



# Machine and Environment Setup

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.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

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[Chat Platform](#) – Slack. This is where we will communicate, organize, and where I will post important information for you.

[Code Editor](#) – Visual Studio Code and Visual Studio. This is where we will create and test code.

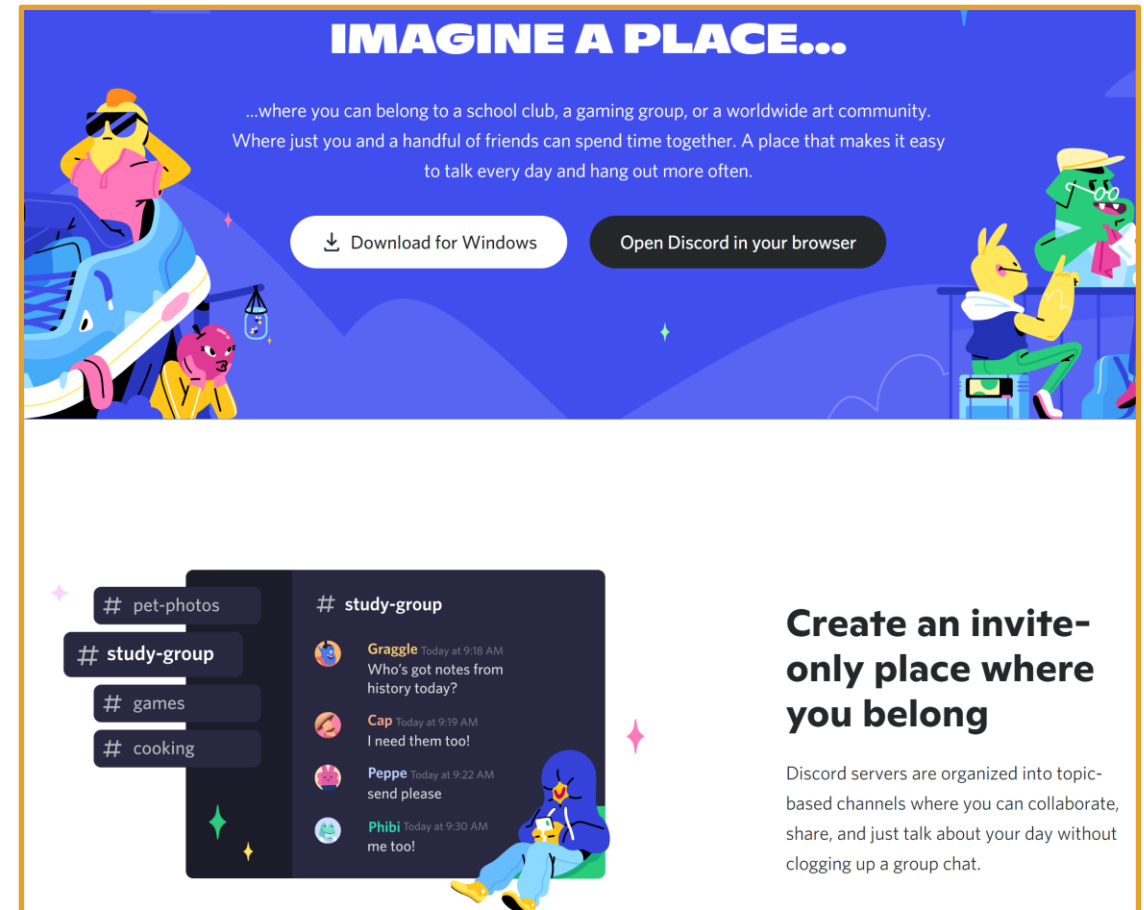
[SDK \(Software Development Kit\)](#) – This is the suite of programs that we download that enables us to create, edit, test, and compile code.

[Version Control](#) – 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>

1. 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>

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1. Create steps for Slack.



# gitBash

<https://gitforwindows.org/>

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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/>

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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.



# GitHub

# Basic Git Life Cycle

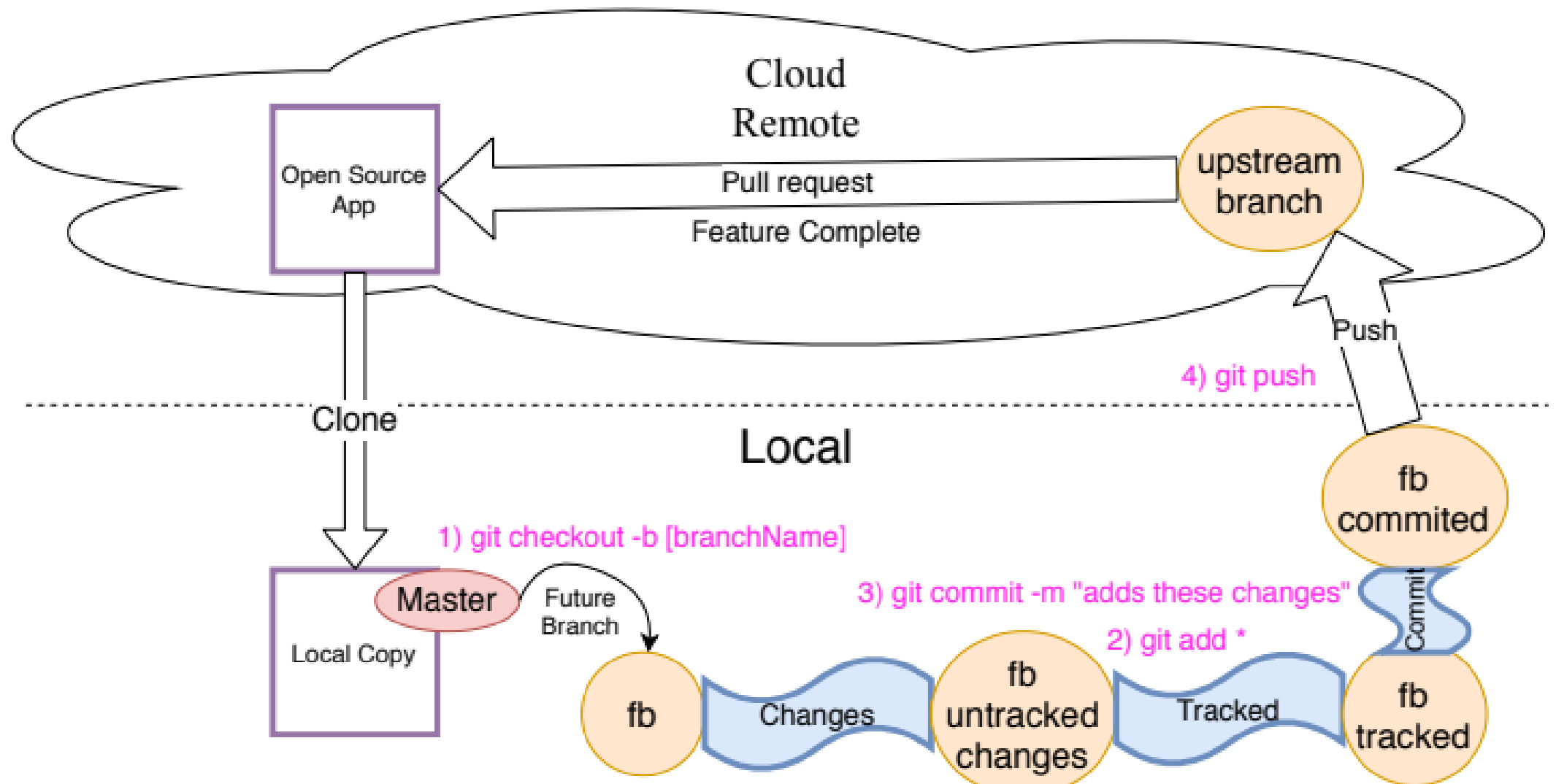
<https://education.github.com/git-cheat-sheet-education.pdf>

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1. `git clone [url]` or `git pull` from master branch.
2. `git checkout -b [branchName]` (Create a new “feature” branch and switch to it.)
3. 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`.

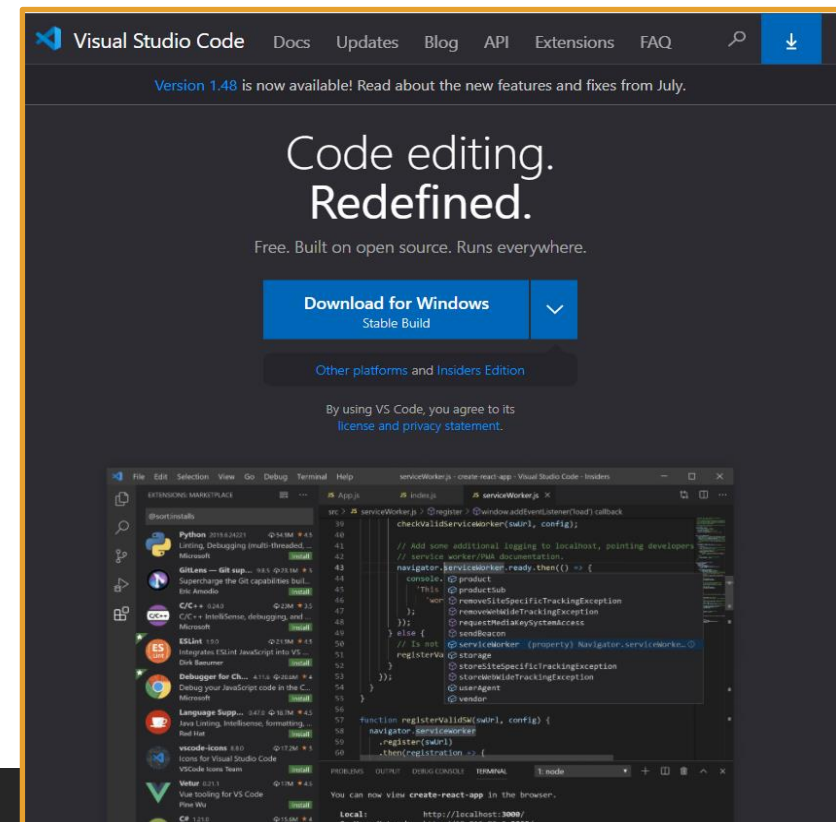


# Simple (NO-CONFLICTS) Github Workflow



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

## VS Code



# SDK (Software Development Kit)

[https://en.wikipedia.org/wiki/Software\\_development\\_kit#:~:text=https://dotnet.microsoft.com/download/visual-studio-sdks](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 **SDKs** add additional features and can be installed in apps to provide analytics, data about application activity, and monetization options.

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

# Log into Git from Command Line

[https://kbroman.org/github\\_tutorial/pages/first\\_time.html](https://kbroman.org/github_tutorial/pages/first_time.html)

<https://docs.github.com/en/github/getting-started-with-github/quickstart/set-up-git>

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