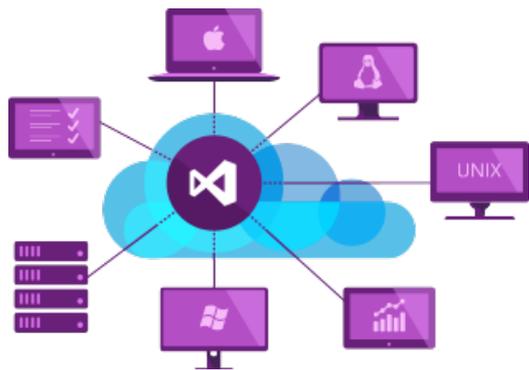




Visual Studio Team Services

Getting Started



Hans-Petter Halvorsen, M.Sc.

Visual Studio Team Services

- Visual Studio Team Services is a platform taking care of all aspects of the process of developing software (the software development lifecycle)
- You can share Documents and Code with your Team, report Bugs, etc.

Team Foundation Server (TFS) vs. Visual Studio Team Services (VSTS)

Visual Studio

Visual Studio don't care if you use TFS or VSTS. You just hook it up using an URL.

Team
Foundation
Server (TFS)

vs.

Visual Studio
Team Services
(VSTS)

“Team Foundation Server” (TFS). This is software you can install on a server in your own network. You and your team can then hook up Visual Studio to that server and use TFS. You have to buy the software, buy licenses for users and use your own server.

“Visual Studio Team Services” (VSTS) is an online version of TFS – hosted by Microsoft. You don't need to install anything. You need to pay a monthly fee (until 5 users is for free).

VSTS is available from <http://www.visualstudio.com>

https://en.wikipedia.org/wiki/Team_Foundation_Server

Visual Studio Team Services (VSTS)

- Formerly known as Visual Studio Online (VSO)
- VSTS is a Source Code Control (SCC), Bug Tracking, Project Management, and Team Collaboration platform
- Integrated with Visual Studio
- TFS in the Cloud (This means you don't need to host the server yourself)
- Free for up to 5 users

www.visualstudio.com

TFS/VSTS

Server

Clients

Others

TFS/VSTS

Services

Repository

SQL Server Git
(TFVC)

LabVIEW

MSSCCI Provider

Eclipse

Web Access

MS Excel

MS Project

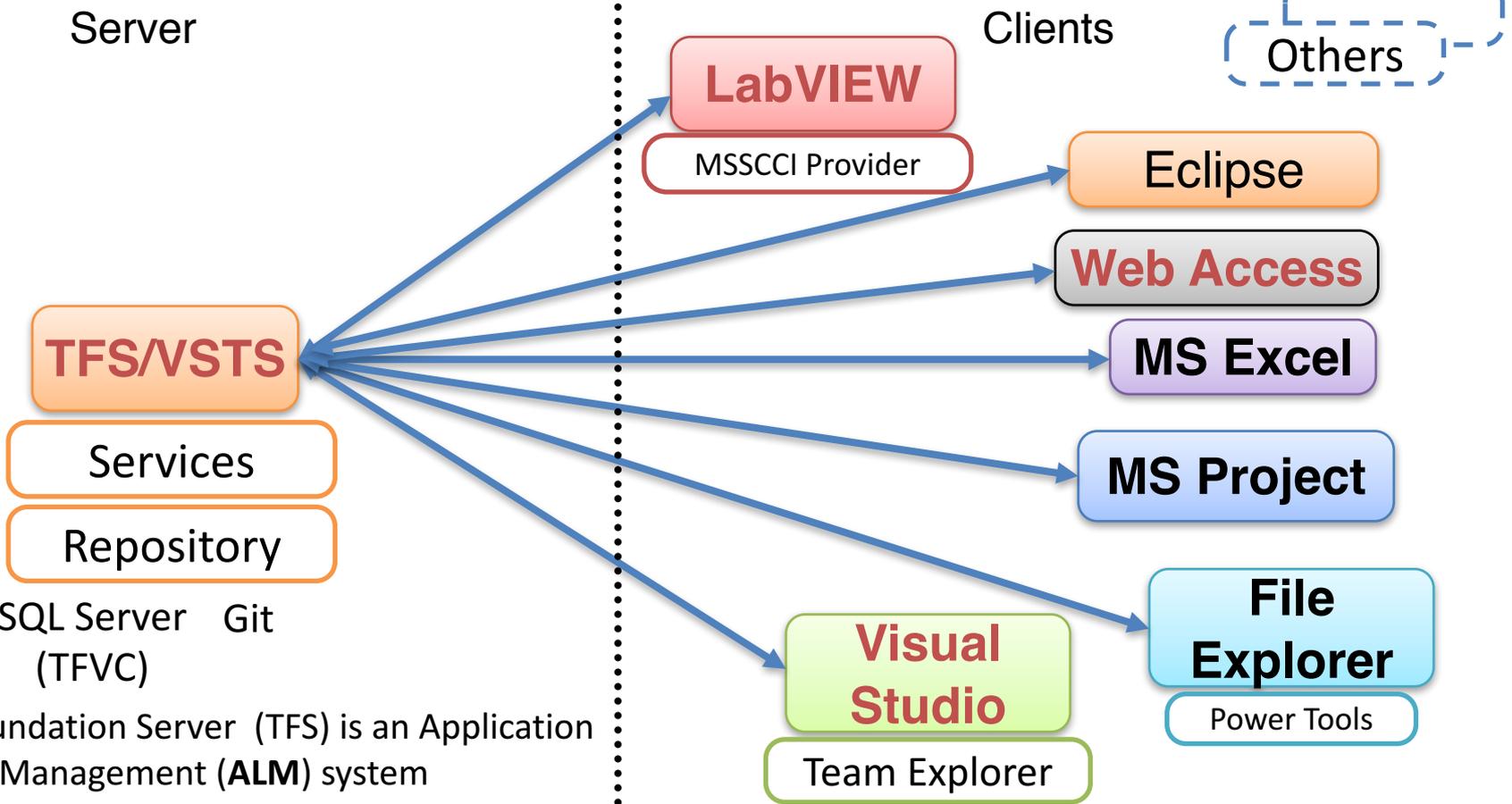
**Visual
Studio**

Team Explorer

**File
Explorer**

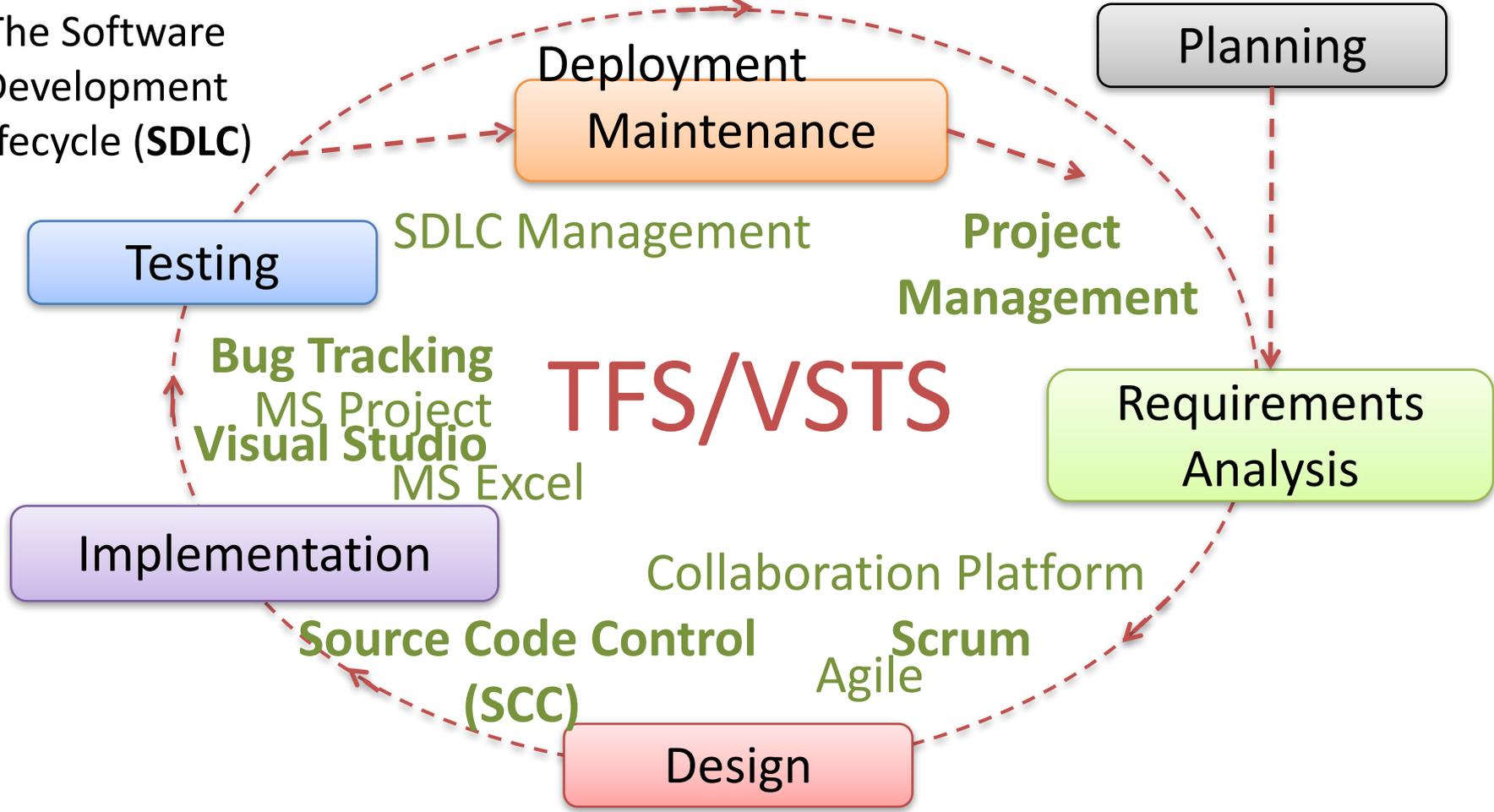
Power Tools

Team Foundation Server (TFS) is an Application Lifecycle Management (ALM) system



TFS/VSTS is an Application Lifecycle Management (ALM) System

The Software Development Lifecycle (SDLC)



TFS/VSTS

SDLC Management

Project Management

Bug Tracking
MS Project
Visual Studio
MS Excel

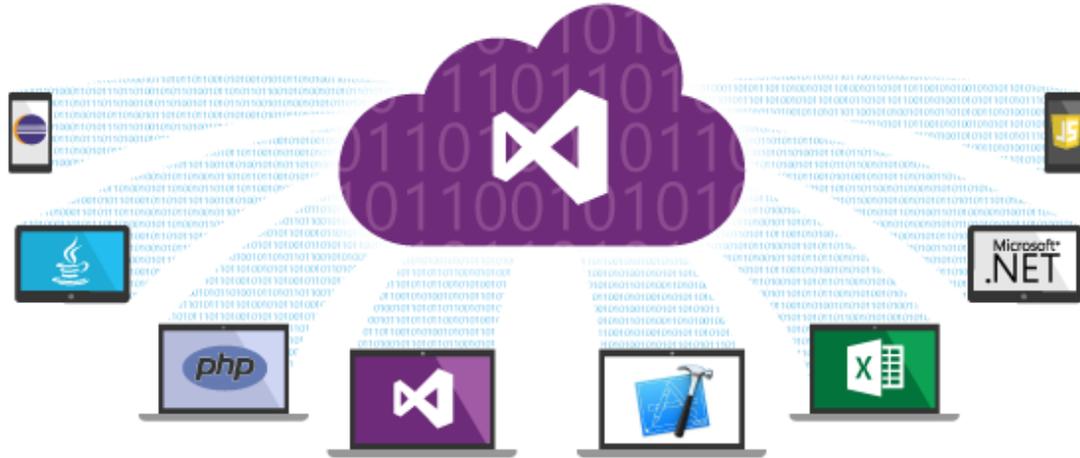
Collaboration Platform

Source Code Control (SCC)

Agile
Scrum

Visual Studio Team Services

www.visualstudio.com



Visual Studio Team Services

Cloud collaboration tools for teams

It's not an IDE, it's everything else. Visual Studio Team Services provides a set of cloud-powered collaboration tools that work with your existing IDE or editor, so your team can work effectively on software projects of all shapes and sizes.

Getting Started

Visual Studio

MSDN Subscriptions

Sign in



Products

Features

Downloads

News

Support

Marketplace

Documentation

Free Visual Studio



Tools for every developer and every app

A powerful IDE

Create stunning apps for Windows, Android, iOS, and the web with a powerful integrated development environment.

[Learn about Visual Studio](#)

[Download Community 2015](#)

[Compare 2015 product editions](#)

Team collaboration

Collaborate in the cloud with version control, agile, continuous delivery, app analytics — using any IDE or editor.

[Learn about Team Services](#)

[Get started for free](#)

[Host it yourself with Team Foundation Server](#)

An editor for any OS

Build and debug modern web and cloud apps with a free code editor that runs on Windows, OS X, or Linux.

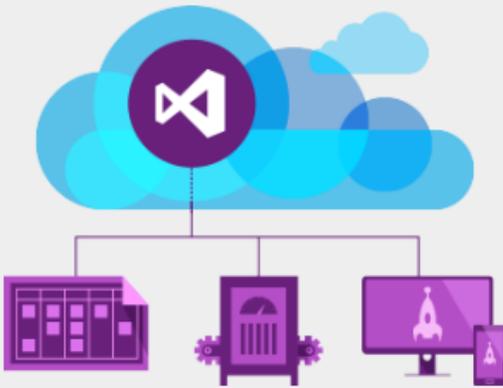
[Learn about Visual Studio Code](#)

[Download Code for Mac OS X](#)

[Download for Linux](#)  [Windows](#) 

By using VS Code, you agree to its [license](#) and [privacy statement](#).

Sign in with your existing Microsoft Account



Sign in to Visual Studio

Sign in with your work or school account [→](#)

If you don't have an existing Microsoft account (hotmail,...), you need to create a new account



Microsoft account [What's this?](#)

Keep me signed in

Sign in

[Can't access your account?](#)

[Sign in with a single-use code](#)

Don't have a Microsoft account? [Sign up now](#)

VSTS Account

Create a Visual Studio Team Services Account

Full name *

Contact e-mail *

Country/Region *

Please select



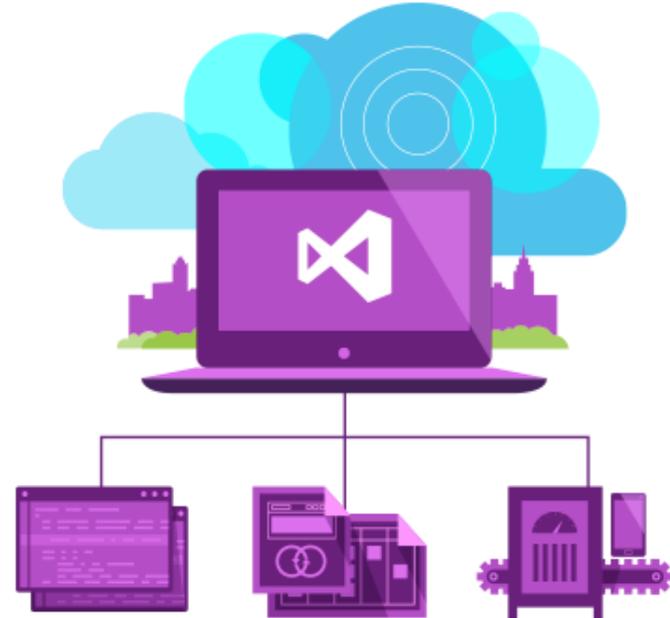
Account URL * 

https:// .visualstudio.com

Your account will be hosted in the **South Central US** region.

[Change options](#)

Create Account



Create your First Project

CREATE NEW TEAM PROJECT ✕

Project name

Description

Process template **Scrum** ▾
This template is for teams who follow the Scrum framework.

Version control **Team Foundation Version Control** ▾
Team Foundation Version Control (TFVC) uses a single, centralized server repository to track and version files. Local changes are always checked in to the central server where other developers can get the latest changes.

Enter the Name of your Project here

Select these options

Project Start Page (Dashboard)

Welcome

Get started using Visual Studio Online to make the most of your team dashboard.



Manage Work

Add work to your board



Collaborate on code

Add code to your repository



Continuously integrate

Automate your builds



Visualize progress

Learn how to add charts

Work in Progress (2)

ID	Work Item Type	Title	Assigned To	State
105	Task	SRS	Hans-Petter Hal...	In Progress
106	Task	SDD	Hans-Petter Hal...	In Progress

On the Dashboard you see different Widgets

[View query](#)

Work

- [Backlog Board](#)
- [Task board](#)
- [Queries](#)

Visual Studio



Open in Visual Studio

Requires Visual Studio 2013+



Get Visual Studio

See Visual Studio downloads

Sprint Burndown

Set iteration dates to use the sprint burndown widget

[Set iteration dates](#)

New work item

Enter title

Bug

Create

Work in Progress

2

Work items

Team Members



Add or Change Widgets



Add Project Members

Visual Studio Online / Systemutvikling 2015 | Hans-Petter Halvorsen

HOME CODE WORK BUILD TEST

MANAGE MEMBERSHIP OF SYSTEMUTVIKLING 2015 TEAM

+ Add... | Search

Display Name	Username Or Scope	
Hans-Petter Halvorsen	hans.p.halvorsen@hit.no	Remove
Olav Dæhli	olav.dehli@hotmail.com	

Close

Work

- Backlog
- Board
- Task board
- Queries

Visual Studio

- Open in Visual Studio (Requires Visual Studio 2013+)
- Get Visual Studio (See Visual Studio downloads)

Team Members

Click here to Manage Team Members

This Window pops up where you can Add or Remove Team Members

Other Links Widget on the Dashboard

Iterations

Hans-Petter Halvorsen |  

Other Links

- [Request feedback](#)
- [Configure schedule and iterations](#)
- [Configure work areas](#)



ITERATIONS ×

Show Expand all

Select the iterations you want to use for iteration planning (sprint planning). Selected iterations will appear in your backlog view as iterations available for planning.

New New child

Iterations	Start Date	End Date
Software Development	Set dates	Backlog iterati
Release 1		
<input checked="" type="checkbox"/> Sprint 1		
<input checked="" type="checkbox"/> Sprint 2		
<input checked="" type="checkbox"/> Sprint 3		
<input checked="" type="checkbox"/> Sprint 4		
<input checked="" type="checkbox"/> Sprint 5		
<input checked="" type="checkbox"/> Sprint 6		
<input type="checkbox"/> Release 2		
<input type="checkbox"/> Release 3		
<input type="checkbox"/> Release 4		

Close

Control panel > DefaultCollection > Software Development

Overview **Iterations** Areas Security Alerts Version Control Service Hooks Services

Iterations

Select the iterations you want to use for iteration planning (sprint planning). Selected iterations will appear in your backlog view as iterations available for planning.

New New child

Iterations	Start Date	End Date
Software Development	Set dates	Backlog iteration for this team
Release 1		
<input checked="" type="checkbox"/> Sprint 1		
<input checked="" type="checkbox"/> Sprint 2		
<input checked="" type="checkbox"/> Sprint 3		
<input checked="" type="checkbox"/> Sprint 4		
<input checked="" type="checkbox"/> Sprint 5		
<input checked="" type="checkbox"/> Sprint 6		
<input type="checkbox"/> Release 2		
<input type="checkbox"/> Release 3		
<input type="checkbox"/> Release 4		

Create Iterations for the different releases, milestones or sprints (internal and/or external); e.g., Alpha, Beta, RC, RTM



Areas

Control panel > DefaultCollection > Software Development

Overview

Iterations

Areas

Security

Alerts

Version Control

Areas

Areas

Select the areas your team owns. Selected areas will determine what shows up on your team's backlog and what work items your team is responsible for.

New New child

Areas

 Software Development default area sub-areas are included

New

New child

Open

Delete

Security

Set as default area for team

Exclude sub-areas

The different software modules could be divided into different Areas

Areas

Areas

Select the areas your team owns. Selected areas will determine what shows up on your team's backlog and what work items your team is responsible for.

New

New child

Areas

- | | | | |
|-------------------------------------|----------------------|--------------|------------------------|
| <input checked="" type="checkbox"/> | Software Development | default area | sub-areas are included |
| <input type="checkbox"/> | Database | | |
| <input type="checkbox"/> | Design | | |
| <input type="checkbox"/> | Script | Set default | |
| <input type="checkbox"/> | Desktop | | |
| <input type="checkbox"/> | WinFormApp1 | | |
| <input type="checkbox"/> | WinFormApp2 | | |
| <input type="checkbox"/> | Web | | |
| <input type="checkbox"/> | WebFormApp1 | | |

Example:

The Product Backlog

All the Work that should be done in the Project

The screenshot displays the Visual Studio Online interface for a project named 'Software Development'. The top navigation bar includes 'HOME', 'CODE', 'WORK' (highlighted with a red box), 'BUILD', and 'TEST'. Below this, the 'Backlogs' tab is selected and highlighted with a red box. The left sidebar shows a tree view with 'Current' and 'Future' sections, each containing 'Sprint 1' through 'Sprint 6'. The 'Backlog items' view is active, showing a list of items. A 'New' button is visible, and a form for adding a new item is open, with 'Product Backlog Item' selected as the type and a yellow input field for the title. The main area contains a table of backlog items.

Visual Studio Online / Software Development

Hans-Petter Halvorsen | Settings | Help

HOME CODE **WORK** BUILD TEST*

Search work items

Backlogs Queries

Backlog items

Current
Sprint 1

Future
Sprint 2
Sprint 3
Sprint 4
Sprint 5
Sprint 6

Backlog items

Backlog Board

Forecast Off In progress items Show View Backlog items

New [Icons] Create query Column options [Envelope]

Type Product Backlog Item

Title [Yellow Input Field] Add

Order	Work Item Type	Title	State	Effort	Iteration Path	Tags
1	Product Backlo...	Create GUI for Web App	New		Software Development	
2	Product Backlo...	Add Database Communication with Server	New		Software Development	

The Sprint Backlog

All the Work that should be done in the Next Sprint Iteration)

Just Drag Items from the Product Backlog to the Sprint Backlog

Visual Studio Online / Software Development

HOME CODE **WORK** BUILD TEST*

Backlogs Queries

Features

Backlog items

Current

Sprint 1

Future

Sprint 2

Sprint 3

Sprint 4

Sprint 5

Sprint 6

Backlog items

Backlog Board

New

Create query Column options

Type Product Backlog Item

Title

Add

Order	Work Item Type	Title	State	Effort
1	Product Backlo...	Create GUI for Web App	New	
2	Product Backlo...	Add Database Communi...		

Visual Studio Online / Software Development

HOME CODE **WORK** BUILD TEST*

Backlogs Queries

Features

Backlog items

Current

Sprint 1

Future

Sprint 2

Sprint 3

Sprint 4

Sprint 5

Software Development Team Sprint 1

Backlog Board Capacity

Create query Column options

Title	State	Assigned To	Rema...
Create GUI for Web App	New		
Add Database Communication with Server	New		

Title



Create GUI for Web App

GUI Design

Add Database Communication with Server

Create Tasks

Task 3: GUI Design

Tags Add...

GUI Design

Iteration Software Development\Release 1\Sprint 1

STATUS	DETAILS
Assigned To Hans-Petter Halvorsen	Remaining Work
State To Do	Backlog Priority
Reason New task	Activity
Blocked	Area Software Development\Web

DESCRIPTION	HISTORY LINKS (1) ATTACHMENTS
<p>B / U [Rich Text Editor]</p>	<p>B / U [Rich Text Editor]</p>

New task

Save Save and close Close

Task Board

Visual Studio Online / Systemutvikling 2015 Hans-Petter Halvorsen | ⚙️ 😊 ?

HOME CODE **WORK** BUILD TEST Search work items 🔍

Backlogs Queries

Features
Backlog items

Current
Sprint 1
Sprint 2
Sprint 3
Sprint 4
Sprint 5
Sprint 6

Systemutvikling 2015 Team Sprint 1

Backlog **Board** Capacity

No iteration dates [Set dates](#)

Group by Backlog items Person All ⚙️ 🖨️

Backlog	To do	In progress 30 h	Done
Introduction Olav Dæhli State: New			What is System Engineering Hans-Petter H...
Requirement Analysis Hans-Petter H... 20 h State: New		SRS Hans-Petter H... 20	
Software Design Olav Dæhli 10 h State: New	ERwin Olav Dæhli	SDD Hans-Petter H... 10	
Database Communication fails Hans-Petter Halv... State: New			
Database Script not Working Olav Dæhli State: New			

Drag and Drop Tasks



Visual Studio

How-To use TFS/VSTS Features inside Visual Studio

Hans-Petter Halvorsen, M.Sc.

Using TFS/VSTS with Visual Studio

- Connect to TFS/VSTS
- Add Source Code to TFS/VSTS
- Check In/Check Out
- Team Explorer
- Source Control Explorer

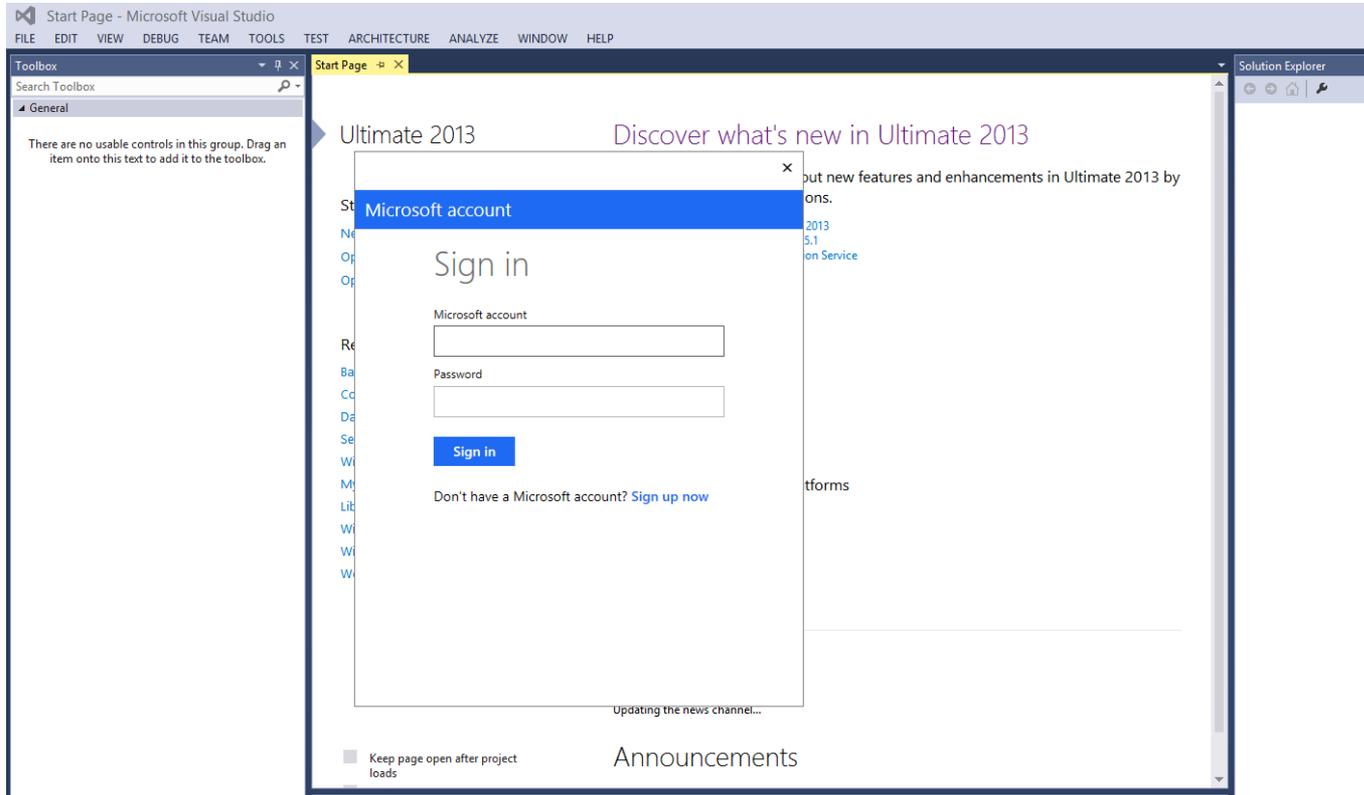
Open in Visual Studio

The screenshot displays the Visual Studio Online (VSO) interface. At the top, the browser address bar shows the URL for Microsoft Visual Studio Online. The VSO header includes the logo, the text "Visual Studio Online / Software Development", and the user name "Hans-Petter Halvorsen". Below the header, there are navigation tabs for "HOME", "CODE", "WORK", "BUILD", and "TEST*", with "Overview" selected. A search bar for work items is located on the right side of the header.

The main content area is divided into several sections:

- How to:** A row of four colored tiles: "Work" (blue), "Code" (purple), "Build" (grey), and "Test" (blue). Each tile has a brief description and a right-pointing arrow.
- Work:** A section with a "Create new" button and a "Visual Studio" header. It contains three items: "Open in Visual Studio" (with a red box around it), "Get Visual Studio", and "Backlog" (with sub-items "Task board" and "Queries").
- Sprint:** A section with a "Manage..." button and "Other links". It includes an "Example Sprint" with a bar chart and a "Members" section with a green "HH" tile.
- Pinned Items:** A section with a "Pinned Items" header and a "Manage..." button. It shows "Example Pinned Items" with a large "42", a large "12", and a bar chart.

Sign in



TFS/VSTS in Visual Studio

The screenshot displays the Visual Studio interface with the Source Control Explorer and Team Explorer windows. The Source Control Explorer window shows a tree view of folders under 'Development', including 'BuildProcessTemplates', 'Code', 'Documents', and 'Project Management'. The Team Explorer window shows the 'Pending Changes' view for 'Development', displaying a table of pending changes.

Source location: Development

Local Path: C:\Work\Development

Name	Pending Change	User	Latest	Last Check-in
BuildProcessTemplates			Yes	2013-04-26 12:...
Code			Yes	2013-05-31 12:...
Documents			Yes	2013-06-20 10:...
Project Management			Yes	2014-01-15 9:2...

Changeset 149 successfully checked in.

Check In | Shelve | Actions

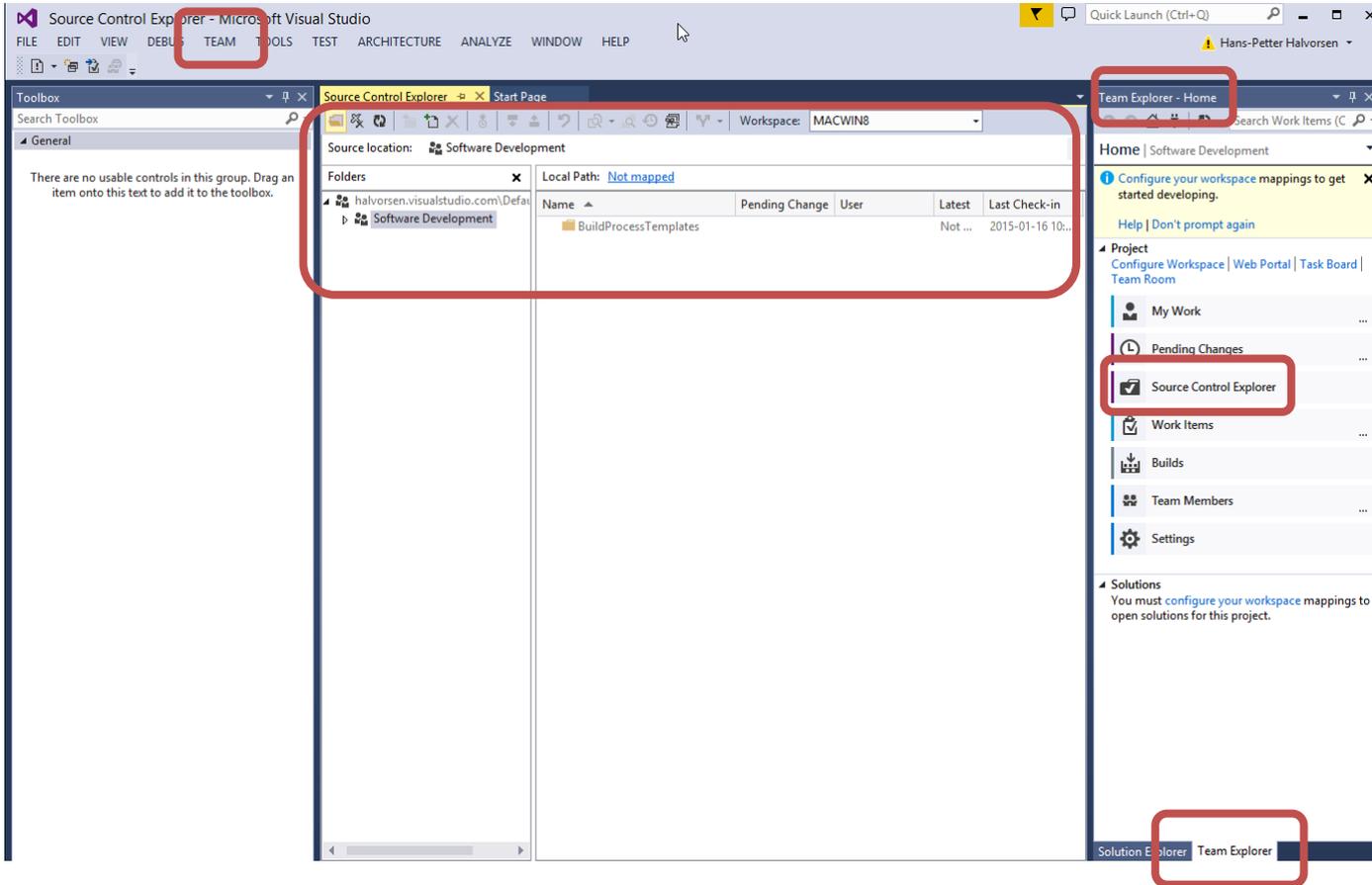
Comment
Enter a check-in comment

Related Work Items
Queries | Add Work Item by ID
Drag work items here to link them to the check-in.

Included Changes
Exclude All | View Options
There are no pending changes.

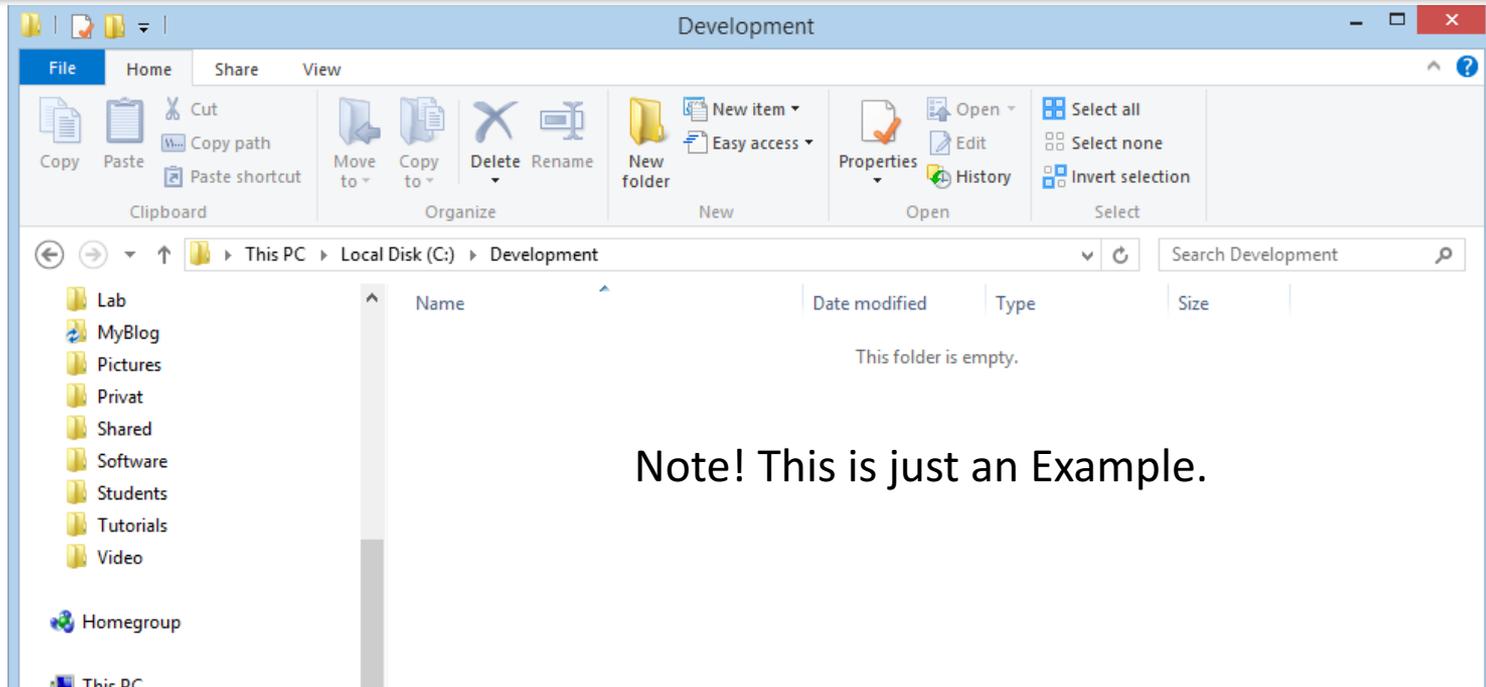
Excluded Changes
Include All | View Options
There are no pending changes.

Team Explorer + Source Control Explorer



Create local Folder on your Hard drive

Create a local Folder on your hard drive where you want to store your files (Documents, Code Files, etc.)



Note! This is just an Example.

Workspace Mapping

The screenshot shows the Visual Studio Source Control Explorer interface. The 'Local Path' field is set to 'Not mapped'. A red box highlights this field, with an arrow pointing to the 'Map' dialog box. The 'Map' dialog box is titled 'Map' and contains the following information:

- Create a workspace mapping.**
- Current status:** The server folder is not mapped.
- Server folder:** `$/Software Development`
- Local folder:** `C:\Development\Software Development` (highlighted with a red box)
- Recursive**
- Map** and **Cancel** buttons.

The 'Browse For Folder' dialog box is open, showing the local disk structure. The 'Development' folder is selected. A red arrow points from the '...' button in the 'Map' dialog box to the 'Development' folder in this dialog.

Please select a local folder.

- Local Disk (C:)
- 1a65a5d1b342d3f6d7c19f
- 34aa392620a2bb71c33e42373e
- 108c125016f61b53f0
- a000753c8554850cce
- Development**
- inetpub
- National Instruments Downloads
- PerfLogs
- Program Files
- Temp
- Users
- Windows
- Work

Make New Folder OK Cancel

Create a Folder Structure

The screenshot shows the Source Control Explorer window in Microsoft Visual Studio. The 'Folders' pane on the left displays a tree view with a folder named 'Software Development' selected. A right-click context menu is open over this folder, and the 'New Folder' option is highlighted. A red callout box with the text 'Right-click and select "New Folder"' points to this menu item. The main area shows a table of files with columns for Name, Pending Change, User, Latest, and Last Check-in. The 'Team Explorer' pane on the right shows the project structure and various toolbars.

Name	Pending Change	User	Latest	Last Check-in
ProcessTemplates			Yes	2015-01-16 10:...

Right-click and select "New Folder"

Folder Structure Example

The screenshot shows the Source Control Explorer interface. The top bar indicates the workspace is 'MACWIN8'. The source location is 'Software Development'. The local path is 'C:\Development\Software Development'. The folder structure is displayed in two panes: a tree view on the left and a table view on the right. A red rounded rectangle highlights the 'Code' folder and its subfolders in the tree view.

Source location: Software Development

Workspace:

Local Path: [C:\Development\Software Development](#)

Folders

- halvorsen.visualstudio.com\DefaultCollection
 - Software Development
 - BuildProcessTemplates
 - Code
 - WebForm App
 - WinForm App
 - Database
 - Documents
 - Project Management
 - Requirements and Design
 - System Documentation
 - User Documentation
 - User Guides

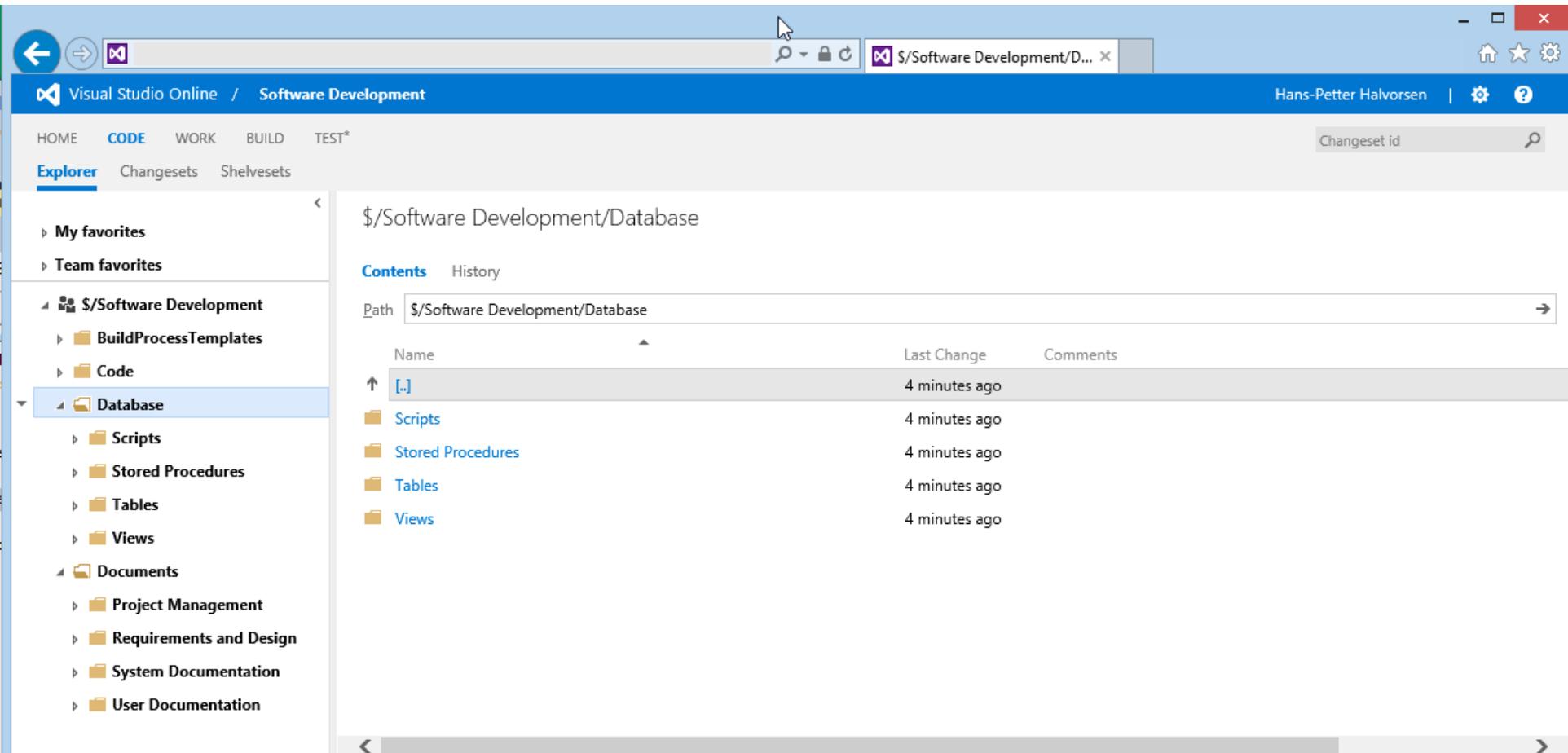
Name	Pending Change	User	Latest	Last Check-in
BuildProcessTemplates			Yes	2015-01-16 10:...
+ Code	add	Hans-Petter H...	Yes	
+ Database	add	Hans-Petter H...	Yes	
+ Documents	add	Hans-Petter H...	Yes	

Upload/Check In Changes to the Server

The screenshot displays the Visual Studio Source Control Explorer interface. The 'Pending Changes' window is open, showing a list of files with their local paths and pending status. A red box highlights the 'Check In' button in the top right corner of the Pending Changes window. A red arrow points from the 'Check In Pending Changes' option in the context menu to the 'Check In' button. The context menu also includes options like 'Get Latest Version', 'Check Out for Edit...', 'Delete', 'Rename', 'Move...', 'Rollback...', 'Undo Pending Changes', 'Shelve Pending Changes', and 'View History'.

When you are Finished you need to Upload/Check In Changes to the Server (Visual Studio Online). The Folders you created should then be visible to the other Members on your Team

The Folders are now available on the Server



The screenshot shows the Visual Studio Online interface. The Explorer pane on the left displays a tree view of folders. The main pane shows the contents of the selected folder, which is a table with columns for Name, Last Change, and Comments.

Visual Studio Online / Software Development

Hans-Petter Halvorsen | Settings Help

HOME CODE WORK BUILD TEST*

Changeset id

My favorites

Team favorites

\$/Software Development

- BuildProcessTemplates
- Code
- Database**
 - Scripts
 - Stored Procedures
 - Tables
 - Views
- Documents
 - Project Management
 - Requirements and Design
 - System Documentation
 - User Documentation

\$/Software Development/Database

Contents History

Path: \$/Software Development/Database

Name	Last Change	Comments
↑ [..]	4 minutes ago	
Scripts	4 minutes ago	
Stored Procedures	4 minutes ago	
Tables	4 minutes ago	
Views	4 minutes ago	

```
-top: 60px;  
-bottom: 40px;
```

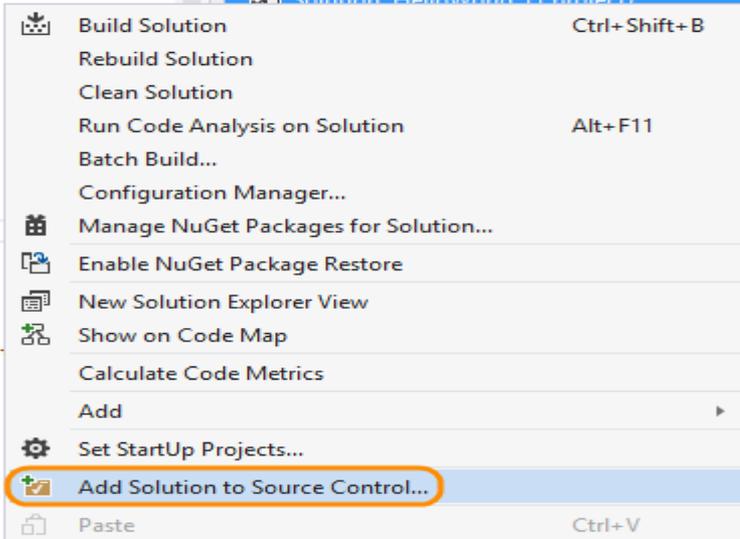
```
or validation helpers */  
.input-validation-error {  
background-color: #b94a48;
```

```
.input-validation-valid {  
background-color: none;
```

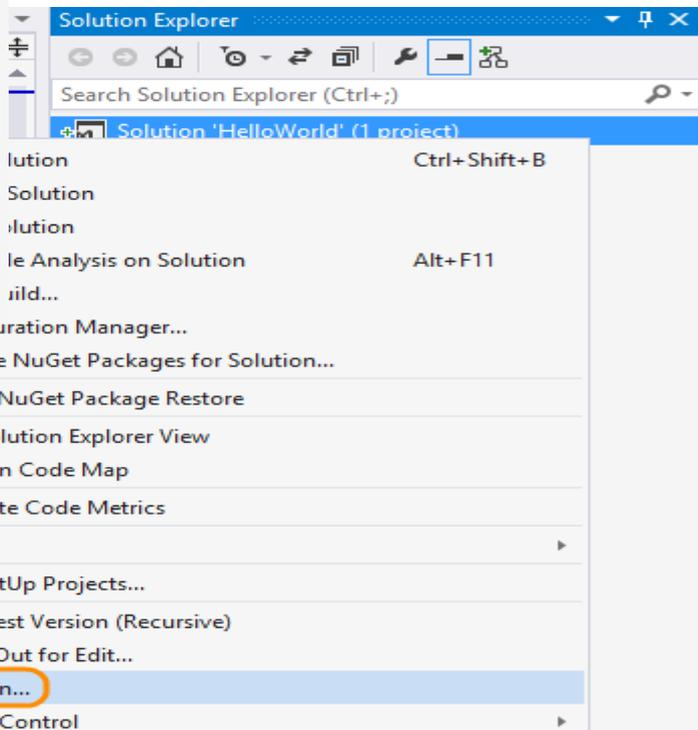
```
.input-validation-error {  
border: 1px solid #b94a48;
```

```
input[type="checkbox"].input-validation-error {  
background-color: none;
```

```
.input-validation-errors {  
background-color: #b94a48;
```



Add Source Code



Check In

```
.input-validation-error {  
border: 1px solid #b94a48;
```

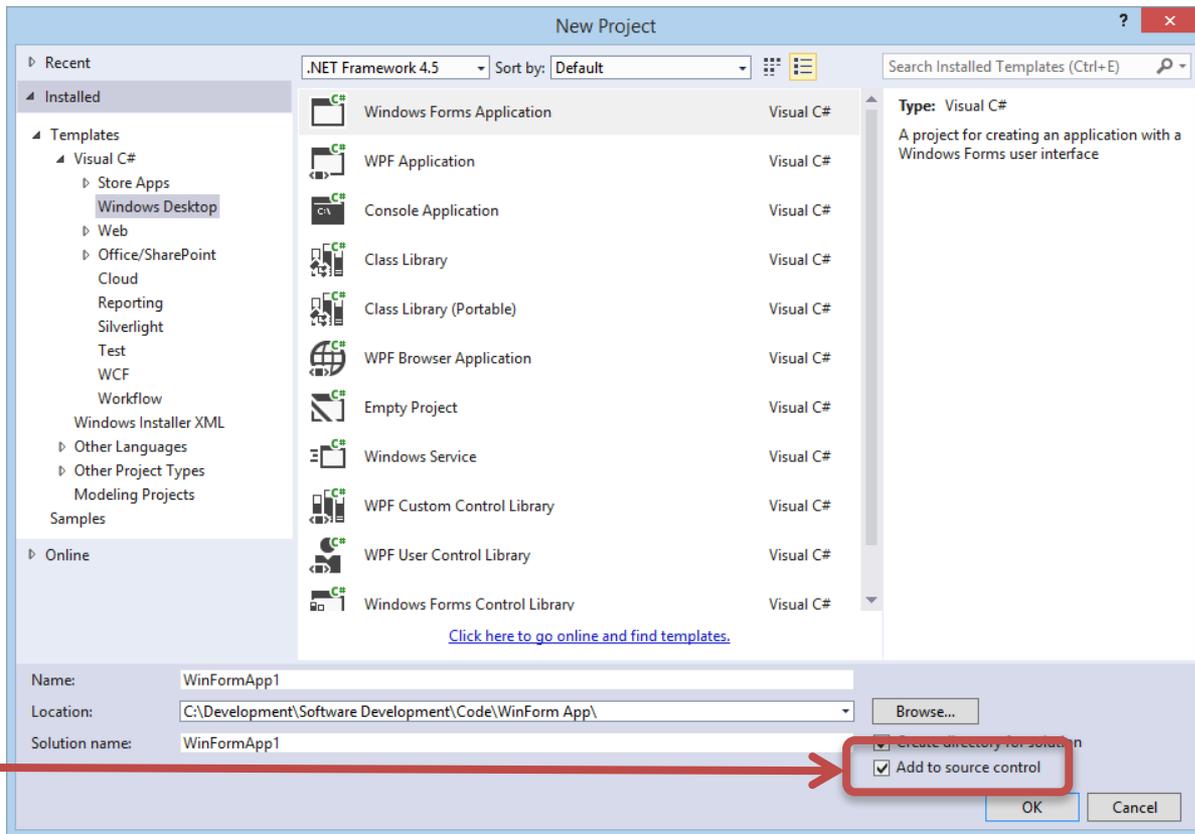
```
input[type="checkbox"].input-validation-error {  
background-color: none;
```

```
.input-validation-errors {  
background-color: #b94a48;
```

```
.input-validation-valid {  
background-color: none;
```

Add Code to Source Control

Create a New Project, e.g.
Windows Desktop



Make sure to Select
this Option!!

Solution Explorer



Search Solution Explorer (Ctrl+`^`)

- Solution 'WinFormApp1' (1 project)
 - + C# WinFormApp1
 - ▶ + Properties
 - ▶ - References
 - + App.config
 - ▶ + Form1.cs
 - ▶ + Form1.Designer.cs
 - ▶ + Form1
 - + Program.cs

Solution Explorer

Properties

WinFormApp1 So



- (Name)
- Active config
- Description
- Path
- Startup project

- Build Solution F6
- Rebuild Solution
- Clean Solution
- Run Code Analysis on Solution Alt+F11
- Batch Build...
- Configuration Manager...
- Manage NuGet Packages for Solution...
- Enable NuGet Package Restore
- New Solution Explorer View
- Show on Code Map
- Calculate Code Metrics
- Add
- Set StartUp Projects...
- Check In...**
- Source Control
- Paste Ctrl+V
- Rename
- Open Folder in File Explorer
- Properties Alt+Enter



Solution Explorer



Search Solution Explorer (Ctrl+`^`)

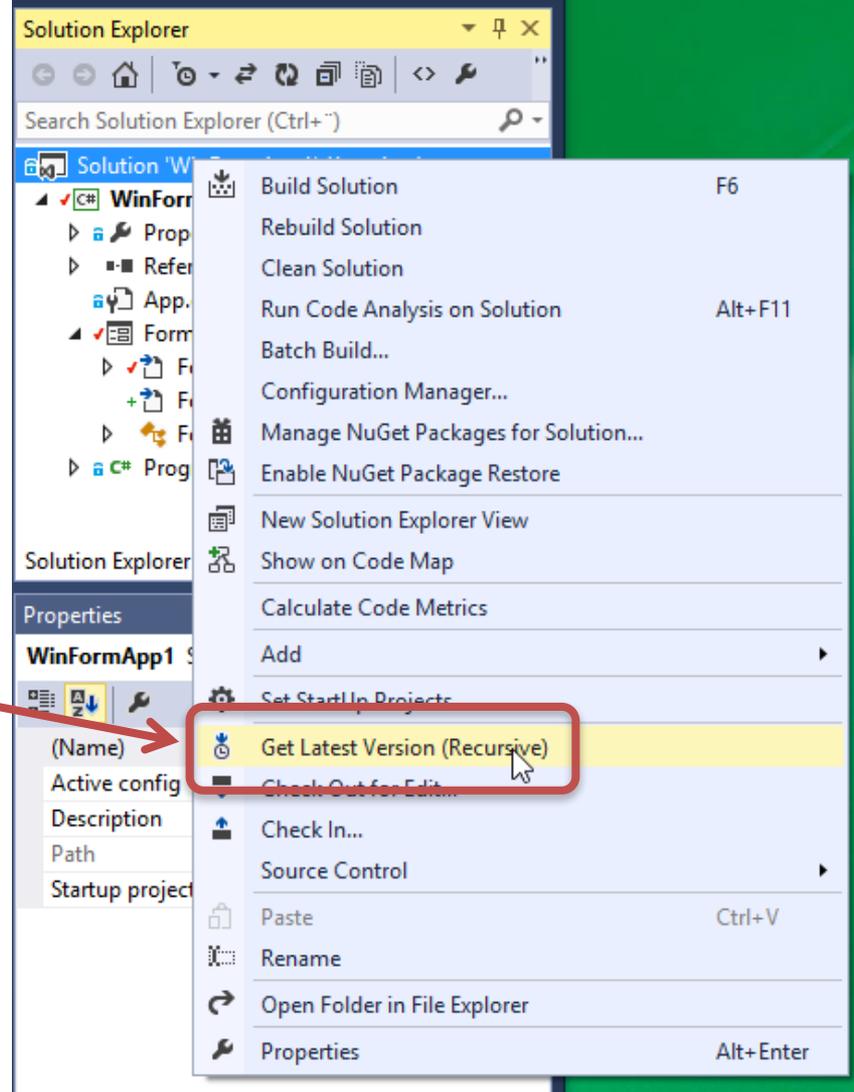
Solution 'WinFormApp1' (1 project)

- + C# WinFormApp1
 - ▶ Properties
 - ▶ References
 - + App.config
 - ▶ + Form1.cs
 - ▶ + Form1.Designer.cs
 - ▶ + Form1
 - + Program.cs

Solution Explorer Team Explorer

Get Latest Version

Before working on your Code, you should always get the latest version from the Server



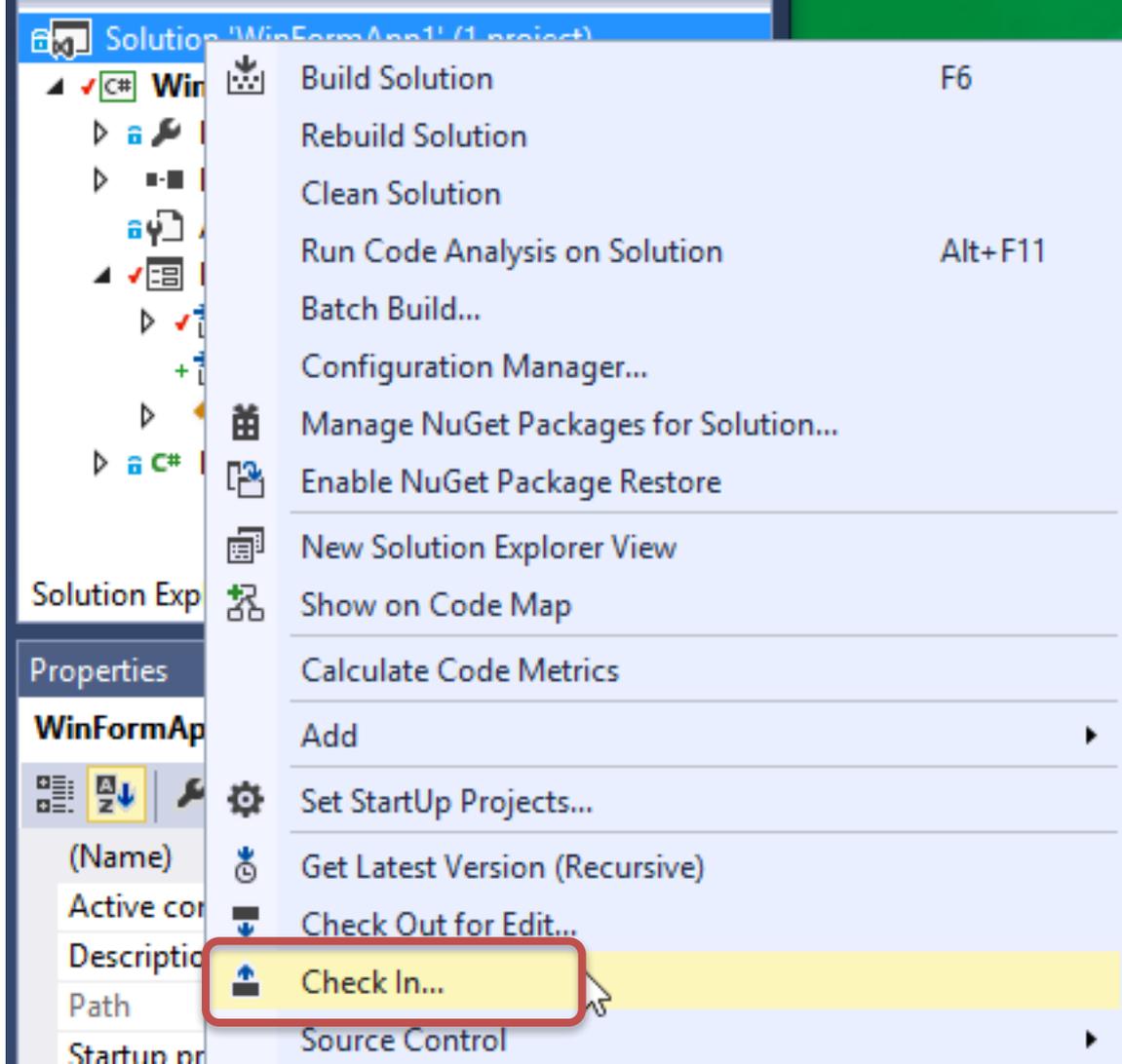
Editing your Code



The Code you are editing are checked out automatically

Check in your Code when Finished

But before you check in your code you should first get the latest version from the server and make sure your Code Compile without Error!



Work Items – New Bug

New Bug 1*: WS is not working

      Copy template URL

Tags

WS is not working

STATUS

Assigned To
State
Reason

CLASSIFICATION

Area
Iteration

PLANNING

Stack Rank
Priority
Severity

REPRO STEPS

SYSTEM INFO

TEST CASES



Work Items are used to Add Items to the Product Backlog, Report Bugs, etc. Lots of different Work Items Types exists. You can even create New Work Item Types

HISTORY

ALL LINKS

ATTACHMENTS



DISCUSSION ONLY

ALL CHANGES

[No entries with comments]

Queries

- Used to find existing Work Items
- You may create different Queries to make it easy to find the Work Items you need
- Queries may be personal or visible for everybody in the project (Team Queries)

New Query 1 5 work items (1 selected)

results [editor](#)

Column Options

Type of Query [Flat List of Work Items](#) [Work Items and Direct Links](#) [Tree of Work Items](#)

Filters for top level work items

	And/Or	Field	Operator	Value
+ X	<input type="checkbox"/>	Team Project	=	@Project
+ X	<input type="checkbox"/> And	Work Item Type	=	[Any]
+ X	<input type="checkbox"/> And	State	=	[Any]

+ Add new clause

Save query [Refresh](#) [Refresh](#) [Refresh](#) [Refresh](#) [Refresh](#) [Refresh](#) [Refresh](#) | Column Options

ID	Work Ite...	Title	Assigned To	State	Tags
1	Bug	Database Error	Hans-Pett...	Active	
2	Task	Add Web functionality		New	
4	Test Case	Test Empty Fields	Hans-Pett...	Design	
3	Test Case	Test Web Service	Hans-Pett...	Design	
5	Bug	WS is not working		Active	

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