

GitHub 101

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Why is this important ?

- Due to network effects and the intertwining between projects Github has the highest rate of lock in, and more and more third parties directly integrate into the Git-hub API.
- Its "kinda" like a programmer's CV. Git-hub helps you keep track of all the projects you have been involved in over the years and can act as a public record of your skills and experience.
- Git-hub presents a very good way to learn and strengthen your coding ability.
- Repository - You have your repository, which is usually a library of files which you work from which is good for organization.
- Revisioning - Git keeps an eye on each revision you make with the option of 'reverting' to a previous version, should the need arise.


Why is this important ?

- Collaboration - Multiple people can pull and push codes to the repository, making it a centralized source.
- Forks - sort of an off-shoot of previous code. Forks are great for taking a basic example and further customizing the code because the initial code is still intact should other avenues be explored.
- Issue system - good way of handling any technical issues with the code with people being able to respond to particular sections.
- Github is a great way to handle and maintain code for a developer in the sense that it keeps everything organized with the ability to undo any unwanted actions. You can also push directly to servers so there is more consistency with that side of the transfer. In general, Github, and Git, are great tools for any developer/designer and relatively easy to learn.

What is Git-Hub ?

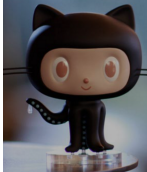
- GitHub is an open source code hosting platform for version control and collaboration. It lets you and others work together on projects from anywhere.

Opening an account

 [Personal](#) [Open source](#) [Business](#) [Explore](#)

[Pricing](#) [Blog](#) [Support](#)

[Sign in](#) [Sign up](#)



How people build software

Millions of developers use GitHub to build personal projects, support their businesses, and work together on open source technologies.

Use at least one letter, one numeral, and seven characters.

[Sign up for GitHub](#)

By clicking "Sign up for GitHub", you agree to our [Terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails.

Introducing unlimited private repositories

All of our paid plans on GitHub.com now include unlimited private repositories. [Sign up](#) to get started or [read more about this change on our blog](#).

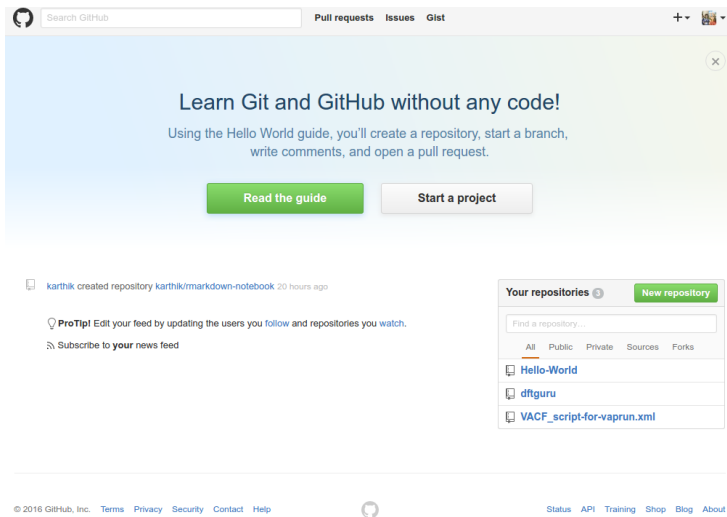
Welcome home, developers

GitHub fosters a fast, flexible, and collaborative development process that lets you work on your own or with others.

- Lets all open a github account and follow each other.
- Kindly follow me @dftguru and i'll follow back. Also follow Karthik Ram (@karthik) from UC Berkeley.

Welcome to Github

- You are now part of the elite 0.002 percent of the world's population.



The screenshot shows the GitHub homepage. At the top, there is a search bar with the GitHub logo and a navigation bar with links for 'Pull requests', 'Issues', and 'Gist'. Below the navigation bar, a large blue and green banner reads 'Learn Git and GitHub without any code!' and 'Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.' There are two buttons: 'Read the guide' (green) and 'Start a project' (grey). Below the banner, a feed item shows 'karthik created repository karthik/markdown-notebook 20 hours ago'. To the right, a 'Your repositories' section shows a list of repositories: 'Hello-World', 'dftguru', and 'VACF_script-for-vaprun.xml'. At the bottom, there is a footer with copyright information, links for 'Terms', 'Privacy', 'Security', 'Contact', 'Help', and a status bar with links for 'Status', 'API', 'Training', 'Shop', 'Blog', and 'About'.

Search GitHub

Pull requests Issues Gist

Learn Git and GitHub without any code!

Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

Read the guide Start a project

karthik created repository karthik/markdown-notebook 20 hours ago

ProTip! Edit your feed by updating the users you follow and repositories you watch.

Subscribe to your news feed

Your repositories 3 New repository

Find a repository...

All Public Private Sources Forks

Hello-World

dftguru

VACF_script-for-vaprun.xml

© 2016 GitHub, Inc. Terms Privacy Security Contact Help

Status API Training Shop Blog About

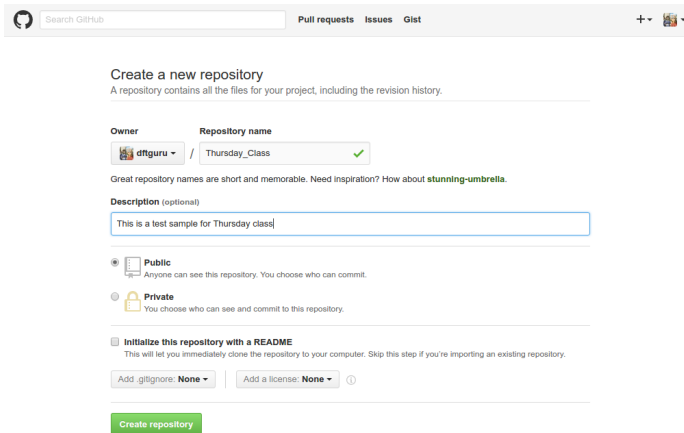
- Remember your avatar and email settings.

Creating a Repository

- A repository is usually used to organize a single project. Repositories can contain folders and files, images, videos, spreadsheets, and data sets anything your project needs. GitHub recommend including a README, or a file with information about your project. GitHub makes it easy to add one at the same time you create your new repository. It also offers other common options such as a license file.
- There are three ways to create a new repository
 - ➊ Using the "Start a project" tab on your homepage.
 - ➋ Using the "New repository" tab on your homepage.
 - ➌ Using the "+" tab at the top right corner beside your avatar.

Creating a Repository

- Go ahead and name the repository, add a description and initialize with a README file.



The screenshot shows the GitHub interface for creating a new repository. At the top, there's a navigation bar with the GitHub logo, a search bar, and links for 'Pull requests', 'Issues', and 'Gist'. Below this, the main heading is 'Create a new repository' with a subtitle 'A repository contains all the files for your project, including the revision history.' The form is divided into several sections: 1. 'Owner' and 'Repository name': The owner is 'dfguru' and the repository name is 'Thursday_Class', which has a green checkmark next to it. 2. 'Description (optional)': A text box containing 'This is a test sample for Thursday class'. 3. 'Visibility': Two radio buttons are present. 'Public' is selected, with the text 'Anyone can see this repository. You choose who can commit.' 'Private' is unselected, with the text 'You choose who can see and commit to this repository.' 4. 'Initialize this repository with a README': A checkbox is checked, with the text 'This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.' 5. 'Add .gitignore' and 'Add a license': Both dropdown menus are set to 'None'. At the bottom, there is a green 'Create repository' button.

- You can always edit the README file by clicking on README.md after creating the repository. Create the repository if you haven't already.

You have now created a repository

- Go ahead and explore the various tabs and what they do...

The screenshot shows the GitHub interface for a repository named 'Thursday_Class' by user 'dfguru'. At the top, there's a navigation bar with 'Pull requests', 'Issues', and 'Gist' tabs. Below this, the repository name 'dfguru / Thursday_Class' is displayed, along with 'Unwatch' (1), 'Star' (0), and 'Fork' (0) buttons. A secondary navigation bar includes 'Code', 'Issues' (0), 'Pull requests' (0), 'Wiki', 'Pulse', 'Graphs', and 'Settings'. The main content area starts with the text 'This is a test sample for Thursday class — Edit'. Below this, statistics show '1 commit', '1 branch', '0 releases', and '1 contributor'. Action buttons include 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. A commit history table lists the 'Initial commit' by 'dfguru' with a 'README.md' file, committed '31 minutes ago'. Below the table, the 'README.md' content is shown, featuring the title 'Thursday_Class' and the text 'This is a test sample for Thursday class'.

This is a test sample for Thursday class — Edit

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

dfguru Initial commit	Latest commit f475c5c 31 minutes ago
README.md Initial commit	31 minutes ago

Thursday_Class

This is a test sample for Thursday class



Deleting or Transferring ownership of a Repository

- The new repository you created can be deleted by going to "Settings" - located besides "Graph"

The screenshot shows the GitHub interface for a repository named 'Thursday_Class' by user 'dftguru'. The 'Settings' tab is selected in the top navigation bar. On the left, a sidebar lists 'Options' with sub-items: 'Collaborators', 'Branches', 'Webhooks & services', and 'Deploy keys'. The main content area is divided into two sections: 'Settings' and 'Features'. The 'Settings' section includes a 'Repository name' field with the value 'Thursday_Class' and a 'Rename' button. The 'Features' section shows the 'Wikis' feature is enabled, with a description: 'GitHub Wikis is a simple way to let others contribute content. Any GitHub user can create and edit pages to use for documentation, examples, support, or anything you wish.' Below these sections is a red 'Danger Zone' box containing three actions: 'Make this repository private' (with a 'Make private' button), 'Transfer ownership' (with a 'Transfer' button), and 'Delete this repository' (with a 'Delete this repository' button).

This repository Search Pull requests Issues Gist + -

dftguru / Thursday_Class Unwatch 1 Star 0 Fork 0

<> Code Issues 0 Pull requests 0 Wiki Pulse Graphs Settings

Options

- Collaborators
- Branches
- Webhooks & services
- Deploy keys

Settings

Repository name

Thursday_Class Rename

Features

☒ Wikis

GitHub Wikis is a simple way to let others contribute content. Any GitHub user can create and edit pages to use for documentation, examples, support, or anything you wish.

Danger Zone

Make this repository private

Please [upgrade your plan](#) to make this repository private.

Make private

Transfer ownership

Transfer this repository to another user or to an organization where you have admin rights.

Transfer

Delete this repository

Once you delete a repository, there is no going back. Please be certain.

Delete this repository

Creating a Branch

- Branching is the way to work on different versions of a repository at one time.

By default your repository has one branch named "master" which is considered to be the definitive branch. We use branches to experiment and make edits before committing them to "master".

When you create a branch off the "master" branch, you're making a copy, or snapshot, of "master" as it was at that point in time. If someone else made changes to the "master" branch while you were working on your branch, you could pull in those updates.

- To create a new branch
 - 1 Go to your new repository Thursday-Class.
 - 2 Click the drop down at the top of the file list that says Branch: master.
 - 3 Type a branch name, "Sarah-Alyssa-Srimanta", into the new branch text box.
 - 4 Select the blue Create branch box or hit Enter on your keyboard.

You have created a branch

The screenshot shows the GitHub interface for the repository 'dftguru / Thursday_Class'. At the top, there are navigation links for Code, Issues (0), Pull requests (0), Wiki, Pulse, Graphs, and Settings. Below these, a message states 'This is a test sample for Thursday class — Edit'. A summary bar indicates 1 commit, 1 branch, 0 releases, and 1 contributor. Action buttons include 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. A modal window titled 'Switch branches/tags' is open, showing a search bar with 'Sarah-Alyssa' entered. Under the 'Branches' tab, a button 'Create branch: Sarah-Alyssa from 'master'' is visible. The main content area shows the 'master' branch with its latest commit 'f475c5c' from 2 hours ago, and a preview of the 'Thursday_Class' directory containing a file with the text 'This is a test sample for Thursday class'.

- Now you have two branches, "master" and "Sarah-Alyssa-Srimanta". They look exactly the same, but not for long! Next we'll add our changes to the new branch.

Make and commit changes

- Now we can make changes to the branch "Sarah-Alyssa-Srimanta" which is a branch of our "master".

To make and commit changes:

- 1 Click the README.md file.
- 2 Click the pencil icon in the upper right corner of the file view to edit.
- 3 In the editor, write a bit about yourself e.g Prof. Jose taught me crystal, latex, vasp etc...
- 4 Write a commit message that describes your changes.
- 5 Click Commit changes button.

Make and commit changes

The screenshot shows the GitHub web interface for a repository named 'dftguru / Thursday_Class'. The top navigation bar includes 'Pull requests', 'Issues', and 'Gist'. The repository name is followed by 'Unwatch', '1 Star', and '0 Fork'. Below the navigation bar, there are tabs for 'Code', 'Issues', 'Pull requests', 'Wiki', 'Pulse', 'Graphs', and 'Settings'. The 'Code' tab is active, showing the file 'Thursday_Class / README.md'. The file content is displayed in a code editor with line numbers 1 through 4. The text in the editor is: 1 # Thursday_Class, 2 This is a test sample for Thursday class, 3, 4 Prof. Jose taught me crystal, latex, vasp etc... Below the code editor, there is a 'Commit changes' dialog box. The dialog box has a title 'Commit changes' and a text area containing 'Updated README.md'. Below the text area, there is a message: 'Dr Yohannes again and again... You are outstanding in this regard.' At the bottom of the dialog box, there are two radio buttons: 'Commit directly to the Sarah-Alyssa-Srinanta branch.' and 'Create a new branch for this commit and start a pull request. Learn more about pull requests.' The 'Commit changes' button is green and the 'Cancel' button is red.

GitHub repository: dftguru / Thursday_Class

Navigation: Pull requests, Issues, Gist

Repository stats: Unwatch, 1 Star, 0 Fork

File: Thursday_Class / README.md

Code editor content:

```
1 # Thursday_Class
2 This is a test sample for Thursday class
3
4 Prof. Jose taught me crystal, latex, vasp etc...
```

Commit changes dialog:

Updated README.md

Dr Yohannes again and again... You are outstanding in this regard.

Commit options:

- Commit directly to the Sarah-Alyssa-Srinanta branch.
- Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Buttons: Commit changes, Cancel

Open a Pull Request

Nice edits! Now that you have changes in a branch off of master, you can open a pull request.

Pull Requests are the heart of collaboration on GitHub. When you open a pull request, youre proposing your changes and requesting that someone review and pull in your contribution and merge them into their branch.

Pull requests show diffs, or differences, of the content from both branches. The changes, additions, and subtractions are shown in green and red.

As soon as you make a commit, you can open a pull request and start a discussion, even before the code is finished.

By using GitHubs @mention system in your pull request message, you can ask for feedback from specific people or teams, whether theyre down the hall or 10 time zones away.

You can even open pull requests in your own repository and merge them yourself. Its a great way to learn the GitHub Flow before working on larger projects.