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***MINI 1***

**Topic 1: What are the basic features of ASP.NET? There must be something useful here, but what is it? Why should we build our website using tools that support or rely in ASP.NET? Does it have advantages over Java, or PHP, or XHTML, or is it something entirely different? You are looking for information about what you can DO with it, not the deep, deep, technical details.**

**3 URLs**

1. <https://msdn.microsoft.com/en-us/library/4w3ex9c2.aspx>
2. <http://www.developer.com/net/asp/top-10-features-in-asp.net-4.5.html>
3. <https://www.bayt.com/en/specialties/q/1427/what-are-the-advantages-of-using-asp-net-over-php/>

**Precis of Sources**

ASP.NET is a Web development modeling utility. Unlike PHP, ASP.NET is not a programming language and offers more diversity and flexibility than PHP. ASP.NET allows a developer to use any language compatible with the common language runtime (CLR), which includes C#. According to Microsoft, there are three “flavors” of ASP.NET: Web forms, MVC, and Web pages. Each of which target a specific audience and offer their own features. ASP.NET offers a vast array of features which is what helps distinguish itself from Java, PHP, and XHTML, which it is similar to but also different.

ASP.NET’s main feature is obviously the ability to use Visual Studio, Microsoft’s own IDE. This provides a vast array of robust tools to use along with the trusted backing that your code will adapt to many web browser and environments easily. The ability to write applications using a vast array of languages again further distinguishes ASP.NET from PHP. ASP.NET is a compiled language whereas PHP is interpreted. This allows for some “hand-holding” with ASP.NET for type checking. ASP.NET also features supports for the web such as web sockets, HTML5 form types, and the ASP.NET Web API.

**Summary of Topic**

All in all, ASP.NET is a model, or blueprint, for building Web applications. Unlike PHP which is free and open-sourced, ASP.NET requires the use of a Microsoft license (Windows PC and Visual Studio) but provides more benefits than PHP. A major benefit I noticed when browsing online is that ASP.NET allows for easier maintenance of code long-term with many people stating PHP became increasingly difficult over time to maintain code. ASP.NET is also distinctly different from PHP because PHP is a programming language itself whereas ASP.NET allows the developer to use any programming language that conforms to the common language runtime. Finally, ASP.NET offers a framework class library allowing for quick implementation of Web elements without having to build everything from scratch.

**JIT 1**

Are the .aspx links on some Microsoft Web pages due to being developed with ASP.NET?

**Topic 2: What makes C# different from but also related to C and C++ as a programming language? How are they alike? How are they different? Are there important “gotchas” everyone should be aware of?**

**3 URLs**

1. <http://stackoverflow.com/questions/692225/what-are-the-differences-between-c-c-sharp-and-c-in-terms-of-real-world-appli>
2. <https://www.quora.com/What-is-the-difference-between-C-C++-and-C>
3. <https://www.thesoftwareguild.com/faq/difference-between-c-plus-plus-and-c-sharp/>

**Precis of Sources**

C# is different than C and C++ due to its high level of abstraction. C is a hardware level code often found running in kernels, hardware device drivers, and applications to access old, stable code. C++ is more abstract than C, adding the benefits of an object-oriented language but lacks some features such as garbage collection which is done by the programmer. C# on the other hand is a lot like Java. C# provides the benefits of a full object oriented language, it is less error prone due to its syntax, but complicates access to lower level APIs making specialized performance requirements problematic.

C# allows for the benefits of the .NET framework for many things, including StackOverflow and our own personal websites. C# lacks a pointers capability that C and C++ feature as well. C# only has two types of data. Values and objects much like Java. C# is a newer language initially launched in July 2000 whereas C++ can be traced back more than 30 years ago. C is even older than C++. C++ however, due to its age, is used frequently in the real world. It is found in video games, healthcare fields, and many other places due to its abstraction above C but its ability to provide performance and specialized programs.

**Summary of Topic**

C# is different than C and C++ because it can utilize the .NET framework. C and C++ cannot utilize the framework natively and both are old languages. Unlike C and C++, C# provides a built-in garbage collection, much like Java, taking ease off the developer to not have to worry about releasing and managing memory. C# however, is the farthest language away from the hardware because of this abstraction which allows for syntax checking making coding in C# less prone to errors, but also sacrifices the ability to be hardware specific and provide maximum performance tailoring based on the developing needs. In my opinion, I find C# to more closely related to Java than C or C++.

**JIT 1**

Is there a C# API or reference page to view methods, libraries and classes like Java?

**Topic 3: What makes for good website design? We will be talking about design for several meetings, but I want you to go out and see if you can find any sort of consensus whatsoever on what makes a good website. Are there acknowledged “best practices?” If you need to qualify your answer based on “what kind of website,” you can do so, but I would then like you to discuss several different “kinds” of websites and the best designs practices suggested for each.**

**3 URLs**

1. <http://shortiedesigns.com/2014/03/10-top-principles-effective-web-design/>
2. <https://conversionxl.com/8-universal-web-design-principles-you-should-to-know/>
3. <https://www.smashingmagazine.com/2008/01/10-principles-of-effective-web-design/>

**Precis of Sources**

Web pages first need to have a clear purpose in mind whether they are for business to client interaction, entertainment, providing information, etc. Without a clear purpose the website is meaningless. Beyond a purpose, the web site then needs to provide clear communication about its purpose. Navigation is essential to a website. Every page in a website should be able to navigate further down into a website or be able to bring a user back up to the home page to venture off into other tangents. Most modern websites now feature grid based layouts and a common web site template is found within bootstrap, pioneered by Twitter, to provide easy ways to create beautiful website.

The colors of a website are important much like how iOS and Android have shifted their color schemes to match a more vibrant and colorful approach instead of a flat color approach. Of course, all of this is futile if the web site itself as poor performance due to server overflow or the load time of the website is too long. Most people don’t have enough of an attention span to wait for a web site that isn’t important causing some to dismiss a website entirely if it loads forever. An important design principle to acknowledge in today’s time is the ability for the website to be mobile friendly. People are spending more and more time surfing the web on their phone and will benefit astronomically from a mobile web design.

**Summary of Topic**

Without good web design, a web site can fail and for a business, cause them to lose business. While I believe all aspects of web design to be self-explanatory and go hand in hand with the design principles I’ve learned in my two other A 290 Courses I’ve taken with you, I think the most important aspect about design in today’s day and age, and one that I see not followed often, is a mobile friendly website, less clutter to keep the user’s attention on the important stuff, and a fast load time. While most websites today are mobile friendly, when I find one that isn’t I have to consider if the website is truly worth my time or if I need to use it, otherwise I’ll go somewhere else. I also see too many website cluttering their websites with adds that not only make me take a website less seriously, but also increase the website load time drastically. If you’re on a mobile phone it especially increases load times. Have you ever read a “news” site and started reading only to have the entire text moved and jumbled while an ad loaded in because you didn’t realize it wasn’t done loading? I have and its pretty interesting most phones now hide the loading and title bars as soon as you scroll so you don’t see the website is taking forever to scroll.

**JIT 1**

Will our websites be designed in HTML? I only ask because I caught a glimpse online about ASP.NET rendering files into HTML and JavaScript leading me to believe the web design was done in an IDE and not with actual HTML code.