

Machine and Environment Setup

.NET

Failure is central to engineering. Every single calculation that an engineer makes is a failure calculation. Successful engineering is all about understanding how things break or fail Henry Petroski

Contents

<u>Chat Platform</u> – Slack. This is where we will communicate, organize, and where I will post important information for you.

<u>Code Editor</u> – Visual Studio Code and Visual Studio. This is where we will create and test code.

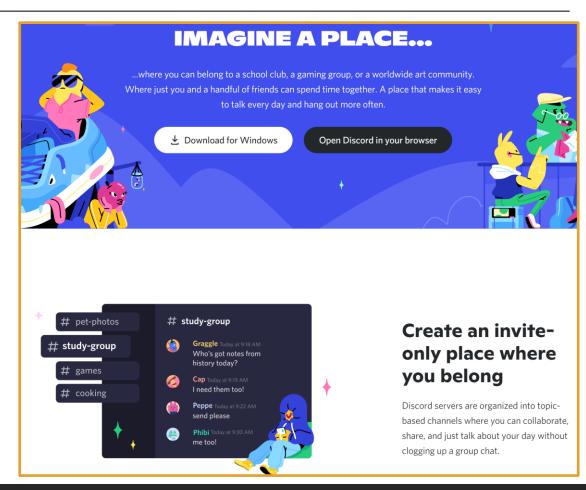
<u>SDK (Software Development Kit)</u> – This is the suite of programs that we download that enables us to create, edit, test, and compile code.

<u>Version Control</u> – GitHub. This is where we will store our documents and code, record changes, and control which version of our code we use.

Chat Platform – Discord

https://discord.com/brand-new

- Download Discord to your PC/Mac and phone
- 2. Each associate is responsible for maintaining contact and being up to date on messages on Discord. Especially during 9-5 (CST) hours.



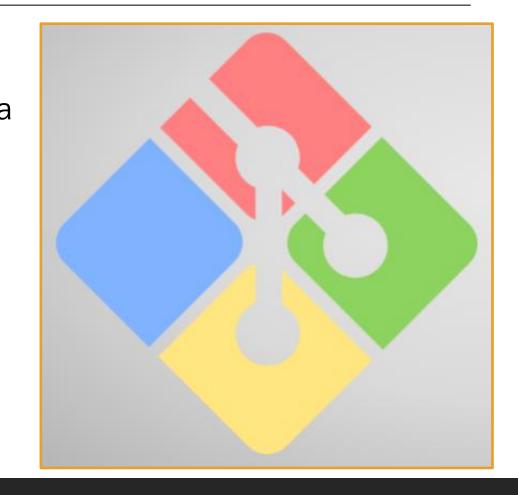
Chat Platform – Slack

https://discord.com/brand-new

1. Create steps for Slack.

gitBash https://gitforwindows.org/

- 1. Git for Windows focuses on offering a lightweight, native set of tools that bring the full feature set of the Git SCM to Windows while providing appropriate user interfaces for experienced Git users and novices alike.
- 2. Go to https://gitforwindows.org/



Version Control – github.com

https://gitforwindows.org/

- 1. Open Command Line (Terminal). Run 'git -version'.
- 2. Accept your invite to the class repo.
- 3. On the class repo, create a personal Repo of the format 'MooreMark'.
- 4. Clone your remote repo from your local gitBash.
- 5. Create a text doc in your cloned repo folder.
- 6. Push a simple text doc.
 - git add .
 - git commit -m "message to self"
 - git push
 - Create new upstream branch, if necessary.
 - Verify it worked by looking at your account online.

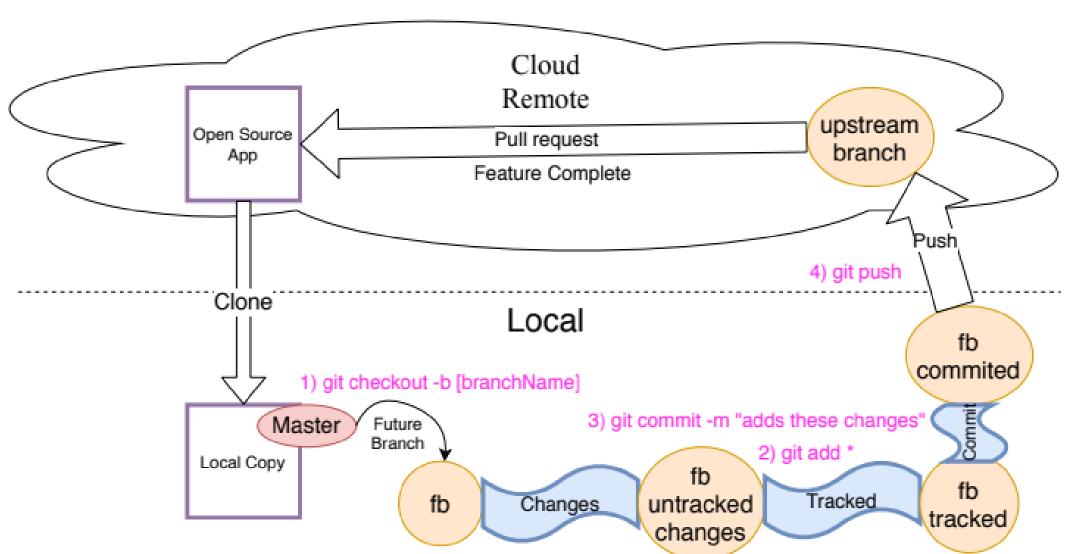


Basic Git Life Cycle

https://education.github.com/git-cheat-sheet-education.pdf

- 1. git clone [url] or git pull from master branch.
- 2. git checkout -b [branchName] (Create a new "feature" branch and switch to it.)
- Make changes to add a feature.
- 4. git add . (Add all changes made to tracking)
- 5. git commit -m "This message tells what the changes are" (Add to staging)
- 6. git pull (to be 100% sure no changes were made to the master branch while you were working)
- 7. git push
- 8. Go online and make a pull request (PR) to master.
- 9. Return to Local main branch and git pull.

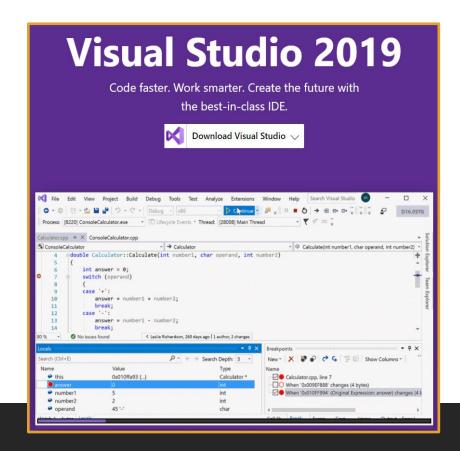
Simple (NO-CONFLICTS) Github Workflow



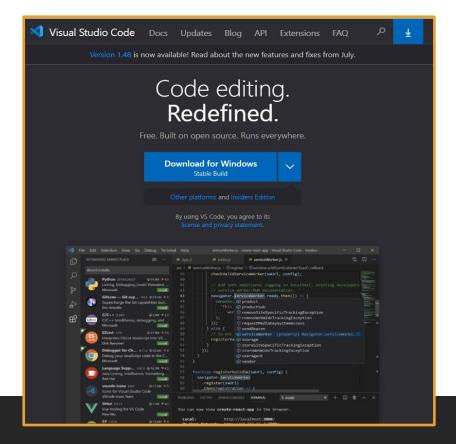
Code Editor – Visual Studio

https://visualstudio.microsoft.com/vs/ https://dotnet.microsoft.com/download https://code.visualstudio.com/

Visual Studio



VS Code



SDK (Software Development Kit)

https://en.wikipedia.org/wiki/Software_development_kit#:~:text=https://dotnet.microsoft.com/download/visual-studio-sdks

A **Software Development Kit** (**SDK**) is a collection of software development tools in one installable package. They have compiler, debugger and perhaps a software framework. They are normally specific to a hardware platform and operating system combination.

- An SDK is required for developing a platform-specific app.
- The development of an Android app on Java platform requires a Java Development Kit.
- For iOS applications (apps) the iOS SDK is required.
- For Universal Windows Platform (UWP) the .NET Framework SDK is used.

Some **SDK**s add additional features and can be installed in apps to provide analytics, data about application activity, and monetization options.

.NET is a free, cross-platform, open-source developer platform for building many different types of applications.			
Version	Status	Visual Studio 2017 SDK ①	Visual Studio 2019 SDK ①
.NET 6.0	Preview ① Download matrix for .NET Core	N/A	x64 SDK x86 SDK (v6.0.100-preview.4)
.NET 5.0	Current ①	N/A	x64 SDK x86 SDK (v5.0.300)
.NET Core 3.1	LTS ①	N/A	x64 SDK x86 SDK (v3.1.409)

Log into Git from Command Line

https://kbroman.org/github_tutorial/pages/first_time.html https://docs.github.com/en/github/getting-started-with-github/quickstart/set-up-git

You need to log into github.com from the command line and may have to change some settings.