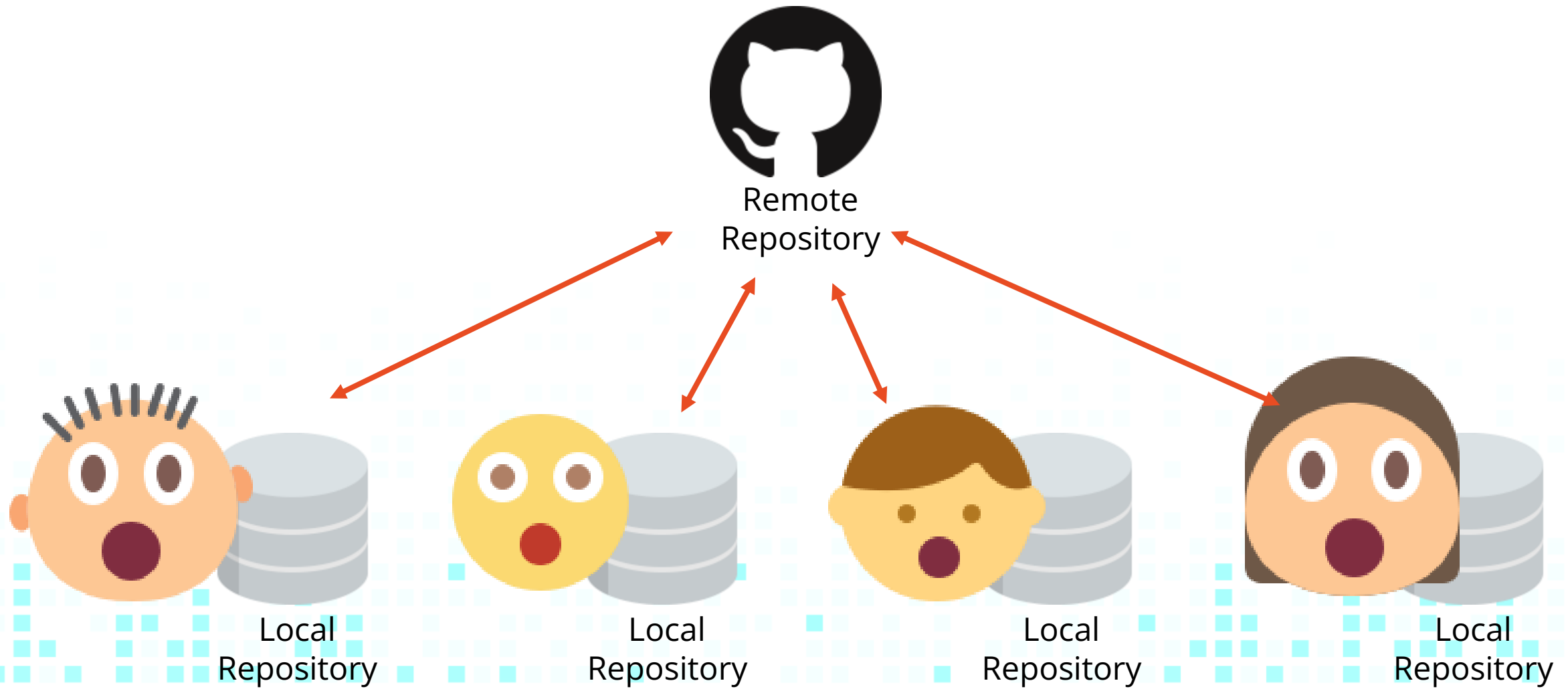


Educational Game OOP Project

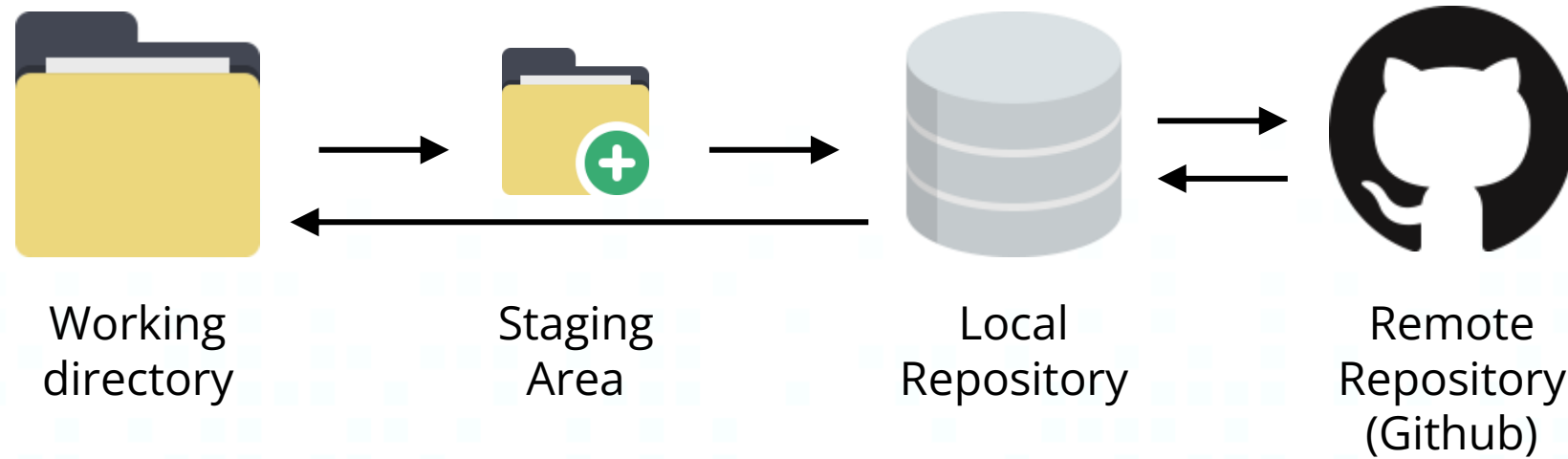
Git Good in a Team

Let's git it together
again

Git Process



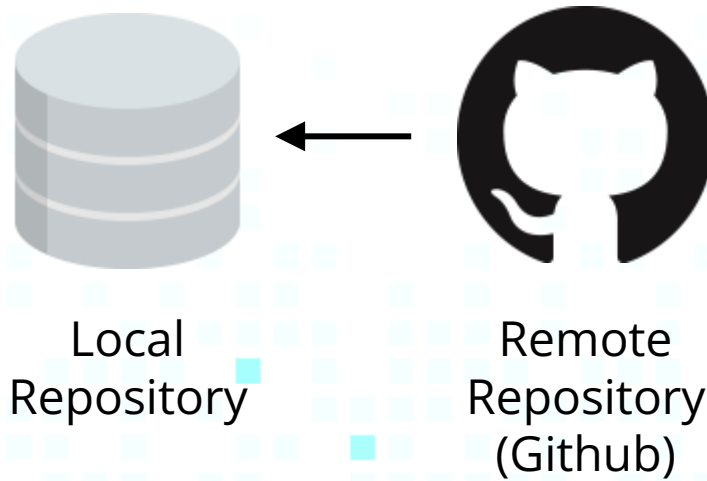
Git Process



Getting the Repository

- Create a working copy of a repository

```
git clone <repository>
```



Adding & Committing

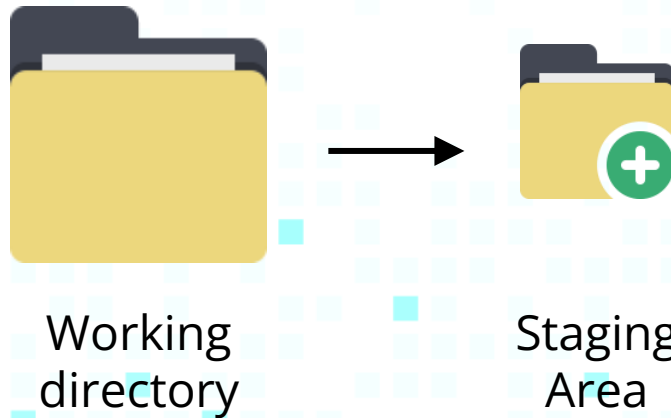
- Select files you want to commit and add them to the staging area*
- You can pick specific files
- Or you can just throw them all in
- Think of a boarding platform for a train:
 - The station is the working directory,
 - The boarding platform is the staging area,
 - And the people in the plane are the changes in a new commit.

Adding & Committing

- Propose Changes to Staging Area

```
git add <filenames>
```

```
git add *
```



Adding & Committing

- Save the files in the staging area in a commit
- Gives the commit an ID/hash so you can find it later
- Give the commit a message so you know what has changed in the new commit
- Remember: commits are working versions of your code. You can always roll back to one if a new change does not work out
- You should probably commit more often than you think
- How useful is a 10000 line commit with message “it better works”?
- How useful is a 20 line commit with message “Add css class to make buttons bigger on small screens”?

Adding & Committing

- Committing changes

```
git commit
```

```
git commit -m "commit message"
```



Staging
Area



Local
Repository

Pushing Changes

- Push changes to remote repository

```
git push
```

```
git push <remote> <branch>
```

```
git push origin main
```

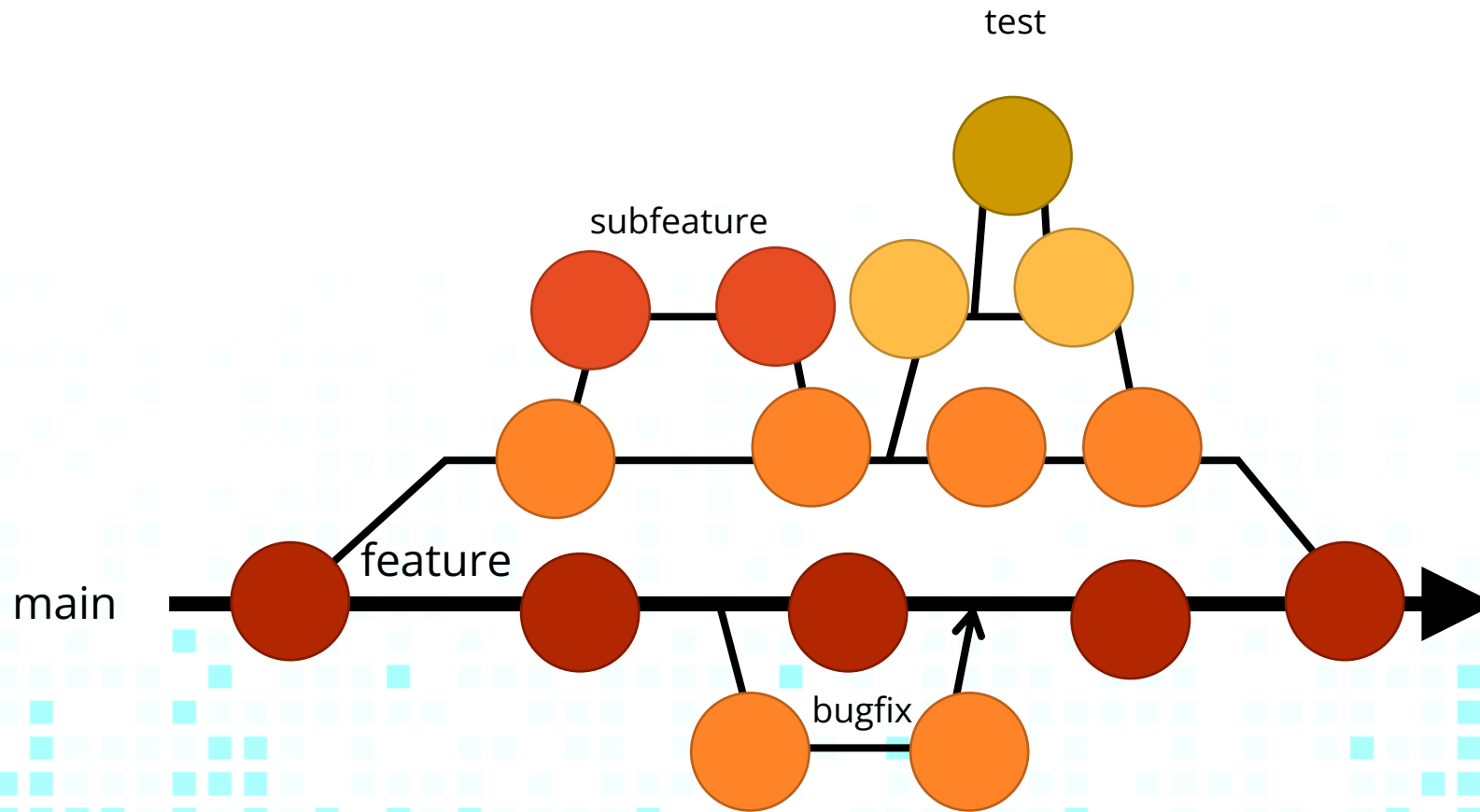


Local
Repository



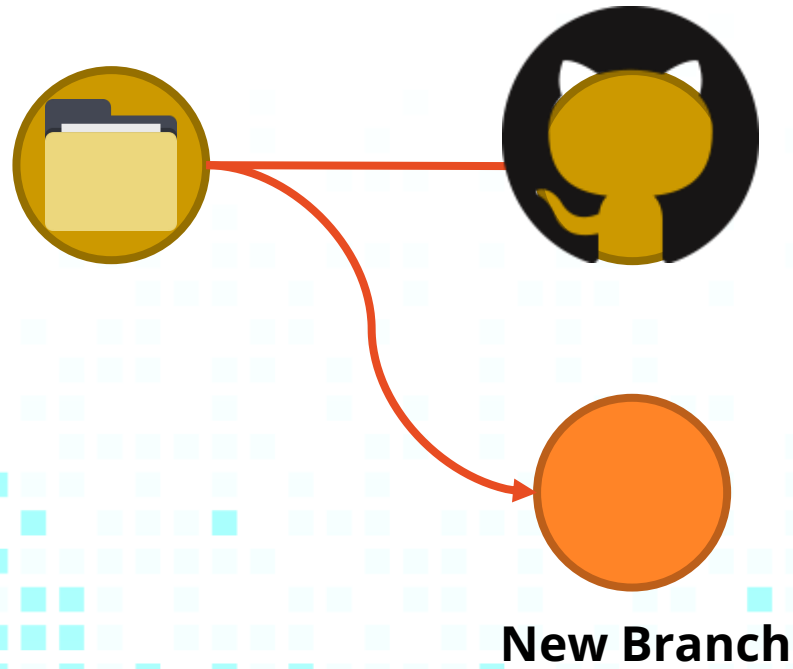
Remote
Repository

Branches



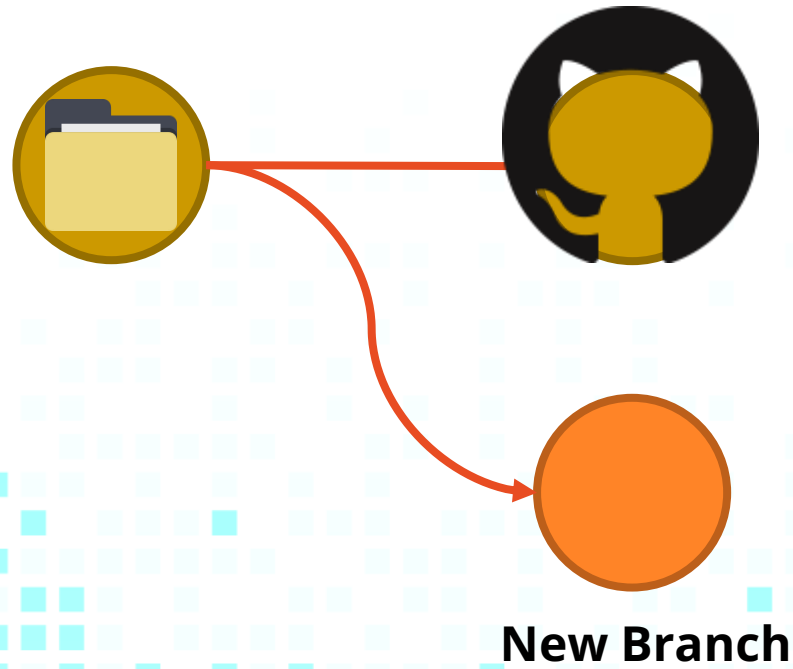
Branching: New Branch

```
git branch <new branch>
```



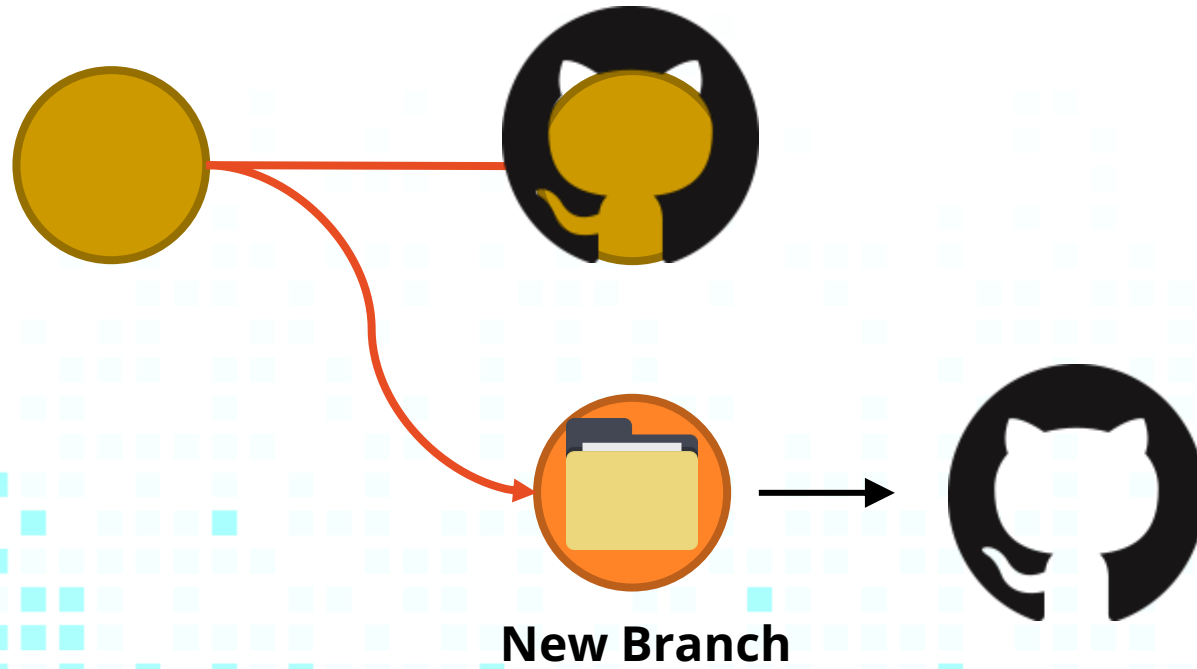
Branching: Moving to Branch

```
git checkout <branch>
```



Branching: Pushing to GitHub

```
git push origin <branch>
```



Updating

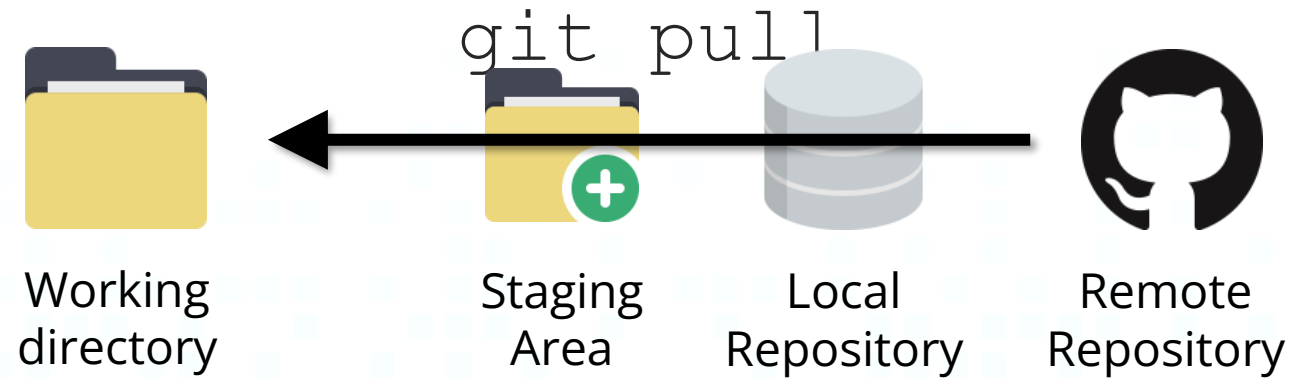
- Update local repository without merging

```
git fetch
```



Updating

- Update local repository to match remote (current branch)



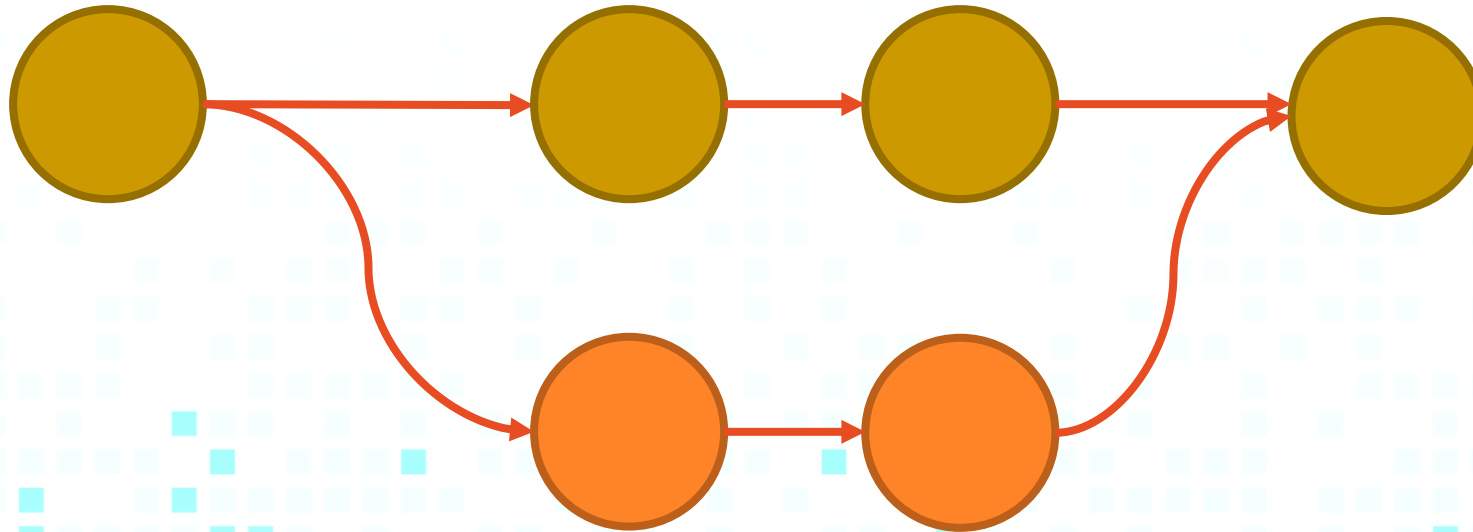
- Update local repository to match all remote branches

```
git pull --all
```


Merging

- Merging another branch with current

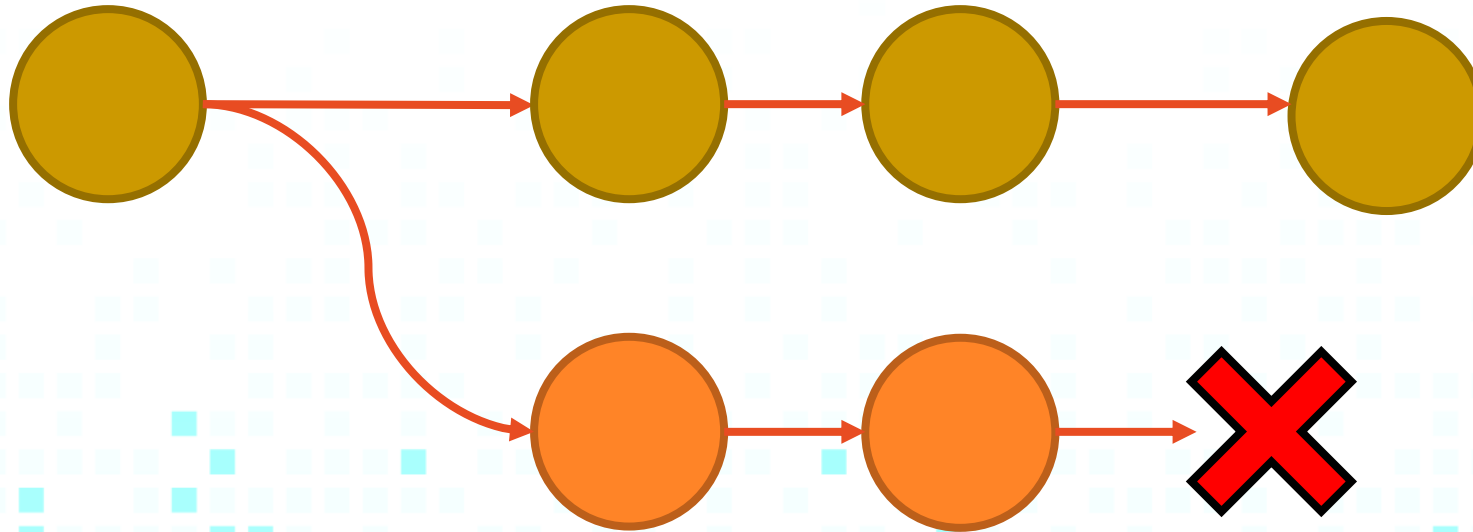
```
git merge <branch>
```



Merging

- Merging another branch with current

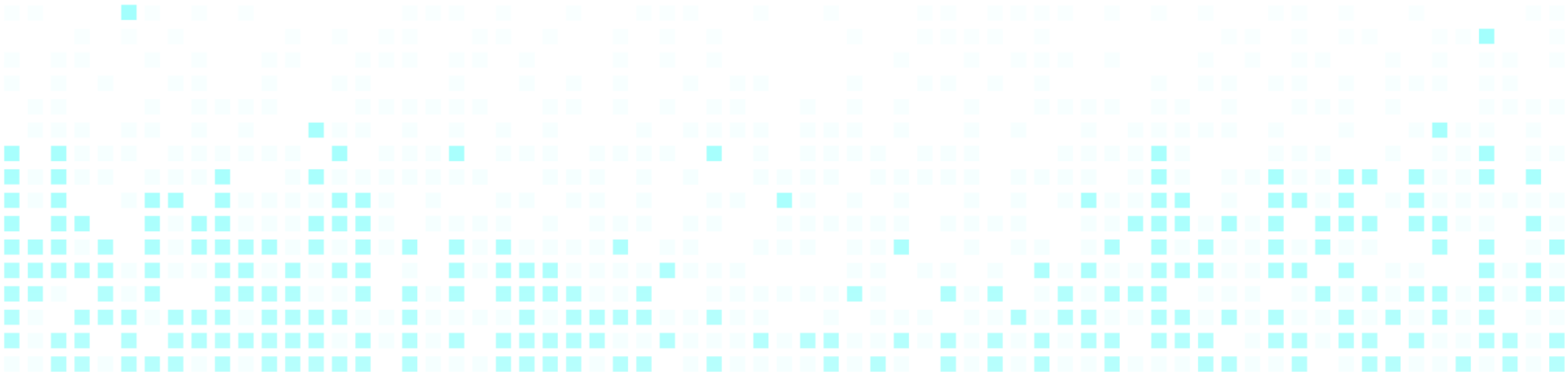
```
git branch --delete <branch>
```



Branching Model

Branching Model


- Decide on how you are going to manage your branches
- Determines when and how you will make changes and commit it back to your codebase



Feature Branch Workflow

- No development takes place in main
 - Keeps the branch clean and high quality
- All features developed in separate branch
- Pull Request created with each Feature to be merged in main
- Read More: <https://www.atlassian.com/git/tutorials/comparing-workflows/feature-branch-workflow>

Example

- **feature** Feature adding or expanding
 - **wip** Works in progress won't be finished soon
 - **bugfix** Bug fix or experiment
 - **junk** Throwaway branch created to experiment
- 

Restrictions

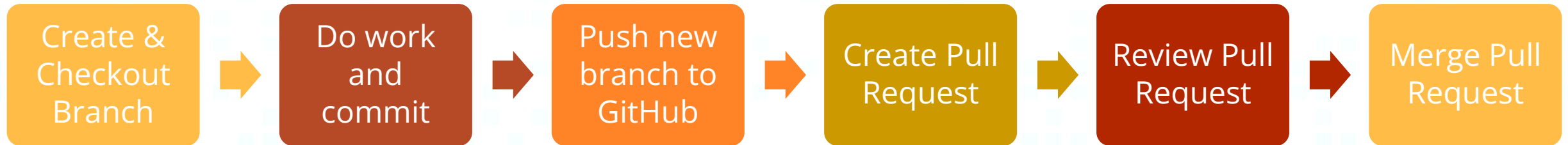
Pushing to main

- You should not push/commit directly to main!
- Why?
 - main branch must ALWAYS contain working software
 - Measure of progress
 - Ensuring code quality
- Code must be reviewed
 - Pull request!


What if I already did it?

- If you already committed to main on your local machine
- Create a branch and push from there
 - `git branch new-work`
 - `git checkout new-work`
 - `git push origin new-work`

What do I do?



Create a pull request

 new-index had recent pushes less than a minute ago

Compare & pull request

• or



base: main ▾



compare: new-index ▾

✓ **Able to merge.** These branches can be automatically merged.

Discuss and review the changes in this comparison with others. [Learn about pull requests](#)

Create pull request

Request review

New Index #1



Open

FransBlauw wants to merge 1 commit into `main` from `new-index`



Conversation 0



Commits 1



Checks 0



Files changed 1

FransBlauw commented 1 minute ago



I added a new index page



New Index

a0cb64e

Add more commits by pushing to the `new-index` branch on `HZ-2223/fpr-team99`.



Review required

At least 1 approving review is required by reviewers with write access. [Learn more](#).



Merging is blocked

Merging can be performed automatically with 1 approving review.

Merge pull request



You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Select at least ONE person to review the code

Reviewers



Request up to 15 reviewers

Type or choose a user

daphneheertjes

dwaard

eliotolhoek Elio

Gijsvdabeele

jerhee71 Jeroen

Lucky-Loek Loek van der Linde

RemcoKok

Assign a Reviewer

Reviewers

FransBlauw



Review required

[Show all reviewers](#)

At least 1 approving review is required by reviewers with write access. [Learn more.](#)



1 pending reviewer



Merging is blocked

Merging can be performed automatically with 1 approving review.

Merge pull request



You can also [open this in GitHub Desktop](#) or [view command line instructions.](#)

Reviewer MUST Review

another teammate requested your review on this pull request.

Add your review

Adding a Review

Create page.html #2

Edit

<> Code ▾

🔗 Open

another teammate wants to merge 1 commit into `main` from `new-page` 📄

💬 Conversation 0

🔗 Commits 1

📄 Checks 0

📄 Files changed 1

+1 -0 📄📄📄📄

Changes from all commits ▾

File filter ▾

Conversations ▾

Jump to ▾

⚙️ ▾

0 / 1 files viewed

Review changes ▾

✓ 1 📄📄📄📄 page.html 📄

... @@ -0,0 +1 @@

Finish your review

✕

Write

Preview

H B I ≡ <> 🔗 ≡ ≡ ≡ @ 📄 ↶

Leave a comment

Attach files by dragging & dropping, selecting or pasting them. 📎

☒ **Comment**

Submit general feedback without explicit approval.

☐ **Approve**

Submit feedback and approve merging these changes.

☐ **Request changes**

Submit feedback that must be addressed before merging.

Submit review



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Adding a Review

- The reviewer must judge the quality of the code
 - Functionality?
 - Code Quality?
- Can comment on specific lines of code or request as a whole
- If rejected, changes can be made
- Only if approved can you merge

After the review



Changes approved

[Show all reviewers](#)

1 approving review by reviewers with write access. [Learn more.](#)



1 approval



This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request



You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

The Unwritten Laws of Pull Requesting

You shall always
fix merge
conflicts on your
own PRs

You shall always
create small PRs

You shall always
review other PRs
and leave good
feedback

Reset main branch

- If you made changes to your main branch locally, you must reset your local branch
- Reset your **local** main branch to **remote** on GitHub
- Make sure you are on your main branch locally
 - git checkout main
- Then reset the branch
 - git reset --hard origin/main

BE CAREFUL! If you do this in the wrong branch, you might lose work!

Tip!

- Set your notification emails to go to your HZ email-address

