

# PDSA.com

*Solutions for the Real World*

PDSA IT Professional  
Development Services

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## PDSA IT Professional Development Services

### Step 1: Professional Development Assessment

Before you begin any professional development process, there are some vital steps that must be performed.

1. Discuss current and future technology goals with management.
2. Meet with all team members to assess which training classes each requires.
3. Match each team member to appropriate courses.

Meeting with each person on your team and capturing their current knowledge provides you with a picture of where your team needs additional training. We then match these assessments with the goals of your business. With this gap analysis complete between what your business requires of your IT department and where your department needs additional skills determines our next step of professional development training.

### Step 2: Professional Development Training

PDSA has long been known for high quality, real-world training. Our training classes will help your developers learn new technologies and methodologies the right way. We focus on what is important and teach best practices learned from our consulting practice and from the industry. We have courses in each of the following areas:

- .NET Framework
- Web Development
- Desktop Development
- Service Oriented Architecture
- Windows Store
- Project Management
- SQL Server
- Team Foundation Server

After we provide the training we then move into step 3 to ensure that your teams puts the learning to good use right away.

## Step 3: Integration of Development Training

We do not just leave you with the training, but continue to mentor and assist your team with integrating the best practices they learned into their day-to-day operations. Our on-going mentoring ensures that you truly get the most out of the training. We accomplish this with regularly scheduled daily/weekly meetings with you team members to help identify bottlenecks or roadblocks to implementing their training.

## Step 1: Professional Development Assessment

Our Professional Development Assessment is an interview with management and then each of your developers to gauge the effectiveness of each person in the role they perform. We outline each role you need in your shop and match each person into those various roles.

### Without the Right Skills Your Software Projects Can Suffer

The PDSA Skills Assessment Review identifies areas where your developers, business analysts and project managers require additional training. We help you identify the gaps in your IT staff's knowledge in relation to your business goals. We then recommend the training, mentoring or other courses of action to help your team build the necessary skills to meet your goals.

**Findings:** Are your employees skills what are needed to take your company into the future?

**Reasons:** What are the skills that are lacking?

**Recommendations:** We outline a plan for improving skills.

**Remediation:** PDSA can help you implement the recommendations.

The following is a small sample of the skills that we look at:

- .NET Technical Skills
- Database Skills
- Project management Skills
  - Requirements gathering
  - Estimating
  - Inter-Personal skills
  - Organizational skills

### .NET Technical Skills

Having the right .NET technical skills is critical for a developer today. Our assessment test will give you an idea on where each employee stacks up to the industry standard.

## Database Skills

Every developer needs to be able to work with a database. Developers should know how to performance tune their SQL queries, and create basic stored procedures. Our assessment will determine their skills in these areas.

## Project Management Skills

Identifying key requirements and developing project estimates are two fundamental skills each IT employee should have. We help you identify those employees that need more guidance in these areas.

Once the skills assessments are complete, we then choose from the following list of courses and seminars to determine which ones will benefit your organization the best.

## Step 2: Professional Development Training

We offer a wide variety of project management and developer training. The list below shows our most complete list to-date. However, we are adding new seminars all the time, so feel free to ask if you don't see what you need. Chances are we either have it, or we can find the resource you need.

**NOTE:** Our course offerings can change at any time. Please call us to get the latest updates of the courses we offer.

## PDSA Courses At-a-Glance

Below are all of PDSA's offerings organized by category.

Category	Class Name	Duration	Level
.NET Framework	Fundamentals of C#	1 to 2 days	Beginning
	Fundamentals of Visual Basic	1 to 2 days	Beginning
	Object Oriented Programming for Everyone	4 hours to 1 day	Beginning / Intermediate
	What's New in Visual Studio 2013	2-3 hours	Anyone
	What's New in .NET 4.5	2-3 hours	Anyone
	Fundamental of ADO.NET	4 hours	Beginning/ Intermediate
	Creating Collections of Entity Classes	2 hours	Intermediate/ Advanced
	Debugging Tips & Tricks	2 hours	Intermediate/ Advanced
	Tips & Tricks for Flexible Code	2-4 hours	Intermediate/ Advanced
	The Basics of How to Unit Test your Code	2 hours	Intermediate
	Professional Exception Management	2 hours	Intermediate/ Advanced
	LINQ to XML Makes Working with XML a Breeze	2 hours	Intermediate

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Category	Class Name	Duration	Level
	Use XML Files! An Alternative to SQL	2 hours	Intermediate
	Real World Uses for Dependency Injection	3-4 hours	Intermediate/ Advanced
	Collections for Business Applications	2 hours	Intermediate
	15 Ways to Improve Your Business Applications Today	2 hours	Intermediate
	Developing a Windows Service Framework	2 hours	Intermediate/ Advanced
	Effective Patterns for Business Rules and Validation	2 hours	Intermediate
	Application Block Architecture	2 hours	Intermediate/ Advanced
	Effective Patterns for Lookup Tables	2 hours	Intermediate
	Serialization in .NET	2 hours	Intermediate/ Advanced
<b>Web Programming</b>	Fundamentals of ASP.NET Web Forms	1 day	Beginning
	Fundamentals of ASP.NET MVC	4 hours	Beginning
	Fundamentals of ASP.NET Security	4 hours to 1 day	Intermediate/ Advanced

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Category	Class Name	Duration	Level
	MVVM for Web Forms Made Easy	2 hours	Intermediate/ Advanced
	Web Forms Are Not Dead	2 to 4 hours	Intermediate
	Choosing Between ASP.NET Web Forms and ASP.NET MVC	2 hours	Intermediate
	Building Business Applications in ASP.NET MVC	2 hours	Intermediate
	Learning HTML 5	3 to 4 hours	Beginning
	Introduction to CSS and CSS 3	2 to 3 hours	Beginning
	Spice up your HTML 5 Applications UI	2 hours	Intermediate
	Bootstrap 101-Creating Mobile Web Sites	4 hours	Beginning
	Bootstrap: Building Navigation Systems	2 hours	Intermediate
	Bootstrap: Building Business Web Pages	2 hours	Intermediate
<b>Desktop Programming</b>	Getting Started with WPF and XAML	2 to 4 hours	Beginning
	XAML Styles, Resources and Templates	2 hours	Beginning
	Eliminate Code using Data Binding in XAML	2 hours	Beginning

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Category	Class Name	Duration	Level
	Design Tips to Spice up Your XAML Apps (even if you are not a designer)	2 hours	Intermediate
	A Library of Business Application Form Designs for XAML	1 to 2 hours	Intermediate
	Push the XAML List Box to the Limit	2 hours	Intermediate
	MVVM Made Easy	2 hours	Beginning
	Navigation Techniques for your WPF Applications	2 hours	Intermediate
	A Windows 8 Look and Feel for WPF	2 hours	Intermediate
<b>Service Oriented Architecture Programming</b>	Introduction to Windows Communication Foundation (WCF)	2 hours	Beginning
	Introduction to the Web API	2 hours	Beginning
	From Zero to a Service-Oriented Architecture (or Synchronous to Asynchronous Programming)	2 hours	Intermediate
	Create jQuery-callable WCF Services	2 hours	Intermediate
	Architecting Applications for Multiple User Interfaces	2 hours	Intermediate

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Category	Class Name	Duration	Level
<b>Windows Store Programming</b>	Getting Started with Windows 8 Store Apps	2 hours	Beginning
	Calling Web Services from your Windows Store XAML Apps	1 to 2 hours	Intermediate
	Architecting a Business Application for Windows 8 Windows Store	2 hours	Intermediate
<b>Project Management</b>	Best Practices for Requirements Gathering- User Stories to Specs: A Practical Approach	2 to 4 hours	Intermediate
	Best Practices for Estimating Projects- Taking the Guess Work out of Estimating	2 to 4 hours	Intermediate
	Project Manager's Survival Guide- 24 Things You Need to Know to Survive any Project	2 to 4 hours	Intermediate
	Best Practices for Agile Work Management- Waterfall is Dead: Move On	2 to 4 hours	Intermediate
	Introduction to SQL Server and Structured Query Language (SQL)	4 hours to 1 day	Beginning
<b>SQL Server Reporting Services</b>	Introduction to SQL Server Reporting Services	4 hours to 1 day	Beginning

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<b>Team Foundation Server</b>	Introduction to Team Foundation Server	1 to 2 hours	Beginning
	TFS Pre-Planning, Setup and Installation	2 hours	Beginning
	TFS Administration	2 hours	Beginning
	TFS and the Agile Development Process	4 hours	Beginning
	TFS and Testing	4 hours	Beginning

## .NET Framework Courses

### Fundamentals of C#

This course is for anyone who wants to learn how to become a C# programmer. C# is one of the most popular programming languages in the world today for the .NET platform. C# can create any type of .NET application just like any other .NET language. In this course you will learn the C# language. By the end of this course you will be able to create business applications using C#.

Learning Objectives:

- An overview of Visual Studio .NET
- An introduction to the C# language
- Object Oriented Programming principles
- Using Controls
- Event Programming Basics
- Variables and Operators
- Controlling flow using if statements and loops
- Creating classes with methods and properties

**Duration: 1 to 2 days**

**Level: Beginning**

### Fundamentals of Visual Basic

This course is for anyone who wants to learn how to become a Visual Basic programmer. Visual Basic is one of the most widely used programming languages in the world. It is also one of the easiest programming languages to learn, so it is a good choice as a first language. Visual Basic can create any type of .NET application just like any other .NET language. In this course you will learn the Visual Basic language.

By the end of this course you will have learned several very useful techniques that will allow you to create a simple Visual Basic application and have a good foundation on which to continue on with more advanced courses.

## Learning Objectives:

- An overview of Visual Basic
- An introduction to the Visual Basic language
- Object Oriented Programming principles
- Creating classes with methods and properties
- Creating Windows Presentation Foundation (WPF) User Interfaces
- Debugging and Exception Handling

**Duration: 1 to 2 days**

**Level: Beginning**

## Object Oriented Programming for Everyone

Are you still confused by Classes, Properties, Methods, Inheritance, Overloading, Events, Enumerations, "lions and tigers and bears oh my!" If so, then you need to attend this seminar where you will find the answers. You will learn a step-by-step approach on how to make your traditional applications more object-oriented. You will learn how to re-factor your code to be more reusable, more scalable and more maintainable. Find out why adopting a purely OOP approach to your application development will make your applications easier to test and debug.

**Duration: 4 hours to 1 day**

**Level: Beginning to Intermediate**

## What's New in Visual Studio 2013

Microsoft is constantly improving Visual Studio. In 2013 there are many new features. This seminar explores many of the features that you can utilize right away to increase your productivity.

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**Duration: 2-3 hours**

**Level: Anyone**

## What's New in .NET 4.5

C# and Visual Basic continue to get new features. Some are useful, some aren't. In this seminar you will see many of the new features and how they will help you develop applications quicker.

**Duration: 2-3 hours**

**Level: Anyone**

## Fundamentals of ADO.NET

This course is for anyone who wants to learn how to use ADO.NET to access data in databases. Throughout this course you will be introduced to the concepts of the data handling using the Microsoft .NET Framework. Emphasis will be on good programming standards and practices.

### Learning Objectives

- Using the Connection Class
- Using the Command Class
- Using DataSets
- Using DataTables
- Using Parameters
- Using Stored Procedures

**Duration: 4 hours**

**Level: Beginning to Intermediate**

## Creating Collections of Entity Classes

You know should be creating collections of objects instead of using a Data Reader, a DataSet or a DataTable in your applications. The reasons for using collections of objects

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are many. You get strong typing, IntelliSense, compile-time errors instead of runtime and many other reasons. You can use LINQ to SQL or the Entity Framework to generate code that creates these collections of objects for you. However, Microsoft loves to abandon technologies every other year, so if you know how to build your own object collections using technology that is tried and true, then you are not relying on Microsoft staying consistent. Using ADO.NET for data access and building classes with properties and methods has not changed since .NET 1.0. In this seminar you will learn to use a DataTable to fill a collection of objects. You will then see how to use a DataReader to fill the same collection of objects. You will also see how to use LINQ to iterate over a DataTable to build your entity collection. Finally, you will learn the use of nullable and non-nullable data types and finally see how to use reflection to fill your collections.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## Debugging Tips & Tricks

If you have not really dug into the VS.NET debugger, then this seminar is for you. You will explore all the various breakpoint, tracepoint, data tips, and the myriad features that this powerful debugger lets you use. You will see how to set conditional breakpoints, use the Debug and Trace objects, and learn the difference between the Watch window, locals and immediate window. Set breakpoints with hit counts, filters, conditions. See how to use data tips, visualizers, and make object ids. See when objects are about to be garbage collected. Learn how exception handling is a debugging aid.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## Tips and Tricks for Flexible Code

Creating applications that are flexible and maintainable means thinking about application development a little differently. You need to adopt good object-oriented techniques in order to create software that can truly adapt to a changing development environment. In this seminar you will see many examples of tips and tricks that will help you keep your

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software running for many years to come. You will see real-world examples of extension methods, faster reflection, string handling, generics, using XML, wrapper classes, dependency injection, configuration and exception management. You will walk away with a code that you can use in your applications right away.

**Duration: 2-4 Hours**

**Level: Intermediate / Advanced**

## The Basics of How to Unit Test your Code

Everyone knows that they should be writing unit tests for their applications, but how many of us really do it? In Visual Studio unit testing is an integrated part of the development environment. There is no longer any reason to avoid not doing test driven development and automated unit testing. In this session you will learn the basics of unit testing, how to run tests, and how to reduce the number of tests by taking advantage of data-driven tests. You will then see an example of how to architect your applications to make testing quicker and easier. At the end of this session you will walk away with the knowledge you need to start automating the testing of your applications.

**Duration: 2 Hours**

**Level: Intermediate**

## Professional Exception Management

Things happen! If they happen in your application will you know about it? Will your users really tell you that something went wrong? Even if they do, they are very bad about giving you good information about the environment they are running in. As such you need to develop a top-notch exception handling system that reports everything you need to know and have it send and/or record that information so you can look at it. In this seminar you will learn to create a provider-based exception management system that will allow you to record exceptions in the event log, in a text file, in a database table, and even have it send you an email. You will also learn to create a data-driven messaging system to display good informational messages to your users.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## LINQ to XML Makes Working with XML a Breeze

LINQ technology in .NET has some great hooks into XML that make using XML documents very easy. This seminar will explore how you will put this technology to work in your applications. Many XPath queries can be greatly simplified using the LINQ syntax. Besides the obvious advantages of using LINQ to iterate over XML data you can also use it to create and process XML documents. One great way you can use XML is in prototyping. This session will show you how to use LINQ to XML to read and write XML files. You will walk away with a template for creating data access classes for your XML files.

**Duration: 2 Hours**

**Level: Intermediate**

## Use XML Files! An Alternative to SQL

XML files are very common in today's programming world. You will most likely need to read files, write files and query XML within your applications. .NET provides a rich set of XML processing classes that you can use to perform all these functions. One great use of XML files is to cache validation table data on the client instead of constantly gathering this rather static table data from the server. This technique comes in very handy in WPF, Windows Store and Windows Phone applications. You can even use XML files to completely replace SQL in some applications. In this seminar you will learn how to perform complete read, add, edit and delete operations using LINQ to XML. You will also see a technique of how to keep your XML files up-to-date with any server changes. You will walk away confident that you can put these techniques into use in your applications immediately!

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**Duration: 2 Hours**

**Level: Intermediate**

## Real World Uses for Dependency Injection

Understanding Dependency Injection does not have to be hard. In this seminar you will learn to use DI using components you can put to use in your applications immediately. You will see how to create a flexible configuration management system, a messaging system that can be used for error messages and even localization, and an exception management system. You will walk away with a code that you can use in your applications right away.

**Duration: 3-4 Hours**

**Level: Intermediate / Advanced**

## Collections for Business Applications

Collections are fundamental to managing and binding data in a variety of scenarios across almost all user interface technologies available today. In this session, you will learn all about the common collection interfaces and classes available in .NET, such as lists, collections, dictionaries, hash tables, queues and stacks. You will learn how and when to use the features provided by the .NET System.Collections and System.Collections.Generic namespaces to build features in your business applications, including use of business object collections, sorting, filtering, lambda usage, and more!

**Duration: 2 Hours**

**Level: Intermediate**

## 15 Ways to Improve Your Business Applications Today

Every day, we work with customers to help them improve existing applications developed in .NET. In this session, you will learn 15 of the most common problems we see all the time in custom business applications, including issues such as weak security, inline constants, over-use of the DataSet class, lengthy or monolithic code, absence of configuration settings, poor type conversions and more. You will come away with the best

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practices you should be using to make your business applications performant, reusable, testable and secure.

**Duration: 2 Hours**

**Level: Intermediate**

## Developing a Windows Service Framework

Windows services are hard to build and test, right? Wrong! Windows service applications allow you to run programs on a machine in the background without a user interface, which is useful for long-running processes, automated tasks or hosting WCF services. In this session, you will learn how to develop a reusable framework for designing and deploying windows service applications that makes it easy to design, test and deploy windows services.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## Effective Patterns for Business Rules and Validation

Every application uses validation and business rules, but not every application takes advantage of the most effective approaches to implementing business requirements. In this session, you will learn how to design business rule and validation strategies using effective design patterns that enable your applications to be testable, flexible and easier to maintain.

**Duration: 2 Hours**

**Level: Intermediate**

## Application Block Architecture

All applications use core services such as logging, authentication and exception handling. Today, there are two common approaches to building application architecture to implement these common services: the provider model and dependency injection. In this session, you will learn the benefits and drawbacks of each of these approaches, which

approach is suited to your environment and how you can implement these in your application.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## Effective Patterns for Lookup Tables

Nearly all business applications use database lookup tables for foreign key values on attributes like “customer status” or “country code”. In this session, you will learn the advantages and disadvantages of different approaches to using lookup table values, how to provide generic access to lookup tables in your .NET code, and how to avoid hard-coding foreign key values when writing business rules by using a few simple design patterns.

**Duration: 2 Hours**

**Level: Intermediate**

## Serialization in .NET

A lot of work in .NET gets done by converting objects into other formats in order to store (or transmit) the values and then convert back into an object later on. This is known as serialization and deserialization of object state. In this session, you will learn the options available for serialization, formatting and deserialization of objects in .NET, using in order to create SOAP, binary, JSON and XML representations of object state, and how you can customize objects to control what information is serialized and how it is restored.

Takeaways: An understanding of the options for serialization and deserialization, and how to control the formatting of serialized objects using features in the System.Runtime.Serialization and System.Xml.Serialization namespace in .NET.

**Duration: 2 Hours**

**Level: Intermediate / Advanced**

## Web Programming Courses

### Fundamentals of ASP.NET Web Forms

This course is for anyone that wants to learn how to use ASP.NET Web Forms to build business web applications. You will learn the concepts of web site creation using Web Forms and C#. Emphasis will be on good programming standards and practices.

**Duration: 1 day**

**Level: Beginning**

### Fundamentals of ASP.NET MVC

This course is for anyone that wants to learn how to use ASP.NET MVC to build web applications. You will learn the concepts of web site creation using MVC and C#. Emphasis will be on good programming standards and practices.

**Duration: 4 hours**

**Level: Beginning**

### Fundamentals of ASP.NET Security

Learn how to use the ASP.NET security features like the membership system and the security controls. This seminar will show you step-by-step how to use the security controls and classes within ASP.NET. Learn how to create users, setup roles, add a login page, view who is logged in, and how to keep track of who is logged into your application.

**Duration: 4 hours to 1 day**

**Level: Intermediate / Advanced**

### MVVM for Web Forms Made Easy

There are way too many overly complex Model View Model (MVVM) design patterns and libraries in the development world. How is a programmer that is new to the model-view approach to ever learn how to use MVVM quickly and easily? This session will guide you

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step-by-step on how to take advantage of this powerful design pattern. You will not have to learn any of the MVVM libraries; instead you will see how to use your own classes to implement MVVM. The main goal of MVVM is to help you develop code that is testable and re-usable. Both goals are accomplished with a simple approach to MVVM. You will walk away with some great base classes that will help you incorporate MVVM into your web applications.

**Duration: 2 hours**

**Level: Intermediate / Advanced**

## Web Forms Are Not Dead

You have a large investment in Web Forms. Everyone says you should be using MVC now, but why? There is no need to move to MVC to develop today's modern web applications. You can use Web Forms to develop the same web applications you build with MVC. You can have mobile aware sites using bootstrap, HTML 5, CSS 3 and media queries. You can even have friendly URLs, control over the rendered HTML, less View State, unit testing, integration with JavaScript frameworks and even separation of concerns. This seminar will show you how to keep your current investment in Web Forms and your knowledge of web applications yet still create modern web sites.

**Duration: 2 to 4 hours**

**Level: Intermediate**

## Choosing Between ASP.NET Web Forms and ASP.NET MVC

Microsoft provides two great approaches to developing web applications: ASP.NET Web Forms and ASP.NET MVC. In this session, you will learn the advantages and disadvantages of using ASP.NET Web Forms or ASP.NET MVC for different application scenarios, as well as what both approaches have in common. In addition, you will get an overview of how to architect web applications to minimize these differences. Whether you are new to ASP.NET development, or have been developing web applications for a while, this session will help you decide which approach to use on your next project.

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**Duration: 2 hours**

**Level: Intermediate**

## Building Business Applications in ASP.NET MVC

In this session, you will learn the alternatives available for building a line of business web application using ASP.NET MVC and see a working sample of a time tracking business application built on the ASP.NET MVC platform.

Takeaways: An understanding of the challenges inherent in developing business applications in ASP.NET MVC as well as approaches and alternatives for building applications on this platform.

**Duration: 2 hours**

**Level: Intermediate**

## Learning HTML 5

Most of the samples for HTML 5 on the internet are for web site designers. However, you are a business programmer and you need to learn to create business, data-entry forms. This seminar will focus on HTML 5 for the business application programmer. Learn the new keywords and the new attributes that make HTML 5 a great addition to your web applications. This session teaches you the basics of HTML 5 focusing on form layout for business applications. You will learn how to use styles and attempt to make HTML 5 generic across the widest possible collection of browsers that are out there. You will walk away with a set of samples that you can use to build your own HTML 5 web forms.

**Duration: 3 to 4 hours**

**Level: Beginning**

## Introduction to CSS and CSS 3

Want to make your HTML 5 efficient and easy to maintain? Cascading Styles Sheets (CSS) are the answer. Many developers use an HTML Table structure to layout their data input pages. While this works it is not the most efficient, and not very flexible. Learn how to use

CSS3 to build input pages that can change without modifying every page and every table in your HTML pages. Learn the new HTML 5 CSS3 tags and how to create cross-browser support for your HTML 5 pages. This seminar will serve as introduction to CSS3 for programmer's that have had little or no experience with CSS. Many of the new CSS3 rules and properties such as transform, transitions, resize and column counts are covered.

**Duration: 2 to 3 hours**

**Level: Beginning**

## Spice up your HTML 5 Applications UI

Most programmers are not artists; but you do not to be in order for your HTML 5 applications to look professional. Just a few little touches such as the use of appropriate styles, color gradients, pictures, animation and a few other UI design tips and your application will look great! This seminar will present you with a collection of tips that will spice up your HTML 5 applications in no time at all. The best thing is you can do all of these in Visual Studio; no need to learn an artist's tool such as PhotoShop or Microsoft Expression Web. You will learn to create a library of re-usable styles, colors, gradients, color palettes, descriptive buttons and many other techniques that will take your applications from drab to fab! You will walk away with a set of styles and resources that you can put to use in your applications immediately!

**Duration: 2 hours**

**Level: Intermediate**

## Bootstrap 101 - Creating Mobile Web Sites

Developing websites that are responsive to different size devices is easy when you use the right tools. Twitter's bootstrap is the tool of choice these days. Not only is it free, but also has many free themes that allow you to modify the look and feel in a flash. Learning bootstrap is pretty easy with the resources available on the web, however, having someone walk you through the basics step-by-step will greatly increase your learning. This seminar assumes you know little or nothing about bootstrap, but you want to learn how to create great looking websites that work on a desktop, tablet or smart phone.

**Duration: 4 hours**

**Level: Beginning**

## Bootstrap: Building Navigation Systems

Creating navigation for your application is easy with Bootstrap. They have built-in horizontal navigation systems. You can also use their tabs and accordions to build navigation. While not built-in, you can also create your own sidebar navigation with just a little CSS and jQuery to make it responsive.

**Duration: 2 hours**

**Level: Intermediate**

## Bootstrap: Building Business Web Pages

In this seminar you will see how to build several standard business pages such as a Member Log In, Forgot Password, Member Sign Up, About, Contact Us, Address, Member Profile, Credit Card, and many others. We will use bootstrap, HTML 5, CSS 3 and other tools to create these. You learn each tool and different UI techniques to give your customers the best look and feel on different devices from PCs to tablets to smart phones.

**Duration: 2 hours**

**Level: Intermediate**

## Desktop Programming Courses

### Getting Started with WPF and XAML

Confused about how to get started using WPF, Windows Phone and Windows 8 Store applications? Have you attended XAML sessions only to find out that they are doing all this graphics stuff and you need to write a business application? This seminar will focus on XAML for the business application programmer. This session teaches you the basics of XAML focusing on form layout for business applications. You will learn how to use styles and the basics of data binding.

**Duration: 2 to 4 hours**

**Level: Beginning**

### XAML Styles, Resources and Templates, Oh My!

This seminar teaches you how to effectively use styles in your XAML applications. You will learn the basics of styles, how to override styles, base styles on other styles, create resource dictionaries and override control templates. Resource dictionaries and styles can be loaded dynamically, placed into DLLs, or right in your main application. You will learn the best practices around how to manage your resource dictionaries. Being able to change the look and feel of the default controls can go a long way in giving your users a great UI. You will learn to modify controls by changing their default template. You will walk away with a set of styles and resource dictionaries that you can use in your XAML applications.

**Duration: 2 hours**

**Level: Beginning**

### Eliminate Code using Data Binding in XAML

Data Binding in XAML is much more than just binding to data in a database. You will learn various methods of using data binding including binding one control to another control, binding to properties in your classes, and having XAML create classes for you. You will learn how to set global settings like font size, colors and other configuration data through easy to use classes. You will also see how to bind to data classes in your back end database

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as well. This session will show you step-by-step how to build a WCF Service to retrieve data from a SQL Server database and display it in a typical business form. You will see a real world example of an Add, Edit, Delete screen in WPF and Windows Store using a WCF Service and Entity classes. You will walk away with some useful classes that you can utilize in your own applications.

**Duration: 2 hours**

**Level: Beginning**

## Design Tips to Spice up Your XAML Apps (Even if you are not a designer!)

Most programmers are not artists; but you do not to be in order for your applications to look professional. Just a few little touches such as styles, color gradients, pictures, animation and a few other XAML “magic” tricks and your application can look great! This seminar will present you with a collection of tips that will spice up your WPF and Windows Store applications in no time at all. The best thing is you can do all of these in Visual Studio; no need to learn Expression Blend! You will be shown some great re-usable styles, colors, mirror reflections, gradients, a sample menu system and other XAML techniques that will take your XAML applications from drab to fab! You will walk away with a set of styles and resources that you can put to use in your applications immediately!

**Duration: 2 hours**

**Level: Intermediate**

## A Library of Business Application Form Designs for XAML

There are a many common problems that you need to solve in any business application. In this seminar you will see examples of many different versions of About, Login, Contact Us, Address, Person, Credit Card, Licensing, Add/Edit/Delete and many others. You will learn how to create these forms and even some of the code behind to make them work! Good UI design and user-friendly techniques will be the focus of each of the screens. Some will be familiar, but you may find a gem or two that you had not thought of before. You will walk

away with a ton of sample forms in your XAML that you can put to use in your applications immediately!

**Duration: 1 to 2 hours**

**Level: Intermediate**

## Push the XAML List Box to the Limit

The List Box control in XAML is extremely powerful. In fact after you see all the things you can do with the List Box you will probably use it more than any other list-type control. In this seminar you will see how to present multiple columns, multiple lines per row, make the list box horizontal, display images, even perform sorting and grouping all with just a little bit of XAML and code. All of this and more is available with this powerful control. Switching templates to display two different sets of information in the same list box and using value converters to format data can really spice up your XAML applications. All of these techniques and more are taught in this fun and informative session. You will walk away with some great reusable code that will be of use to you right away.

**Duration: 2 hours**

**Level: Intermediate**

## MVVM Made Easy

There are way too many overly complex Model View Model (MVVM) design patterns and libraries in the development world. How is a programmer that is new to WPF, Windows Store or Windows Phone to ever learn how to use MVVM quickly and easily? This session will guide you step-by-step on how to take advantage of this powerful design pattern. You will not have to learn any of the MVVM libraries; instead you will see how to use your own classes to implement MVVM. The main goal of MVVM is to help you develop code that is testable and re-usable, and this can be accomplished by just using a simple approach to MVVM. You will walk away with some great base classes that will help you incorporate MVVM into your XAML applications.

**Duration: 2 hours**

**Level: Beginning**

## Navigation Techniques for your WPF Applications

WPF does not offer a wide variety of built-in ways to navigate through your business application. However with just a little bit of creativity and code you can create a variety of navigational scenarios. In this session you will learn what is built into VS.NET, what is available on the web and how to create some of your own navigations that can be used in a variety of application scenarios. A unique, data-driven approach to a menu system are taught using XML and XAML together in a reusable user control. You will also see how to use animation and converter classes to create some interesting navigational effects. You will walk away with a set of re-usable navigation components that you can use right away in your production applications.

**Duration: 2 hours**

**Level: Intermediate**

## A Windows 8 Look and Feel for WPF

Many people will not be able to upgrade to Windows 8 right away for various reasons. However, there is nothing to stop you from designing your XAML applications to have a similar look and feel. In this seminar you will learn how to create a Windows 8 style shell in XAML. You will learn to create user controls for buttons, a communication system, and a set of “Tiles” you can use to launch features of your application. These features can be built in the current version of Visual Studio without running Windows 8.

**Duration: 2 hours**

**Level: Intermediate**

## Service Oriented Architecture Programming Courses

### Introduction to Windows Communication Foundation (WCF)

Learning WCF can be a little daunting, however it is increasingly necessary to learn this important technology. It is a vital part of any WPF, Windows Store or Windows Phone application. This seminar will make it very easy for you to learn the fundamentals of WCF. You will see a 2-tier application converted into a multi-tier, WCF application. Each step will be explained as to the how and why you need to do that step. You will learn where you should, and where you should not, use WCF in your applications.

**Duration: 2 hours**

**Level: Beginning**

### Introduction to the Web API

A new way to create web services was introduced a few years ago in the form of the ASP.NET Web API. This is a lightweight type of web services that use HTTP and JSON primarily for communication. This seminar will introduce you to how to create web services using the Web API.

**Duration: 2 hours**

**Level: Beginning**

**Available: 2<sup>nd</sup> Quarter of 2015**

### From Zero to a Service-Oriented Architecture (or Synchronous to Asynchronous Programming)

Your boss has asked you to recreate your ASP.NET or Desktop application as a Windows Store, WPF or Windows Phone application. However you know you now need to use a web service to accomplish this. How do you take your existing 2-tier application and convert it to a service-oriented architecture? This session will present a step-by-step approach to converting a 2-tier application into a WCF service application. You will learn the steps you take and see why you want to take advantage of this powerful architecture. Each step is

explained as to the how and why you need to do that step. You learn where you should, and where you should not, use WCF in your applications. At the end of this session you will have the steps you need to migrate your existing applications to an asynchronous, service-oriented architecture.

**Duration: 2 hours**

**Level: Intermediate**

## Create jQuery-callable WCF Services

If you are like many developers, you are using Windows Communication Foundation to provide services to Windows Form, WPF, Web Forms, MVC, and possibly Windows Store applications. Now your boss is asking you to develop some mobile applications using HTML 5 and jQuery. You know you can reuse many of your WCF services, but you are having trouble calling them from jQuery without breaking your existing applications. In this seminar you will be shown the steps for taking a sample WCF service from working just for .NET applications to working with jQuery as well. Don't worry, your existing applications will still work with the changes you are going to make.

**Duration: 2 hours**

**Level: Intermediate**

## Architecting Applications for Multiple User Interfaces

The techniques for building applications have changed dramatically in the last few years. Gone are the days of single-tier, battle-ship gray, boring user interfaces. Users demand that your applications (or portions) run on more than one device. This session will take you on a tour of how you should be architecting your application by breaking it up into services. You will learn how to create your business rules and data layer as a service. This seminar will assume you have some knowledge of .NET but have been developing applications the old way and you are now looking to see how to use WCF and the Model-View-View-Model (MVVM) design pattern to create applications that can be run on one more than one user interface platform. This session has many demonstrations and you will be led step-by-step

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through the code. You will walk away with a sample set of services that run on Windows Forms, WPF, Windows Stored, Windows Phone, Web Forms and MVC applications.

**Duration: 2 hours**

**Level: Intermediate**

## Windows Store Programming Courses

### Getting Started with Window 8 Store Apps

Confused about how to get started using the XAML in Windows 8? Have you attended XAML sessions only to find out that they are doing all this graphics stuff and you need to write a business app? This seminar will focus on XAML for the business application programmer. This session teaches you the basics of XAML focusing on form layout for business applications. You will learn how to use styles and the basics of data binding.

**Duration: 2 hours**

**Level: Beginning**

### Calling Web Services from your Window Store XAML Apps

In order to get data to your Window Store application you will need to build a set of web services. You will see how to select, add, edit and delete data from a Window Store XAML application using a WCF service. A typical Window Store app will be shown which you can use as the basis for your Window Store business applications. You will be given step-by-step instructions on how to build the sample, and you will get the sample application at the end of this presentation.

**Duration: 1 to 2 hours**

**Level: Intermediate**

### Architecting a Business Application for Windows 8 Window Store

Managers and executives quite often want to see a dashboard type of application to give them insight into the business. They wish to look at this data on many different platforms; their phone, their tablet, their PC. How can you develop a set of services that are reusable across each of these platforms? This seminar will show you how to architect the services you need that can be re-used across many different platforms. You will first be shown how to use these services from a Windows Store XAML application, then you will see how to consume the same services from Windows Forms, WPF, Windows Store, Windows Phone and even ASP.NET. A real-world business application is used to illustrate the concepts and

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you will be taken through how this application was created. You will walk away from this seminar with some reusable classes and a great sample that will give you a great head start on building your own business application for Window Store XAML and other platforms.

**Duration: 2 hours**

**Level: Intermediate**

## Project Management Courses

### Best Practices for Requirements Gathering - User Stories to Specs: A Practical Approach

Have you wondered why your applications just don't seem to match your customer's expectations? How do you manage the 'moving target' of requirements? Learn key, common sense, concepts to provide an improved foundation to your skill set. Today's economic conditions have helped drive the need for new tools and methods for requirements gathering. Discover approaches to matching requirements and customer's expectations. Understand the intricacies of balancing scope, schedule and budget. Learn how to balance the need for rigor and the need for speed and efficiency in gathering your requirements. Grasp how to embrace uncertainty that is inherent and inevitable in software development projects. These best practices presented to you will enable you to leverage what you learned at your first day back at the office.

Learning Objectives:

1. Why having a process by which you gather requirements is important.
2. Learn specific techniques and tools to support/augment your requirements gathering process.
3. Realize what agile requirements gathering is and is not.
4. Understand the project triangle dilemma: scope, cost, and schedule.
5. Learn what screen mock-ups, business rules and database entities can in common.

**Duration: 2 to 4 hours**

**Level: Intermediate**

### Best Practices for Estimating Projects - Taking the Guess Work out of Estimating

Are you afraid of making estimates? You are not alone! Do you know why making quality estimates AND tracking actuals is so important? Can you really estimate how long a football game will be? Learn the importance of accurate estimating and how that skill will

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help you define and manage your customer's expectations. Discover the difference between 'ideal time' and 'elapsed time' and why your estimates need to encompass both. Join others in learning the anatomy of an estimate and learn techniques to make your life easier. Come learn some great tips you can begin using your first day back on the job.

Learning Objectives:

1. Learn key and critical benefits on why you should develop your estimation skills.
2. Understand why tracking your time against your estimates greatly improves your project's key performance metrics.
3. Discover why improved estimation skills can be leveraged to increase customer satisfaction and expectations.
4. Padding estimates is addictive: learn how to avoid it.
5. Ideal time and elapsed time: know the difference and learn how to manage each.

**Duration: 2 to 4 hours**

**Level: Intermediate**

## Project Manager's Survival Guide - 24 Things You Need to Know to Survive any Project

Are you having difficulty managing your projects? Are you about to enter the uncharted territory of project management? Do you know how to communicate effectively to your customer, teammates, and your management? Come early, sit close and get some common sense, experienced based tips and pointers on how to improve your soft skills. Discover how to find the 'right' people for your team. Learn the practical elements of working with customers, people, technology, process, and "connecting" them successfully to be more effective at your job. You will leave with demonstrable actions that you can apply at your next day back at work.

Learning Objectives:

1. Learn why 'customer service' is the business you are really in.

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2. Understand why a 'Project Definition' is key to set customer's expectations and running a project.
3. Appreciate why people and trust are important for your success.
4. Realize why poor estimation and unstable requirements will lead to a project's failure.
5. Send informative and readable emails using the 5 C's of communication.
6. Discover how 'not' to run a meeting.

**Duration: 2 to 4 hours**

**Level: Intermediate**

## Best Practices for Agile Work Management - Waterfall is Dead: Move On!

In today's world, the success of your career is hinged on the ability to adapt to your environment. What is the 'Agile Manifesto' and how should it guide my projects? The process of developing software has evolved over the years. Learn how sprints, time boxing and stand ups can improve quality and productivity.

Learning Objectives:

1. Learn what the 'Agile Manifesto' is and why it is important.
2. Discover how to manage unpredictability through sprints.
3. Understand the basics of an Agile Project Lifecycle.
4. Increase work team productivity with time boxing and stand-ups.
5. Learn who owns the 'product backlog' and how it gets worked.

**Duration: 2 to 4 hours**

**Level: Intermediate**

## SQL Server Courses

We offer a single course on learning SQL Server and SQL. Most of our “SQL training” is done during our mentoring. We find people learn more intermediate to advanced topics in SQL better on their own databases.

### Introduction to SQL Server and Structured Query Language (SQL)

SQL Server is one of the premier database systems on the market today. You will find this tool to be an excellent choice for both departmental and enterprise applications. When you find that your current database system is giving you performance problems, or you are having issues with too many users overwriting each other’s data, or you need better security over your data, then it is most likely time to move to a professional database system that has been proven over many years to solve these issues.

Learning Objectives:

- Overview of Features in SQL Server
- How to Create a Database
- Data Types and Creating Tables
- Creating Indexes
- Creating Constraints
- Retrieving Data
- Advanced Retrieval Techniques
- Joining Tables
- Data Modification (INSERT, UPDATE, DELETE)
- System Functions
- Stored Procedures
- Triggers
- Views

**Duration: 4 hours to 1 day**

**Level: Beginning**

## SQL Server Reporting Services Courses

We offer a single course on learning SQL Server Reporting Services. Most of our “Report building training” is done during our mentoring. We find people learn more intermediate to advanced topics in report building better when using their own databases.

### Introduction to SQL Server Reporting Services

This course is designed as an introduction for anyone who wants to learn how to design, deploy and integrate reports using SQL Server 2008 R2 Reporting Services, the .NET Framework and any type of .NET application. Reporting is a key component of every business application, and every developer should know how to create reports, integrate those reports into a .NET application and manage existing reports. SQL Server 2008 R2 Reporting Services is an excellent platform for meeting a wide variety of reporting needs. The purpose of this course is to show the student how to create and manage reports used with real-world business applications.

#### Learning Objectives:

By the end of this course, you will have learned the basics of how to design, test, deploy and manage reports. In addition you will learn to integrate your reports into .NET applications. You will learn the following:

- How to install & configure Reporting Services for development
- How to create, design and deploy reports
- How to design reports to take advantage of advanced features
- How to use report server URL access
- How to use the Web Forms report viewer
- How to use the Windows Forms report viewer
- How to use the Reporting Services web service
- How to administer Reporting Services

**Duration: 4 hours to 1 day**

**Level: Beginning**

## Team Foundation Server Courses

### Introduction to Team Foundation Server

Team Foundation Server (TFS) is an excellent source control system, but has many features as well. This seminar will provide an overview of the features that can help you become productive with this powerful tool right away.

**Duration: 1 to 2 hours**

**Level: Beginning**

### TFS Pre-Planning, Setup and Installation

This seminar will help you determine the installation type you wish to use, the accounts you need to setup and the pre-requisites that you need to install. You will then learn to install and configure your TFS installation.

**Duration: 2 hours**

**Level: Beginning**

### TFS Administration

You need to learn how to administer your TFS system and how to manage projects, security and backup. In addition you will learn how to setup and administer the clients for your TFS. This seminar will show you step-by-step how to perform each of these tasks.

**Duration: 2 hours**

**Level: Beginning**

### TFS and the Agile Development Process

You can work with TFS from within Visual Studio. You will learn the different Application Lifecycle Management (ALM) templates you can choose and what each one is best for. You will learn how to setup team projects and how to configure projects to work with the ALM and security. Once you have your projects configured you will now learn to use the Version

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Control system including parallel development, branching and merging. You will also learn the basics of using an Agile process for managing change and quality of your code.

**Duration: 4 hours**

**Level: Beginning**

## TFS and Testing

There are a whole suite of tools built into TFS for testing your application. This includes unit tests, code analysis, metrics, and profiling. Through the use of good test case management, manual and coded UI tests and performance and load tests you can ensure that the code you write is of good quality. You will also learn to create automated builds and tests that can run each night and inform you the next day of any issues to correct.

**Duration: 4 hours**

**Level: Beginning**

## Step 3: Integration of Development Training

After your staff has been through the training you want them to put what they learned into practice. Every project manager and developer will need some additional help now and then on how best to implement the techniques learned in their projects. Whether it is just a simple bug they just can't get past, or they need to learn a new technology. Let PDSA's team of experts be their resource.

### A Just-In-Time Business Partner...

PDSA is in the business of helping your IT staff be successful. For over 23 years we have trained and mentored literally thousands of developers, project managers and CIOs just like you. Our one-on-one sessions can be conducted either in person or via WebEx. We are available at your convenience.

### Developer Mentoring Services

The list below is representative of the kinds of mentoring we offer. If you don't see one that you need, just ask.

- Visual Studio / .NET
- C# / Visual Basic
- JavaScript / jQuery/ jQuery Mobile
- WPF / MVC / Web Forms
- WCF / Web API / SOA
- HTML / HTML 5 / Bootstrap
- CSS / CSS 3
- Regular Expressions / RegX
- XML / JSON
- SQL Server
- SQL Server Reporting Services
- Team Foundation Server (TFS)
- Web Development
- MVVM, SaaS

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- Security
- Architecture
- Unit Testing

## CIO/CTO/Project Manager Mentoring Services

We can work with your CIO, CTO and/or project managers to help embrace new methodologies and find what works best for your organization.

- IT Strategic Planning
- Team Management
- Agile / Scrum
- Requirements Gathering and Analysis
- Prototyping
- Estimating
- Architecture / Design

## Your Personal Training Engagement

All classes can be done either as a lecture or hands-on.

We supply a qualified instructor and sample code for each class. Some classes come with a workbook (PDF format) and hands-on exercises.

We have a half-day minimum for all training engagements.

A day of training is 6 to 7 hours.

### Training Levels

We assume that all students are familiar with the basics of programming. We assign different levels based on what is being taught in the seminar.

**Beginning** = A junior level programmer or developer with little or no experience with the topic.

**Intermediate** = A mid to senior-level developer with good knowledge of the underlying fundamentals of what is being presented, but is new to the topic.

**Advanced** = A senior-level developer with a good knowledge of the topic. This course will present more advanced concepts.

### Travel Costs

Travel costs to your location is extra. We do not charge travel within Orange County CA. We can provide fixed travel costs to any destination.

### Remote Training

Any of these course can taught remotely via WebEx.

### Pricing

Please call us for pricing at (714) 734-9792 and ask for David Lefort or Michael Krasowski.

## Contact Information

For more information on any of our training courses, please contact either David Lefort or Michael Krasowski at PDSA.

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