Java EE, .NET and PHP

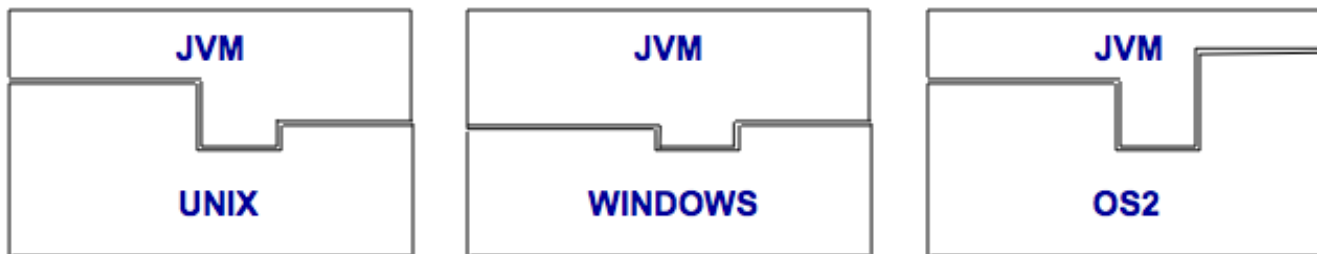## Haim Michael

October 11th, 2012

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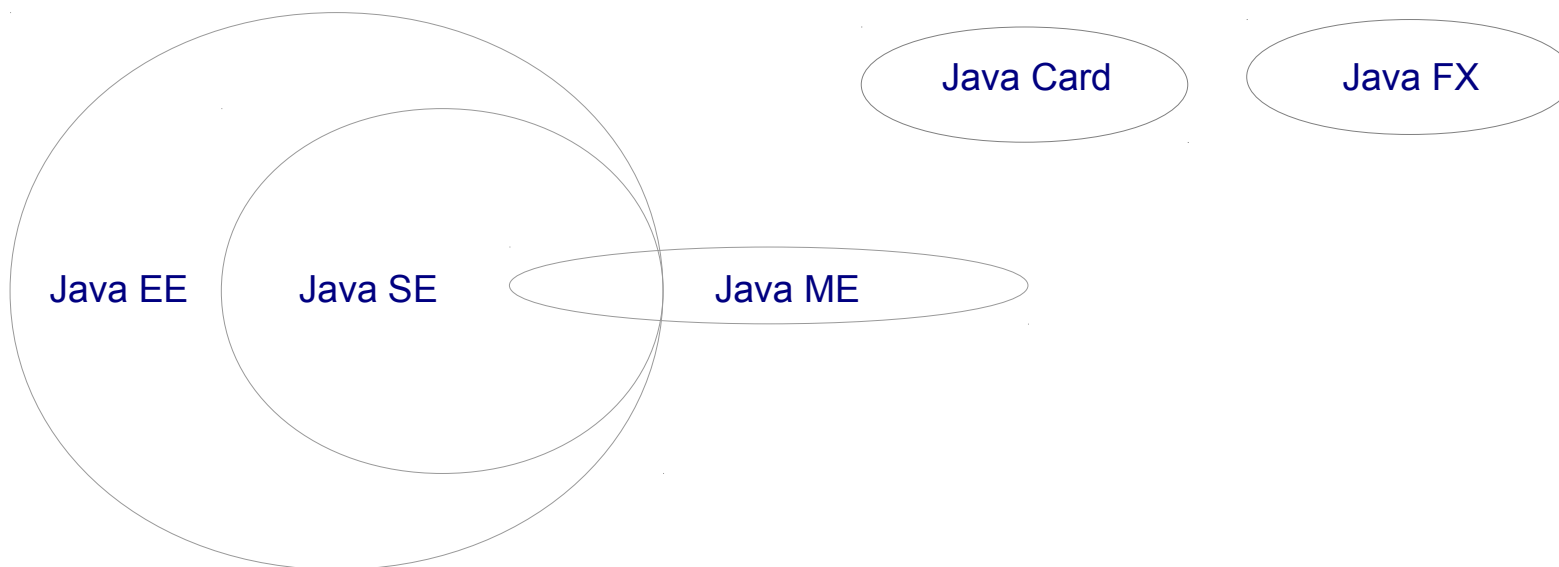- Comparison

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The Java World

- It all started with Toasters and Washing Machines ('Oak').

- The JVM (Java Virtual Machine) sets a Unified Execution Environment.

JVM	JVM	JVM
UNIX	WINDOWS	OS2

- The possibility to develop Java applets was the trigger to Java popularity.

The Java World

- The Java programming language is officially developed by the JCP organization, indirectly controlled by Oracle.

- The Java world is huge and is officially composed of the following domains.

Java Card

Java FX

Java EE   Java SE   Java ME

The Java World

- The Java EE clear specification enables the development of different Java EE application servers. Some of them are commercial while others are open source.

The Java World

- The none official Java world is even bigger!

The Java World

- There are many different IDE tools you can use in order to develop in Java.

The Java World

- The popular frameworks for web applications development using Java include the following:

The Java World

- Doing the first steps you should start with installing the
  Java Development Kit (JDK). You can download it at www.oracle.com.

- You can start learning the basics using the following free
  guides:

  www.JavaBook.co.il

  www.ScalaBook.co.il

- You can find free advance online courses at www.abelski.org.

- The main developers web site is http://www.oracle.com/technetwork.

The Java World

- The first important professional certifications you would

  like to target it:

  Oracle Certified Professional, Java SE Programmer

  Once achieved, it is highly recommended to continue

  with the Java EE certifications.

- Learning the Spring Framework the first professional

  certification you would like to target is:

  SpringSource Certified Spring Professional

  Once achieved, it is highly recommended to continue with

  the other Spring certifications.

The .NET Framework

- The .NET framework is an API for programming on the Windows platform. C# is the language that was designed from scratch to work with the .NET framework.

- Other important .NET framework languages include VB.NET, IronRuby, IronPython and F#.

F#   C#   VB.NET

The .NET Framework

- The CLR (Common Language Runtime) is the virtual machine component of the .NET framework.

- The CIL (Common Intermediate Language) is the .NET framework equivalent to Java Byte Code. It is a [standard](#) been used by the .NET framework and by Mono.

www.mono-project.com

The .NET Framework

- The .NET framework is developed by Microsoft. Its officiall main technologies include the following:

The .NET Framework

- The Visual Studio is the official one and only IDE available for software development using the .NET framework.

The .NET Framework

- Doing the first steps you should start with installing the Visual Studio Express Edition. It is free!

- You can start learning the basics using the following free guides:

  www.CSharpBook.co.il

  www.FSharpBook.co.il

  www.AzureBook.co.il

- You can find free advance online courses at www.abelski.org.

- The main developers web site is msdn.microsoft.com.

The .NET Framework

- The MCPD (Microsoft Certified Professional Developer) is the certification you should target.

- The available MCPD certifications include the following:

  MCPD on Microsoft Visual Studio 2010 Windows Developer

  MCPD on Microsoft Visual Studio 2010 Web Developer

  MCPD on Microsoft Visual Studio 2010 Azure Developer

  MCPD on Windows Phone

  MCPD on Microsoft SharePoint 2010

  MCPD on Microsoft Silverlight 4

  Each one of them requires passing a different set of exams.

The PHP Platform

- The PHP programming language was developed to allow simple web pages development.

- PHP was originally developed by Rasmus Lardorf in 1994, and was publicly released in June 1995.

- In 1997 Zeev Suraski & Andi Gutmans rewrote PHP parser and formed the base of PHP 3.

The PHP Platform

- As of PHP 5.X, it is no longer a 'spaghetti like' programming language. PHP allows us to define classes, interfaces and as of PHP 5.4 it even allows us to define traits.

- Similarly to Java and .NET, code running in PHP is executed using a virtual machine.

The PHP Platform

- The PHP programming language is officially maintained by Zend.

- The PHP programming language targets web applications development only.

- Zend develops and maintains the PHP language. In addition, it develops tools for developers and maintains the Zend Framework.

The PHP Platform

- There are many different IDEs we can use in order to develop in PHP.

The PHP Platform

- The popular frameworks for web applications development using PHP include the following:
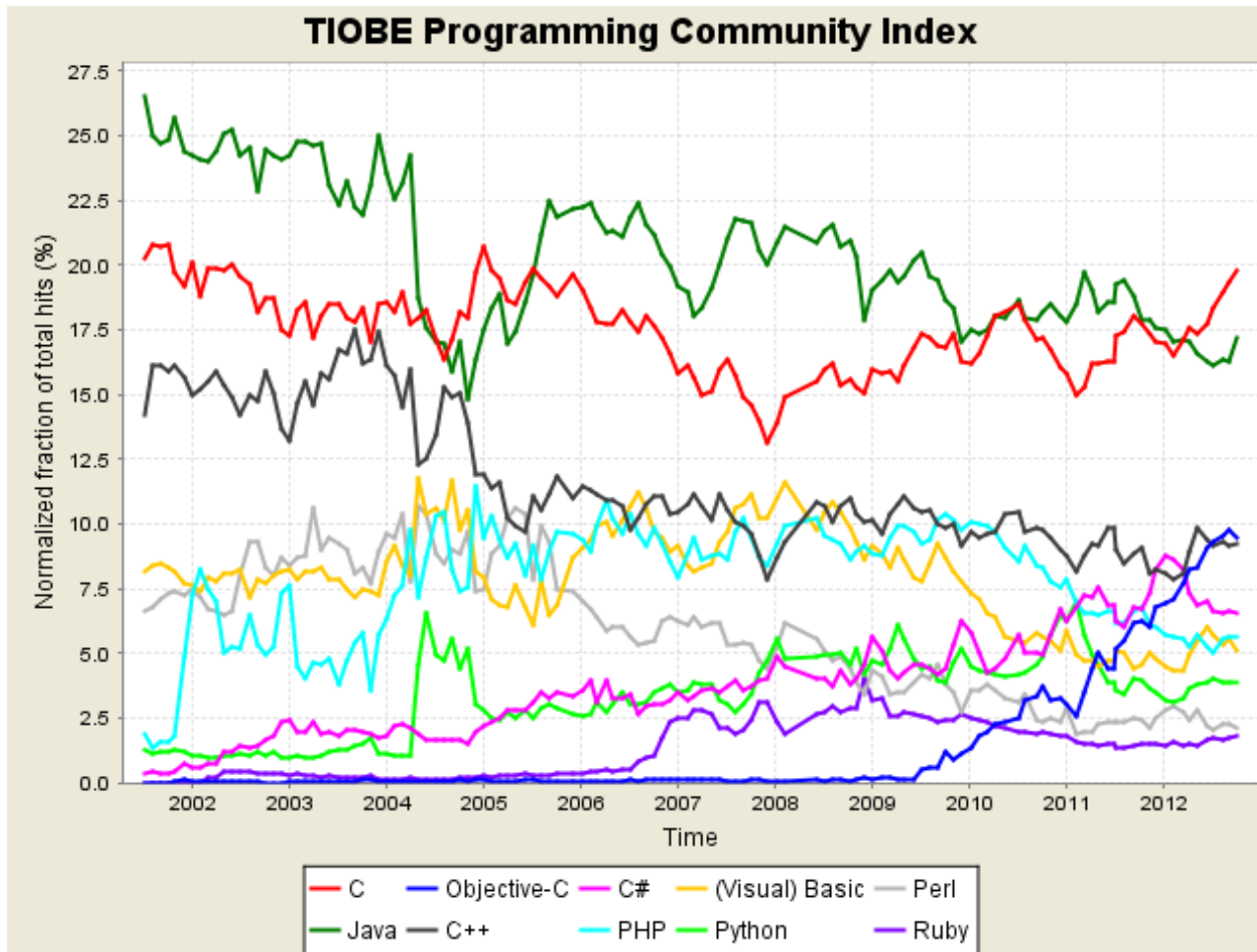
The PHP Platform

- Doing the first steps you should start with installing the Zend Server Community Edition. You can download it for free at www.zend.com.

- You can start learning the basics using the following free guide: www.PHPBook.co.il

- You can find free advance online courses at www.abelski.org

- The main developers web site is www.php.net.

The PHP Platform

- The PHP [certification](#) you would like to get is

  PHP Zend Certified Engineer

- Learning the Zend Framework 2 you would like to get the

  Zend Framework 2 Certified Engineer

- The [PHP Yellow Pages](#) lists all people world wide that

  passed the certification exams.

Comparison

TIOBE Programming Community Index

taken from www.tiobe.com

Comparison

- Using PHP fits most cases. Simple information systems is the classic case for PHP. Facebook, Yahoo and many other popular web sites were developed in PHP.

- PHP doesn't fit when there is a need in holding huge graph of objects during runtime, as in the following cases:

  Realtime Flights Control Systems

  Realtime Finance Trade Systems

  Realtime Multiplayer Games

Comparison

- The C# programming language is more advance (by far) comparing with Java and PHP.

- The most important language capabilities it adds comparing with Java are:
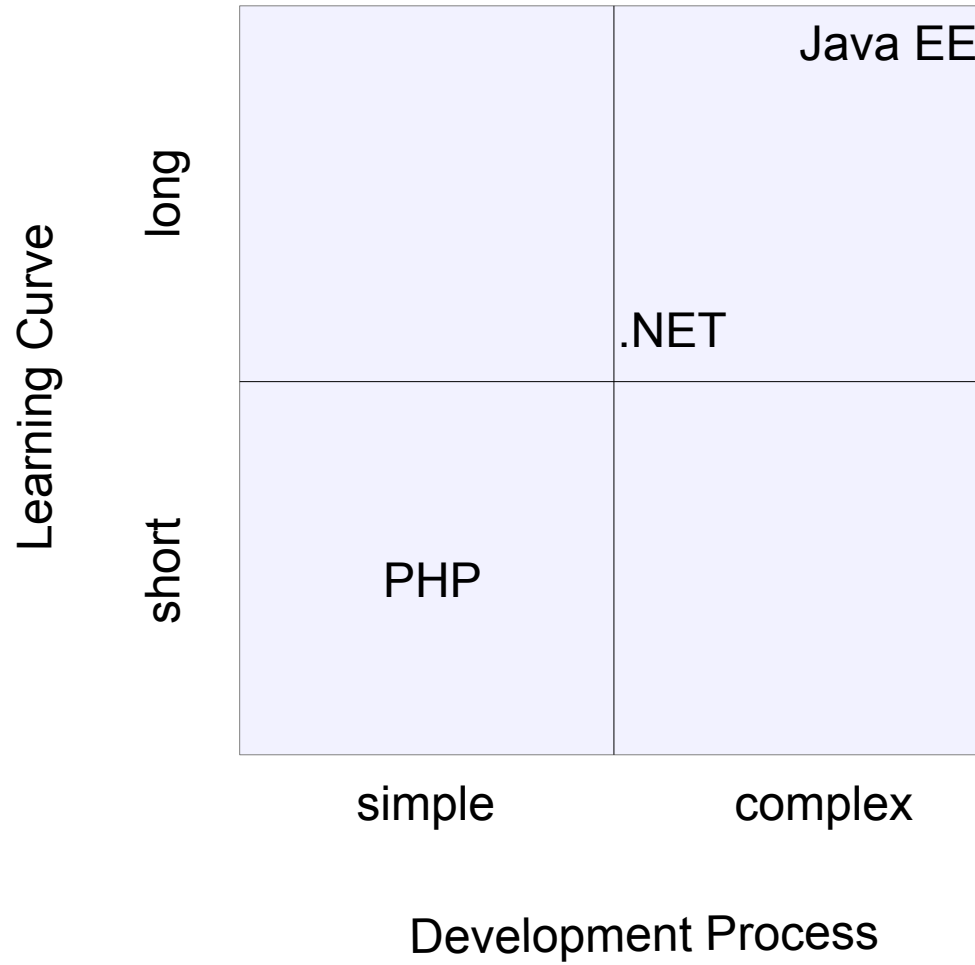
  Properties

  Delegates

  Lambda Expressions

  Language Integrated Query (LINQ)

  Serialization into XML

Comparison

A quadrant chart comparing development frameworks. The vertical axis is labeled "Learning Curve" with "short" at the bottom and "long" at the top. The horizontal axis is labeled "Development Process" with "simple" on the left and "complex" on the right.

- Java EE: long learning curve, complex development process
- .NET: medium learning curve, complex development process
- PHP: short learning curve, simple development process

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Comparison

Platform Dependency

high: .NET

low: PHP — Java EE

Development Cost: cheap — expensive

Comparison

	few	many
big (Open Source Community)	Java EE	PHP .NET
small		

Hosting Services

Comparison

Comparison

Databases Dependency

strong

weak

.NET

PHP

Java EE

few   many

Available Web Frameworks

Comparison

Israeli Local Community

big: .NET   PHP

small: Java EE

Application Servers: few   many

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Other Technologies

Questions & Answers

- Two courses you might find interesting include

  PHP Cross Platform Mobile Applications

  more info

  .NET Cloud Based Web Applications

  more info

  Android 4.1 Applications Development

  more info

- If you enjoyed my lecture please leave me a comment

  at http://speakermix.com/life-michael.

  Thanks for your time!

  Haim.