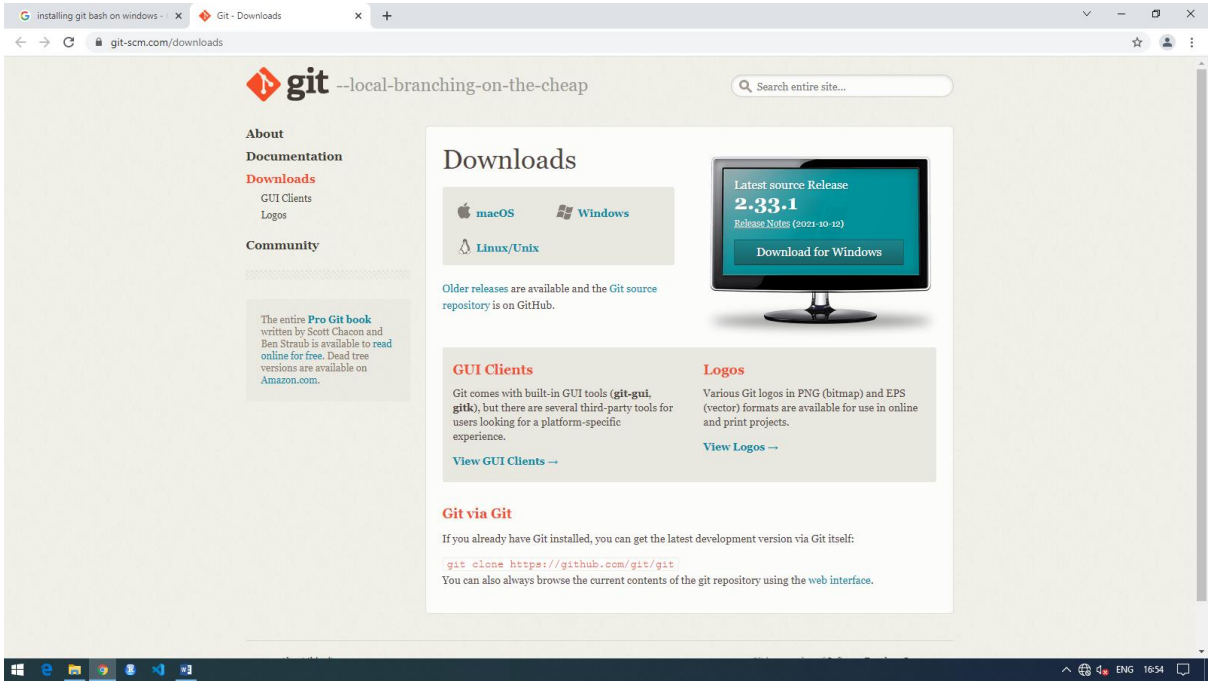
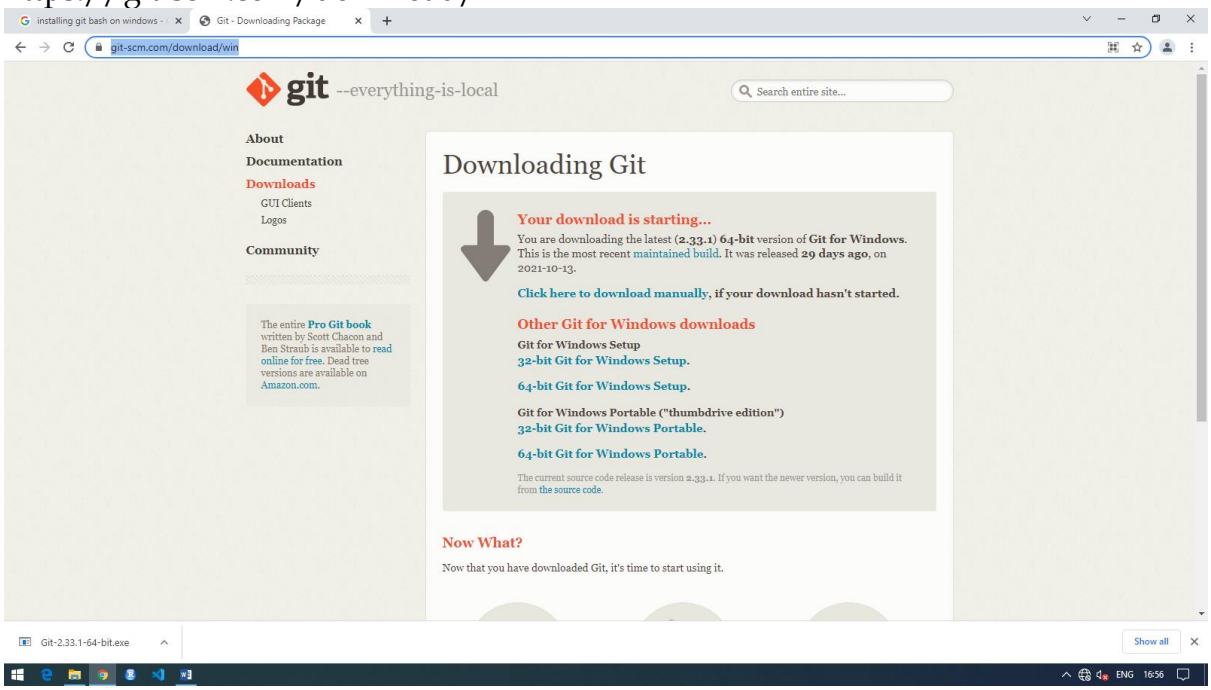
Git and Github
Topics:

1. Setting up Git
2. Basic Git Commands
3. Online Git Repositories

To install git bash on windows:
Go to website page: https://git-scm.com/downloads



Click on Windows
https://git-scm.com/download/win



Install it

Setting up Git:

Some basic concepts:

- Git is a very popular version control system for software.
- Version Control: Software tools that enable the management of changes to source code
  – maintaining version history
- Several version control tools: CVS, SVN, Git etc

About Git:

- Distributed version control system
- Developed by Linus Torvalds for managing Linux Kernel development
- Widely adopted now by several projects
  – The Node ecosystem thrives on it

Exercises - What we will do here:

- Setting up Git on Your machine
- Using Git
- Using online Git repositories

Setting up Git:
Goto the site https://git-scm.com
Goto Downloads / select Windows git installation file
Git Bash:
Configure the environment for the First Time:
> git --version
> git config --global user.name "U Mohan Srinivas"
> git config --global user.email "umohansrinivas@gmail.com"
Checking Your Settings:
> git config --list

Basic Git Commands:

Create a folder git-test
Open this folder in Visual Studio Code Software Editor
Create index.html file in this folder
Go to Command line interface in git-test folder
Type the Following Commands:
> git init
This folder is initializes as git repository (master branch for this git repo)
> git status
Returns the current status of the folder
Identify listed and untracked files in red color
> git add .
All files are added to the staging area.
Repeat >git status
> git add <files/folders
Add files / folders to staging area
> git commit –m "first commit"
Commit the current status of the folder to the git repository
Repeat >git status

Nothing to commit, working tree clean
> git log --online
See a brief log of all commits
Come back to editor of index.html and add more line
Create sub folder called templates and create another test.html and add some lines
> git status
> git add .
> git commit –m "second commit"
Modify the index.html file
> git status
> git add .
> git commit –m "third commit"
> git log --online
We can use the commits to Rollback changes (go to previous version)
> git checkout <commit> <file>
Checkout the file from an older commit
> git checkout 900cfcf index.html
> git status
> git reset HEAD index.html
> git status
> git checkout -- index.html
> git status
> git reset <file>
Unstage a staged file, but leave working directory unchanged
> git reset
Reset the staging area to the last commit without disturbing the working directory

Online Git Repositories:

Store a copy of your git repository on online
It can be easily shared on multiple computers and multiple users
Two online Git repository service providers

1. GitHub (https://github.com)
2. Bitbucket (https://bitbucket.org)

Here Local git repository to be mirrored in an online git repository

First Create an Account in Bitbucket
After Login to your account do the following procedure.
On the Dashboard – Click on Repositories / select Create Repository
Type Repository name: git-test
Access Level: This is a private repository
Repository type: Git
Click on Crete Repository

Online Git Repository Commands:

- git remote add origin <repository URL>
  - Add the remote online repository

- git push –u origin master
  - Push the local git repository to the origin to the master branch
- git clone <repository URL>
  - clone an online Git repository to your computer

Copy HTTPS url home page of repository
> git remote add origin url
> git push –u origin master

Online Github Repository:

Login to Account GitHub
Right Side Click on + symbol or New Repository
Repository name: git-test
Private
Click on Create repository
Do the same procedure as bitbucket

Copy / Download Git Repository
Open Repository copy HTTPS url
> mkdir temp
> cd temp
> git clone url