Installation Doubts?

Workshop will start at 2:10 pm.

Git & Github Workshop 2022

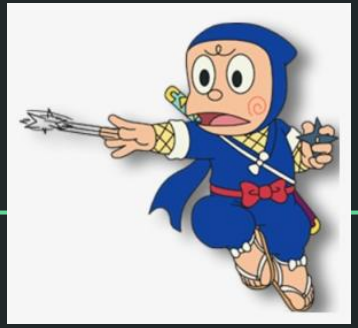
Learning Outcomes

- Familiar with Basic Linux commands
- Realize the importance of Version Control System
- Be able to use Git to track your code
- Be able to push and pull code from Github
- Be able to send a PR properly to an existing Github Repository

Flow

- Raise Doubts
- Hands On
- Fun quiz
- We would be here after the end

Become a Terminal Ninja



What is Git?

Track

- Backup
- History
- Experiment
- Collaborate

How does Git do it - Snapshots AKA Commits

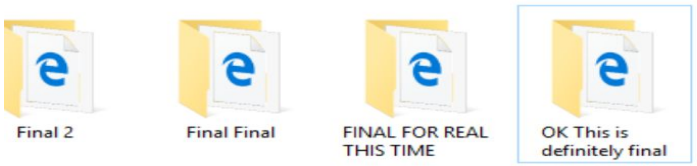
```
commit 9641cc84a1b5d4e84f265000757497dabd1c3d63 (HEAD -> master)
Author: rakaar <rka87338@gmail.com>
Date:   Sat Oct 10 14:08:27 2020 +0530

    Finished the climax chapter

commit f0155a195dfab4db3d4ebaf3608c1153956bd4a4
Author: rakaar <rka87338@gmail.com>
Date:   Sat Oct 10 14:07:48 2020 +0530

    Completed writting second chapter

commit ce934582f4a86f10e2d9411b88c0d74594cde45a
Author: rakaar <rka87338@gmail.com>
Date:   Sat Oct 10 14:07:29 2020 +0530

    Wrote First Chapter of the book
```

git

I prefer the real version control

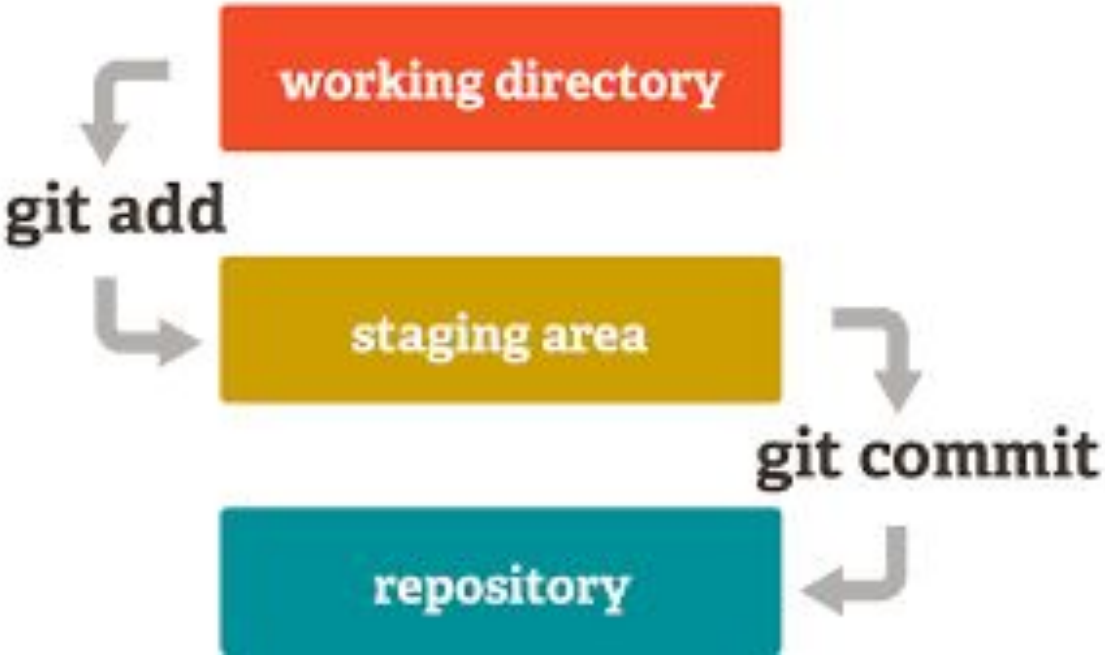
SUBVERSION

I said the *real* version control


Final 2
Final Final
FINAL FOR REAL THIS TIME
OK This is definitely final

Perfection

Mental Model of Git Workflow



This Staging Area is Confusing!

WORKING DIRECTORY

STAGING AREA

COMMIT !

DEMO

git init

git add FileName

git commit -m “A nice commit message”

Hands On by Building a “facebook Clone”

JUMPING BETWEEN STAGES - EVIL CAT TRILOGY

Undo the changes after a Commit

Case 1

Working tree clean

Cat comes up and adds rubbish files and and garbage content

You come back and check git status. It’s too chaotic

You want to undo!

Just do git checkout .

And you have recovered your codebase

Restoring code after files are in Staging Area

Case 2

This time it plans to commit

It adds rubbish files and rubbish content

It does git add .

And luckily you come in time and it runs away

How do you unstage?

git reset --hard HEAD

Going back to a Previous Commit

Case 3

This time the cat makes NOT 1 but 2 Rubbish commits 😦

Git reset --hard COMMIT_HASH_YOU_WANT_TO_GO_BACK

When you revert a commit

DOUBTS

Intro to Branching

Richard's copy of Codebase

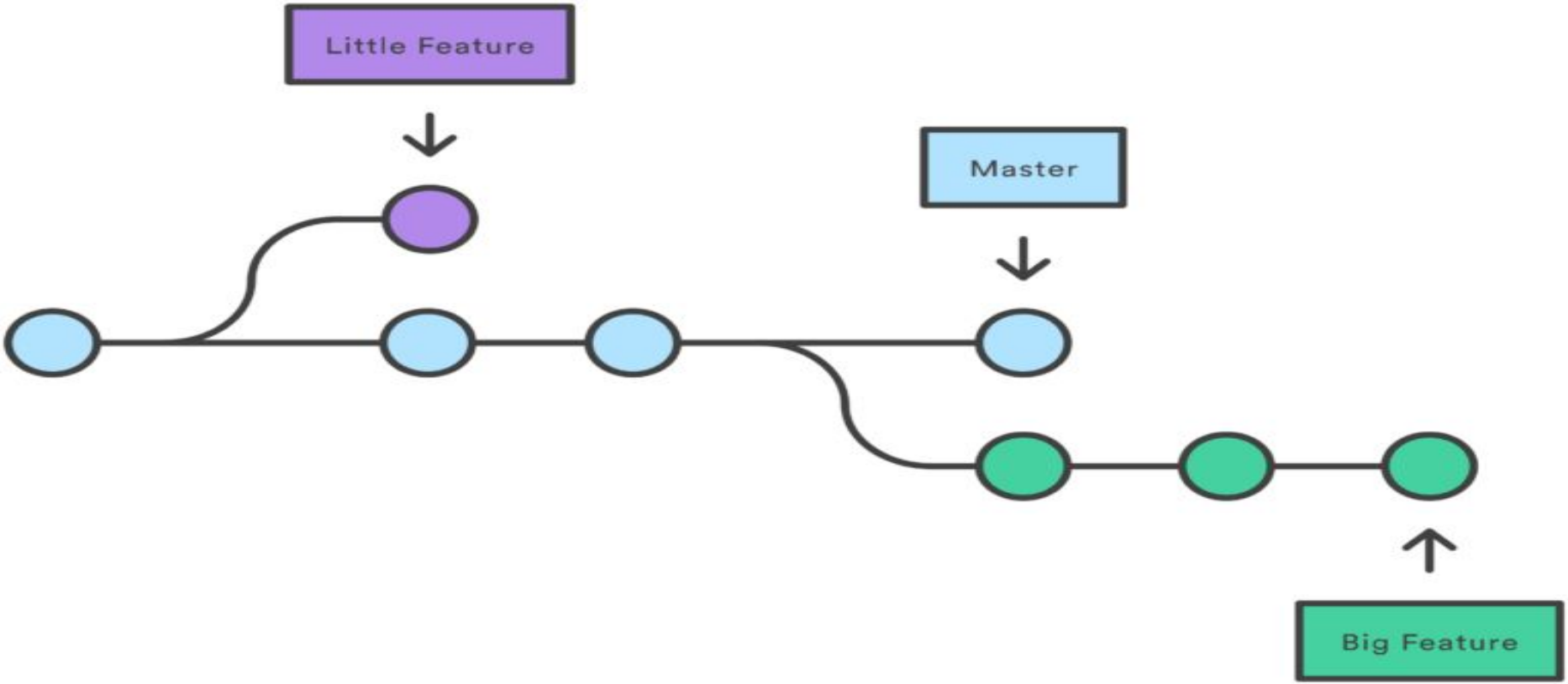
OriginalCodeBase

Gilfoyle's copy of Codebase

Eric's copy of Codebase

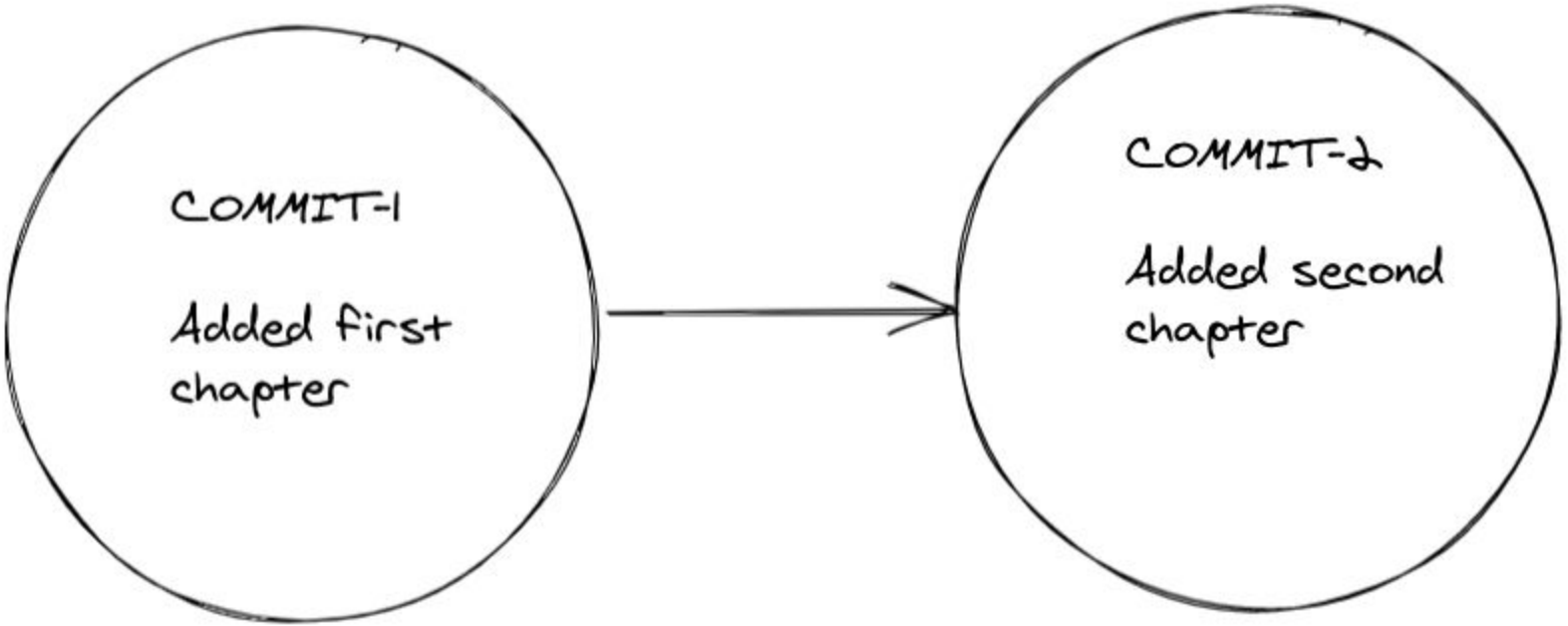
Dinesh's copy of Codebase

Branching

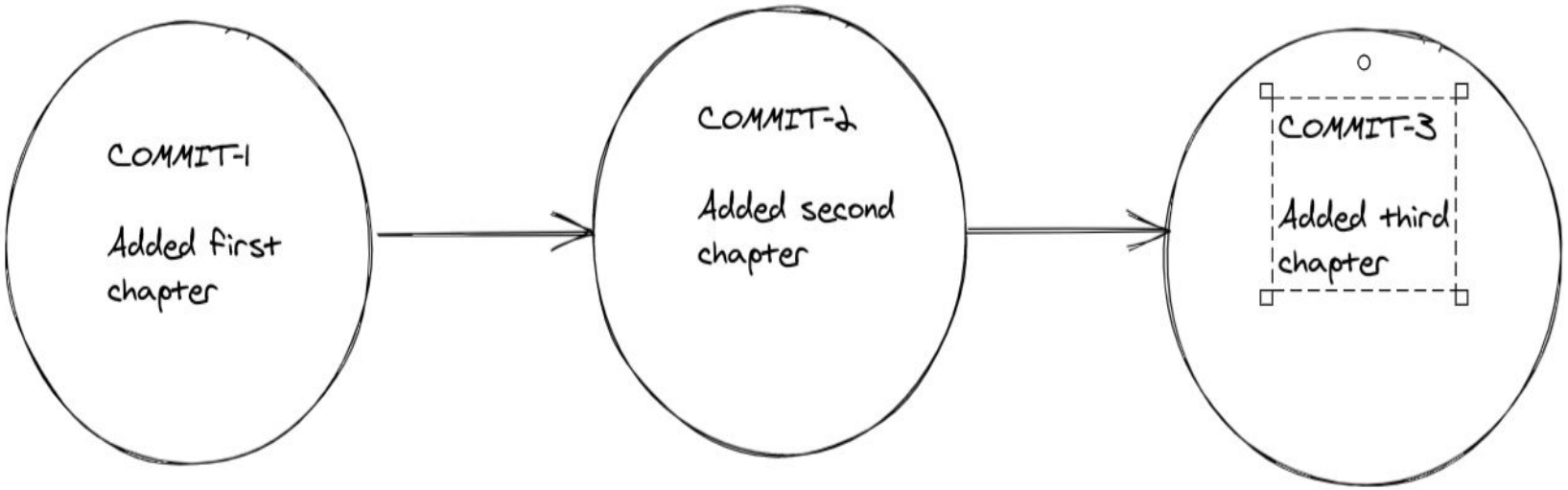


Branching

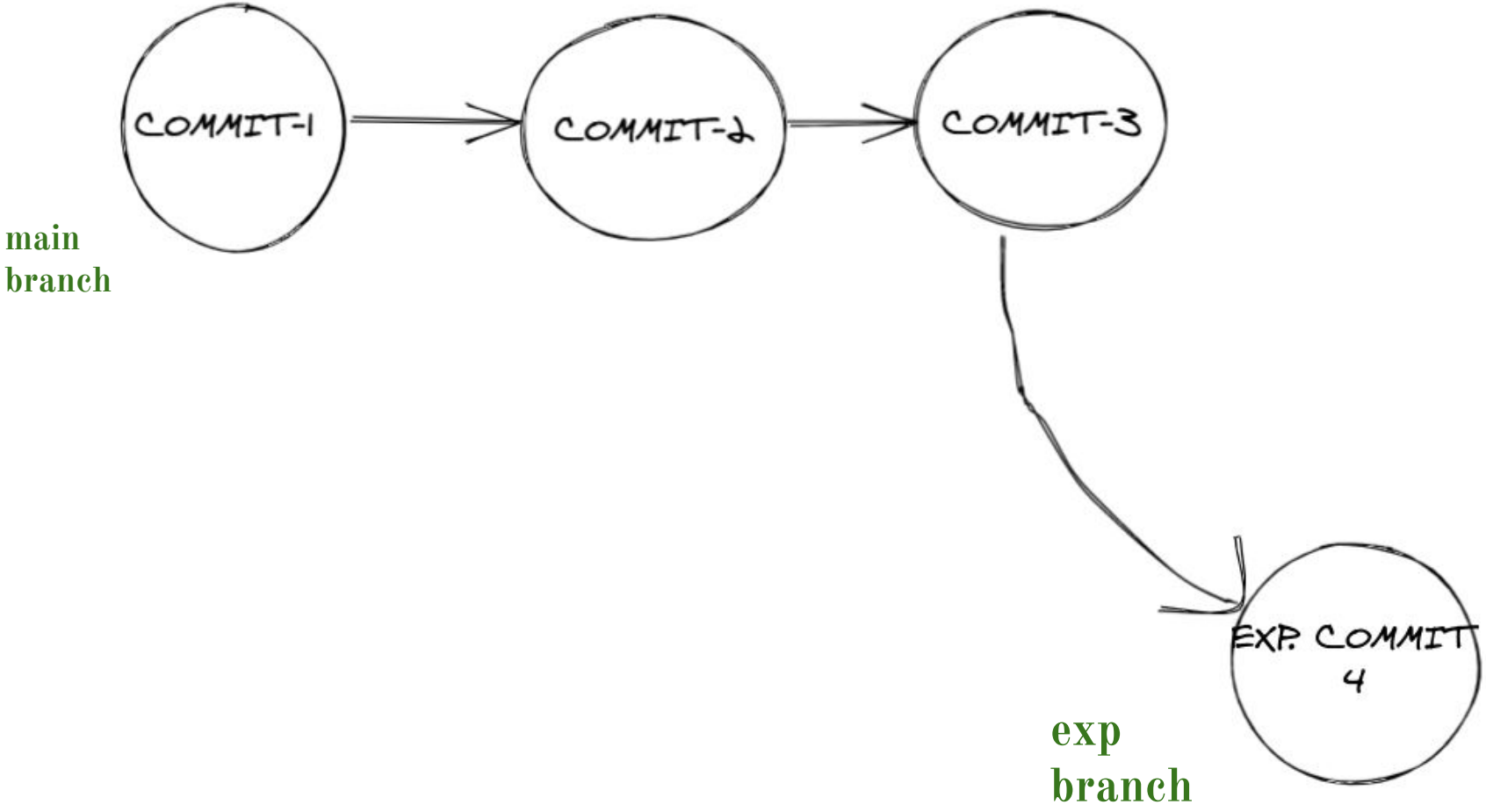
main branch

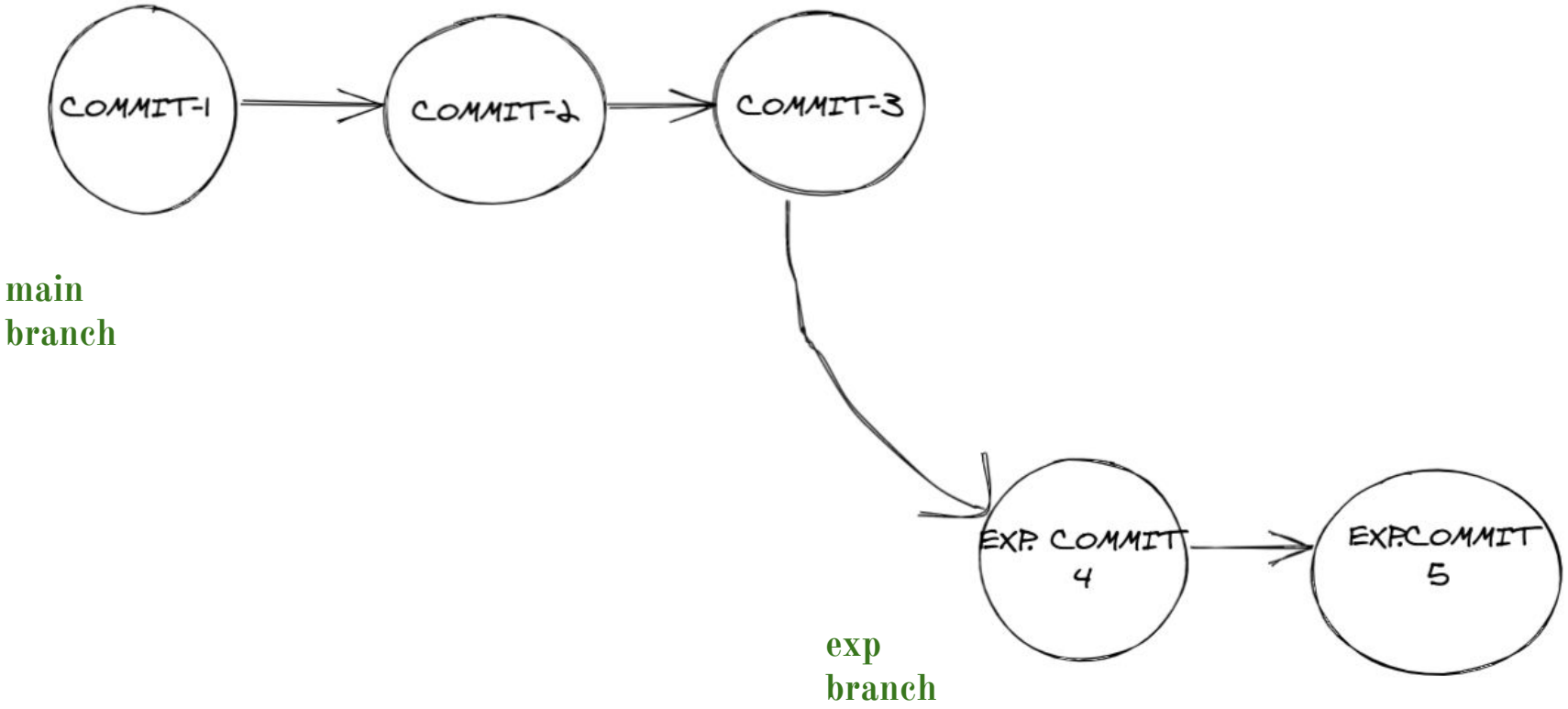


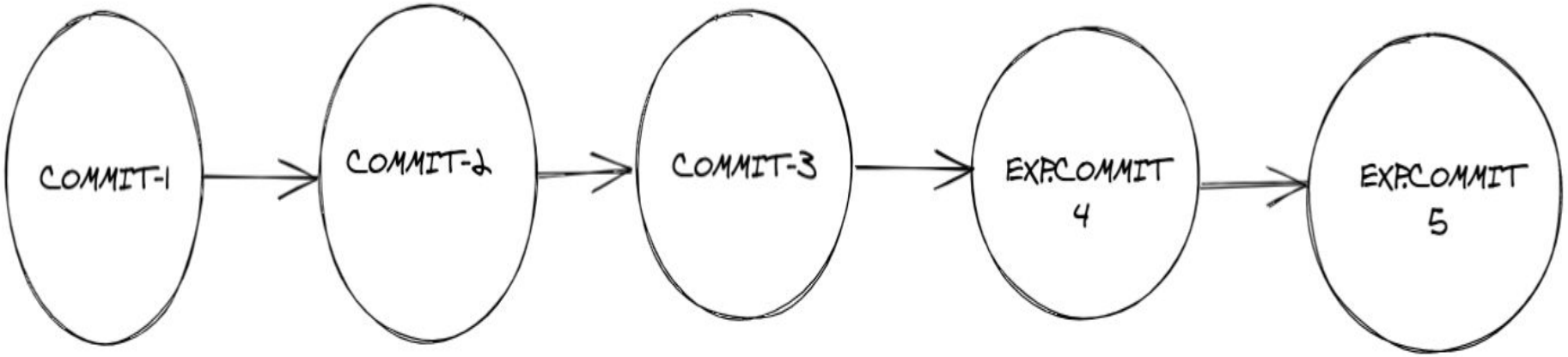
main branch


COMMIT-1
Added first chapter
COMMIT-2
Added second chapter
COMMIT-3
Added third chapter

main branch


COMMIT-1
COMMIT-2
COMMIT-3
main
branch
EXP. COMMIT
4
exp
branch


COMMIT-1
COMMIT-2
COMMIT-3
main
branch
EXP. COMMIT
4
EXP.COMMIT
5
exp
branch

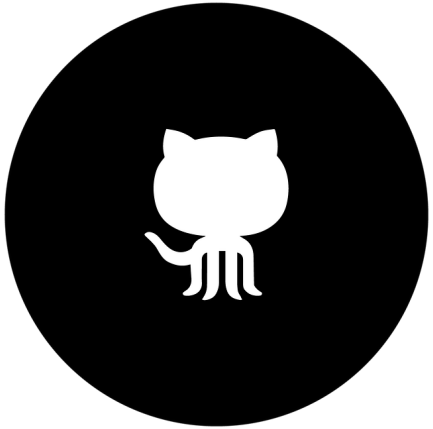


main branch after merging changes from exp branch

Hands On

Make a branch named **poke** and add poke feature

DOUBTS



Github

Alone we can do so little, together we can do so much

-Helen Keller

Github Authentication:

- Personal Access Token

Let’s ~~rock~~ push and ~~roll~~ pull

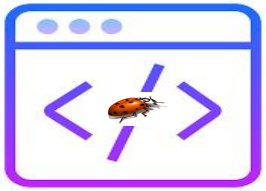
Remotes

origin = https://github.com/username/repoName

Demo - Send a PR

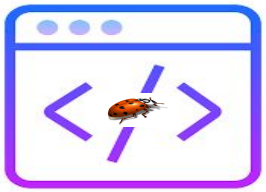
- Fork
- Clone
- New Branch
- Commit
- Push
- Pull Request (in github)

Workflow - Contributing to a Repository on



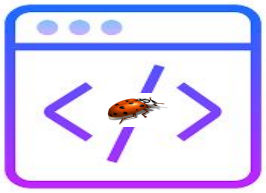
kossiitkgp/codebase

Workflow - Contributing to a Repository on

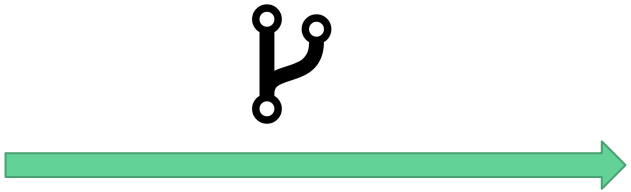


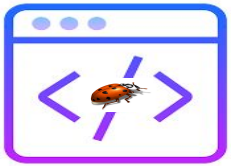
kossiitkgp/codebase

Workflow - Contributing to a Repository on



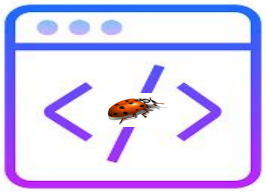
kossiitkgp/codebase



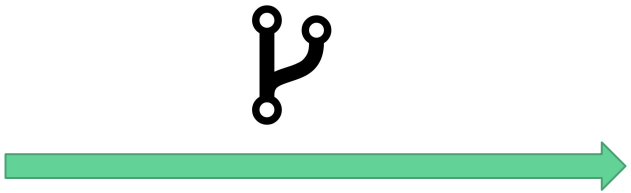


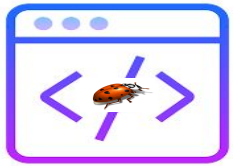
eric/codebase

Workflow - Contributing to a Repository on



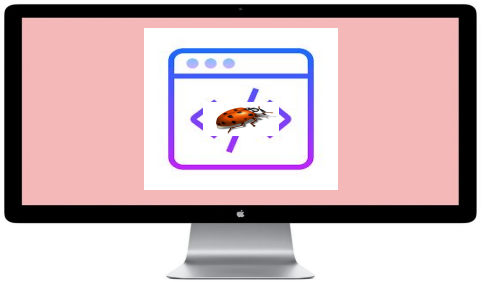
kossiitkgp/codebase



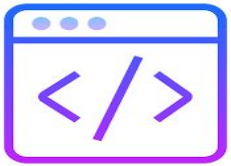


eric/codebase

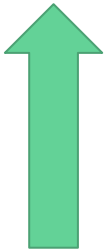
Clone



Workflow - Contributing to a Repository on

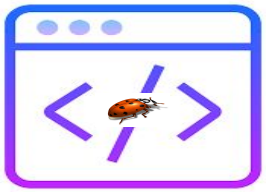


eric/codebase



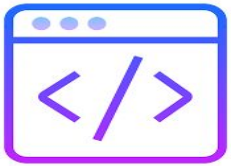
Eric works hard and fixes the bug and he **PUSHES**

Workflow - Contributing to a Repository on



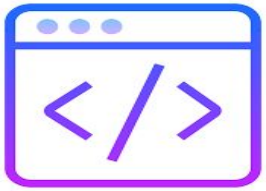
kossiitkgp/codebase

Pull Request



eric/codebase

Workflow - Contributing to a Repository on



kossiitkgp/codebase

After **MERGING** the **Pull Request**, it is now free of bugs!

We want **you** to send a PR

You find a interesting issue in the kernel

You submitted a pull request

Your pull request is merged

Some good places to try out

- **Check out metakgp repositories**
- **Issues with label - good-first-issue**
- **Participate in KWoC-2022 (Keep following KOSS on facebook for updates)**

For more...

- Check out for advance resources here
- Get GitHub Student Pack
- Participate in Hacktoberfest
- Checkout out Github Pages, host your static site for free

We Want Your Feedback

Feedback form - https://forms.gle/FPdVbGVgPLztGSaM6

Git gud at Git!

DOUBTS