GITHUB under microscope

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Sponsored by (SmartAcademyVienna)

What is Github

GitHub is a website and cloud-based service that helps developers store and manage their code, as well as track and control changes to their code.

To understand exactly what GitHub is, you need to know two connected principles:

- Version control.
- Git.

1. What is version control.

Version control helps developers track and manage changes to a software project's code. As a software project grows, version control becomes essential.

version control lets developers safely work through ***branching*** and ***merging***.

What is branch ??

With branching, a developer duplicates part of the source code (called the ***repository***). The developer can then safely make changes to that part of the code without affecting the rest of the project.

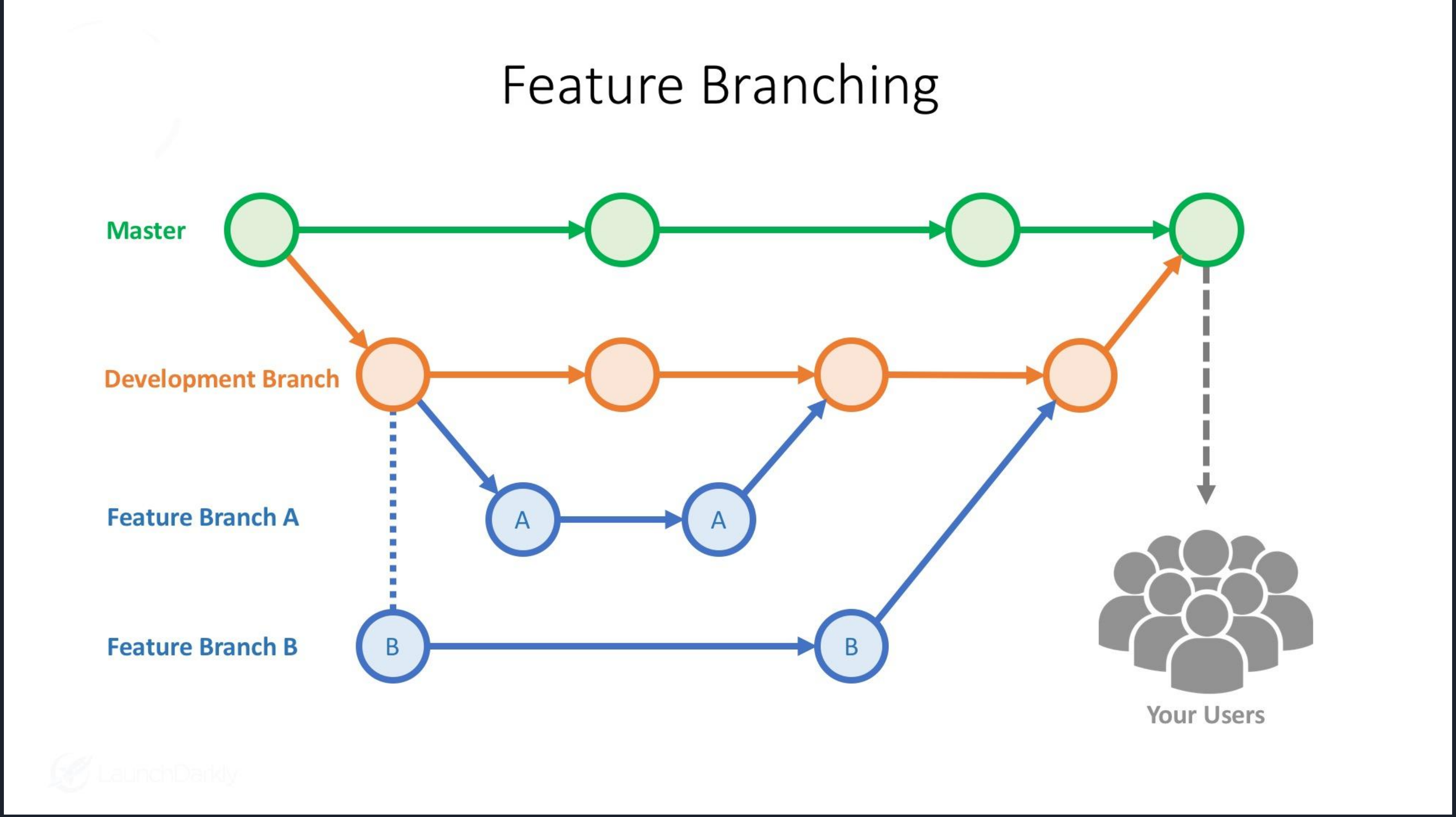
Repository is like a folder in your computer but just different name with github.

Then, once the developer gets his or her part of the code working properly, he or she can ***merge*** that code back into the main source code to make it official.

All of these changes are then tracked and can be reverted if need be.

What is merging?

Merging is a process to make codes united in one branch. Merging is done after making a robust code that has no errors and faulty mistakes.



Version control.

2. What is Git?

Git is a **distributed version control system**, which means that the entire codebase and history is available on every developer’s computer, which allows for easy branching and merging.

According to a Stack Overflow developer survey, over 87.2% of developers use Git.

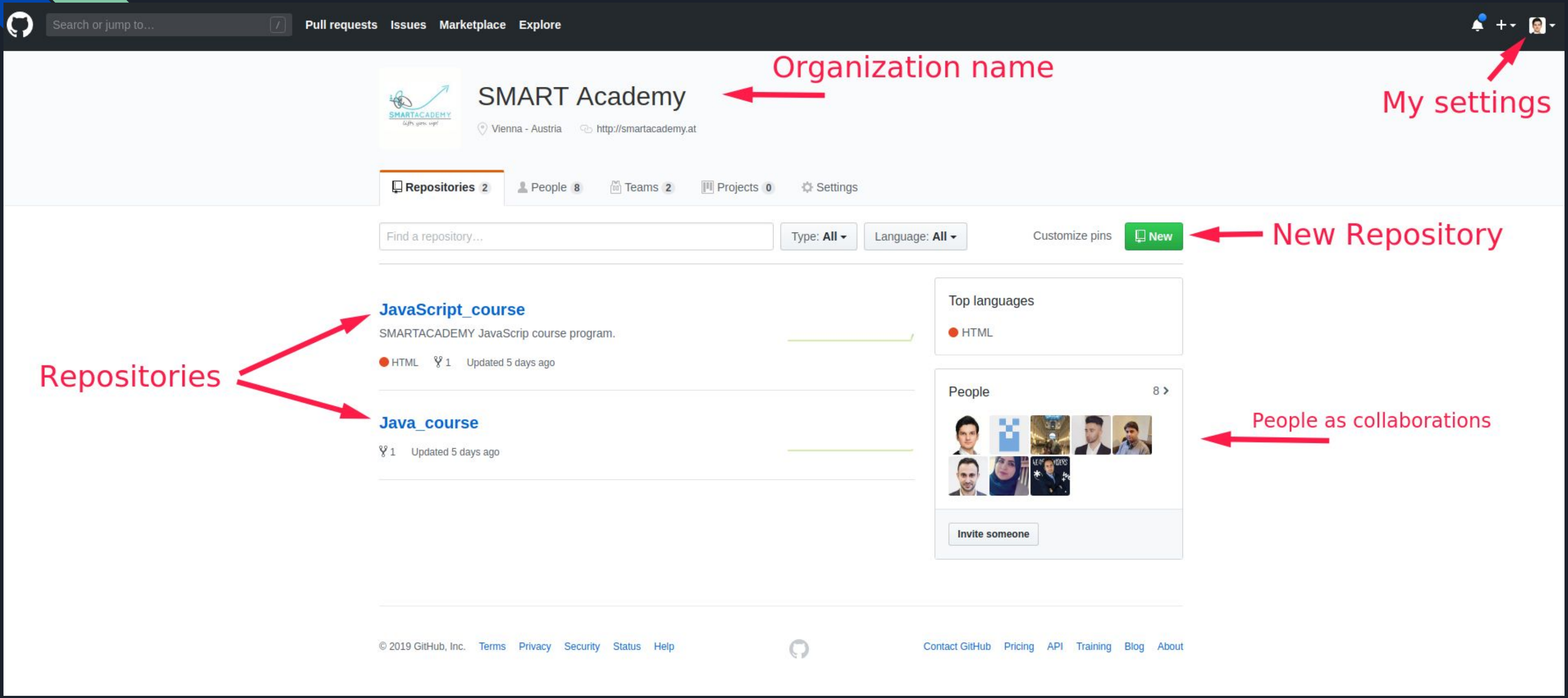
Wait what!!!

Then what is Github?

GitHub is

A for-profit company that offers a cloud-based Git repository hosting service. It makes it a lot easier for individuals and teams to use Git for version control and collaboration.

Smart Academy repository



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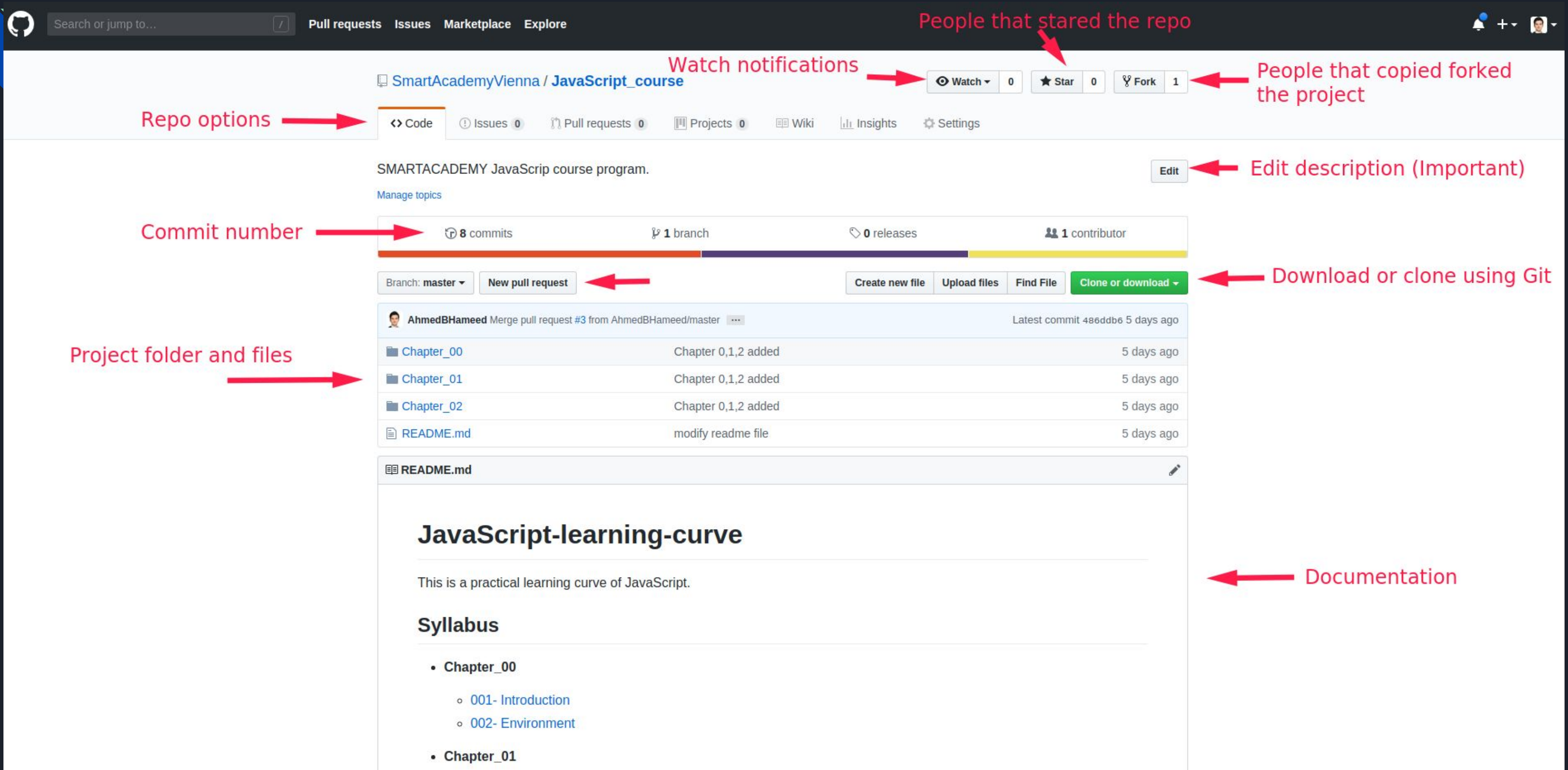

SmartAcademyVienna / **JavaScript_course**

SMARTACADEMY JavaScrip course program.

8 commits | 1 branch | 0 releases | 1 contributor

AhmedBHameed Merge pull request #3 from AhmedBHameed/master ... Latest commit 486ddb6 5 days ago

Chapter_00	Chapter 0,1,2 added	5 days ago
Chapter_01	Chapter 0,1,2 added	5 days ago
Chapter_02	Chapter 0,1,2 added	5 days ago
README.md	modify readme file	5 days ago

README.md

JavaScript-learning-curve

This is a practical learning curve of JavaScript.

Syllabus

- **Chapter_00**
  - 001- Introduction
  - 002- Environment
- **Chapter_01**

People that stared the repo

Watch notifications

People that copied forked the project

Repo options

Edit description (Important)

Commit number

Download or clone using Git

Project folder and files

Documentation

Let us play around with Github

To be active uploading/downloading latest code of your repo, you have to do few steps in advance. That would also including requesting for “PULL REQUEST” or “MERGE REQUEST” in gitlab platform.

- Fork your target repo from the webpage.
- Go to your repositories (In your account repos). You will find the new forked repo that already forked.
- Clone it with “https” using => git clone REPOSITORY_URL
- Remember [DO NOT WORK ON MASTER BRANCH]. So create a new branch and give it descriptive name using => git checkout -b "BRANCH_NAME".

CONTINUE_1...

- Checkout to your new branch. (It might be when creating new branch, Git will attach it automatically) using => git checkout “BRANCH_NAME”
- Check out that you are on the new branch using => git status
- If everything ok, then start developing till you finish implementing your new feature.
- Finished, then add your changes using => git add . => Don’t forget DOT
- Then follow it with commit to make a history log using => git commit -m “Nice descriptive here”
- Finally push your code to GitHub using => git push
- Sometimes git ask you to provide email and username to save it in the configuration. So follow the same info in the message.
- Now again try to push.

CONTINUE_2...

- LOL, yes you will get annoying message (Only for the new branch, first time push) telling that your branch is new and you have to push using the following code => git push --set-upstream origin BRANCH_NAME
- IF the code needed to be merged, then create go to the same repo in your github account, from there create a pull request.

IF NOT WORKING THEN CONTINUE_3...

- If the Fork is not working then first:
  git remote add [NAME] [SMARTACADMY_REPO_URL]
  Follow convention by setting [NAME] to “upstream”
- Then take all changes by git fetch upstream
- Then do git rebase upstream/master
- Sometimes Git prevent you to do the previous step because it has no version control history. If so then add all changes and make history point.
- Then do rebase git rebase upstream/master
- Finally git push origin master --force

This is only what we need at this level.

ATTENTION

Raise your hand and pray for me…

BECAUSE…

I have got a third asylum interview

…

Thank you.