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## Data Modeling

**ADO.NET:** Is a set of classes that can be used to interact with data sources like databases and xml files. This data can be consumed by any .NET application such as ASP.Net Web Applications, Windows Applications, and Console Applications. MicrosoftActiveXDataObjects.

Sources: What is ADO,NET.flv (Kudvencat)

**Entity Framework:** (EF) is an object-relational mapper that enables .NET developers to work with relational data using domain-specific objects. It eliminates the need for most of the data-access code that developers usually need to write.

**Files and Streams:** Has to do with streaming provider WCF Data Services: speed, using multiple data streams for video, audio, images, document files, and other types of binary files.

**LINQ:** Language-Integrated Query (**LINQ**) is a set of features introduced in Visual Studio 2008 that extends powerful query capabilities to the language syntax of C# and Visual Basic

**XML: Extensible Markup Language- Markup language that** is both human-readable and machine-readable

**HTML 5:** HTML5 is the latest standard for HTML.

**HTML5** was specially designed to deliver rich web content without the need for additional plugins.

**HTML5** has new semantic, graphics, and multimedia elements.

**HTML5** also has new form elements and new API's to make it easier to build web applications.

**HTML5** is cross-platform, designed to work on types of hardware (PCs, Tablets, Phones, TVs, etc.).

## Application Development

**Base Types**

**Collections:** Arrays and Collections are ways of managing groups of objects. A collection is a class, so you must declare a new collection before you can add elements to that collection.

**Events and Delegates:** The user selects an event. The delegate keyword encapsulates the find result method via its signature. The parameters are passed in by the user via a form for example.

```
public delegate int FindResult(object obj1, object obj2);
```

**Object:** In computer science, an object is a location in memory having a value and possibly referenced by an identifier. Identity, properties, and attributes.

**Object Oriented Programming:** A particular instance of a class.

**encapsulation:** Hiding (public or private) internal state and behavior in a class and requiring all interaction to be performed through an object's method via an identifier.

**inheritance:** Creating subclasses from Super Classes

**polymorphism:**

**modularity:** The source code for an object can be written and maintained independently of the source code for other objects. Once created, an object can be easily passed around inside the system.

**Serialization:** Serialization is the process of converting an object into a stream of bytes in order to store the object or transmit it to memory, a database, or a file. Its main purpose is to save the state of an object in order to be able to recreate it when needed.

**Parameter:** A Value passed to a method.

**Field:**

**types:**

**Operators:**

**Constructor:**

**Reflection:**

**Attribute:**

## SQL

**What is a Unique key?** The UNIQUE constraint uniquely identifies each record in a column or multiple columns. You can have many Unique Keys. You can have many unique constraints per table.

**What is a Primary key?** There can only be one Primary Key per table. All columns defined within a PRIMARY KEY constraint must be defined as NOT NULL.

**NULL?** No value required by user in form field

**NOT NULL?** Value required by user in form field

