https://www.halvorsen.blog



Azure DevOps with Git and Visual Studio

Hans-Petter Halvorsen

Contents

- Introduction
 - What is Azure DevOps?
 - What is Git?
- Getting Started with Azure DevOps
 - Create Project and Add Members
- Start using Git with Azure DevOps and Visual Studio
 - Connect to remote repository
 - Configure .gitignore file
 - Make local Clone
- Start Creating Code in Visual Studio
 - Create a new Application
 - Fetch, Pull, Commit and Push Code within Git

https://www.halvorsen.blog

Introduction

Hans-Petter Halvorsen



Azure DevOps

- Azure DevOps is tool for Software Engineering
 - Planning, Collaboration, Source Code Control, Bug Tracking, Agile and Scrum, etc.
- Developed by Microsoft
- <u>https://dev.azure.com</u>
- Free for 5 Developers + Stakeholders
- You use it in your web browser, and it also has integration with Visual Studio for Source Code Control

Git



- Git is a distributed revision control system. Git maintains a local copy of the entire repository.
- Git was created for use in the development of the Linux kernel by Linus Torvalds and others developing the kernel.
- Git has now become the most used revision control system or source code control system today.
- Git is a free and open-source software.
- Visual Studio has integrated support for Git.
- Azure DevOps use Git as their source code control system.
- Another system/provider that uses Git is GitHub.
- Azure DevOps and GitHub are Microsoft owned proprietary products that uses Git as the repository. Other similar systems are SourceForge, BitBucket and GitLab.

https://www.halvorsen.blog

Getting Started with Azure DevOps

Hans-Petter Halvorsen

Table of Contents

Getting Started with Azure DevOps

First, you need to Create a New Organization



hansha@usn.no Switch directory

Get started with Azure DevOps

Choosing Continue means that you agree to our <u>Terms of</u> <u>Service</u>, <u>Privacy Statement</u>, and <u>Code of Conduct</u>.

I would like info	mation, tips, and offers about Azure	
DevOps and oth	er Microsoft products and services. Priv	<u>acy</u>
Statement.		

Continue



Create New Project

Create new project

 \times

Project name *

SoftwareHPH

Description

Visibility



Public projects are disabled for your organization. You can turn on public visibility with organization policies.

		avancea	
ersion control 💿		Work item process 💿	
Git	\sim	Scrum	\sim

Make sure to select "Advanced": Version control = Git Work item process: Scrum

Select a meaningful Project name

Project Start Page

Azure DevOps usn24 / ProjectHPH / Overvi	iew / Summary	🔍 Search 🛛 🗄 🗇 🗞 🥮
P ProjectHPH + P F	ProjectHPH	🕆 Private 🖏 Invite 🏠
🗊 Summary		
Dashboards		Project stats
🖾 Wiki		
Boards		
😢 Repos		
Pipelines		
👗 Test Plans		
Artifacts		No stats are available at this moment Setup a service to see project activity.
	Welcome to the project!	
	Boards Donos Dinalinos Test Dans	
	boards repos ripennes rescrians	
	Artifacts	Members 1
	or manage your services	
Project settings		

Invite/Add Members



https://learn.microsoft.com/en-us/azure/devops/organizations/security/add-users-team-project

Give Users "Full Access" in Organization Settings

To get full access ("Administrator" access) go into "Organization setting". Select "Users" and then "Add users". Then Access level = Basic and the proper Project. žΞ Azure DevOps 255721 / Settings / Users Q Search Organization Settin... Users All users Group rules \downarrow Export users Add new users Q Search Settings \times ∃ Filter users Microsoft Entra User Type 🗸 \sim \times General Required fields are marked with an asterisk Users or Service Principals * B Overview Total 4 Projects 8 Users or Service Principals Add users Summary 8 Users Make sure to select "Basic" Last Accessed Name ↑ Access level Hans-Petter Halvorsen Basic 5.9.2024 Global notifications hans.p.halvorsen@usn.no d Usage Add to projects 592024 Select Project(s) ③ Extensions ProiectHPH Microsoft Entra Azure DevOps Groups Security 5.9.2024 Project Contributors Make sure to select O Security overview **Policies** Send email invites (to Users only) "Send email .." as well Permissions

https://www.halvorsen.blog

Start using Git with Azure DevOps and Visual Studio

Hans-Petter Halvorsen

Table of Contents

Git

- Git is a distributed version control system, meaning that all the changes only happens locally on your computer.
- First, you need to make a local **Clone** of the remote repository.
- To contribute these changes to the remote repository, you must **push** those local commit(s) to the server.
- If you are working in a team, or if you are using different machines, you might often need to **fetch** and **pull** new changes on the remote repository

Configure .gitignore File

Azure DevOps usn24 / ProjectHPH / Repos / Files / ♦ ProjectHPH ∨

P ProjectHPH +	ProjectHPH is empty. Add some code!
Overview	Clone to your computer
E Boards	
😢 Repos	HTTPS SSH https://usn24@dev.azure.com/usn24/ProjectHPH/_git/ProjectHPH U OR U Clone in VS Code V
D Files	Generate Git Credentials
¢ Commits	◎ Having problems authenticating in Git? Be sure to get the latest version Git for Windows or our plugins for Intelli). Eclipse. Android Studio or Windows command line.
ያ Pushes	
8° Branches	Push an existing repository from command line
🖉 Tags	HTTPS SSH
양 Pull requests	git remote add origin https://usn24@dev.azure.com/usn24/ProjectHPH/_git/ProjectHPH git push -u originall
O Advanced Security	Initialize 📽 main branch with a README or gitignore
Pipelines	Import a repository
👗 Test Plans	Add a README Add a .gitignore: VisualStudio V Initialize
Artifacts	
	Initialize ^{ge} main branch with a README or gitignore
	Add a README Add a .gitignore: None V Initialize Select "VisualStudio" and click "Initialize'

.gitignore

Azure DevOps usn24 / Proje	ectHPH / Repos / Files / 🔶 ProjectHPH	\vee			Q Search	5 Å ©	ه
P ProjectHPH +	ProjectHPH :	% main ∨ D / Type to find a file or folder					
Overview	🗅 .gitignore	Files			🟥 Set up build	🕑 Clone	:
n Boards	MJ README.md	Contents History					2
😢 Repos		Name †	Last change	Commits			
Files		🗅 .gitignore	Just now	682d8aaf Added README.md, .gitignore (VisualStudio) file	s Hans-Petter Halvorsen		
¢ Commits		MI README.md	Just now	682d8aaf Added README.md, .gitignore (VisualStudio) file	is Hans-Petter Halvorsen		
<u></u> Pushes							
운 Branches		Introduction					
🖉 Tags		TODO: Give a short introduction of your project. Let the	is section explain the ol	ojectives or the motivation behind this project.			
윙 Pull requests		Getting Started					
O Advanced Security		TODO: Guide users through getting your code up and	running on their own sy	rstem. In this section you can talk about:			
Pipelines		1. Installation process 2. Software dependencies					
		3. Latest releases					
Test Plans		4. API references					
Artifacts		Build and Test					
		TODO: Describe and show how to build your code and	d run the tests.				
		Contribute					
		TODO: Explain how other users and developers can co	ntribute to make your c	ode better.			
		If you want to learn more about creating good readme	e files then refer the foll	owing guidelines $\mathbb{C}.$ You can also seek inspiration from the belowing	ow readme files:		
		ASP.NET Core					
		Chakra Core C					

Local Clone

Project URL: https://usn24@dev.azure.com/usn24/ProjectHPH/_git/ProjectHPH



Visual Studio – Clone a repository

-						
	📢 File Edit View Git Project Debu ∰ ⊕ + ⊕ ॷ + ≅ 🖻 📴 🗇 🔶 -	ug Analyze Tools Extensions Window Help 𝒫 - ► Attach 🛤 🜄 🖕	© Search -		● ー □ × 卷 GitHub Copilot ៤ 尽	
	Toolbox → ♥ × Search Toolbox ♪ • General There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.	Clone a repository UR Enter a Git repository UR Repository location https://example.com/example.git <1 Path C:\Users\hansha\Source\Repos Browse a repository	RL Required>	. ×	Git Changes - # × Git version control isn't being used yet. Initialize, back up, and share your repository. © Create Git Repository Get code from an online repository like GitHub or Azure DevOps. ▲ Clone Repository Open an existing local repository using the Git menu. Read an overview of using Git in Visual Studio.	
"Repos	sitory location	n" – If it is not fille	ed out	Path: lo	ocal Path on you	r
automa	atically, copy	the URL from Az	ure DevOps	hard dr	ive where you w	ant
Command line	2			to store	e your local versi	ion
HTTPS S	SH https://usn24@	dev.azure.com/usn24/Proj	0	(clone)	of the source co	ode
					Solution Explorer Git Changes	

🗔 Readv

🗉 Select Repository 🔶 🔒

Clone a Repository

	- 🗆 ×	×
Enter a Git repository URL		Connect to a Project
Repository location https://example.com/example.git <required></required>		Showing hosted repositories for: (a) hansha@usn.no (USN)
Path C:\Users\hansha\Source\Repos		Add Azure DevOps Server - Refresh
 Browse a repository △ Azure DevOps O GitHub 		 △ dev.azure.com ▲ ⊕ 255721 ▲ ֎ GreenSense Systems ♦ GreenSenseRepo ▲ ₽ 271370 ▲ ₽ ayment_System ♦ Payment_System ▲ ⊕ usn22 ▲ ₩ WProject 1
Either enter the URL directly, or if you don't know the URL, select "Browse a repository" and "Azure DevOps"		Style="text-align: center;">Style="text-align: center;"/>Style="text-align: cente
	Back Clone	Connect - Cancel

Local Clone/Development folder

📙 🛃 🚽 🗧 ProjectHPH					- 0	×
File Home Share View						~ ?
← → × 📙 « Developmen	t > Azure D	evOps > ProjectHPH	ٽ ~	Search ProjectHPH		Q
✓		Name	k	Date modified	Type	Size
Desktop	A	.gitignore		05.09.2024 11:21	Git Ignore Source	1
🖶 Downloads	A	READIVIE.IIIU		03.03.2024 11.21	Markdown Source	1
Documents	A					
Pictures	A					
HelloWorld						
PowerPoints						
SDP Students 26.8						
Sjekklister						
> 🌰 OneDrive - Personal						
> 💻 This PC						
> 💣 Network						
		<				>

i == 🖿

Git Terms



Git maintains a local copy of the entire repository, so you need now and then to sync your local activities with the server.

- Fetch It's important to fetch and pull before you push.
 - Fetching checks if there are any remote commits that you should incorporate into your local changes. If you see any, pull first to prevent any upstream merge conflicts.
- **Pull** Always pull before you push. When you pull first, you can prevent upstream merge conflicts.
- **Push** When you create **commits** you save local snapshots of your code. You then need to use **Push** to push the commits to the server.
- **Sync** Use this operation to both Pull, then Push, sequentially.

Open Git Tools in Visual Studio

Select Git Changes and Git Repository

Settings

Visual Studio 2022		×	00	File	Edit	View	Git	Project	Debug	Analyze	Tools	Extens	sions
Open recent		Get started	÷ e		御 - 🖬	Sc Sc	lution	Explorer		Ctr	l+W, S		5 -
<u></u>		✓ Clone a repository	~		-	뒿 Gi	t Chan	iges		Ctr	l+0, Ctr	l+G	•••
▲ Yesterday		Get code from an online repository like GitHub or Azure	Git	Rep.	posit	😽 Gi	t Repo	sitory		Ctr	l+0, Ctr	I+R	
WinFormApp1.sln 0	05.09.2024 13:44	DevOps	No	oner	reno	ੈ ਸੇ ∎	am Ex	piorer		Ctr	+ , Ctrl	+M	70
WinFormsApp2 slp	HPH\WINFORMAPP1	Open a project or		oper	перо	🗏 Se	erver E	xplorer		Ctr	I+W, L		
C:\Temp\WinFormsApp2		SOIUTION Open a local Visual Studio	Filt	ter		📾 Da	ata Lak	e Analvt	ics Explo	er	, –		
This month Temperature Sensor sin	6.08.2024 14:11			ranch	000			or Objec	t Evoloro	r Ctr	l⊥l Ctrl	+5	ph
C:\Temp\Temperature Sensor		Navigate and edit code within	10	anci	ics	⊡ To	2L JEN	loror	C LAPIOIE		н, сан Бла т	13	
WinFormsApp1.sln	16.08.2024 13:36					<u>∎</u> le	ISU EXP			Cu	I+E, I		
Temperature Sensor.sin	16.08.2024 13:32	🋅 Create a new				😁 G	tHub C	Copilot Cr	nat	Ctr	I+ , C		
C:\Users\hansha\Documents\Visual Stu	udio 2022\Exampl	project Choose a project template with			-		okieci	ittor Evol	oror	N 0			
C:\\TC01 Temperature Sensor\Code E	16.08.2024 13:29 Examples\Tempera	code scaffolding to get started Continue without code \rightarrow				Sile E	dit View	Git Project [Debug Analyze	Tools Extensio	ons Window	Help 🔎 S	earch
- ,,) (C) + (C))]	• ≌ ‼ ₪	Lione Repos	sitory		÷ 1	_	
						Git Repp	ository *	Create Git R	enository itories		DrojostUDU		
			-			Filter	epository	Commit or S	tash	• <u> </u>	pen Local Rep	ository	
Just open Vis	sual Stuc	lio without				▲ Branches	;	Fetch		Grapi	n messay	le .	
		Ducient					C	hoose	vour l	ocal R	enosi	torv	
creating or o	pening a	Project						Sync (Pull th	ien-Push)	-000011	0000	cory	
								 New Branch. View Branch 	History				
								Manage Brar	nches				
								 Open in File Open in Con 	Explorer nmand Prompt				
								Manage Rem	notes				

Git Tools in Visual Studio



Git Repository window

Git RepH (main) 🌸 🗙						÷ ¢
🕫 ProjectHPH (main)	< 🖸 🖉 🖉 🔊	🖉 🔷 👪 🕄		Filter	History	- م
Filter	Branch: mair	1 IIII				
	Branch / Tag	Graph	Message	Author	Date	ID
4 Branches	Incoming (0) Fetch Pull				
A Interpretended Project HPH (main)	Outgoing (D) Push Sync				
%a main 1↓0 / 0	Local Histor	'y				
🛚 🐻 remotes/origin	🔏 main	•	Updated the WinForm with Textbox and Button	Hans-	05.09	f79c0
		Å	WinForm App Added README.md, .gitignore (VisualStudio) files	🕑 Hans 🔮 Hans	05.09 05.09	4cc06 682d8

Git Changes window

Git Chang	jes - Pro	jectHPH		- Ŧ X
Comm	it f79c0a	77 created	locally.	×
main			- 🗄 🗸	12…
110/0	View all	<u>commits</u>		
Enter a	message	<required< td=""><td>></td><td></td></required<>	>	
				#
Commit	All -	Amend		
Related	Work 1	tems		
✓ Change	s	tems		
There a	re no un	staged char	nges in the	e
working	director	у.		
Stashes	5			
Solution	Explorer	i Git Chande	es	

Adding Folders and Files

You can Add Folder and Files directly in Windows File Explorer. Here I have added a Folder "Documents" and added a Word document inside.

📙 🕑 📙 🗢 Documents	– 🗆 X		
File Home Share View	~	0	Git Changes - ProjectHPH 🛛 🔹 🖣 🗙
 ← → · · ↑ • « Windows (C.) > Develo ★ Quick access ■ Desktop ↓ Downloads ☆ Documents ∞ Pictures ↓ HelloWorld 	pment > Azure DevOps > ProjectHPH > Documents Search Documents Date modified Type Size Mew Microsoft Word Document.docx 06.09.2024 10:00 Microsoft Word D 0 KB Mex Microsoft Word D Microsoft Word D Mex Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Microsoft Word D Micr		main ↓↓↓↑ ℃ … ↑↓ 0 / 0 <u>View all commits</u> Enter a message <required></required>
SDP Students 26.8			++
Sjekklister	Then this is automatically detected	ed	Commit All 🔻 🗆 Amend
 OneDrive - Personal This PC 	in "Git Changes in Visual Studio		A Related Work Items There are no items mentioned in the commit
i Network	and you can Commit and Pull to		
1 item	remote repository		 ▲ Changes (1) +… ▲ I C:\Development\Azure DevOps\Pr ▲ Documents ▲ New Microsoft Word Documen
Note! To detec	t a Folder, you also need to create a File	e 📔	◊ Stashes

Note! To detect a Folder, you also need to create a File inside the Folder because a Git folders cannot be

Azure DevOps – Folders and Files

¢	Azure DevOps usn24 / ProjectHPH / Repos / Files / 🚸 ProjectHPH 🗸							You can also add Folder an Files from the Azure DevOr			
Р	ProjectHPH	+	•	ProjectHPH		÷		$^{\wp}$ main \lor	web ir	nterface	
2	Overview		>	© (>>>	Clone Fork			Files			
	Boards			+	New		ß	Contents Hist	ory		
8	Repos			Ť	Upload file(s)	/	b	Folder		Last change	
€	Files			\downarrow	Download as Zip			📁 WinForm	mApp1	1h ago	
¢	Commits				Hide files tree			🗅 .gitignor	re	5h ago	
ይ	Pushes				The mestree			MI README	E.md	5h ago	
운	Branches										
0	Tags							Introduct	tion		
9 1	Dull as success							TODO: Give a	a short introd	uction of your project. Let this section explain	

Create New Folder

🚸 ProjectHPH	÷	양 main 🗸 🗈	/ 1
> Clone		Files	Here we s from the <i>i</i>
		Contents History	
+ New	>	🗅 File	
T Upload file(s)		🗅 Folder	New folder
		MinEormApp1	New folder name
			/ Database
			Use slashes to create
			New file name
I (it toldore d	oonnot ho i	omntv	

Git lotders cannot be empty, so you need to create a File as well inside the Folder

show how to create a new Folder Azure DevOps web interface.

multiple subfolders like "sub/folder".

Database.sql

Git folders cannot be empty, so a placeholder file will be added. Its content can be edited before commit.

https://www.halvorsen.blog

Start Creating Code in Visual Studio

Hans-Petter Halvorsen

Table of Contents

Visual Studio



Create New Project

Create a new project	Search for templates (Alt+S)			
Recent project templates	C# • Windows • Desktop •			
Windows Forms App C# Windows Forms App (.NET C#	A project template for creating a .NET Windows Forms (WinForms) App.			
Framework)	C# Windows Desktop			
	Windows Forms App (.NET Framework) A project for creating an application with a Windows Forms (WinForms) user interface	Configure your new project		
	C# Windows Desktop	Windows Forms App C# Windows Desktop		
	WPF Application A project for creating a .NET WPF Application	Project name		
	C# Windows Desktop	WinFormApp1		
	 WPF Class Library A project for creating a class library that targets a.NET WPF Application 	Location C:\Development\Azure DevOps\ProjectHPH\		
	C# Windows Desktop Library	Solution name 🛈		
	A project for creating a custom control library WPF Applications	WinFormApp1 Place solution and project in the same directory		
	Next	Project will be created in "C:\Development\Azure DevOps \ProjectHPH\WinFormApp1\WinFormApp1\"		

Commit Changes

Git Poject Build Solution Git Poject Build Debu; • An	Debug Team Format Test Analyze Tools Extensions Window Help P Search - WinFormApp1 y CPU • • WinFormApp1 • • <td< th=""><th></th><th>🜒 – □ × & GitHub Copilot 🖻 🖗</th></td<>		🜒 – □ × & GitHub Copilot 🖻 🖗
Toolbox • ະ × ຜິSearch Toolbox •	Form1.cs [Design] + ×	Git Changes - Projecti Main	HPH
All Windows Forms Pointer BackgroundWorker	e# Form1	110/0 <u>View all com</u> Enter a message <re< th=""><th>equired></th></re<>	equired>
BindingSource Button CheckBox CheckBox	button1	Commit All 🝷 🗆 Ame	#
ColorDialog		Keiated work item Changes (2) The C:\Development	s +… ∖Azure DevOps\Pr…
Context Industry DataGridView DataGridView DateTimePicker DomainUpDown		✓ ■ WinFormApp1 c# Form1.Desig P Form1.resx	\WinFormApp1 ner.cs M M
 ErrorProvider FileSystemWatcher FlowLayoutPanel 		▹ Stashes	
 FolderBrowserDialog FontDialog GroupBox 		Solution Explorer Git Properties	Changes • # ×
 I HelpProvider I HScrollBar I mageList 		Form1 System.Windo	0; 0; 0; 0
A Label A LinkLabel ListBox	Commit Changes: When you create	RightToLeft RightToLeftLayout ShowIcon	No False True
	commits you save local snapshots of your	ShowInTaskbar Size SizeGripStyle StartPosition	True 816; 489 Auto WindowsDofaultLocative
NotifyIcon NumericUpDown OpenFileDialog	code. You then need to use Push to push th	e Tag Text	Form1
 PageSetupDialog Panel 	commits to the server	Text The text associated w	vith the control.

Push Changes

Ø	File Edit View Git Project Build D - 이 웹 • 딸 멤 멤 / 가 - 연 • Debu, • Any C	Debug Team Test CPU → ▶ WinFormAp	Analyze op1•▷ ″	Tools Extensions Window Hell - ■ ■ = = ■ +	elp 29 4 I 53 Q	Search -	WinFo	ormApp1		- □ × ಔ GitHub Copilot । 必 尿		
D	Git RepH (main) * × Form1.cs [Design	1						- ¢	Git Changes - Project	HPH <u>▼</u> ₽ ×		
ita (B ProjectHPH (main)	🔊 ୫ 🕄 🗟 🔍 🖉	2 10			Filter	History	- م	Commit f79c0a77 c	reated locally. ×		
Sou	Filter P	Branch: main							main	- ↓↓1 <i>.</i>		
ces.	▲ Branches	Branch / Tag Gr	raph	Message		Author	Date	ID	1↓1/0 <u>View all com</u>	imits		
	▲ � ProjectHPH (main)	- Incoming (0) Fett		ts Please Fetch to get the latest	t commit	s from v	our remo	te hran	Enter a message <re< th=""><th>equired></th></re<>	equired>		
	8 8 main 1↓1/0	 Outgoing (1) Pus 	sh Sync									
	▶ 🗟 remotes/origin	te main	•	pdated the WinForm with Textbo	ox an	🕑 Hans	05.09	f79c0		#		
		▲ Local History				0	05.00	406	Commit All - Ame	end		
			β.	Added README.md, .gitignore (Vis	sualS	Hanse Banse	05.09	4cc06 682d8	Related Work Item	s		
				, 5 5 (-			▲ Changes			
									There are no unstag working directory.	ed changes in the		
									▹ Stashes			
	\A/banyaya				<i>~</i> ~~				Solution Explorer Cit	Changos		
	vvnen you na	ave com	Imit	tea the chang	ges	,						
			. n	- I - + - · - · - · - i -	_				Form1 System Windows Forms Form			
	you then nee	ea to use	e Pu	sn to push th	ie							
	•			•					■ Padding	0; 0; 0; 0		
	commits to	the serve	er.						RightToLeft	No		
			•••						RightToLeftLayout	False		
									ShowIcon	True		
									ShowInTaskbar	True		
									Size	816; 489		
									SizeGripStyle	Auto		
									StartPosition	WindowsDefaultLocati		
									Text	Form1		
									Taut	T VI III		
									The text associated w	vith the control		
									The text disocidited w	and the control.		
J F	Ready							tL 1	/0 • /0 \$ main •	😨 ProjectHPH 🔺 🔎		

How it looks in Azure DevOps

ا ۞ ا ◘ • @ ۞	闭 🧿 Commits - Repos x +	- 0	×
← C බ ⊡ https://dev.azure	e.com/usn24/_git/ProjectHPH/commits	A 🏠 🕄 🗆 🖆 🖓 …	. 🍫
Canvas 🛞 The Technical Guy G Google	🔍 Copilot 🔹 Sikt KI-chat 🛞 ChatGPT 🔤 Google Translate 🚦 Azure DevOps 🛅 News		
Azure DevOps usn24 / ProjectHP	Q Search 送 🗂 Ø 🍇		
P ProjectHPH +	^g ⁹ main ∨		
Overview	Commits	\Xi 🦫 On Commit ID 🔍	۹
n Boards	Graph Commit	Pull Request Status	
😢 Repos	Updated the WinForm with Textbox and Button f79c0a77 M Hans-Petter Halvorsen Today at 1:48 PM		
Files	WinForm App 4cc0s308 M Hans-Petter Halvorsen Today at 1:38 PM		
¢ Commits	Added README.md, .gitignore (VisualStudio) files		
<u></u> Pushes	682d8aaf 🜒 Hans-Petter Halvorsen Today at 9:47 AM		
89 Branches			
7 Tags			
ဒို Pull requests			
O Advanced Security			
Pipelines			
👗 Test Plans			
Artifacts			
Project settings			

Git Tools in Visual Studio - Summary



Git Repository window

Git RepH (main) 🌸 🗙							-	ф
🕫 ProjectHPH (main)	<	S & S	88 🖉 🖄		Filter	History	ş) -
Filter	ę	Branch: main						
		Branch / Tag	Graph	Message	Author	Date	ID	
4 Branches	†↓ 0 / 0	Incoming (0)	Fetch Pull					
🛾 🚸 ProjectHPH (main)		Outgoing (0)	Push Sync					
a main		▲ Local History						
🛚 📑 remotes/origin		🔏 main	•	Updated the WinForm with Textbox and Button	Hans-	05.09	f79c0.	
			Å	WinForm App Added README.md, .gitignore (VisualStudio) files	🕑 Hans 🔮 Hans	05.09 05.09	4cc06. 682d8	

Git Changes window

Git Changes - ProjectHPH	• 4 ×
Commit f79c0a77 created locally.	×
main 👻 🕹 🗸 1	1 <i>G</i>
110/0 <u>View all commits</u>	
Enter a message <required></required>	
	#
b Delated Wark Items	
A Changes	
There are no unstaged changes in the	
working directory.	
Stashes	
Colution Euployer, Cit Changes	
Solution Explorer Git Changes	

Resources

- About Git in Visual Studio: <u>https://learn.microsoft.com/en-</u> <u>us/visualstudio/version-control/git-with-visual-studio</u>
- Tutorial: Open a project from a repo: <u>https://learn.microsoft.com/en-us/visualstudio/get-</u> <u>started/tutorial-open-project-from-repo</u>
- Use git fetch, pull, push and sync for version control in Visual Studio: <u>https://learn.microsoft.com/en-</u> <u>us/visualstudio/version-control/git-fetch-pull-sync</u>

Hans-Petter Halvorsen

University of South-Eastern Norway

www.usn.no

E-mail: <u>hans.p.halvorsen@usn.no</u> Web: <u>https://www.halvorsen.blog</u>

