Angular Quiz

npm uses the package.json to manage what dependencies our application has.

By default, event handlers are set to the bubbling phase.

The send() function of the XMLHttpRequest object sends the request to the server.

XMLHttpRequest is an object used to make Ajax calls.

The submit() function will submit a form using JavaScript.

The === operator compares value equality as well as data type.

You can add new DIV elements dynamically using document.createElement('div').

Undeclared is NOT a JavaScript data type.

innerHTLM is used to change the content of the HTML element.

The HTML DOM is an object based interface that allows JavaScript and other entities manipulate and create HTML elements dynamically.

You are allowed to have more than one script tag on the page for multiple JavaScript references.

<script src="my.js"></script> is the correct syntax for referring to an external script called "my.js".

After defining an object you can still add properties to it.

getElementsByTagName() is the best method to use if you want to grab all paragraphs on the page.

A callback function is a function that is an argument of another function that is typically executed before returning.

The number -1000, is considered truthy.

Controllers are NOT supported as of Angular 2.

Angular 2 supports TypeScript. TypeScript is one of the main drivers behind Angular 2 because of the support for constructs such as Decorators.

The AppComponent is typically the name for an Angular 2 application's root component. The AppComponent is the Component defined in app-component.ts and serves as the main component of the application.

main.ts specifies how to compile the application and specifies the main module.

app-module.ts defines the AppModule component. It is the root module and will link all other components of your application here.

Data-binding is the association of data/events with elements and user interactions.

Directives are elements, attributes and CSS style classes that you bind on your HTML templates.

A Component is a specialized Directive that controls a portion of a webpage.

A template is HTML code mixed with Angular constructs. It defines the view of your application. Metadata is considered to be a collection of data values passed to a component.

Services are features or values that you want defined in one location but in general are used throughout your application.

You typically define one root module and typically define additional features of your application as other modules tied into your root module. The purpose of modules is to organize a specific feature or related functionality in one container allowing you to define multiple modules for each feature and associate them later through a root module.

Interpolation is a way to display data from your Angular code on your templates.

{{}} (double curly braces) is the syntax to use interpolation.

@NgModule is the decorator used to specify metadata for the root module.

The three main properties that you specify inside @NgModule are declarations, bootstrap and imports. There are others used for specifying services and other constructs. Definitions, components and services, however, are not valid properties of @NgModule.

Components, directives and pipes are to be specified as values of the declarations property. Services are specified in the providers array and other modules are specified as values for the imports property.

Other modules are specified as part of the imports property of @NgModule.

Angular will match the selector property of the root component to an element in index.html during the bootstrapping process.

[(ngModel)] is the attribute used for two-way data-binding and its value should be equal to the property that you want to bind.

Interpolation is used only for string-based values. Use property-binding for other datatypes.

Property Binding use brackets [] to surround the property.

Event-binding associates DOM events to component functions.

(click) is an example of event-binding.

@Directive is used for creating custom directives.

ngModel, ngClass and ngStyle are examples of attribute directives.

ngIf will toggle an element's existence in the DOM based on the boolean value of the expression.

ngClass is used to manipulate multiple pre-defined classes at once.

Selector, template, and templateUrl are all valid properties of the @Component decorator.

<script> tags are NOT permitted within Angular 2 Templates.

You can use a service within another.

A route is a path and an associated component.

RouterModule.forRoot(routes) is the method you call to configure the routes in your application with the module.

RouterOutlet is the directive used to specify the location of routable content to display.

RouterLink is used to navigate to internal URL inside of an Angular application. href is used to navigate to external URLs or websites outside of the current application.

A component is an important feature in Angular 2. You'll find that many constructs in Angular 2 are referred to as Components. There is a special decorator that you'll have to use, @Component, even when creating a component.

Modules are used to organize code in features or related functionality in order to prevent code bloat and promote code reuse.

A Logging Service is a type of feature that may be injected into another class.

Dependency injection is a supported feature in Angular 2 closely tied to services which allows you to define functionality in one class and use it throughout your application.

The root module does not have be named AppModule. It is a convention to use AppModule, but Angular2 doesn't require it.

Two-way Data-binding is like property-binding and event-binding together.

Bootstrapping is the process during which your Root Component is inserted into the DOM.

Property binding utilizes a single set of square brackets.

C# Quiz

Debug Mode is the Visual Studio feature you will use to compile and run your program.

The Error List within Visual Studio will show both syntax and compiler errors.

A using block in C# used for to dispose unmanaged resources.

C# a strongly typed language, which means each type of data is predefined as part of the programming language.

In C#, one class can NOT inherit from multiple base classes.

== (double equals) is the correct operator to compare two variables.

Real is NOT a valid data type.

The first index number in an array starts with 0 and the highest index number of an array of size n will be n - 1.

A class object and a member of that class are connected by the dot operator.

Garbage collection is the process of de-allocating memory automatically.

A class may contain any number of variables and methods.

An If-Else statement can NOT be used for handling thrown Exceptions.

\*\* is NOT an Arithmetic operator in C#.NET.

Static functions can access only static data, static functions cannot call instance functions, instance functions can call static functions and access static data.

The Inheritance mechanism uses the existing functionality of base class, overrrides the existing functionality of base class, implements new functionality in the derived class.

A long is an 8-byte Integer.

You can access a private field that is a member of a class with a public property to get and set the private field.

The purpose of the protected access modifier is to hide access to the field from outside the class except a derived class.

\*=, +=, =, /= are assignment operators.

In a Switch statement, if the value of the expression is not represented by a case, the default case will execute if provided in the switch statement.

\ (backslash) is used to start an escape sequence in a string.

Array is NOT a value type.

foreach (int x in arr) { Console.WriteLine(x); } prints the elements of an integer array called arr.

Given a class Robot, Robot droid = new Robot() is the correct way to instantiate an object.

Within a class definition, private is the default access modifier for a class member without one.

No value is returned by the following method signature, protected void MyMethod();

A default constructor has 0 parameters.

public Robot(), public Robot(int speed), public Robot(int speed, string type) are all correct signatures for a constructor for a Robot class.

Given an ArrayList arList, arList.Count is how you get the number of elements in arList.

A value can be repeated in a Dictionary collection any number of times.

List<int> numbers = new List<int>() is the correct way to declare and instantiate a List collection.

Of the collections, Array is NOT dynamic, while List, Dictionary, and ArrayList are.

Provided a List with 10 names, names[4] is the correct way to get the name at 5th position in the List.

Exception is the base exception class that can catch all types of exceptions.

using is the keyword used to add a base class library or namespace to a project to become accessible.

Abstract is the keyword used to make a class definition nonconcrete.

Sealed is the keyword used to prevent a class from being inherited.

Of the following components, namespace can NOT be inside a class definition, but method, field, and property can be.

++ is the operator used to increment a number by 1.

The modulus '%' returns the remainder of two int values when divided.

You can NOT use access modifiers in an interface.

Downcasting is NOT implicit.

Assemblies are packages containing MSIL instructions and metadata to allow various components and tools to function together within the CLR at runtime.

Breakpoint is what you use as a flag or marker indicating a place to pause current execution of a program.

Every class contains a default constructor.

Base is the keyword used to call a method from the Parent class.

Interfaces are what is used in order to mimic multiple inheritance.

You can have more than one constructor, but you can't have none.

Properties are used to store private backing fields.

Dotnet Service Quiz

What is the <portType> tag used for in the WSDL? describes what operations can be performed and what messages are involved at an endpoint

What parts of a SOAP message are required? Envelope, Body

What are benefits of SOAP over REST? SOAP services are accompanied by a clearly outlines the service, SOAP services are not bound to a specific protocol

What does WSDL stand for? Web Service Description Language

What not true about service-oriented architecture (SOA)? None of the above

What is a WSDL? Used to specify the exact message format, Internet protocol, and address that a client must use to communicate with a particular Web Service

True or False. SOAP can transport messages over HTTP, SMTP, and FTP. REST can also do the same. FALSE

In what protocol are SOAP messages bound? Any of the above

In what language is the SOAP message written? XML

Why are Web Services needed? Provides interoperability between platforms, Promotes code reusability, Allows for distributed business applications

The envelope portion of the SOAP message: Is the root of every SOAP message, Is a mandatory part of SOAP message, Must contain exactly one Body element.

What are Web Services? Software that makes itself available over the Internet and uses a standardized messaging system

How are exceptions handled in SOAP? SOAP Fault is sent in SOAP message when exception is thrown, and includes fault code, reason, etc.

SOAP supports JSON to structure and send messages. FALSE

SOAP messages contain \_\_\_\_\_\_\_\_\_; and REST messages contain \_\_\_\_\_\_\_\_\_\_\_. XML, XML or JSON

What transport protocol is used in REST? HTTP

What language is used to represent a resource? Plain Text XML JSON

What is a resource in REST? Any content accessible through the Web Service

Which is not a commonly used HTTP method in REST? TRACE

Which is not one of the core components of an HTTP request? Status code

Which is not one of the core components of an HTTP response? URI

The \_\_\_\_\_ HTTP status code shows success in creating something. 201

How are exceptions handled in REST? A web service should use HTTP error codes like 403 to show access forbidden using the Response object

The purpose of a \_\_\_\_\_ is to locate a resource on the server hosting the REST web service. Uniform resource identifier (URI)

The \_\_\_\_\_ HTTP status code shows not found when a resource is unavailable. 404

The \_\_\_\_\_ HTTP status code shows internal server error. 500

The \_\_\_\_\_ HTTP status code shows forbidden access to a resource. 403

The \_\_\_\_\_ HTTP status code shows a bad request. 400

Which HTTP method can be used for creating or inserting new data onto a server? POST

Which character indicates the beginning of a query param in a URL? ?

What are the different types of web services? Soap Rest

Which annotation exposes fields or variables of a data type via a WCF service? DataMember

Which annotation exposes methods via the WCF service? OperationContract

Web API functionality are associated with which of the following implementation? HTTP verbs

Web API exposes functionality via a WSDL contract? FALSE

HTTP uses a connected architecture FALSE

HTTP is stateless TRUE

Which HTTP Verb is used in order to send data to the server? POST

Which HTTP Verb is used in order to edit data that is currently on the server? PUT

Which HTTP Verb is used in order to remove data that is currently on the server? DELETE

What do you use in order to send information or other data along with the request that is needed by the server? Request Headers

Which Request Header is used in order to spcify what type of data is expected with the response? Accept Header

Which request header is used when you send values from a form so that the server knows what type of data to expect with the request? Content-type Header

In a HTTP Service, where is the data such as JSON or XML stored in a HTTP Response? Body

Web API uses Controller and Action concepts from ASP.NET's MVC Framework TRUE

Serializing is not included with ASP.NET Web API. FALSE

ASP.NET Web API will automatically bind your JSON or XML files to regular C# classes. TRUE

You can use Scaffolded Controllers which will create method signatures for the 4 verbs available for Web API TRUE

You can use Scaffolded Controllers with an Entity Framework entity. TRUE

HttpClient is part of what namespace? System.Net.Http

How can I stop the x variable from being reassigned in JavaScript? const x = 5;

!== will perform type coercion. FALSE

JavaScript code is compiled before being delivered to the browser (or other platform). FALSE

Null is not a data type of JavaScript FALSE

The Number datatype represents both integer and decimal values TRUE

What is the result of this comparison 2 == '2' TRUE

You can retrieve an object's properties using either the dot-notation or the array-notation. TRUE

The following JavaScript demonstrates creating/defining a function named foo: function foo() { console.log('foo'); } TRUE

What is not true about let, var, and const? let can be redeclared in the same scope

MVC Devops

DevOps is Development Culture, Improves team communication, Brings together the Development and Operations team, and Guarantees proper continuous integration, delivery and deployment.

Continuous Integration is keeping up with the latest build of the application.

Git is a version control tool.

In Git, after making changes in a branch, you can commit before you push.

You can create a new branch in Git with the command, git checkout -b <newBranch>.

A protected branch in Git is a branch that cannot be accidentally deleted, a branch that you cannot push into unless you are an admin or owner, a branch in which changes can only go in with a pull request approved by an admin.

Building is the process of compiling, testing and packaging source code.

SonarQube is an open source platform that performs static analysis of code to determine code quality.

Development Operations is the idea that project development and project operations should be combined, automated, and monitored, allowing for shorter development periods, increased deployments, and higher project stability..

Continuous Deployment is when a merge to the remote repository results in your code being deployed to production.

Nuget provides automatic dependency resolution.

Services that SonarQube provides are detect bugs, security holes, and unreliable or unmaintainable code. Note: SonarQube does static analysis - it does not run the code, and the code must already compile successfully for analysis to run.

Remote-tracking branches are updated using git fetch or git pull.

By default, in a Git repository, origin refers to the remote repository that the local repository was cloned from.

Advantages of DevOps includes faster code delivery, and automated testing.

A strongly typed view in ASP.NET MVC is a view used to render a specific type of model.

The components of MVC are model, view, and controller.

MVC Lifecycle can NOT be run without Routes.

The View manages presenting information to the user.

The Model is a represention of the state of data in the program.

The Controller manages communication between the model and the view.

MVC is used to separate business code from presentation code.

It is possible to add more HTML Helper methods by using extension methods.

TempData is a dictionary object used to pass non model data between controller and view or between views but only for the current and subsequent requests only.

ViewBag is a wrapper used to access non model dynamic data properties between controller and view or between views.

ViewData is a dictionary object used to pass non model data between controller and view or between views.

System.ComponentModel.DataAnnotations is the namespace that must be included to implement server side validation for models.

A Partial View can NOT have a @Layout page reference.

A Partial View can be passed data from other Views.

link, meta, title, style are tags that should go in the HEAD element.

div, header, span, strong are tags that should go within the Body element.

An HTML attribute is composed of a key-value pair as part of a tag.

<input type="text"> is the correct HTML for making a text input field.

<style> is the HTML element that allows for internal CSS to be added to the HTML page.

A child element an element directly nested inside another element.

<ol> creates a numbered list.

The <p> tag starts a paragraph.

The CSS Box Model is margin >> border >> padding >> content.

A CSS selector is a tool to target HTML elements and attributes.

Using the \* operator, all siblings will be targeted.

Responsive Web Design is the ability to render your webpage at native viewport resolution.

The ID selector in CSS uses a # symbol.

Correct CSS syntax, body {color: black}.

More than one stylesheet can be used in an HTML page.

SQL Quiz

When defining a table you cannot define an aggregate value of the column.

ACID stands for Atomicity, Consistency, Isolation, Durability.

The UNIQUE constraint requires that values must be unique in the column.

In SQL, NULL values represent the lack of a value for a column.

Referential integrity stipulates foreign keys must always reference a valid primary key.

The CHECK constraint is used to require any values placed in a column satisfy a logical expression.

The difference between WHERE and HAVING is WHERE filters data prior to aggregation, HAVING filters data after aggregation.

The ON DELETE clause is used to specify behavior to take when a referenced row is deleted.

A foreign key is a constraint which defines that a column references a primary key in another table or row.

Denormalization is the process of adding redundancy to a database.

MAX(), SUM(), and COUNT() are examples of aggregate functions. Aggregate functions work on a whole set of data to generate a value based on the whole set.

UPPER(), ABS(), CONCAT() are examples of scalar functions. Scalar functions take in some input and return a single value.

Insert is a part of the DML sublanguage. Insert is used to add data to the database or manipulate new data into the database.

A unique value and NOT NULL are required of a primary key.

LEFT JOIN will return all records from the first table despite any condition specified.

The AS keyword is used to specify an alias.

AVG() is an example of an aggregate function.

DDL statements include commands like CREATE, DROP, and ALTER.

The DROP command is used to remove a table from memory.

DML Statements include commands like INSERT, UPDATE, and DELETE.

In a one-to-one relationship, you do NOT use a third table as an association or join table.

The first normalized form introduces the concept of enforcing primary keys and removing composite columns.

The third normalized form supports the mantra "describe the key, the whole key, and nothing but the key".

A foreign key does not need to point to the primary key of another table. It can actually point to the same table.

ORDER BY sorts the results of a SELECT statement in SQL.

Read Committed is the default transaction isolation level in Sql Server.

The SQL keyword, LIKE is used with wildcards.

SELECT DISTINCT is used to return only different values.

SELECT COUNT(\*) FROM Persons can return the number of records in the "Persons" table.

SELECT SUM(s.rating) FROM sailors s, reserves r WHERE s.sid = r.sid AND r.bid = 103 query finds the total rating of the sailors who have reserved boat "103".

SELECT DISTINCT s.sname FROM sailors s, reserves r1, reserves r2 WHERE s.sid = r1.sid AND r1.sid = r2.sid AND r1.bid <> r2.bid query finds the name of the sailors who have reserved at least two boats.

SELECT \* FROM Persons WHERE LastName BETWEEN 'Hansen' AND 'Pettersen' selects all the records from a table named "Persons" where the "LastName" is alphabetically between (and including) "Hansen" and "Pettersen".

SELECT STORE\_ID, SUM(SALES\_AMOUNT) FROM SALES GROUP BY STORE\_ID; statement lets you find the sales amount for each store.

Insert, Update, Delete are the different events in Triggers.

2345 is the result of SELECT SUBSTR('123456789', INSTR('abcabcabc','b'), 4) FROM EMP;.

SELECT \* FROM Table1 WHERE Column1 >= 10 statements has correct syntax.

You will need to call the Open() method prior to calling the ExecuteReader() method with SqlDataReader.

The ExecuteReader() method of the Command object returns a DataReader object.

ExecuteNonQuery() method can be used in order to run an insert statement using SqlCommand object.

You would store the records that are returned from the SqlDataAdapter in a DataSet.

Connection String contains the location and is used by a data source to connect to a specific database.

DBContext is used by Entity Framework to query a database.

Data Access Layer contains ADO.NET SqlDataAdapter or Entity Framework.

ORM stands for Object Relational Mapper.

You need an existing data source prior to using the Database First workflow.

You can install Entity Framework through the NuGet Package Manager.

DbContext is used in order to query from your database with LINQ.

Idisposable is the statement used to call the Dispose() method of objects that implement this interface.

ToList() is the method called in order to store data from the DbContext in memory.

EntityState.Modified is the property used if you wish to edit a record in the database.

Entity Framework is part of the ADO.NET Framework.

.SaveChanges() is the method used in order to persist changes to the database.

By default, in a Git repository, origin refers to the remote repository that the local repository was cloned from.

Sometimes Git automatically resolve merge conflicts.

Remote-tracking branches are updated using git fetch or git pull.