WHAT'S NEW IN VISUAL STUDIO 2013

David E. Manske

AGENDA

- David Manske and Centare
- Getting Started and Environment Dependencies
- Demos, Examples, and Samples
- Questions — don't hold 'em, you'll forget 'em.

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Inc.5000 · Fastest Growing Firms · Top Workplaces 2012 · Milwaukee-Wisconsin Journal Sentinel

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Coach & Trainer,
Co-creator of BDD

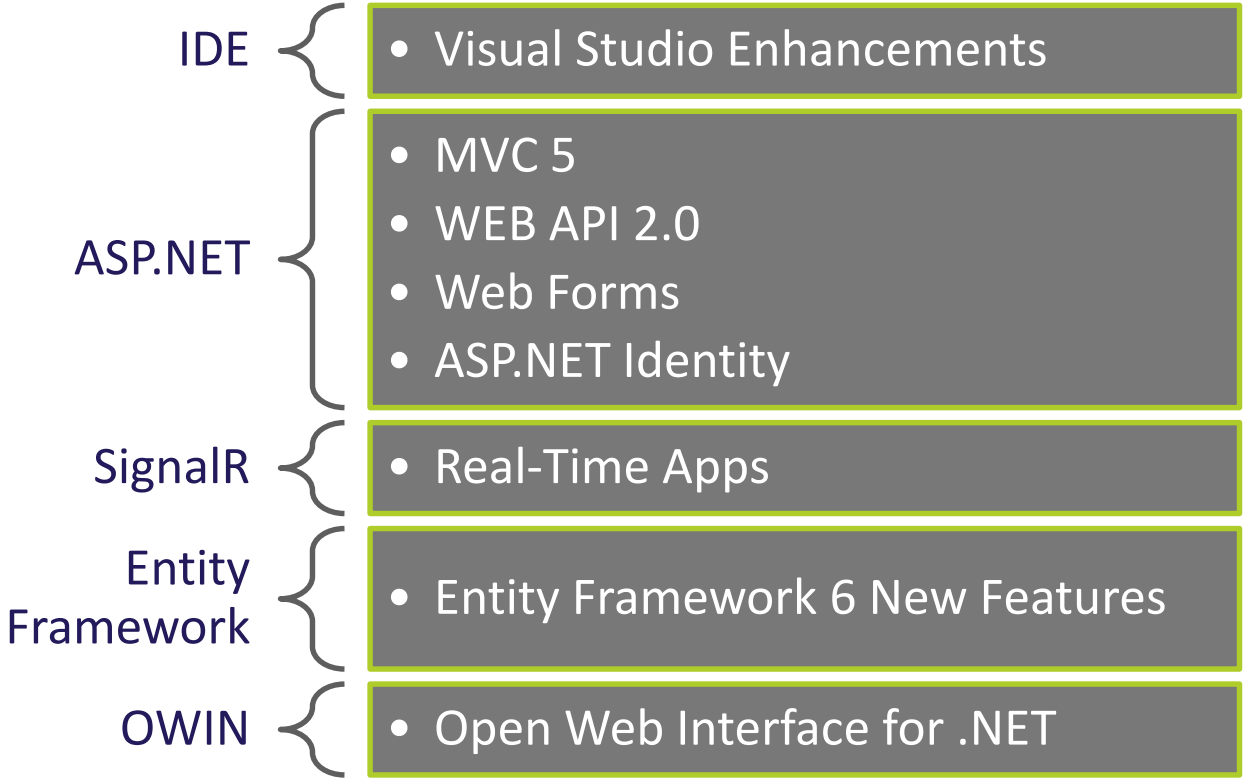
Venkatesh Rao
Author & Owner,
Ribbonfarm Consulting

GETTING STARTED

Environment Dependencies

VISUAL STUDIO 2013

- Visual Studio 2013
  - Ultimate, Premium, Pro
  - Edition's Comparisons at http://bit.ly/1bTj1d3
- Web Essentials for Visual Studio 2013
  - http://bit.ly/14GiDI2
- SideWaffle File Templates
  - http://bit.ly/1fJiX1g

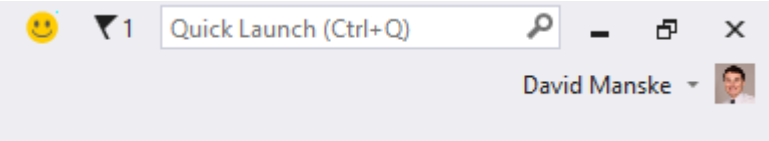

IDE
• Visual Studio Enhancements
ASP.NET
• MVC 5
• WEB API 2.0
• Web Forms
• ASP.NET Identity
SignalR
• Real-Time Apps
Entity Framework
• Entity Framework 6 New Features
OWIN
• Open Web Interface for .NET

DEMO

Let's just jump in...

LOGIN TO THE IDE

- Sign-In to the IDE to save your Visual Studio Preferences, Editor Changes, and other Shortcut Keys/Macros.
  - Appearance, Aliases, Keyboard Shortcuts, Startup, Text Editor



Quick Launch: sync

THEMES

- Light, Dark and Blue (very subtle differences)
  - support for high-resolution (retina) displays
  - more colors added to icons in the toolbar and explorer panels
  - minor color changes within tabs and various other panels
    - ** not very noticeable

Quick Launch: theme

ASYNC EVERYWHERE

- Improved performance for loading large, numerous project solutions
- Cancelable builds
- Async ASP.NET Identity Manager
- Async Entity Framework 6

NEW ASP.NET MVC 5 CHANGES

- Unified ASP.NET
  - MVC, Web Forms, Web API. (SignalR next?)
- Bootstrap Theme 3, out of the box!
- Updated Account Controller (UserManager)
  - In the Preview of 2013, it was AuthenticationIdentityManager and IdentityStore classes. UserManager enhancements in RC.
- Async Everywhere.

PREVIEW MAP FOR SCROLLING

- Preview Map for scrolling through code on the scroll bar and a quick preview.

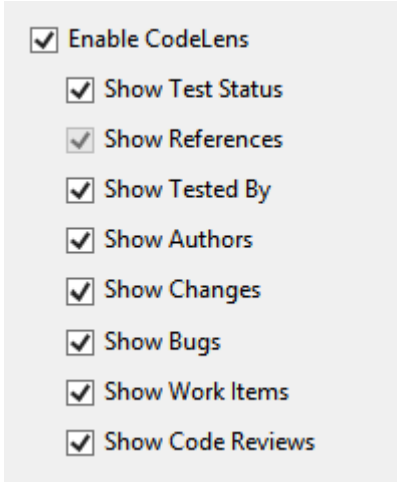
Quick Launch: scroll

GO TO VS. PEEK DEFINITION

- The traditional Go-To-Definition action derails the user from their current context within the file.
- Peek Definition gives the developer a preview of the inquired class/type. (Check out the Preview of a Preview)

CODE LENSES

- Show Recent Test Status (Pass/Fail)
- Show Tests that involve the object/method
- Show References to the method/class/type
- Show Code Authors and Check-in Comments
  - Quick access to view change sets and diff



Quick Launch: codelens

NEW HTML EDITOR

- Totally revamped HTML editor. The old one had legacy front-page extensions that ~~made~~ forced it be slow.
- Added further intellisense for CSS/JavaScript and HTML5 tags.

ZEN CODING

- You may never use this, but it's cool.

Example.

- div
- div>p>strong
- div>h1>p>strong
- div>h1+h2+h3
- lorem
- lorem*5
- lorem3
- ul>li*5>{item number $$$}

div.container>h1>lorem5^+h2>lorem5^+h3>lorem5^+h4>lorem5^+h5>lorem5^+h6>lorem5^+p>lorem^+ul>li*5>lorem3^^+ol>li*5>lorem3^^label>{text}^+input[type="text"]+label>{date}^+input[type="date"]+label>{email}^+input[type="email"]+label>{textarea}^+textarea+input[type="checkbox"]+input[type="checkbox"]+input[type="checkbox"]

ZEN CODING CHEAT SHEET

#
- Creates an id attribute

.
- Creates a class attribute

[]
- Creates a custom attribute

>
- Creates a child element

+
- Creates a sibling element

^
- Climbs up in the tree

***x**
- Multiplied x times

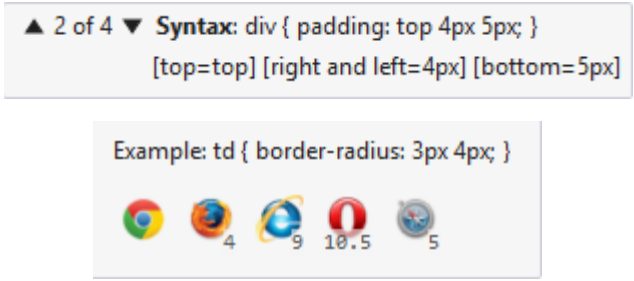
$
- Replace by increment number

$$ or $$$ or $$$$
- Creates an auto increment number with fillers (001, 002)

{}
- Creates a text element

CSS INTELLISENSE AND LESS

- CSS Intellisense
  - Method Overrides
  - Browser Support and Version
- LESS Support
  - Support for pre-compiling, minifying and bundling.
  - http://bit.ly/16aA0bH



ANGULARJS AND COFFEESCRIPT

- AngularJS Intellisense
  - Nested intellisense options
  - SideWaffle Templates

- Coffee Script JavaScript
  - Compiles into native JavaScript
  - Example Compiling

MVC SCAFFOLDING

- New ASP.NET MVC Scaffolding
  - Make your own T4 templates
  - Views based on Twitter Bootstrap
- Create your own Scaffold Template
  - C:\Program Files (x86)\Microsoft Visual Studio 12.0\Common7\IDE\Extensions\Microsoft\Web\Mvc\Scaffolding\Templates

ASP.NET IDENTITY

- ASP.NET Projects support many Auth Types including AzureAD
- Claims-based authentication
  - Support for token based Authentication with Twitter, Facebook, Google, Microsoft or ADFS
- OWIN based, again.

WEB API 2.0

- Support for OWIN Hosting
- Attribute Routing
  - Multiple Actions that respond to the Same Verb
    - [Route("auth/something")]
  - Versioning
    - [Route("api/v1/orders")]
    - [Route("api/v2/orders")]
  - Inline Constraints (continued next)

Inline Constraints

- Ex. [Route("orders/{id:int}")]

Constraint Key	Description	Example
bool	Matches a Boolean value	{x:bool}
datetime	Matches a DateTime value	{x:datetime}
decimal	Matches a Decimal value	{x:decimal}
double	Matches a 64-bit floating point value	{x:double}
float	Matches a 32-bit floating point value	{x:float}
guid	Matches a GUID value	{x:guid}
int	Matches a 32-bit integer value	{x:int}
long	Matches a 64-bit integer value	{x:long}
minlength	Matches a string with the specified minimum length	{x:minlength(4)}
maxlength	Matches a string with the specified maximum length	{x:maxlength(8)}
length	Matches a string with the specified length or within the specified range of lengths	{x:length(6)}, {x:length(4,8)}
min	Matches an integer with the specified minimum value	{x:min(100)}
max	Matches an integer with the specified maximum value	{x:max(200)}
range	Matches an integer within the specified range of values	{x:range(100,200)}
alpha	Matches English uppercase or lowercase alphabet characters	{x:alpha}
regex	Matches the specified regular expression	{x:regex(^\d{3}-\d{3}-\d{4}$)}

ENTITY FRAMEWORK 6

- Async Query and Save
- Testing improvements for the DbContext and DbSet
- CodeFirst mapping to Insert/Update/Delete Stored Procedures
- Lots of other changes and community contributed improvements
  - Full List of Changes http://bit.ly/1eSd7Nv

```
Update-Database -Script -SourceMigration $InitialDatabase
```

SIGNALR 2.0

- OWIN – the Open Web Interface for .NET
  - Katana framework
- Cross-Domain Support (CORS)
  - Support for CORS in addition to existing JSONP
- Easier unit testing of hubs

GETTING STARTED – SIGNALR

- New ASP.NET Project -> MVC
  - nuget install-package signalr
  - Startup.cs add app.MapSignalR();
  - Add -> New Item SignalR v2 Hub
    - "ExampleHub"
  - Change Hello method to "Message(string user, string message)" and Clients.All.message(user, message);

GETTING STARTED – SIGNALR

- In HTML/JavaScript
  - Add to the head

  Include jQuery, SignalR Script and Hub
  - Add to the end of the body

  Connect to Hub, call server methods, handle client side events
  - View Hub Proxy Classes (~/signalr/hubs)

BROWSER LINK (ARTERY)

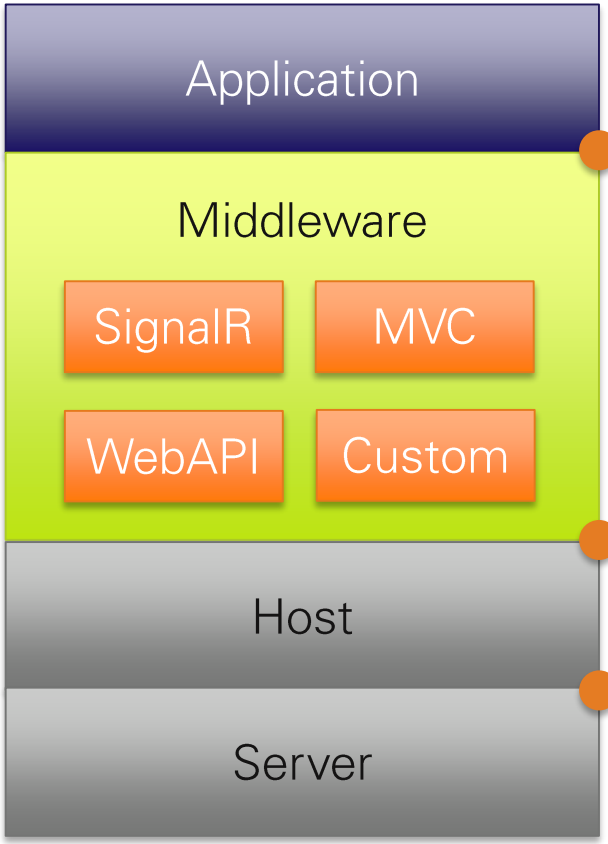
- Launch multiple browsers by setting defaults
  - Works when you “Start without debugging”
- Connected Browser
  - Ctrl-Alt-Enter will refresh connected browsers.
  - CSS Changes are reflected immediately
- “Browser Link Dashboard” – No Extensions Required
  - Inspect elements on the page to see their location in code.
  - Edit elements directly in the web browser.

OWIN

Open Web Interface for .NET

http://owin.org

OWIN MODEL



HttpContext, etc.

OWIN App Builder

OWIN Environment Dictionary

THE OWIN INTERFACE

Environment Dictionary

`IDictionary<string, object>`

`owin.RequestPath`	`string`
`owin.RequestMethod`	`string`
`owin.RequestBody`	`Stream`
`owin.RequestHeaders`	`IDictionary<string, string[]>`

QUESTIONS

(maybe Answers)

UPCOMING EVENTS

Lunch & Learn – "Drive" by Erik Weber

Chicago – January 15th, 2014

Milwaukee – January 16th, 2014

Madison – January 17th, 2014

Lunch & Learn – "Dynamic Strategy – Being an Agile Company" by Chad Albrecht

Milwaukee – February 19th, 2014

Chicago – February 20th, 2014

Madison – February 21st, 2014

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