

# UNDERSTANDING GITHUB



PATHWAY TO YOUR DEVELOPMENT CAREER

# WHY USE GIT?



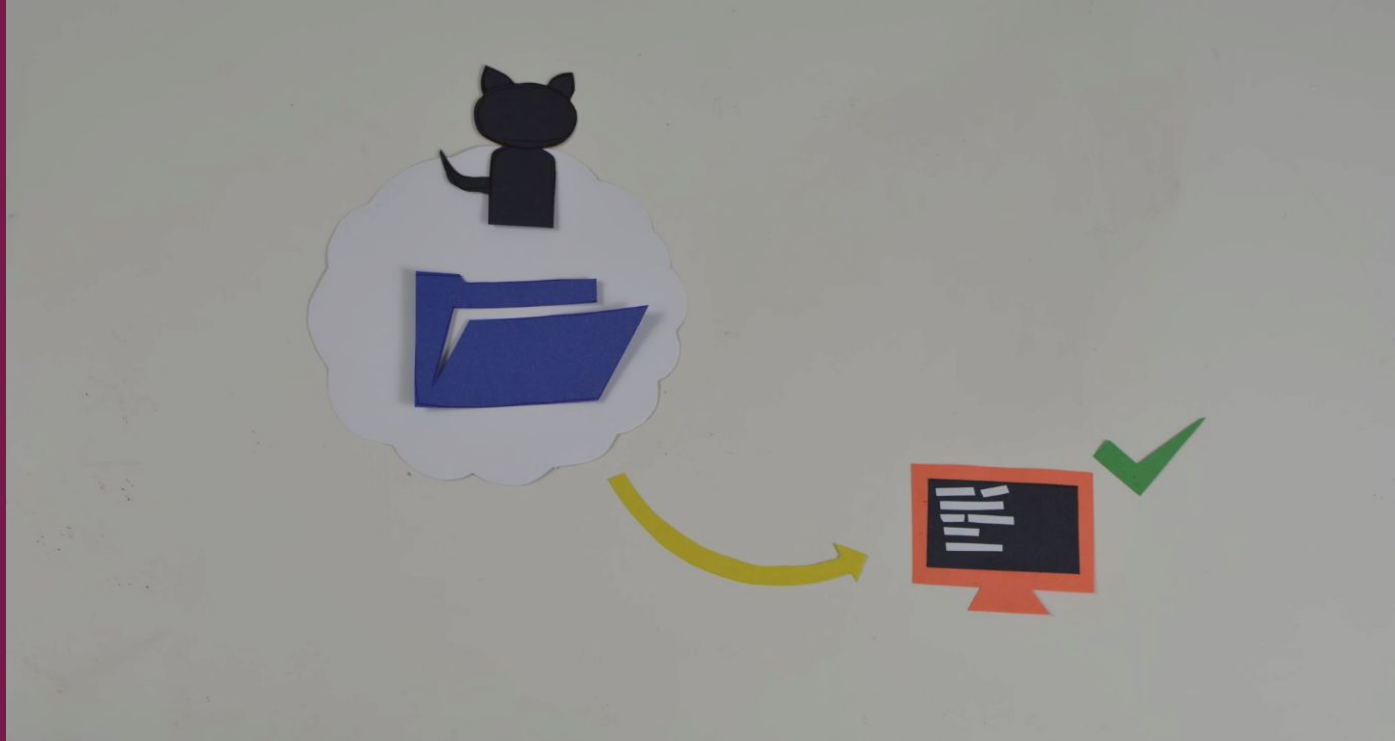
**git** --everything-is-local

- FAST, LIGHT VERSION CONTROL SYSTEM
- SERIES OF COMMAND LINE TOOLS
- BRANCHING FOR ISOLATING THE CHANGES
- LOCAL REPOSITORY
- STAGING AREAS
- MULTIPLE WORKFLOWS

# WHY USE GITHUB?

- GITHUB IS LIKE FACEBOOK FOR PROGRAMMERS.
- CENTRALIZED PLACE TO HOST YOUR REPOSITORIES.
- EVERYONE'S ON THERE. YOU CAN LOOK AT WHAT THEY'RE WORKING ON AND EASILY PERUSE THEIR CODE AND MAKE SUGGESTIONS OR CHANGES.
- COMBINES POWER OF GIT AND VIRTUES OF SOCIAL MEDIA
- IT'S REALLY OPEN SOURCE. "OPEN SOURCE" IS NOT SO OPEN IF YOU CAN'T EASILY STUDY IT. WITH GITHUB, ALL OF THE CODE IS EASILY INSPECTED, AS IS IT'S ENTIRE HISTORY.

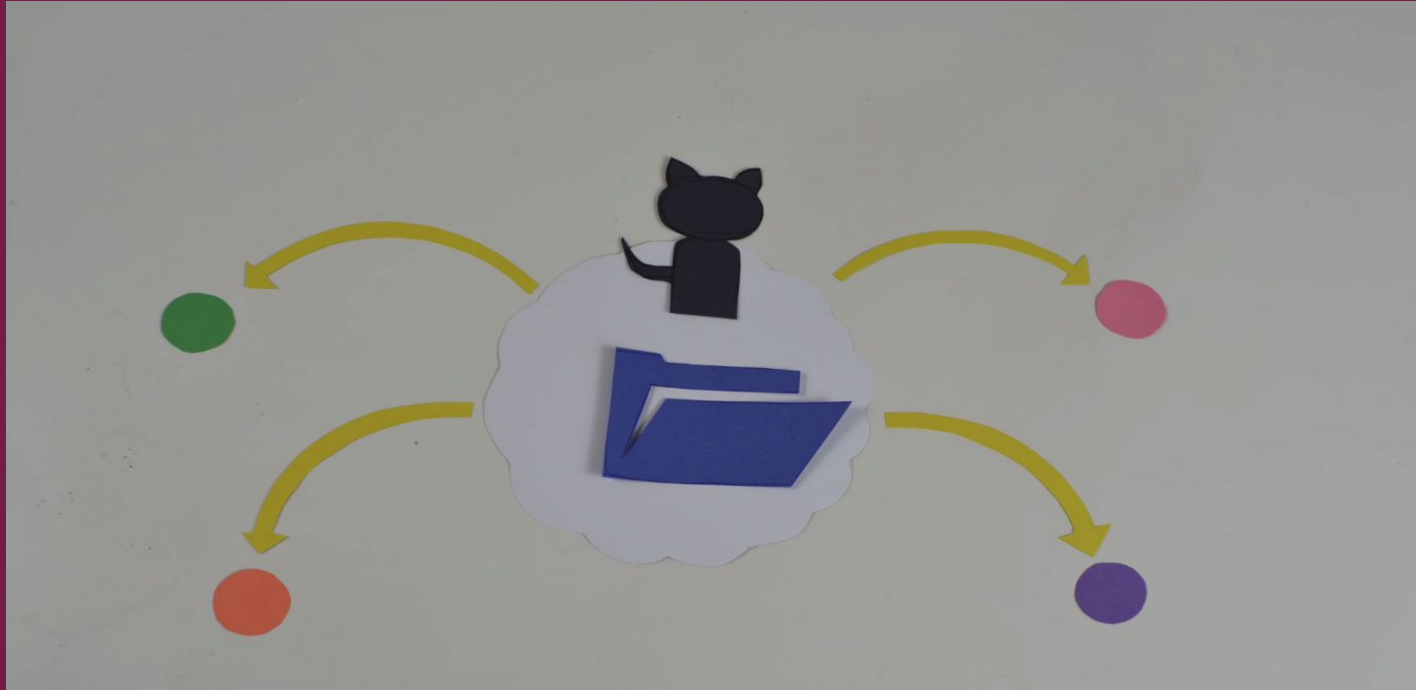
# HOSTING YOUR REPO ON GITHUB AND PULLING IT ON LOCAL MACHINE TO DO SOME EDITS



PUSH THE CHANGES AND HERE YOU GO THE UPDATED REPO IS  
READY



NOW IT CAN BE MADE PUBLIC AND YOU CAN COLLABORATE AND  
WORK WITH GROUPS



# GETTING STARTED WITH GITHUB (OPTIONAL)

## WINDOWS

INSTALL GIT FOR WINDOWS FROM [HERE](#). YOUR DOWNLOAD WILL START AUTOMATICALLY.

## UBUNTU

FOR INSTRUCTIONS ON INSTALLING GIT FOR DIFFERENT UNIX FLAVORS SEE [DOWNLOAD FOR LINUX AND UNIX](#).

## MAC

INSTALL OSX GIT INSTALLER FROM [HERE](#). YOUR DOWNLOAD WILL START AUTOMATICALLY.

# GIT STATUS

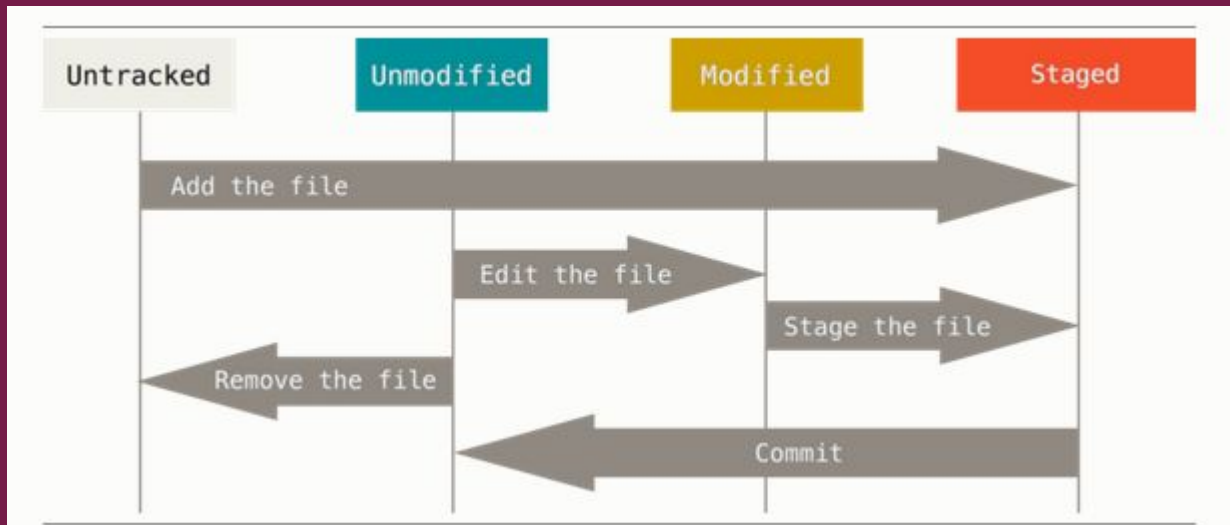
Commands used: git status

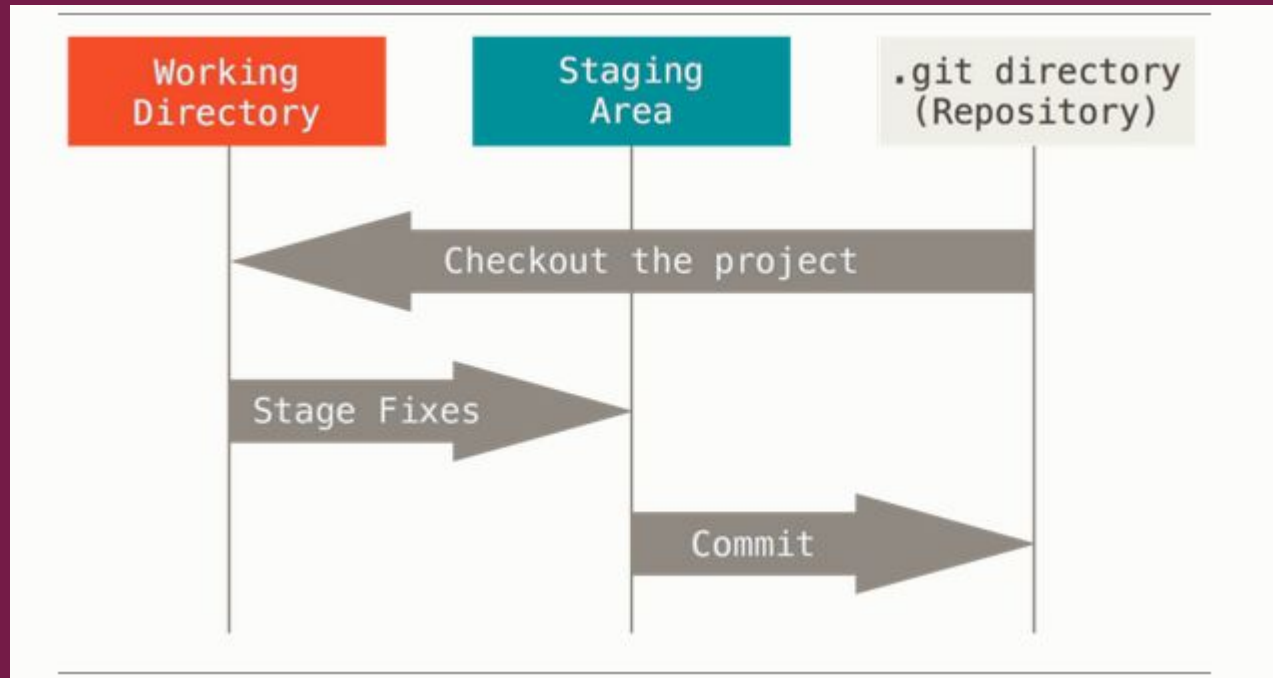
```
anubha@anubha-HP-15-Notebook-PC: ~/Documents/AllAboutGit
anubha@anubha-HP-15-Notebook-PC:~$ cd Documents
anubha@anubha-HP-15-Notebook-PC:~/Documents$ git clone https://github.com/AnubhaKushwahaDTU/AllAboutGit.git
Cloning into 'AllAboutGit'...
remote: Counting objects: 16, done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 16 (delta 1), reused 16 (delta 1), pack-reused 0
Unpacking objects: 100% (16/16), done.
Checking connectivity... done.
anubha@anubha-HP-15-Notebook-PC:~/Documents$ cd AllAboutGit
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   README.md

no changes added to commit (use "git add" and/or "git commit -a")
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$
```







# ADD THE CHANGED FILES AND COMMIT

Commands used: `*git add` / `*git commit`

```
anubha@anubha-HP-15-Notebook-PC: ~/Documents/AllAboutGit
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   README.md

no changes added to commit (use "git add" and/or "git commit -a")
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git add README.md
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   README.md

anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git commit -m "Updated README"
[master 0e6000d] Updated README
 1 file changed, 1 insertion(+)
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$
```

# TIME TO PUSH YOUR CHANGES FROM LOCAL REPO TO REMOTE

## Commands used: git push origin

```
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ git push origin
warning: push.default is unset; its implicit value has changed in
Git 2.0 from 'matching' to 'simple'. To squelch this message
and maintain the traditional behavior, use:
```

```
git config --global push.default matching
```

To squelch this message and adopt the new behavior now, use:

```
git config --global push.default simple
```

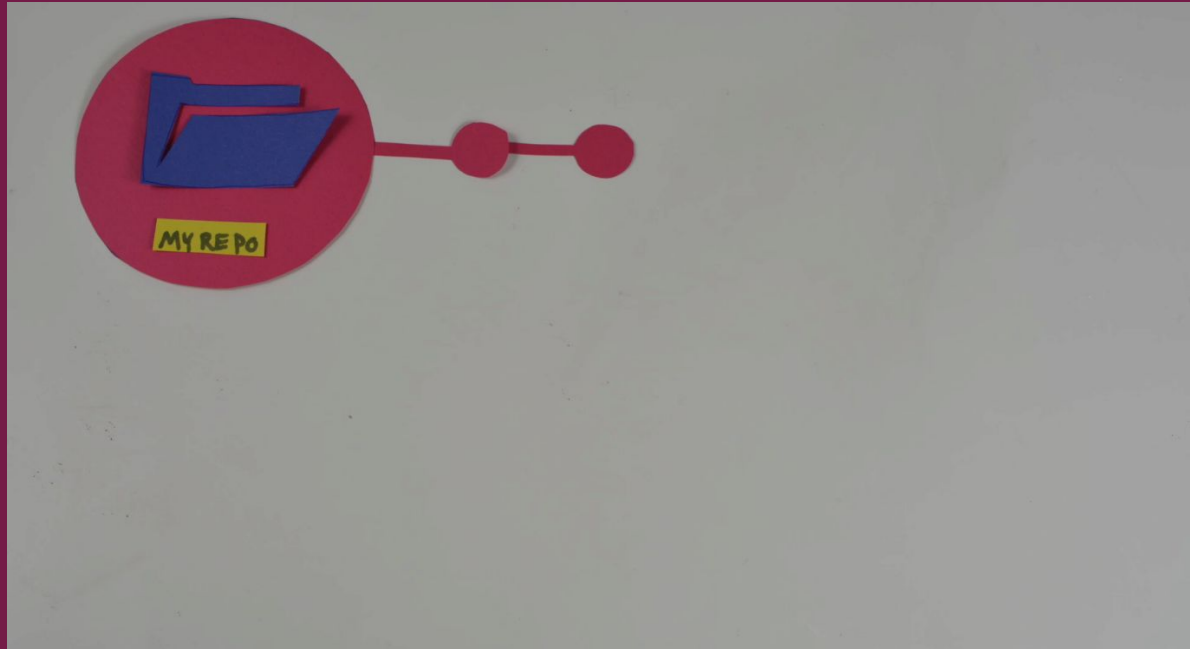
When push.default is set to 'matching', git will push local branches to the remote branches that already exist with the same name.

Since Git 2.0, Git defaults to the more conservative 'simple' behavior, which only pushes the current branch to the corresponding remote branch that 'git pull' uses to update the current branch.

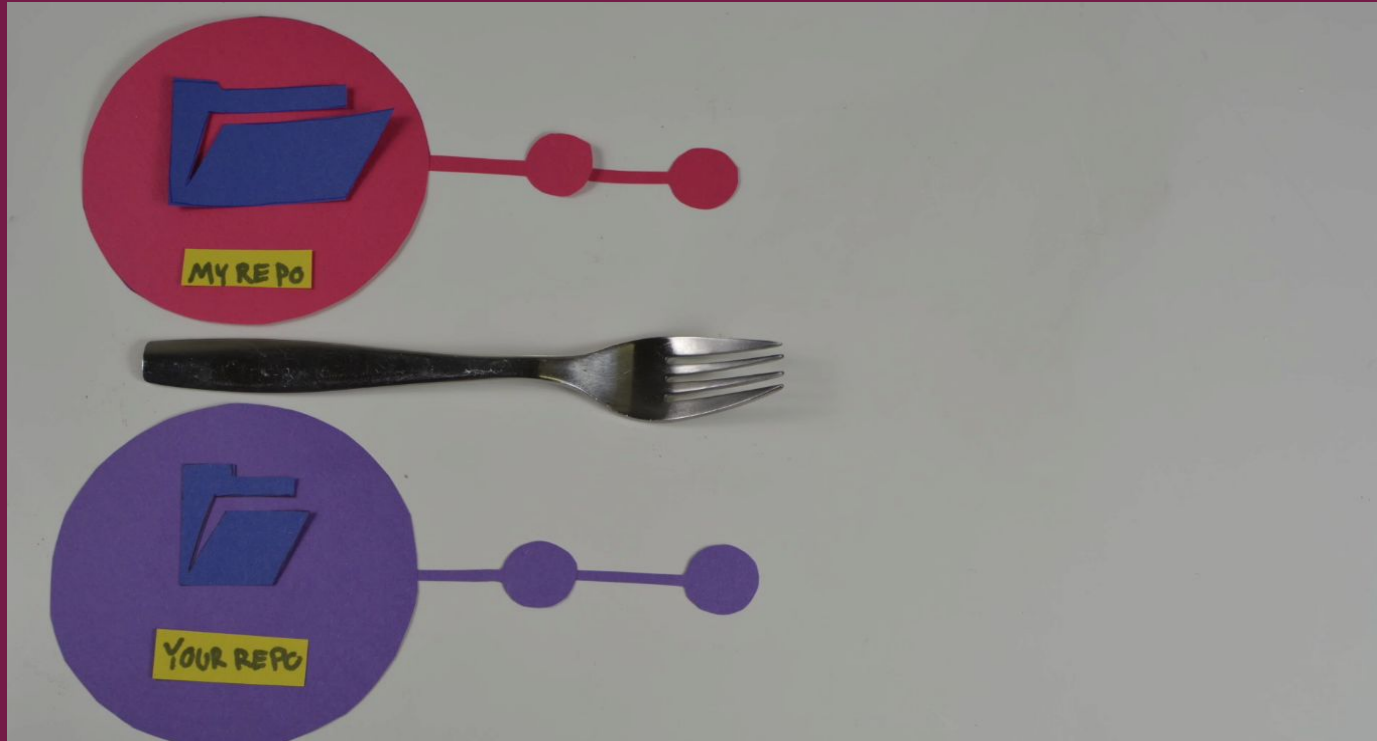
See 'git help config' and search for 'push.default' for further information. (the 'simple' mode was introduced in Git 1.7.11. Use the similar mode 'current' instead of 'simple' if you sometimes use older versions of Git)

```
Username for 'https://github.com': anu.kushwaha191811@gmail.com
Password for 'https://anu.kushwaha191811@gmail.com@github.com':
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 362 bytes | 0 bytes/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local objects.
To https://github.com/AnubhaKushwahaDTU/AllAboutGit.git
  893db7b..0e6000d master -> master
anubha@anubha-HP-15-Notebook-PC:~/Documents/AllAboutGit$ █
```

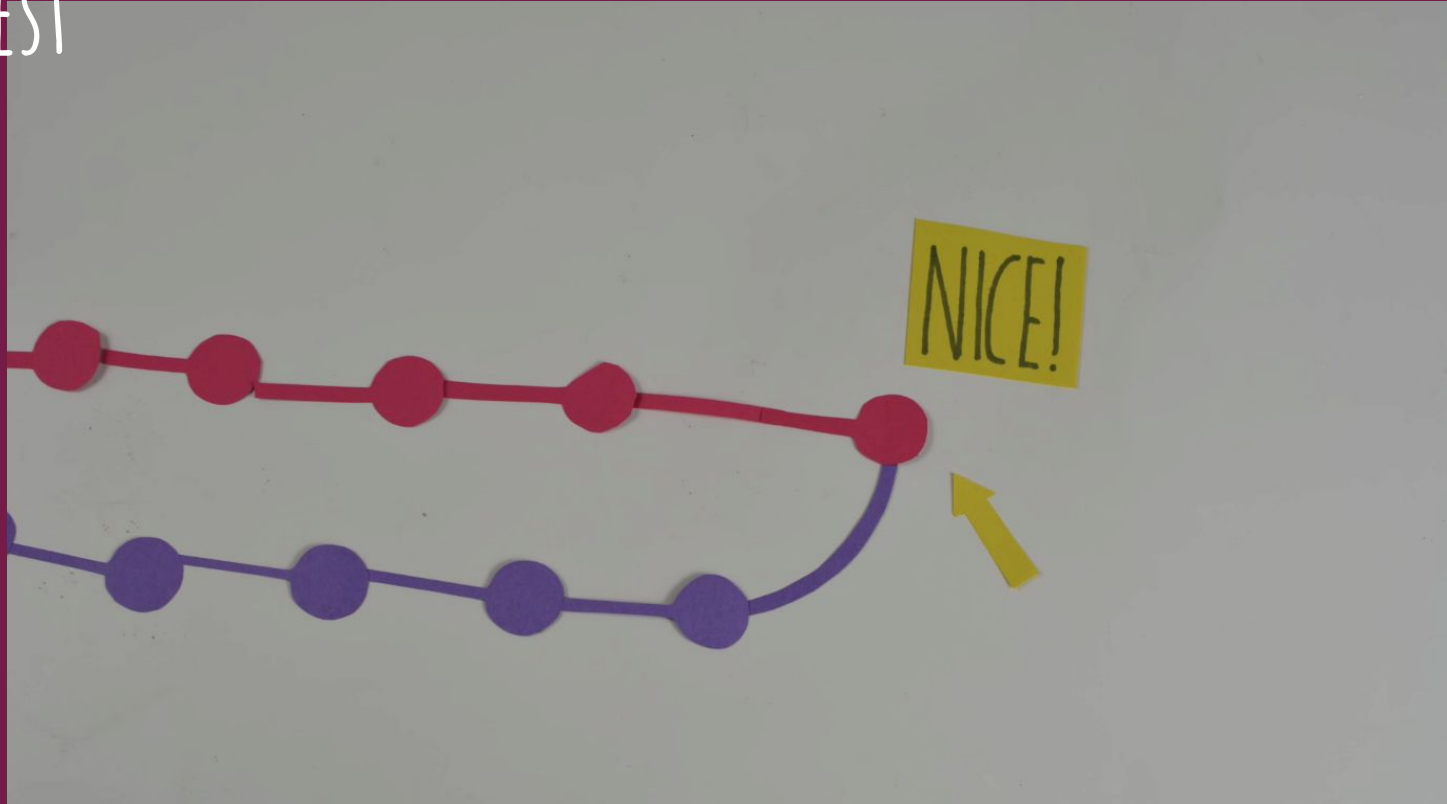
YOU REALLY LIKED SOME REPO AND HAVE IDEAS TO  
IMPROVE/FOUND A BUGGGGGGG! OR YOU WANT TO USE IT FOR A  
DIFF PURPOSE



THERE YOU GO, YOU CAN SIMPLY FORK THE PROJECT AND NOW IT  
WILL BE YOUR COPY OF CODE



THE WAY YOU CAN CONTRIBUTE BACK IS BY GENERATING A PULL REQUEST



# OTHER ADVANTAGES OF GITHUB

GRAPHICAL USER INTERFACE

PROJECT WIKI'S

BUG TRACKERS

COMMENT ON PULL REQUEST

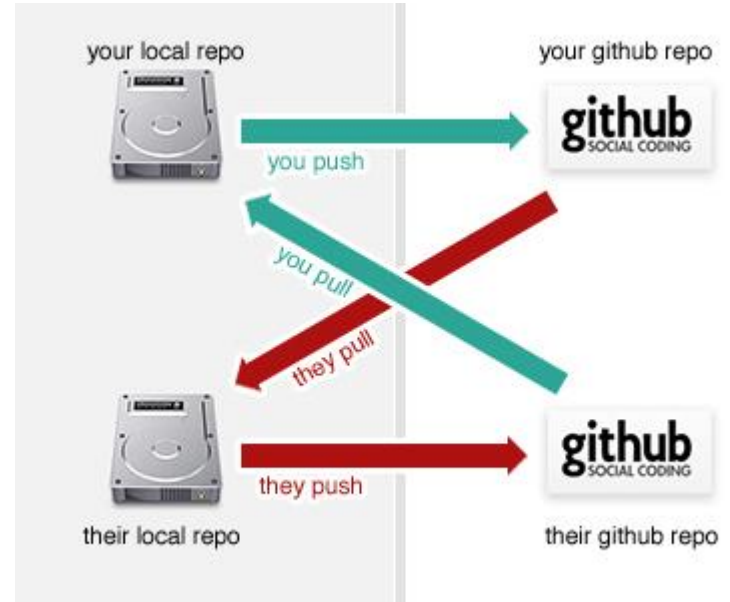
COMMENT ON CODE

STATIC WEB HOSTING



# HOW IT WORKS

- REPOSITORY
- LOCAL REPOSITORY
- REMOTE REPOSITORY



# REPOSITORY

GitHub, Inc. (US) | <https://github.com/systers/powerup-android> | Search



This repository Search

Pull requests Issues Gist



systers / **powerup-android**

Watch 13 Star 13 Fork 93

Code Issues 38 Pull requests 40 Projects 0 Wiki Pulse Graphs

PowerUp is an educational choose-your-own-adventure game that utilizes a users uploaded curriculum to empower pre-adolescents to take charge of their reproductive health. This is the Android version of the game.

114 commits 5 branches 0 releases 12 contributors

Branch: develop

New pull request

Create new file

Upload files

Find file

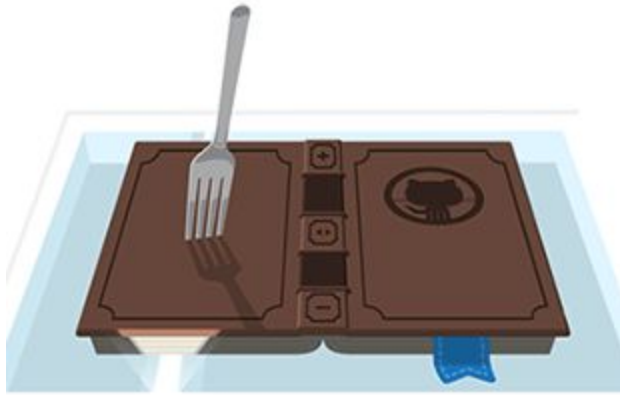
Clone or download

<b>chhavip</b> committed on <b>GitHub</b> Merge pull request #237 from mahikaw/developbranch6 ...	Latest commit 4ae6864 12 hours ago
<b>PowerUp</b>	Merge pull request #237 from mahikaw/developbranch6 12 hours ago
<b>PowerUp Handout.pdf</b>	Handout added a year ago
<b>PowerUp.pdf</b>	PowerUp original proposal added 9 months ago
<b>README.md</b>	Update README.md 2 days ago





README.md


## PowerUp - Android

# FORKING







# REMOTE REPOSITORY

   GitHub, Inc. (US) <https://github.com/anubhakushwaha/powerup-android> 

 This repository

[Pull requests](#) [Issues](#) [Gist](#)

 [anubhakushwaha / powerup-android](#)  
forked from [systems/powerup-android](#)

[Unwatch](#) [1](#) [★ Star](#) [0](#) [🍴 Fork](#) [93](#)

[<> Code](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Pulse](#) [Graphs](#) [Settings](#)


PowerUp is an educational choose-your-own-adventure game that utilizes a users uploaded curriculum to empower pre-adolescents to take charge of their reproductive health. This is the Android version of the game.





[Edit](#)


[📦 104 commits](#) [🌿 6 branches](#) [📦 0 releases](#) [👤 10 contributors](#)

[Branch: develop ▾](#) [New pull request](#) [Create new file](#) [Upload files](#) [Find file](#) [Clone or download ▾](#)

This branch is 10 commits behind systems:develop. [Pull request](#) [Compare](#)

 **chhavip** committed on **GitHub** Merge pull request **#168** from anubhakushwaha/newUserFunctionality [...](#) Latest commit **f194a3a** on 15 Nov

 <a href="#">PowerUp</a>	added new user functionality	a month ago
 <a href="#">PowerUp Handout.pdf</a>	Handout added	a year ago
 <a href="#">PowerUp.pdf</a>	PowerUp original proposal added	9 months ago
 <a href="#">README.md</a>	Update README.md	2 months ago

 **README.md**

```
...
...
...
...
...
```

# LOCAL REPOSITORY

PowerUp - [~/Desktop/powerup-android/PowerUp] - [app] - ~/Desktop/powerup-android/PowerUp/app/src/main/java/powerup/systems/com/StartActivity.java

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

PowerUp app src main java powerup systems com StartActivity

Android

- app
  - manifests
  - java
    - powerup.systems.com
      - datamodel
      - db
        - AvatarActivity
        - AvatarRoomActivity
        - CompletedSceneActivity
        - DressingRoomActivity
        - GameActivity
        - GameOverActivity
        - MapActivity
        - ScenarioOverActivity
        - SelectFeaturesActivity
        - StartActivity
      - powerup.systems.com.powerup
        - assets
        - res
    - Gradle Scripts
      - build.gradle (Project: PowerUp)
      - build.gradle (Module: app)
      - gradle-wrapper.properties (Gradle)
      - proguard-rules.pro (ProGuard Rules)
      - gradle.properties (Project Properties)
      - settings.gradle (Project Settings)
      - local.properties (SDK Location)

```
/**...*/  
package powerup.systems.com;  
  
import ...  
  
public class StartActivity extends Activity {  
  
    private SharedPreferences preferences;  
    private boolean hasPreviouslyStarted;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        preferences = PreferenceManager.getDefaultSharedPreferences(getBaseContext());  
        hasPreviouslyStarted = preferences.getBoolean("has_previously_started", false);  
        ImageButton newUserButton = (ImageButton) findViewById(R.id.newUserButtonFirstPage);  
        newUserButton.setOnClickListener((v) -> {  
            startActivityResult(new Intent(StartActivity.this, AvatarRoomActivity.class), 0);  
        });  
  
        ImageButton startButton = (ImageButton) findViewById(R.id.startButtonMain);  
        startButton.setOnClickListener((v) -> {  
            if (hasPreviouslyStarted) {  
                startActivity(new Intent(StartActivity.this, MapActivity.class));  
            } else {  
                startActivity(new Intent(StartActivity.this, AvatarRoomActivity.class));  
            }  
        });  
  
    }  
  
    @Override  
    protected void onResume() {  
        super.onResume();  
        hasPreviouslyStarted = preferences.getBoolean("has_previously_started", false);  
    }  
}
```

TODO Android Monitor Terminal Event Log Gradle Console

Unregistered VCS root detected: The directory /home/anubha/Desktop/powerup-android is under Git, but is not registered in the Settings. // Add root Confi... 17:14 LF+ UTF-8

# HOW TO IMPLEMENT THESE THINGS NOW

- FIRST STEP GO TO THE GITHUB REPO SITE
- FORK THE DESIRED PROJECT YOU WANT TO WORK UPON
- THERE YOU GO, YOU GET A REMOTE REPOSITORY!
- OPEN THE COMMAND TERMINAL
- NOW CLONE IT TO YOUR LOCAL MACHINE WITH THE FOLLOWING COMMAND: `GIT CLONE [URL OF REMOTE REPO]`

# REMOTE REPO → FORK

GitHub, Inc. (US) | <https://github.com/AnubhaKushwahaDTU/AllAboutGit> | Search

This repository Search Pull requests Issues Gist

AnubhaKushwahaDTU / AllAboutGit  
forked from anubhakushwaha/AllAboutGit

Unwatch 1 Star 0 Fork 1

Code Pull requests 0 Projects 0 Wiki Pulse Graphs Settings

No description or website provided.

Edit

4 commits 2 branches 0 releases 1 contributor

Branch: master New pull request

Create new file Upload files Find file Clone or download

This branch is even with anubhakushwaha:master.

anubhakushwaha added the slides

README.md	Initial Commit	
Untitled presentation(0).jpg	added the slide	
Untitled presentation(1).jpg	added the slides	an hour ago
Untitled presentation(2).jpg	added the slides	an hour ago
Untitled presentation(3).jpg	added the slides	an hour ago
Untitled presentation(4).jpg	added the slides	an hour ago
Untitled presentation(5).jpg	added the slides	an hour ago
Untitled presentation(6).jpg	added the slides	an hour ago

## Clone with HTTPS

Use SSH

Use Git or checkout with SVN using the web URL.

<https://github.com/AnubhaKushwahaDTU/AllAboutGit>

Download ZIP

# CLONING TO LOCAL MACHINE

Commands used: git clone

```
anubha@anubha-HP-15-Notebook-PC: ~/Documents
anubha@anubha-HP-15-Notebook-PC:~$ cd Documents
anubha@anubha-HP-15-Notebook-PC:~/Documents$ git clone https://github.com/AnubhaKushwahaDTU/AllAboutGit.git
Cloning into 'AllAboutGit'...
remote: Counting objects: 16, done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 16 (delta 1), reused 16 (delta 1), pack-reused 0
Unpacking objects: 100% (16/16), done.
Checking connectivity... done.
anubha@anubha-HP-15-Notebook-PC:~/Documents$
```



# LET'S DO SOME CHANGES NOW

- 1) Open the README.md file
- 2) Add your name in the list of contributors

# CHECK YOUR REMOTE REPO → UPDATED WITH NEW COMMIT

Updated README · AnubhaKushwahaDTU/AllAboutGit@0e6000d - Mozilla Firefox (Private Browsing)

GitHub, Inc. (US) | <https://github.com/AnubhaKushwahaDTU/AllAboutGit/commit/0e6000d> | Search

This repository | Search | Pull requests | Issues | Gist

AnubhaKushwahaDTU / AllAboutGit  
forked from anubhakushwaha/AllAboutGit

Unwatch 1 | Star 0 | Fork 1

<> Code | Pull requests 0 | Projects 0 | Wiki | Pulse | Graphs | Settings

### Updated README

master

anubhakushwaha committed 11 minutes ago | 1 parent 893db7b | commit 0e6000daab528a1278a9bca01a6050a89df85416

Showing 1 changed file with 1 addition and 0 deletions. | Unified | Split

1 README.md

```
@@ -2,3 +2,4 @@
2 2
3 3 The list of contributors:
4 4 * Anubha Kushwaha
5 +* Random name
```

0 comments on commit 0e6000d | Lock conversation

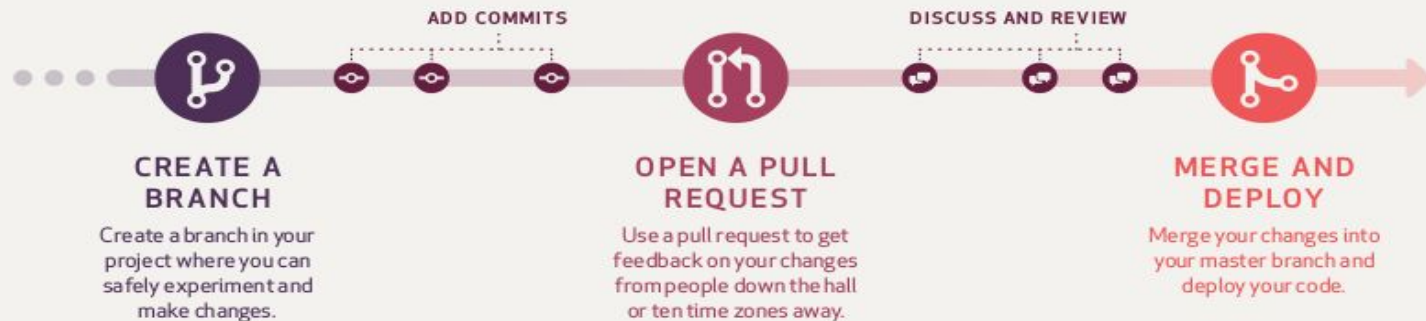
Write | Preview | AA B i | " <> | : : : | @

Leave a comment

CONTRIBUTION TO  
THE WORLD OF OPEN  
SOURCE

# WORK FAST WORK SMART THE GITHUB FLOW

The GitHub Flow is a lightweight, branch-based workflow that's great for teams and projects with regular deployments. Find this and other guides at <http://guides.github.com/>.



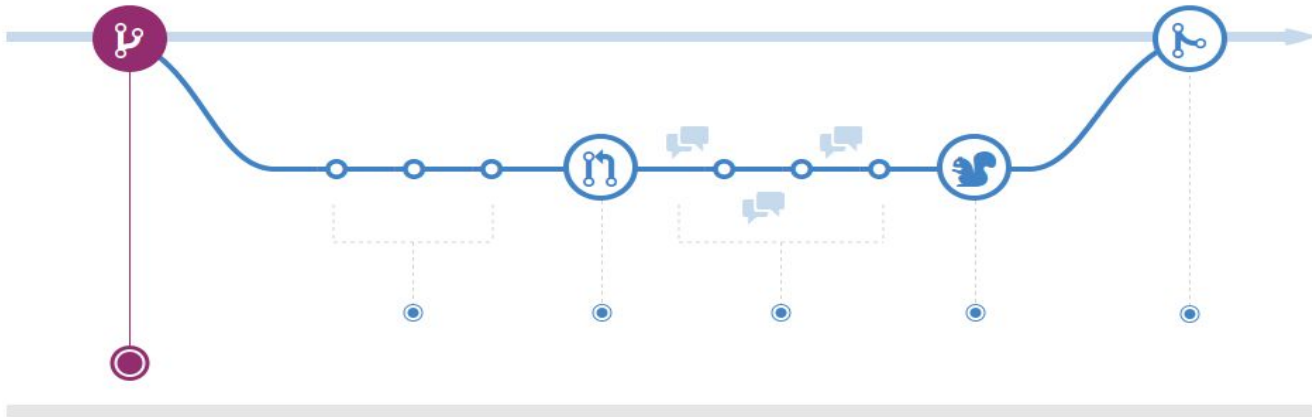
GitHub is the best way to build software together.

GitHub provides tools for easier collaboration and code sharing from any device. Start collaborating with millions of developers today!

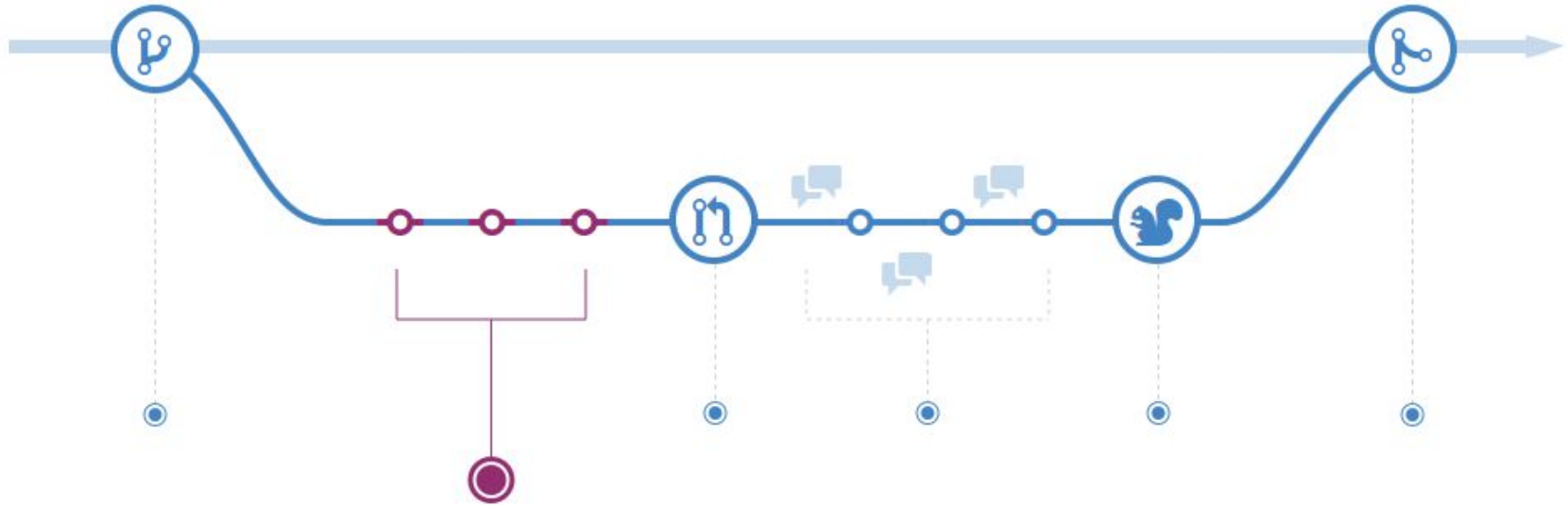
# UNDERSTANDING THE GITHUB FLOW

GitHub Flow is a lightweight, branch-based workflow that supports teams and projects where deployments are made regularly, wherein one person sets up the initial project and others are able to work on the same.

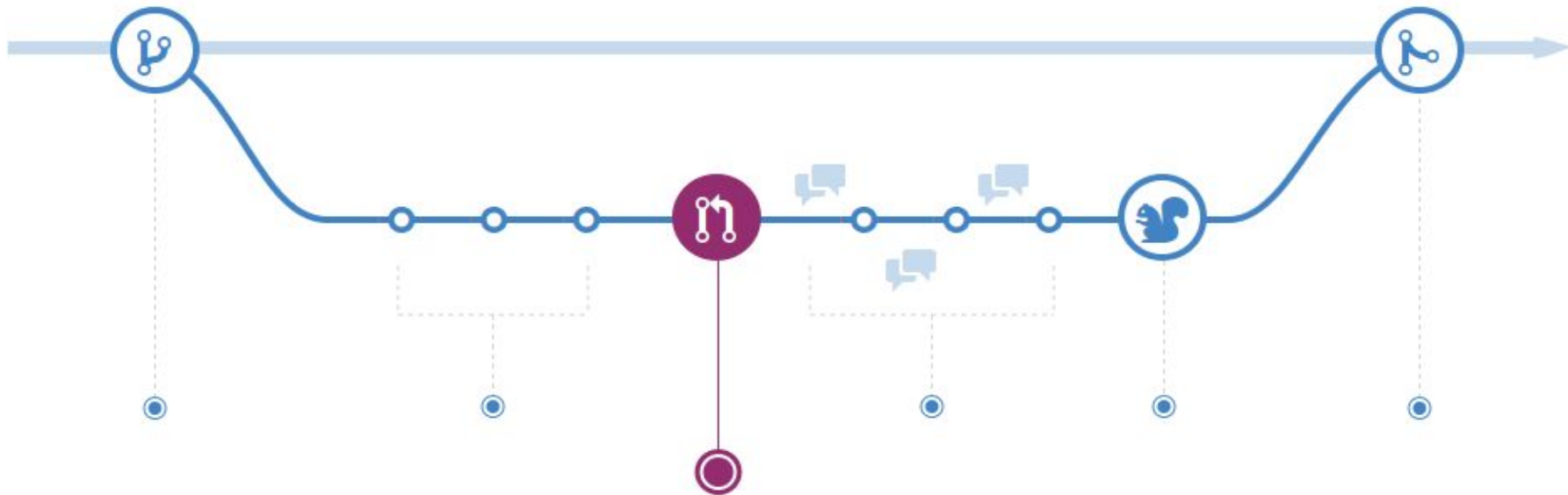
## 1) CREATE A BRANCH



# DO YOUR WORK AND ADD COMMITS



# OPEN A PULL REQUEST



# Updated README #2



Open

AnubhaKushwa... wants to merge 1 commit into anubhakushwaha:master from AnubhaKushwahaDTU:master

Conversation 0

Commits 1

Files changed 1



AnubhaKushwahaDTU commented just now

*No description provided.*

Updated README

0e6000d

Add more commits by pushing to the **master** branch on **AnubhaKushwahaDTU/AllAboutGit**.**This branch has no conflicts with the base branch**Only those with [write access](#) to this repository can merge pull requests.

You can now request reviews from specific people you work with

[Learn more.](#)

Got it!

**Reviewers**

No reviews

**Assignees**

No one assigned

**Labels**

None yet

**Projects**

None yet