and “string”?	65
How can we handle exceptions in .NET?	65
How can I know from which source the exception occurred?	66
What if we do not catch the exception?	66
What are system level exceptions and application level exceptions?	67
Can two catch blocks be executed?	68
What are different types of collections in .NET?	68
What is the difference between arraylist and list?	68
Are Arraylist faster or Arrays?	68
What are hashtable collections?	68
What are Queues and stack collection?	69
Can you explain generics in .NET?	69
Explain generic constraints and when should we use them?	70
Can you explain the concept of generic collection?	71
What is the difference between dictionary and hashtable?	71
What are the generic equivalent for array list,stack, queues and hashtable?	72
What is the use of IEnumerable, ICollection, IList and IDictionary?	72
Differentiate IEnumerable vs IQueryable ?	73
What is code access security (CAS)?.....	74
So how does CAS actually work?	74
Is CAS supported in .NET 4.0?	75
What is sandboxing?	75
How can we create a windows service using .NET?	76
What is serialization and deserialization in .NET?	77
Can you mention some scenarios where we can use serialization?	78
When should we use binary serialization as compared to XML serialization?	78
Can you explain the concept of “Short Circuiting”?	79
What is the difference between “Typeof” and “GetType” ?	80

Will the following c# code compile?	80
Explain the use of Icomparable in c#?	80
What is difference between Icomparable and IComparer ?	84
Can you explain Lazy Loading?	86
So how do we implement “LazyLoading” ?	88
Are there any readymade objects in .NET by which we can implement Lazy loading?	89
What are the advantages / disadvantages of lazy loading?	90
What is the difference between “IS” and “AS” keyword ?	91
What is the use of “Yield” keyword?	91
What is the difference between “==” and .Equals()?	95
What’s the difference between catch with parameter and catch without parameter?	97
How can we mark a method as deprecated?	98
What is the difference between Build Vs Rebuild Vs Clean solution menu ?	100
What is the difference between i++ vs ++i ?	101
When should we use “??” (NULL Coalescing operator) ?	103
Explain need of NULLABLE types ?	103
In what scenario’s we will use NULLABLE types ?	103
What is the benefit of coalescing?	103
What are code contracts?	104
Chapter 3: OOP	105
What is Object Oriented Programming?	105
What is a Class and object?	106
What are different properties provided by Object-oriented systems?	106
How can we implement encapsulation in .NET?	106
What’s the difference between abstraction and encapsulation?	107
How is inheritance implemented in .NET?	107
What are the two different types of polymorphism?	107
How can we implement static polymorphism?	108
How can we implement dynamic polymorphism?	108
What is downcasting and upcasting ?	109
What is the difference overriding and overloading?	110
What is operator overloading?	110
What are abstract classes?	111
What are abstract methods?	112
What is an Interface?	112
Do interface have accessibility modifier ?	113
Can we create an object of abstract class or an interface?	113
What is difference between abstract classes and interfaces?	113
An abstract with only abstract method, how is it different from interfaces?	113
If we want to update interface with new methods, what is the best practice?	113
What is a delegate?	115
How can we create a delegate?	115
What is a multicast delegate?	116
What are Events?	116
What is the difference between delegate and events?	116
Do events have return type?	117

Can events have access modifiers?	117
Can we have shared events?	117
What is shadowing?	117
What is the difference between Shadowing and Overriding?	118
If we inherit a class do the private variables also get inherited?	118
How can we stop the class from further inheriting?	118
What is the use of “Must inherit” keyword in VB.NET?	119
What are similarities between Class and structure?	119
What is the difference between Class and structure’s?	119
When to use Structures and When to use classes ?	119
What does virtual keyword mean?	120
What are shared (VB.NET)/Static(C#) variables?	120
What is ENUM and what are the benefits of using it?	120
What is the use of Flags in ENUM?	121
How can we loop through ENUM values?	122
What is the use of “ENUM.Parse” method?	122
What is nested Classes?	122
If you create the child class object which constructor will fire first?	122
In what instances you will declare a constructor to be private?	123
Can we have different access modifiers on get/set methods of a property?	123
How can you define a property read only for external world and writable in the same assembly?	123
Will the finally run in this code?.....	124
What is an Indexer?	125
Can we have static indexer in C#?	127
Chapter 4: ADO.NET	127
What are the different components in ADO.NET?	127
What is the namespace in which .NET has the data functionality class?	128
When should we use System.Data.SqlClient and System.Data.OleDb ?	129
What is difference between dataset and data reader?	130
What is the use of command objects?	130
What are Dataset objects?	130
What is the use of data adapter?	131
What are basic methods of Data adapter?	131
How can we fire a simple SQL Statement using ADO?	132
How do we use stored procedure in ADO.NET and how do we provide parameters to the stored procedures?	132
How can we force the connection object to close after my data reader is closed?	133
I want to force the data reader to return only schema of the data store rather than data. ...	133
How can we fine-tune the command object when we are expecting a single row?	133
Which is the best place to store connection string in .NET projects?.....	133
How do you fill the dataset?	133
What are the various methods provided by the dataset object to generate XML?	133
How can we save all data from dataset?	134
How can we check which rows have changed since dataset was loaded?	134
How can we add/remove row is in “Data Table” object of “Dataset”?	134

What is basic use of “DataView”?	134
How can we load multiple tables in a Dataset?	135
How can we add relation between tables in a Dataset?	135
What is the use of Command Builder?	135
Can you explain the term concurrency?	136
How can we resolve concurrency issue?	136
What’s difference between “Optimistic” and “Pessimistic” locking?	136
How many ways are there to implement optimistic locking in ADO.NET?	136
How can do pessimistic locking?	137
How can we perform transactions in .NET?	137
What is difference between Dataset.Clone and Dataset.Copy?	137
Can you explain the difference between an ADO.NET Dataset and an ADO Record set?	138
Explain in detail the fundamental of connection pooling?	138
What is Maximum Pool Size in ADO.NET Connection String?	139
How to enable and disable connection pooling?	139
What are the major differences between classic ADO and ADO.NET?	139
Chapter 5: ASP.NET	139
What are the different events which fire ASP.NET page life cycle?	139
What are Httphandlers and HttpModules?	140
What is the difference between Httphandlers and HttpModules?	140
How do we write a Httphandler ?	140
How do we write an HttpModule?	141
Can you explain how ASP.NET application life cycle works?	143
In which event are the controls fully loaded?	143
What is postback in ASP.NET and what is IsPostBack property?	143
Can you explain “AutoPostBack”?	143
What is the use of @ Register directives?	144
What is the use of Smart Navigation property?	144
What is AppSetting Section in “Web.Config” file?	144
Where is View State information stored?	145
How can we create custom controls in ASP.NET?	145
How many types of validation controls are provided by ASP.NET?	145
How can we force all the validation control to run?	145
How can we check if all the validation control are valid and proper?	145
If client side validation is enabled, will server side code still run ?	146
Which JavaScript file is referenced for validating the validators at the client side?	146
How to disable client side script in validators?	146
How can I show the entire validation error message in a message box on the client side?	146
If a validation is very complex what will you do ?	146
How can you enable automatic paging in Data Grid?	147
What is the use of “GLOBAL.ASAX” file?	147
What is the difference between “Web.config” and “Machine.Config”?	147
Can we have two “web.config” files in one web application?	147
In what scenarios will a project have two Web.config files ?	147
What is a SESSION and APPLICATION object?	148
What is the difference between ‘Server.Transfer’ and ‘response.Redirect’ ?	148

What is the difference between Authentication and authorization?	148
What is impersonation in ASP.NET?	149
What are the various ways of authentication techniques in ASP.NET?	149
Can you explain Forms authentication in detail?	149
How do I sign out in forms authentication?	150
If cookies are disabled how will forms authentication work?	150
How do we implement windows authentication?	151
How can we do single sign on in ASP.NET?	151
Can you explain membership and role providers in ASP.Net 2.0?	151
Can you explain master pages concept in ASP.NET?	153
So how do you create master pages?	154
What is the concept of Web parts?	156
What are partial classes in ASP.NET ?	157
What is the difference between data grid and grid view?	158
What is difference between Grid view, Data list, and repeater?	158
From performance point of view, how do they rate?	159
What is the method to customize columns in Data Grid?	159
How can we format data inside Data Grid?	159
How to decide on the design consideration to take a Data grid, data list, or repeater?	159
What are major events in GLOBAL.ASAX file?	159
How can we kill a user session?	160
How do you upload a file in ASP.NET?	160
How do I send email message from ASP.NET?	160
What are different IIS isolation levels?	160
ASP used STA threading model, what is the threading model used for ASP.NET.	161
What is the use of <%@ page aspcompat=true %> attribute?.....	162
Explain the differences between Server-side and Client-side code?	162
How to use a checkbox in a data grid?	162
What is the difference between “Web farms” and “Web garden”?	162
How do we configure “Web Garden”?	165
What’s the difference between trace and debug in ASP.NET?	167
How do you enable tracing in on an ASP.NET page?	167
Which namespace is needed to implement debug and trace ?	168
Can you explain the concept of trace listener?	168
What are trace switches?	169
What is an application object?	170
What is the use of cache object?	170
What is the difference between Cache object and application object?	170
How can get access to cache object?	170
What are dependencies in cache and types of dependencies?	170
Can you show a simple code showing file dependency in cache?	171
What is Cache Callback in Cache?	171
What is scavenging?	172
What are different types of caching using cache object of ASP.NET?	172
How can you cache different version of same page using ASP.NET cache object?	172
How will implement Page Fragment Caching?	172

Can you compare ASP.NET sessions with classic ASP?	172
Which are the various modes of storing ASP.NET session?	173
Do session use cookies?	173
Is Session_End event supported in all session modes?	173
Where do you specify session state mode in ASP.NET?	173
What are the other ways you can maintain state?	173
What are benefits and Limitation of using Hidden fields?	174
What is ViewState?	174
How do we ensure viewstate is not tampered?	174
Does the performance for viewstate vary according to User controls?	175
What are benefits and Limitation of using Viewstate for state management?	175
How can you use Hidden frames to cache client data ?	175
What are benefits and limitations of using Hidden frames?	176
What are benefits and limitations of using Cookies?	176
What is Query String and what are benefits and limitations of using Query Strings?	176
What is Absolute and Sliding expiration?	177
What is cross page posting?	177
How do we access viewstate value of the current page in the next page ?	178
Can we post and access view state in another ASP.NET page?	178
What is SQL Cache Dependency in ASP.NET 2.0?	178
How do we enable SQL Cache Dependency in ASP.NET 2.0?	179
What is Post Cache substitution?	184
Why do we need methods to be static for Post Cache substitution?	185
How do we encrypt web.config files in ASP.NET?	186
In .NET 1.X how was the encryption implemented for config files?	188
How do you send an email using ASP.NET ?	189
How did you do deployment and setup in ASP.NET ?.....	190
What is URL routing?	193
ASP.NET Label control vs literal control	193
Chapter 6: MVC (Model view controller)	194
What is MVC?	194
Explain MVC application life cycle?	194
Is MVC suitable for both windows and web application?	196
What are the benefits of using MVC?.....	196
Is MVC different from a 3 layered architecture?	196
What is the latest version of MVC?	197
What is the difference between each version of MVC?	197
What are HTML helpers in MVC?	198
What is the difference between “HTML.TextBox” vs “HTML.TextBoxFor”?	198
Explain the importance of MVC model binders?	199
What are routing in MVC?	200
Where is the route mapping code written?	200
Can we map multiple URL’s to the same action?.....	201
How can we navigate from one view to other view using hyperlink?	201
How can we restrict MVC actions to be invoked only by GET or POST?	201
How can we maintain session in MVC?	201

What is the difference between TempData, ViewData and ViewBag?	201
What are partial views in MVC?	203
How did you create partial view and consume the same?	203
How can we do validations in MVC?	204
Can we display all errors in one go?	206
What are the other data annotation attributes for validation in MVC?	206
How can we enable data annotation validation on client side?	207
Explain Areas in MVC?	207
What is Razor in MVC?	209
Why Razor when we already had ASPX?	209
So which is a better fit Razor or ASPX?	209
Explain the difference between layout and master pages ?	210
How to apply layout to Razor views?	210
How can you do authentication and authorization in MVC?	213
How to implement Windows authentication for MVC?	213
How do you implement forms authentication in MVC?	213
How to implement Ajax in MVC?	214
What kind of events can be tracked in AJAX ?	217
What is the difference between "ActionResult" and "ViewResult"?	217
What are the different types of results in MVC?	217
What are "ActionFilters" in MVC?	218
Can we create our custom view engine using MVC?	220
How to send result back in JSON format in MVC?	223
What is "WebAPI"?	224
How does WCF differ from WEB API ?	224
With WCF also you can implement REST, So why "WebAPI"?	224
How to implement "WebAPI" in MVC?	224
How can we detect that a MVC controller is called by POST or GET ?	226
What is Bundling and minification in MVC?	227
How does bundling increase performance?	227
So how do we implement bundling in MVC ?	228
How can you test bundling in debug mode ?	229
Explain minification and how to implement the same ?	229
How to implement minification ?	230
Explain the concept of View Model in MVC ?	230
How can we use two (multiple) models with a single view?	231
What kind of logic view model class will have ?	232
What is the use of "AllowHTML" and "ValidateInput" attributes?	232
Explain unobtrusive JavaScript?	233
Explain the need of display mode in MVC?	234
How can we validate using Facebook or Twitter accounts (MVC OAuth) ?	234
Chapter 6: JQUERY, JSON and Angular JS	237
What is JQuery ?	237
So will JQuery replace JavaScript ?	237
So how do we use these reusable JQuery libraries?	237
What is CDN (Content delivery network)?	237

For JQuery files which are the popular CDN's?	238
How can we reference local JQuery files if CDN fails?	238
What is the difference between JQuery.js and JQuery.min.js file?	239
When should we use jquery.js over jquery.min.js ?	240
What is the use jquery.vsdoc.js ?	240
How does the basic syntax of JQuery looks like?	240
What is the "\$" sign in JQuery ?.....	241
When should we use JQuery.noConflict()?	241
What are the different ways by which you can select a HTML element in JQuery ?	242
What is the use of Document.ready in JQuery ?	243
Can we have two document.ready in a webpage?	243
What is JSON?	244
Do all technologies support JSON?	246
How can you make a JSON call using JQuery ?	247
How can we post JSON to Server?	248
How can we post a complete HTML form in JSON format?	248
How can we convert JSON string in to c# object?	249
What are single page applications (SPA)?	249
What is Angular JS ?.....	249
What is the need of ng-model , ng-expression and ng-app in Angular?	250
How is the data binding in Angular ?	250
Chapter 7: SQL SERVER	253
What is normalization?	253
What is denormalization?	255
What are the different types of joins? What is the difference between them?	255
What is a candidate key?.....	256
What are indexes and what is the difference between clustered and nonclustered?	256
How can you increase SQL performance?.....	256
What is DTS?	257
What is fill factor ?	257
What is RAID and how does it work?	257
What is the difference between DELETE and TRUNCATE TABLE?	258
If locking is not implemented, what issues can occur?	258
What are different transaction levels in SQL SERVER?.....	259
What are the different locks in SQL SERVER?	259
Can we suggest locking hints to SQL SERVER?	260
What is LOCK escalation?.....	261
What are the different ways of moving data between databases in SQL Server?	261
What is the difference between a HAVING CLAUSE and a WHERE CLAUSE?	261
What is the difference between UNION and UNION ALL SQL syntax?	261
How can you raise custom errors from stored procedure?	261
What is ACID fundamental?	262
What is DBCC?.....	263
What is the purpose of Replication?	264
What are the different types of replication supported by SQL SERVER?	264
What is BCP utility in SQL SERVER?	265

What are the different types of triggers in SQL SERVER?	265
If we have multiple AFTER Triggers , can we specify sequence ?	266
What is SQL injection?	266
What is the difference between Stored Procedure and User Defined Function?	266
Chapter 7:Remoting, Web services and WCF	267
What is the Web services, remoting and WCF?	267
What is an application domain?	267
What is .NET Remoting?	267
Which class does the remote object has to inherit?	268
What are two different types of remote object creation mode in .NET remoting?	268
What are the basic steps to implement remoting?	268
What are drawbacks of remoting and how can we overcome the same?	270
What is a Web Service?	270
What's the difference between web services and remoting?	270
What is UDDI?	270
What is DISCO?	270
What is WSDL?	271
What are the steps to create a web service and consume it?	271
How do we secure a web service?	271
Does web service have state?	272
What is SOA?	272
What's the difference between WCF and Web services?	273
What are end point, contract, address, and bindings?	273
What are the main components of WCF?	274
What is a service contract, operation contract and Data Contract?	274
What are the various ways of hosting a WCF service?	275
How do we host a WCF service in IIS?	275
What are the advantages of hosting WCF Services in IIS as compared to self-hosting? ...	275
What are different bindings supported by WCF?	276
What is the difference between BasicHttpBinding and WsHttpBinding ?	276
Can we overload WCF service methods and functions?	277
What is a one-way operation?	277
In one way contract we do not get call back, how can we solve the same?	278
How can we host a service on two different protocols on a single server?	278
How can we integrate with WCF services with MSMQ?	278
How can we do security in WCF services?	278
In what scenarios will you use message security and transport security?	279
Where do we specify security option in WCF services?	279
What are the different ways of doing WCF concurrency?	280
What are different ways of doing WCF instancing?	280
What is REST?	281
How can we make WCF rest enabled?	281
Can we call two WCF services in one transaction?	281
How can we enable debugging and tracing on WCF services?	283
How are exceptions thrown in WCF?	284
What is the difference between WCF fault exceptions and .NET exceptions?	285

What is the difference between Service endpoint and Client endpoint?	286
Chapter 8: WPF and Silverlight	287
What is WPF?	287
What is the need of WPF when we had windows forms?	287
What is XAML in WPF and why do we need it?	288
What is xmlns in XAML file ?	288
What is the difference between xmlns and xmlns:x in WPF ?	289
Provide some instances where you have “xmlns:x” namespace in XAML ?	289
When should we use “x:name” vs “name” ?	290
What are the different kinds of controls in WPF?	290
Can you explain the complete WPF object hierarchy?	291
Does that mean WPF has replaced DirectX?	293
So is XAML meant only for WPF ?	293
Can you explain the overall architecture of WPF?	293
What is App.xaml in WPF project?	294
What are various ways of doing alignment in WPF?	295
What are resources in WPF ?	298
Explain the difference between static and dynamic resource?	300
When should we use static resource over dynamic resource ?	301
Explain the need of binding and commands?	301
Explain one way, two way, one time and one way to source?	301
Can you explain WPF command with an example?	303
How does “UpdateSourceTrigger” affect bindings?	305
Explain the need of “INotifyPropertyChanged” interface?	306
How are WPF observable collections different from simple .NET collections?	307
What are value converters in WPF?.....	308
Explain multi binding and multivalue converters in WPF?	309
Explain WPF relative binding / relative resource?	312
What are the different ways of binding using relative source?	312
Can you explain self relative source binding in WPF?	312
Explain Ancestor relative source binding in WPF?	313
Explain the difference between visual and logical tree in WPF ?	316
Why do we need to have these perspective of visual and logical tree in WPF ?	319
Explain routed events in WPF?.....	319
Explain WPF styles?	320
What are style triggers?	321
Explain Multittrigger concept in WPF?	322
What is the difference between control templates and data templates?.....	323
What is MVVM?.....	325
What are the benefits of MVVM?	326
What is the importance of command and bindings in MVVM pattern?	326
What is the difference between MVVM and 3 layer architecture?	327
Explain delegate command?	327
What is PRISM?	329
What are benefits of PRISM?	330
How are individual units combined in to a single unit ?	330

Does PRISM do MVVM?	331
Is PRISM a part of WPF?	331
What is expression blend?	331
What is SilverLight?	331
Can SilverLight run in other platforms other than window?	331
Come on, even WPF runs under browser why SilverLight ?	331
Can SilverLight run in other platforms other than window?	332
What is the relationship between Silver Light, WPF and XAML?	332
What is XAP file in Silverlight?	332
Can you explain Sliver Light architecture?	332
What are the various basic steps to make a simple Silver Light application?	335
What are the different kinds of bindings in Silverlight?	337
How does Silverlight connect with databases?	338
What are the 2 important points we noted when we call WCF service from Silverlight? ..	338
What are the different ways of doing alignment in Silverlight and WPF?	338
What is expression blend?	340
Chapter 9:- LINQ and Entity framework	343
Define LINQ?	343
How does LINQ help us from the perspective of business objects?	344
Can you explain how a basic LINQ Query looks like?	345
How do we write a LINQ query to search with criteria?	345
How can do a join using LINQ query?	345
How can we do a group by using LINQ query?	345
What are entity classes in LINQ?	345
How can we load the LINQ entity class ?.....	346
How do we define 1 to many and many to 1 relationship in LINQ?	347
How can we call a stored procedure using LINQ ?	348
How can we insert, update and delete using LINQ?	348
What are DBML files in LINQ?	349
What is Entity framework?	349
So what are benefits of using EF?.....	350
So what are the different ways of creating these domain / entity objects?	350
What is pluralize and singularize in Entity framework dialog box?	351
What is the importance of EDMX file in entity framework?	352
Can you explain CSDL, SSDL and MSL section in EDMX file?	352
What are T4 templates?	352
So what is the importance of T4 in Entity framework?	353
How can we read records using entity framework classes?	353
How can we add, update and delete using EF?	354
People say entity framework runs slow?	354
Can you explain lazy loading in a detailed manner ?	355
How can we turn off lazy loading?	355
How can we use stored procedures in entity frame work?	356
What are POCO classes in Entity framework?	356
How to implement POCO in entity framework?	357
In POCO classes do we will need EDMX files?.....	359

What is code first approach in entity framework?	359
How can implement code first in entity framework?	359
What is the difference between POCO, code first and simple EF approach?	359
How can we handle concurrency in Entity framework?	360
How can we do pessimistic locking in Entity framework?.....	361
What is client wins and store wins mode in entity framework concurrency?	361
What are scalar and navigation properties in Entity framework?	361
What are complex types in Entity framework?.....	362
What is the difference between “DbContext” and “ObjectContext” ?	363
What’s the difference between LINQ to SQL and Entity framework?	364
Chapter 10: Design patterns,UML, Estimation and Project management	364
Explain SOLID principles ?	365
What are design patterns?	365
Which design patterns have you used in your project?	365
Can you explain singleton pattern?	370
Can you explain Façade pattern?	371
What is the difference between DI and IOC ?	372
What is MVC, MVP and MVVM pattern?	375
What is MVC pattern?	375
How can we implement MVC in ASP.NET?	376
What is MVP?	376
What is MVVM?.....	376
What is the difference between MVC, MVP and MVVM and when to use what?	377
What is three-tier architecture?	377
Have you ever worked with Microsoft Application Blocks, if yes then which?	378
What is Service Oriented architecture?.....	378
What are different ways you can pass data between tiers?	379
What is UML?.....	380
How many types of diagrams are there in UML?	380
What are advantages of using UML?.....	381
How did you implement UML in your project?	381
What are different phases in a software life cycle?	384
Can you explain different software development life cycles?	385
What does Agile mean?	386
What is SCRUM?	388
What does product owner, product back log and sprint mean in SCRUM?	388
Can you explain how SCRUM flows?	388
Can you explain different roles in SCRUM?	390
When should we choose Agile and when should we choose waterfall?	390
What are some of the important metrics in project?	391
What is effort variance?	391
What is CAR (Causal Analysis and Resolution)?.....	391
What is DAR (Decision Analysis and Resolution)?	391
What is a fish bone diagram?	391
What is Pareto principle?	392
What are functional and non-functional requirements?	392

How do you handle change request?	393
What is internal change request?	393
What is difference between SITP and UTP in testing?.....	393
Which software have you used for project management?	393
People in your project do not perform, what will you do?	393
What is black box testing and White box testing?	393
What is the difference between Unit testing, Assembly testing and Regression testing?	394
What is V model in testing?	396
How do you start a project?	397
How did you do resource allocations?	397
How will you do code reviews?	397
What is CMMI?	398
What are the five levels in CMMI?.....	398
What is SIX sigma?	400
What are DMAIC and DMADV?	401
What are the various ways of doing software estimation ?	401
What is function point estimation?	402
How did you estimate by using function points ?	402
What is the FP per day in your current company?	402
What is SMC approach of estimation?	402
How do you estimate maintenance project and change requests?	402
Chapter 11: Ajax	403
What problem does Ajax solve?	403
What is Ajax?	404
What is the fundamental behind Ajax?	404
How do we use XMLHttpRequest object in JavaScript?.....	404
Can you explain Scriptmanager control in Ajax?	405
What is the use of update panel inAjax?	405
How do we consume web service in Ajax?	406
Can you explain the concept of triggers in 'UpdatePanel' control?	407
Can you explain the 'UpdateProgress' component?	408
How can you do validations in Ajax?	408
How do we do exception handling in Ajax?	409
Can we have multiple "ScriptManager" control on a single page ?	410
Chapter 12:- Reports	410
How do we access crystal reports in .NET?	411
What are the various components in crystal reports?	411
What basic steps are needed to display a simple report in crystal?	412
Can crystal reports be published as a web service?	416
How do we invoke the crystal report web service?	416
How do we add formulas using crystal reports?	416
How do we pass parameters to crystal reports?	417
How do we export from crystal reports?.....	418
How do we print to printer using crystal?	419
How do we generate cross tab reports?.....	419
How can we do grouping in crystal?.....	420

Can you explain three-pass reporting which crystal report uses?	420
Can you explain reporting services architecture?	421
We have two IIS application 'Reports' and 'Reportserver' what do they do ?	425
Can you explain Report definition language (RDL) file in reporting services?	426
What is the basic process of making a report in reporting services?	427
How can we consume reports in ASP.NET?	428
Can you explain the difference between private and shared data sources?	431
How does reports caching in reporting services work ?	431
What are the major differences between Crystal and SQL reporting services?	432
Chapter 13: Threading	433
What is Multi-tasking?	433
What is Multi-threading?	433
What is a Thread?	433
Did VB6 support multi-threading?	434
Can we have multiple threads in one App domain?	434
Which namespace has threading?	434
Can you explain in brief how can we implement threading?.....	434
How can we change priority and what the levels of priority are provided by .NET?	435
What does Address Of operator do in background?	435
How can you reference current thread of the method?	435
what is Thread.Sleep () in threading?	436
How can we make a thread sleep for infinite period?	436
What is Suspend and Resume in Threading?	436
What the way to stop a long running thread?	436
How do I debug thread?	436
What is Thread.Join () in threading?.....	436
What are Daemon threads and how can a thread be created as Daemon?	437
How is shared data managed in threading?.....	437
Can we use events with threading?	437
How can we know a state of a thread?	437
What is use of Interlocked class ?	437
What is a monitor object?	438
What are wait handles?	438
What is ManualResetEvent and AutoResetEvent?	438
What is Reader Writer Locks?	438
How can you avoid deadlock in threading?	439
What is TPL (Task parallel library)?	439
What is the difference between thread and process?	439
Chapter 14: XML	439
What is XML?.....	440
What is the version information in XML?	440
What is ROOT element in XML?	440
If XML does not have closing tag will it work?	440
Is XML case sensitive?	440
What is the difference between XML and HTML?	440
Is XML meant to replace HTML?	440

Can you explain why your project needed XML?	441
What is DTD (Document Type Definition)?	441
What is well formed XML?	441
What is a valid XML?	441
What is CDATA section in XML?	441
What is XSL?	441
What is element and attributes in XML?	441
Which are the namespaces in .NET used for XML?	441
What are the standard ways of parsing XML document?	442
In What scenarios will you use a DOM parser and SAX parser?	444
How was XML handled during COM times?	445
What is the main difference between MSXML and .NET Framework XML classes?	445
What are the core functionalities in XML .NET framework? Can you explain in detail those functionalities?	445
What is XSLT?	445
Define XPATH?	446
What is the concept of XPOINTER?	446
What is an XMLReader Class?	446
What is XMLTextReader?	446
How do we access attributes using “XmlReader”?	447
Explain simple Walk through of XmlReader.....	447
What does XmlValidatingReader class do?	449
Chapter 15: NET Interoperability	450
How can we use COM Components in .NET?	450
We have developed the COM wrapper do we have to still register the COM?	450
How can we use .NET components in COM?	450
How can we make Windows API calls in .NET?	453
When we use windows API in .NET is it managed or unmanaged code?	455
What is COM?	455
What is Reference counting in COM?	455
Can you describe IUNKNOWN interface in short?	455
Can you explain what DCOM is?	455
How do we create DCOM object in VB6?	456
How to implement DTC in .NET?	456
How many types of Transactions are there in COM + .NET?	458
How do you do object pooling in .NET?	458
What are types of compatibility in VB6?	459
What is equivalent for regsvr32 exe in .NET?	460
Chapter 16: Windows workflow Foundation	460
What is Windows Workflow Foundation?	460
What is a Workflow?	460
What are different types of Workflow in Windows Workflow foundation?	461
when should we use a sequential workflow and when should we use state machines?	462
How do we create workflows using designer?	463
How do we specify conditions in Work flow?.....	464
How do you handle exceptions in workflow?.....	466

What is the use of XOML files.	466
How can we pass parameters to workflow?	468
Chapter 17: Extra's	469
What is Multi Targeting in .NET?	469
What are portable class libraries?	469
What is Nuget?	471
How can we UNIT test private methods using VSTS ?	473
Is it good to practice to UNIT test Private methods?	473
What is Mock testing?	474
How can we implement Mocking?	475
So are we saying Microsoft does not have mock frameworks?	476
Define code coverage?	476
What is Cyclomatic complexity and how to measure the same?	477
What is the use of EXTERN keyword and DLLImport attribute?	479
IIS VS windows IIS express?	479
What is the difference between DEBUG and Release?	480
What is the use of DEBUG directive?	480
What does the word scalability, scale-up and scale-out means?	481
Can you write a simple c# code to display Fibonacci series?	481
Can write a logic for bubble sort in c# ?	483
What is inserted sort algorithm?	485
How does selection sort algorithm works?	487
Find if number is even or odd ?	489
What is time out support in regex (regular expression)?	490
Chapter 18: Learn .NET in 60 days	490
Chapter 19: Invoicing application end to end	491
Software Company hierarchy	492
Resume Preparation Guidelines	493
Salary Negotiation	495
Points to remember	497
Other interview questions Books by Shivprasad Koirala	498
Feature 1:- "Async" and "Await" (Code markers)	498
Feature 2:- Zip facility (Zip compression)	500
Feature 3:- Regex timeout (TimeOut).....	501
Feature 4:- Profile Optimization (Improved Startup performance)	504
Feature 5:- Garbage collector (GC Background cleanup)	505
3 more features worth exploring	508
Chapter 20: HTML 5 and CSS 3	508
What is the relationship between SGML , HTML , XML and HTML ?	508
What is HTML 5?	509
In HTML 5 we do not need DTD why?	509
If I do not put <!DOCTYPE html> will HTML 5 work?	510
Which browsers support HTML 5?	510
How is the page structure of HTML 5 different from HTML 4 or previous HTML?	510
What is datalist in HTML 5 ?	511
What are the different new form element types in HTML 5?	511

What is output element in HTML 5?	514
What is SVG?	515
Can we see a simple example of SVG using HTML 5?	515
What is canvas in HTML 5?	515
So how can we draw a simple line on Canvas?	515
What is the difference between Canvas and SVG graphics?	517
How to draw rectangle using Canvas and SVG using HTML 5 ?	517
What is the use of column layout in CSS?	524
Can you explain CSS box model?	526
Can you explain some text effects in CSS 3?	528
What are web workers and why do we need them ?	529
What are the restrictions of Web Worker thread ?	530
So how do we create a worker thread in JavaScript?.....	530
How to terminate a web worker	531
Why do we need HTML 5 server-sent events?	531
What is local storage concept in HTML 5?	533
How can we add and remove data from local storage?	533
What is the lifetime of local storage?	534
What is the difference between local storage and cookies?	534
What is session storage and how can you create one?	535
What is difference between session storage and local storage?	535
What is WebSQL?	535
Is WebSQL a part of HTML 5 specification?	535
So how can we use WebSQL ?	535
What is application cache in HTML5?	536
So how do we implement application cache in HTML 5 ?.....	537
So how do we refresh the application cache of the browser?	537
What is fallback in Application cache?	538
What is network in application cache ?	538