



# Make **git** happen

Joseph Crispell

01 Jun 2020

# What is git?

“You use Git to take snapshots of all the files in a folder.”

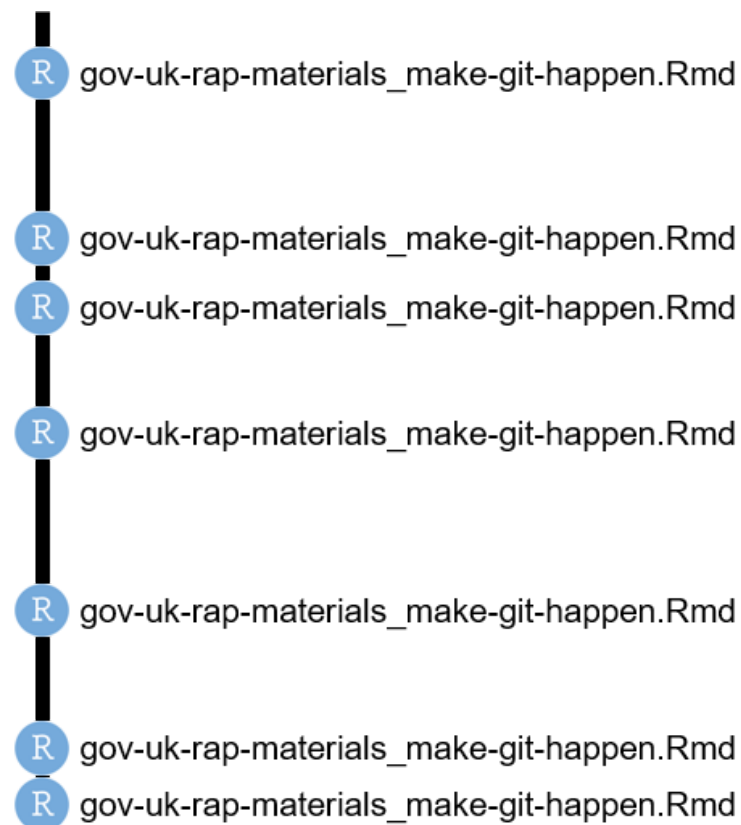
Alice Bartlett



.git	20/05/2020 11:16	File folder	
CreatingAGantt	20/05/2020 10:32	File folder	
css	25/03/2020 14:15	File folder	
images	31/03/2020 15:49	File folder	
R	20/03/2020 11:20	File folder	
.gitignore	18/05/2020 16:09	GITIGNORE File	2 KB
CODE_OF_CONDUCT.md	13/03/2020 08:47	MD File	4 KB
CONTRIBUTING.md	13/03/2020 08:47	MD File	3 KB
gov-uk-rap-materials_intro-to-rap.html	06/04/2020 13:28	Chrome HTML Do...	13,666 KB
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gov-uk-rap-materials_intro-to-RMySQL.log	17/04/2020 10:21	Text Document	8 KB
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gov-uk-rap-materials_intro-to-RMySQL.tex	17/04/2020 10:21	TeX Document	19 KB
gov-uk-rap-materials_make-git-happen.html	29/05/2020 14:37	Chrome HTML Do...	362 KB
gov-uk-rap-materials_make-git-happen.Rmd	29/05/2020 14:37	RMD File	1 KB
LICENSE	13/03/2020 08:47	File	1 KB
README.md	18/05/2020 16:09	MD File	2 KB

# Snapshots in time

- R AnIntroductionToGithub.Rmd
- R AnIntroductionToGithub\_05-04-20.Rmd
- R AnIntroductionToGithub\_05-04-20\_edited.Rmd
- R AnIntroductionToGithub\_15-04-20.Rmd
- R AnIntroductionToGithub\_15-04-20\_JC.Rmd
- R MakeGitHappen\_25-05-20.Rmd
- R MakeGitHappen\_25-05-20\_FINAL.Rmd



# Snapshots in time

History for [gov-uk-rap-materials](#) / [gov-uk-rap-materials\\_make-git-happen.Rmd](#)

Commits on Jun 1, 2020

Added glossary

 JosephCrispell committed 8 minutes ago




ed28ef4



Commits on May 31, 2020

Added repository slide content


 JosephCrispell committed 18 hours ago



a662333



Removed gifs and added images individually


 JosephCrispell committed 19 hours ago



332baca



Added create GitHub account slide content

 JosephCrispell committed 19 hours ago



8745ec7



Added in gif explaining git in practice


 JosephCrispell committed 20 hours ago



b81fb1e



Added useful links

 JosephCrispell committed yesterday




9bd9205



Commits on May 29, 2020

Screenshots for linking to project in RStudio


 JosephCrispell committed 3 days ago



5578230



Introducing working with git using RStudio


 JosephCrispell committed 3 days ago



1bfa534



Added file version control image


 JosephCrispell committed 3 days ago



c99ee65



Working on git tutorial

 JosephCrispell committed 3 days ago

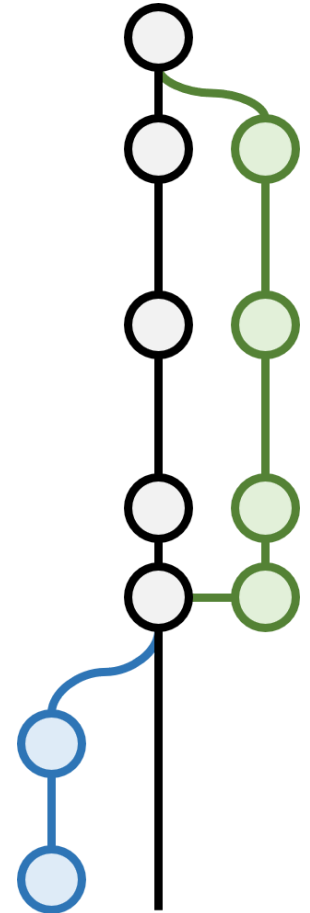


2144a7b



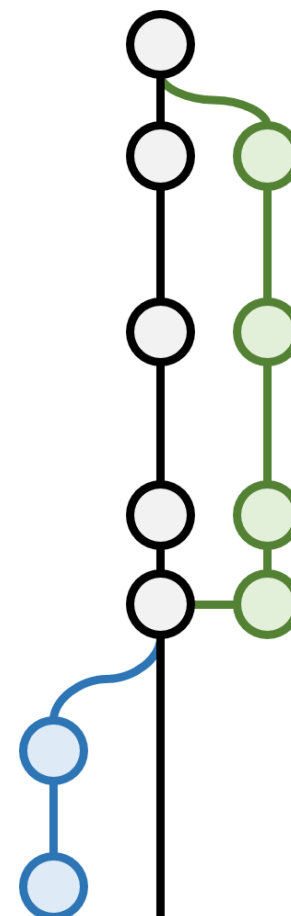
# Three key concepts

- **Repository** - your project folder
- **Commit** - a snapshot of your folder
- **Branch** - a working version of your folder

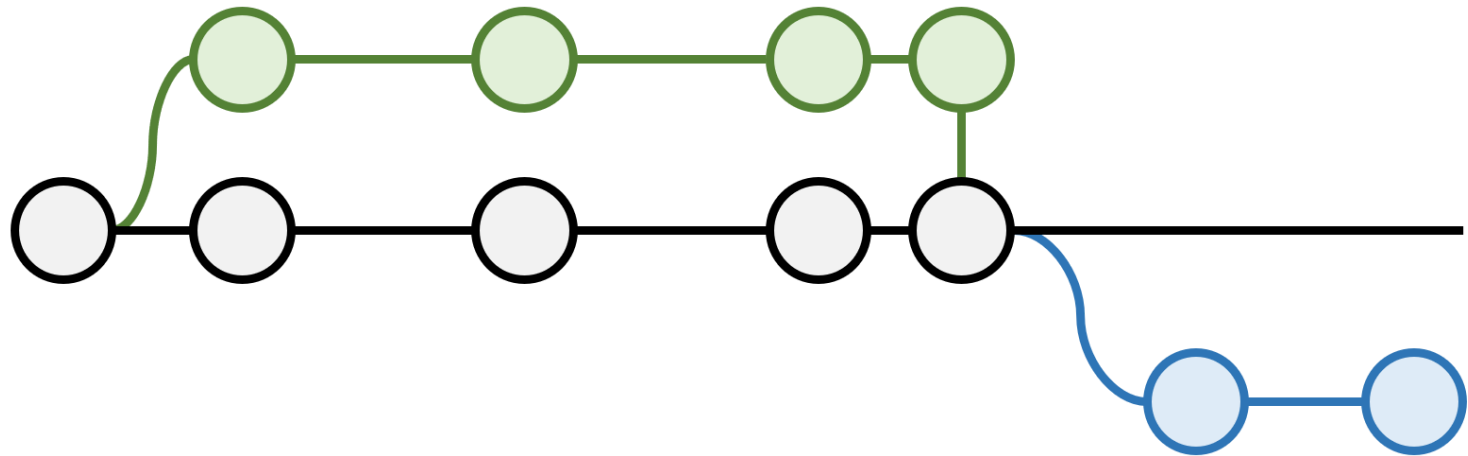


# Three key concepts

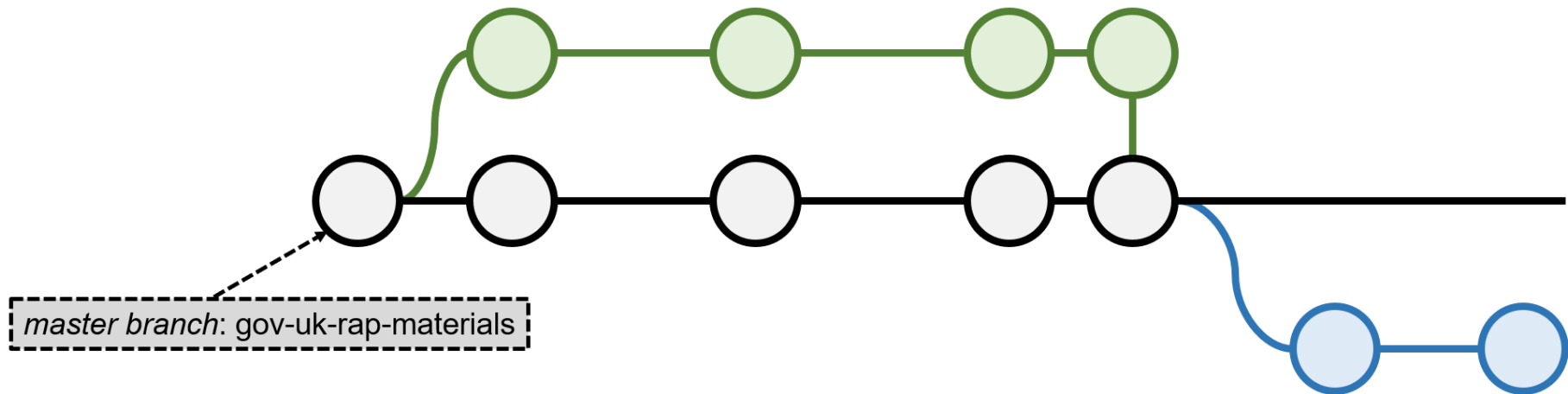
- **Repository** - your project folder
- **Commit** - a snapshot of your folder
  - We use **push** to send the snapshots online
  - And **pull** to retrieve an updated snapshot
- **Branch** - a working version of your folder



# Work git!

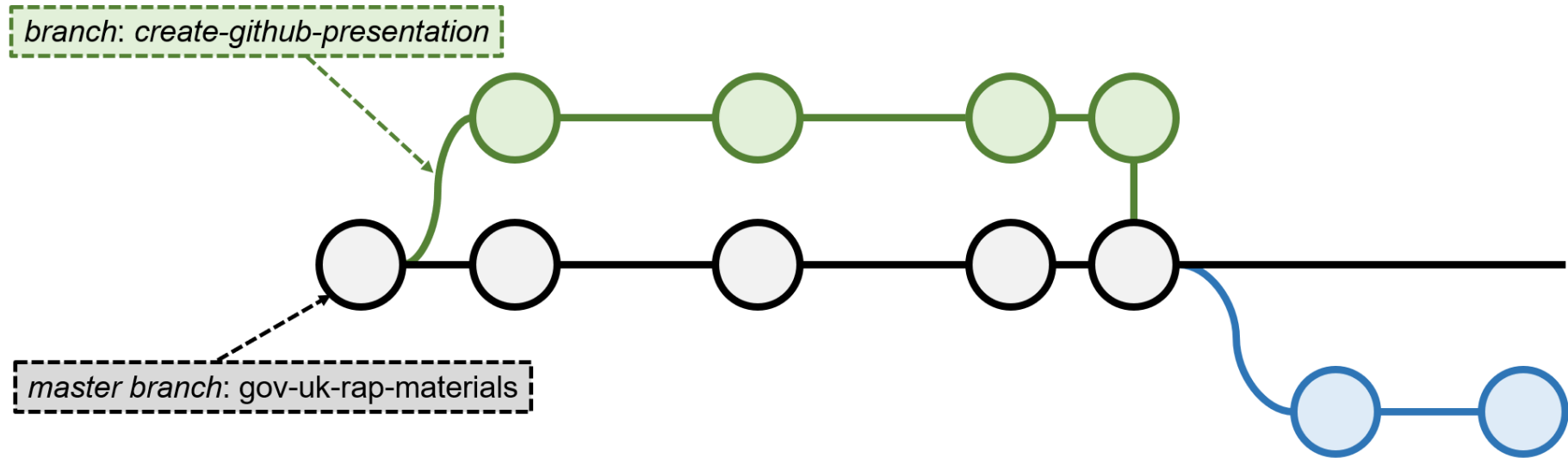


# Work git!

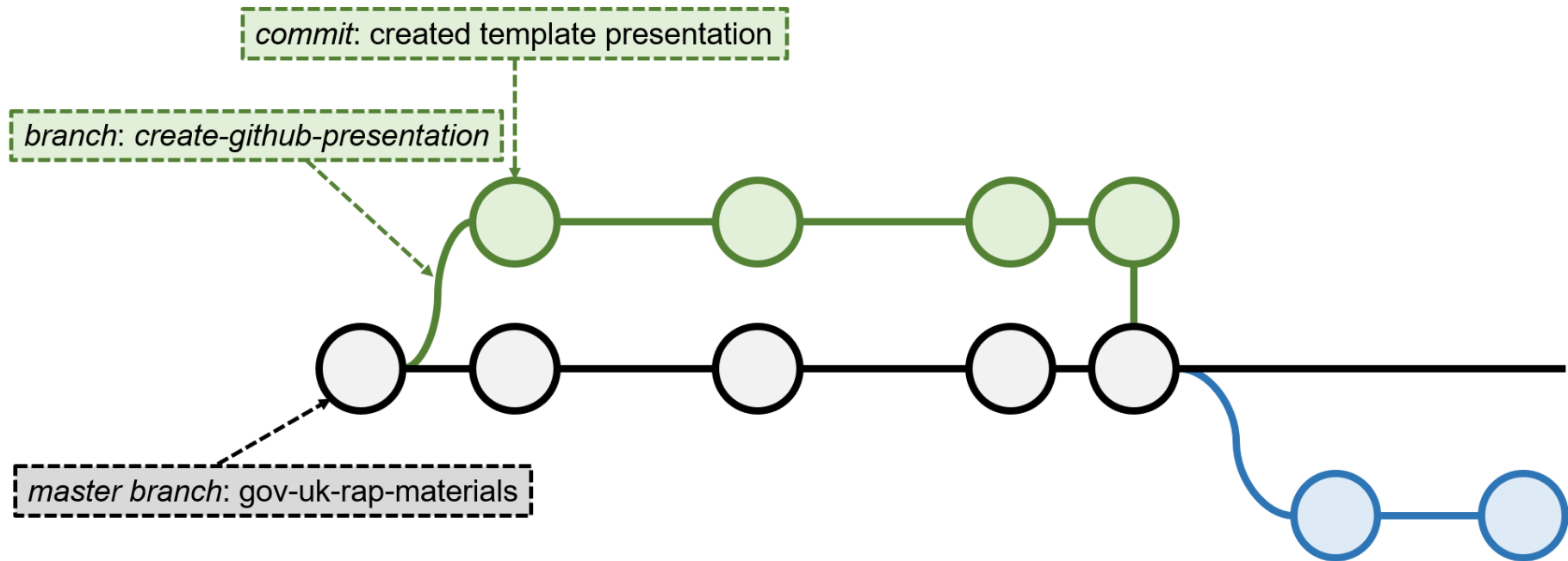




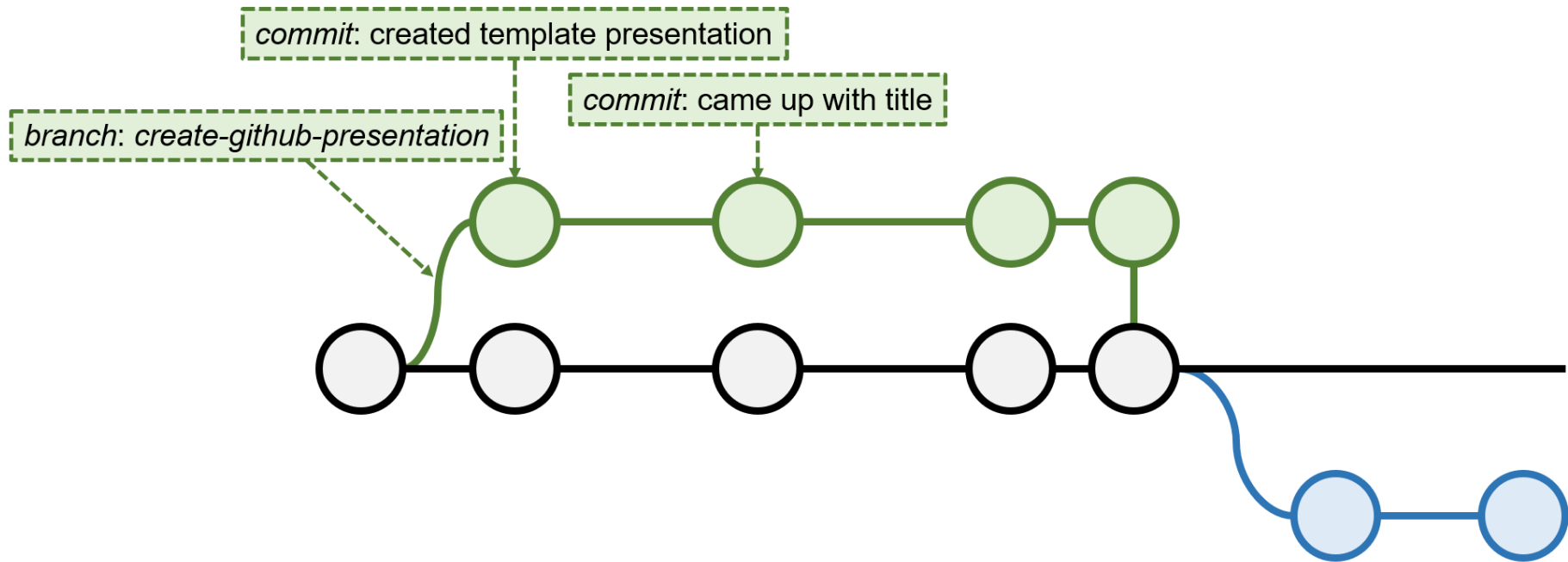
# Work git!



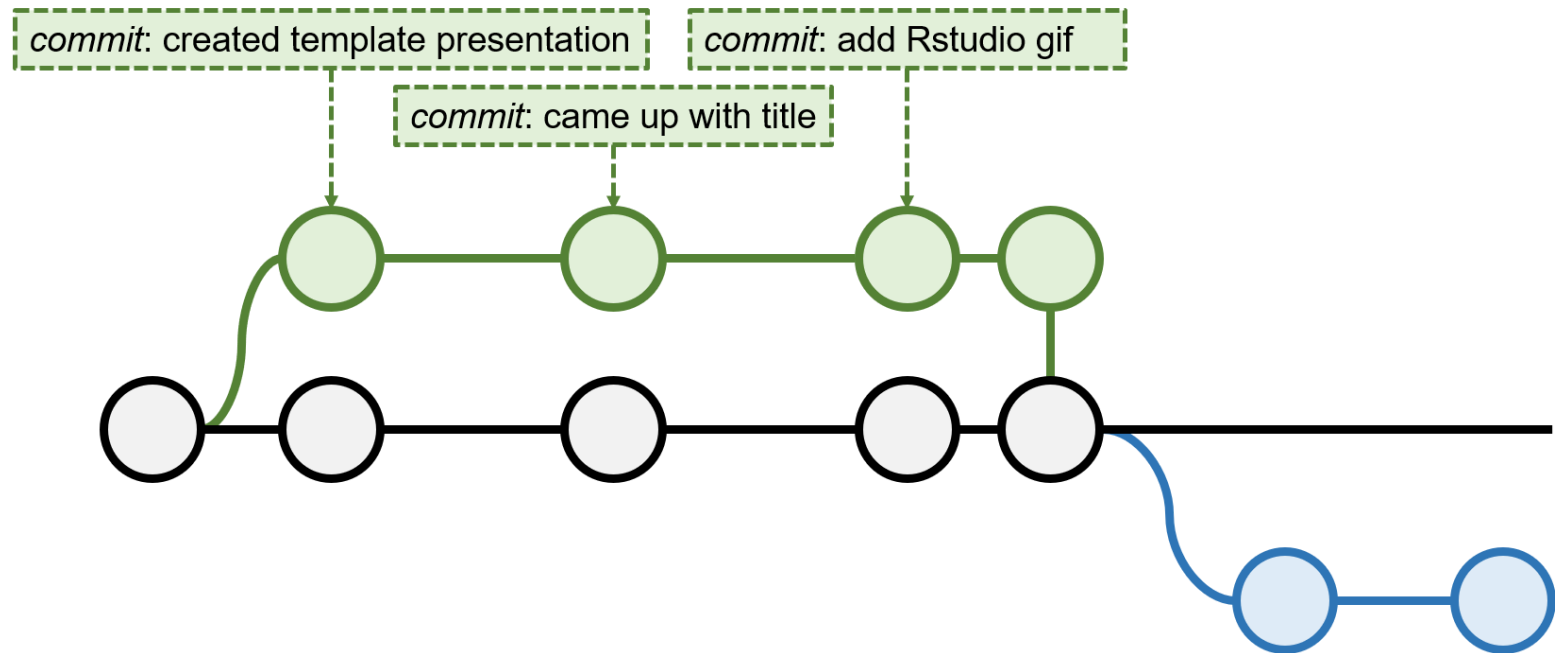
# Work git!



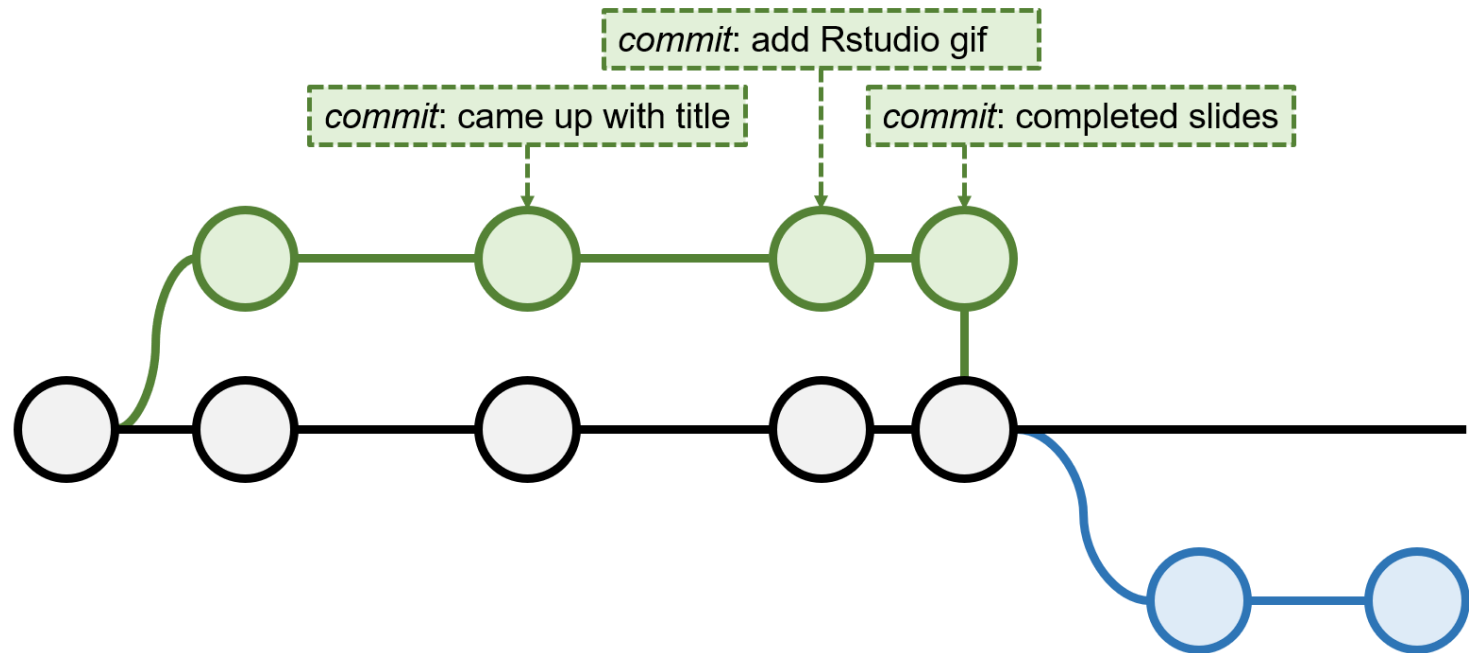
# Work git!



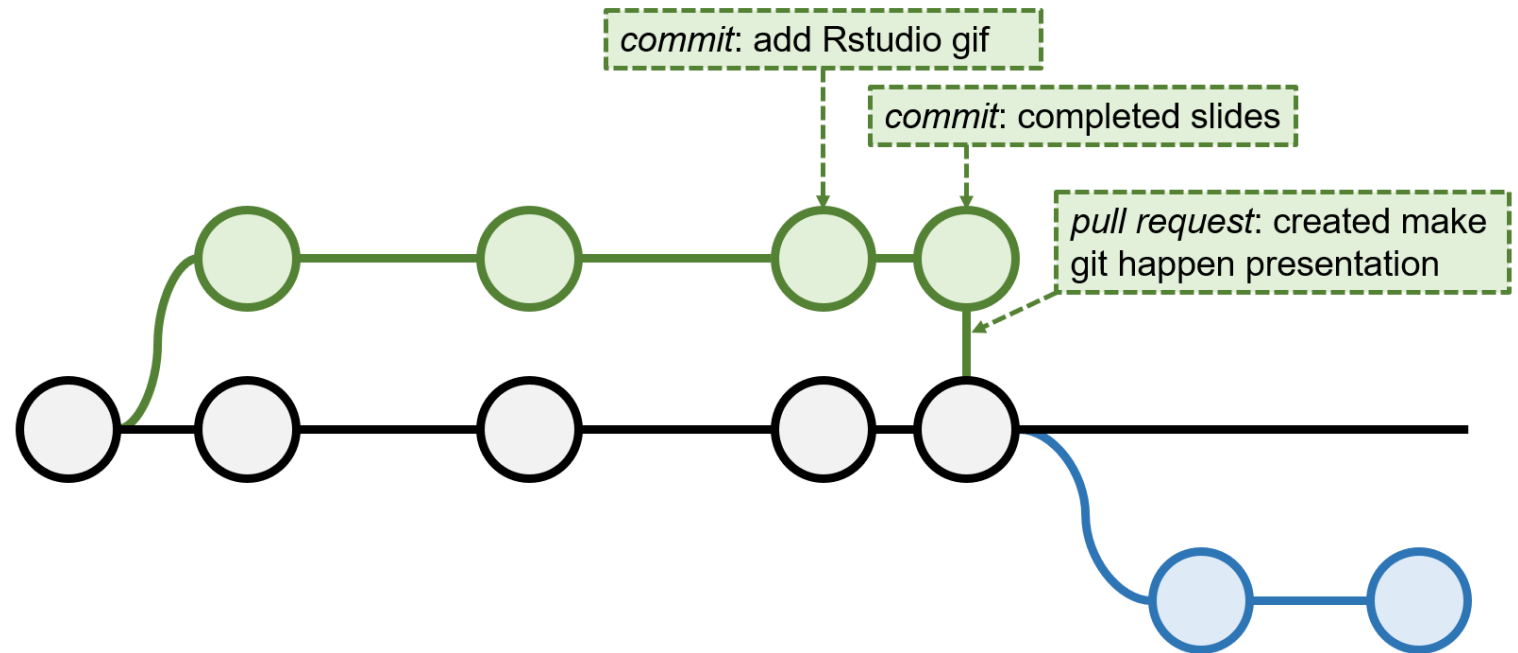
# Work git!



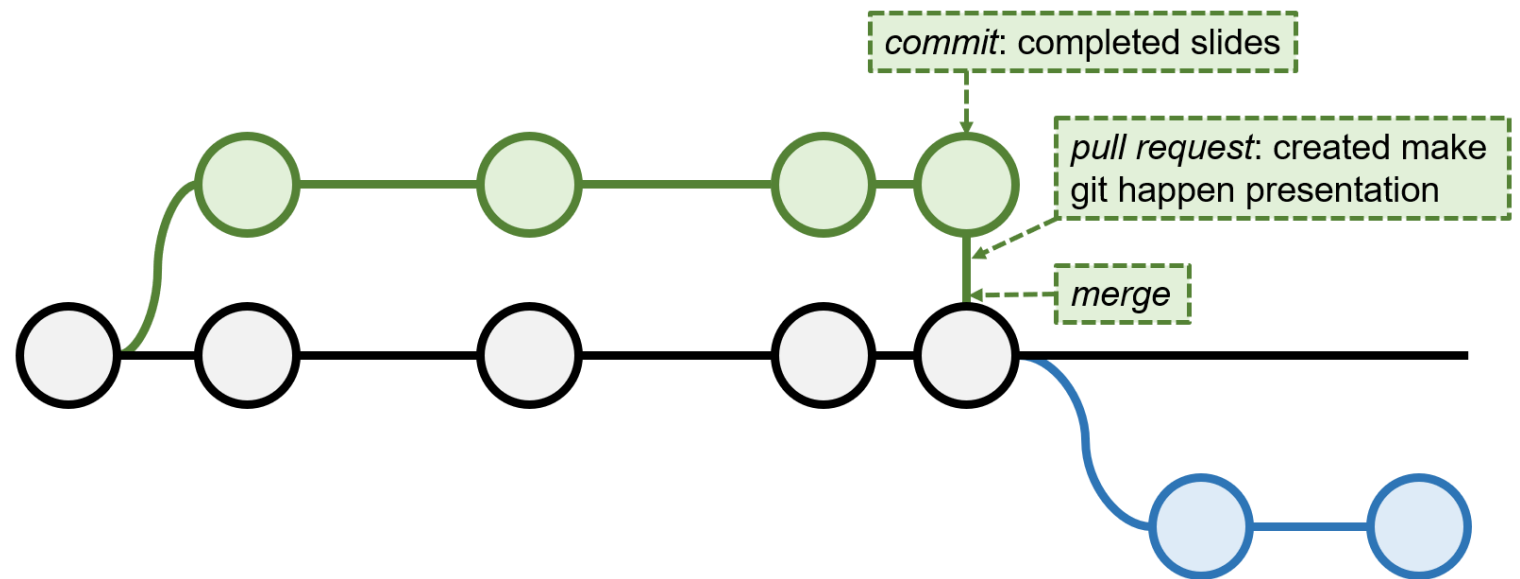
# Work git!



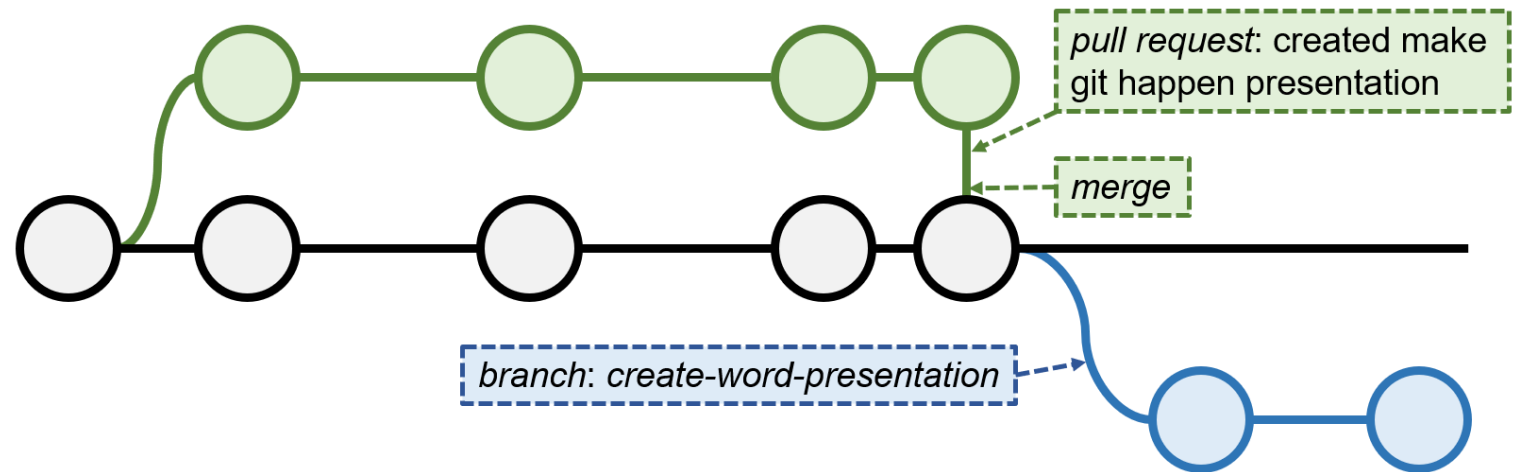
# Work git!



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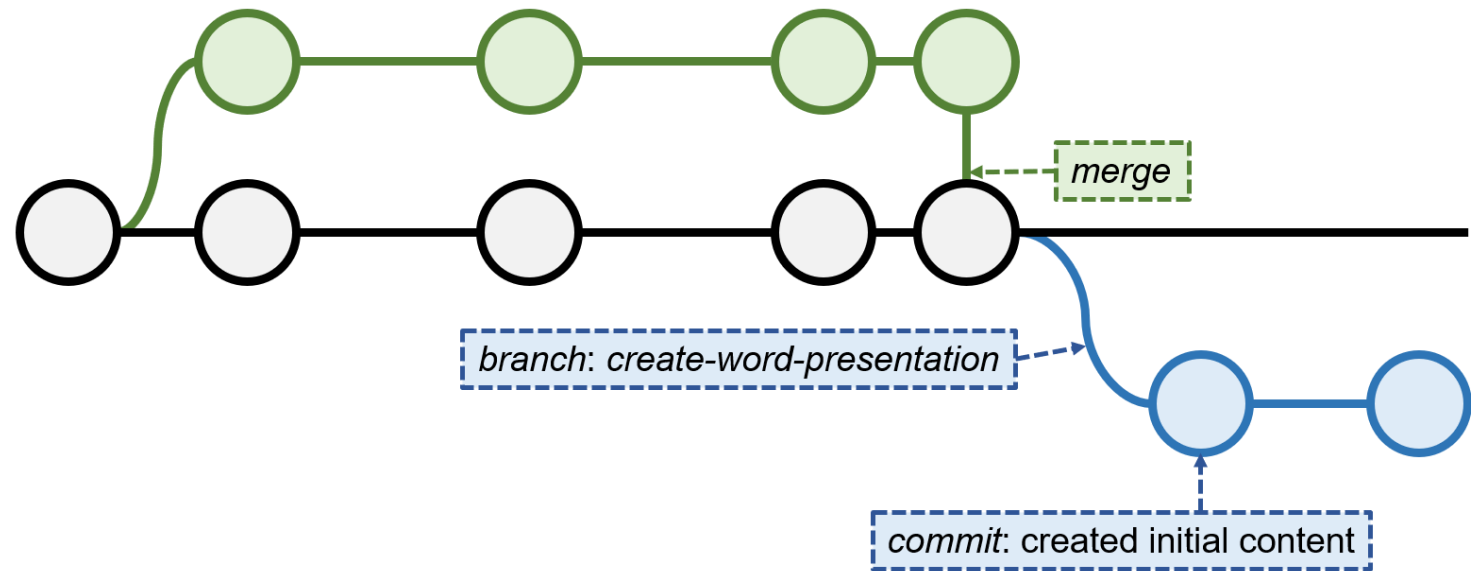


# Work git!

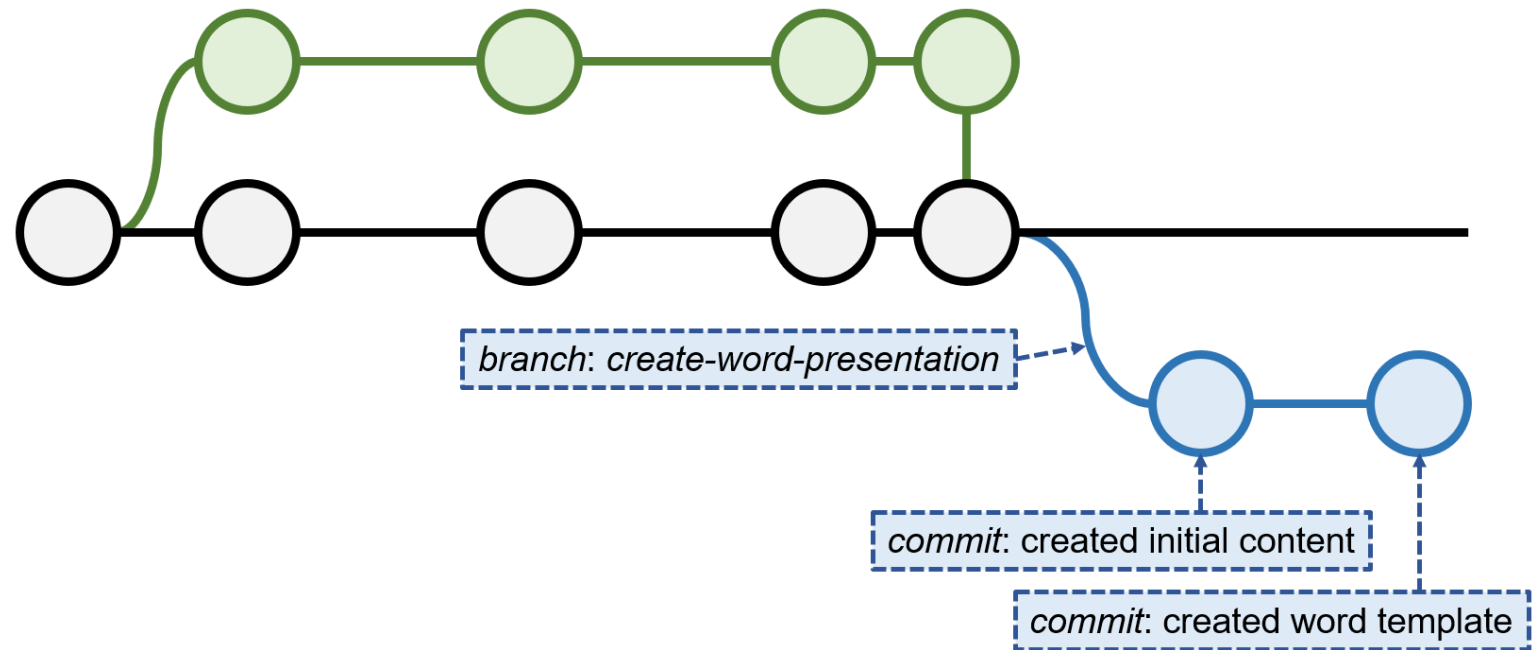




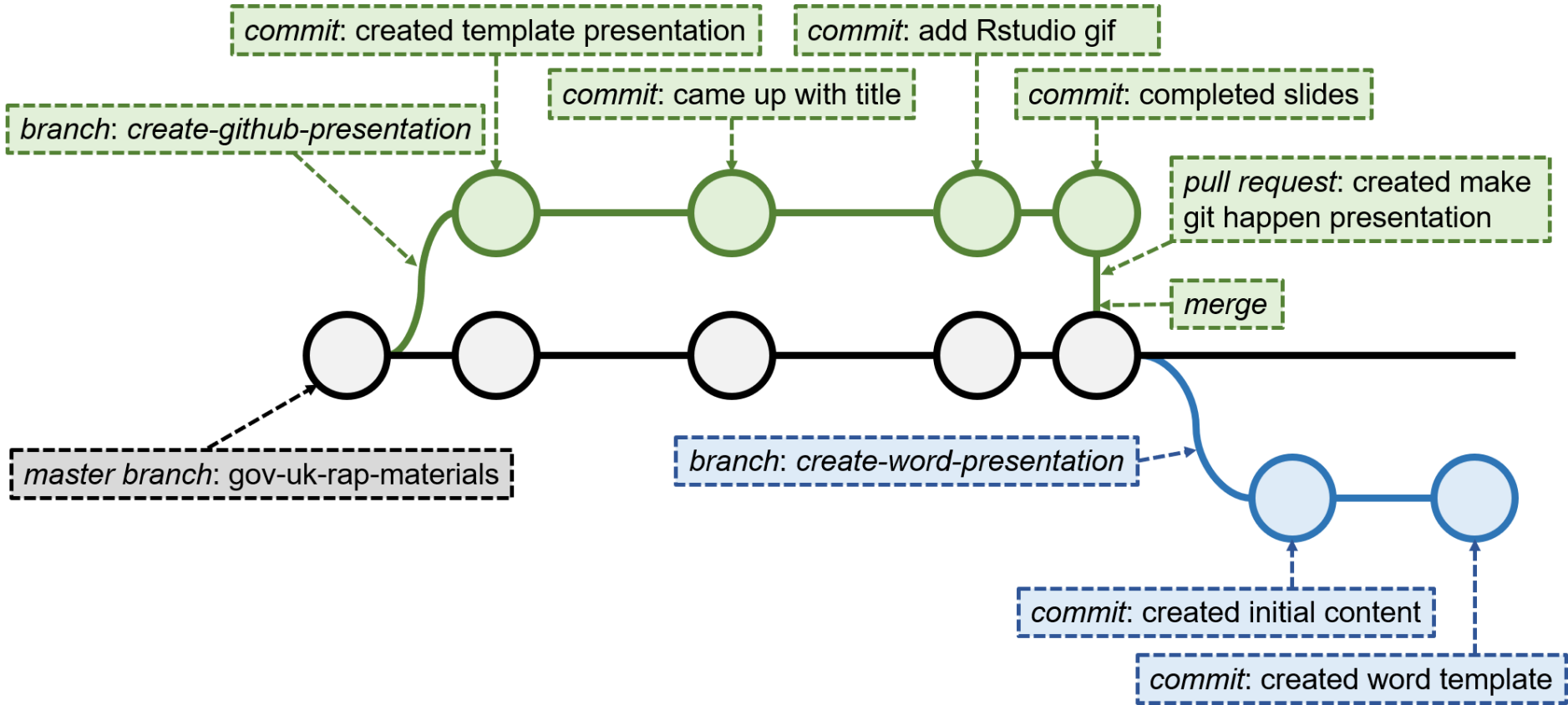
# Work git!



# Work git!



# Work git!



# Installing git

- For Windows, download the executable [here](#)
- On a mac type `git --version` in your terminal
- On linux machines type `sudo apt install git-all` in your terminal



*Note that you may need admin rights on your computer, without these you'll need to request an install.*

# Create a GitHub account

GitHub offers a range of account types. A free account is available for organisations and individuals.

Even if you're in an institution, create a personal GitHub account to keep track of your own work.

You'll find more information, and links for creating an account, [here](#).



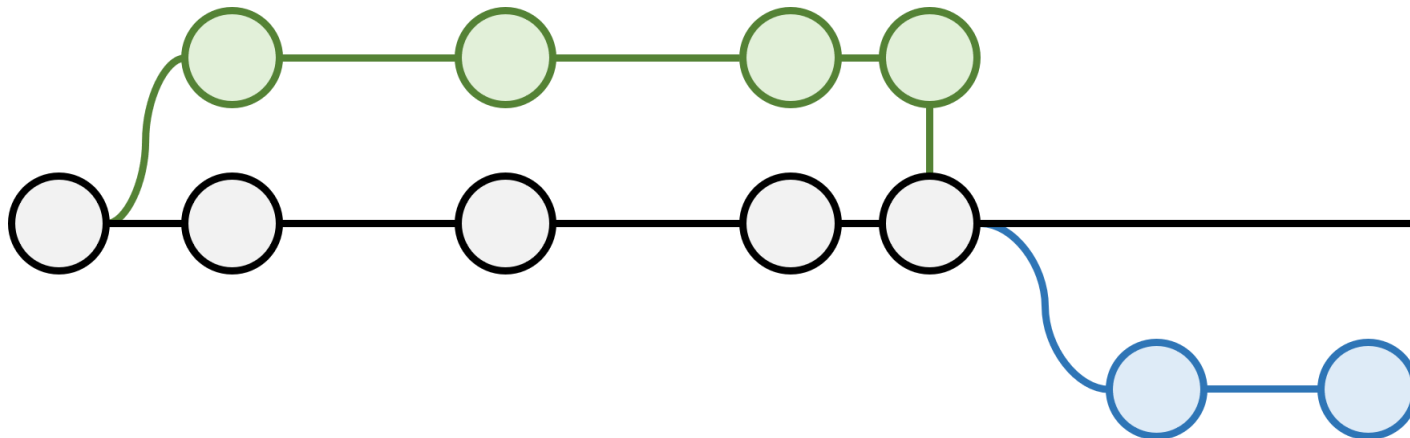
# Create a repository

- Follow the instructions [here](#) to create your first repository
- Some key files to include:

README - ideally format this as a markdown `md` file (more info [here](#) and [here](#))

LICENSE - how you want people to re-use your code ([info](#))

`.gitignore` - names of any files in your project you don't want on GitHub ([templates](#))



# Linking to RStudio

- Rstudio does a lot of the hard work for you
- You can use the terminal, if you like
- Here are some screenshots showing you how to link a GitHub repository to RStudio

























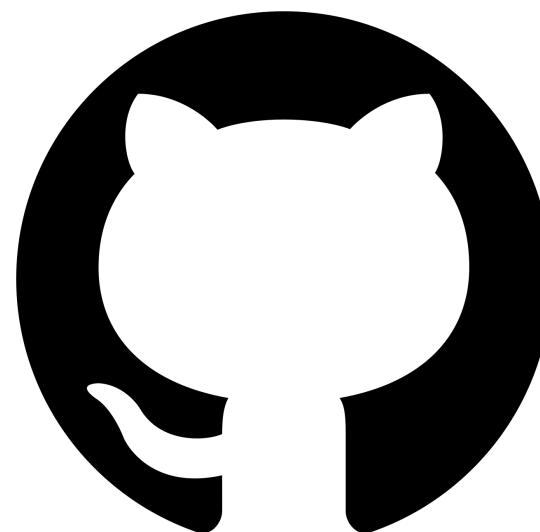






# git the most out of GitHub

- Manage your work on a project using the [Projects](#) tab
- Track your tasks using [issues](#)
- Document your project using a [wiki](#)
- Host a [website](#) on GitHub, check out these [jekyl themes](#)



# Useful resources

- Introduction to GitHub presentation ([slides](#) and [video](#))
- All you need to know about GitHub in their [help](#) pages
- Detailed book about git, GitHub and R ([here](#))
- Detailed overview of RStudio, git and GitHub ([here](#))
- A game to help us think about git branches ([here](#))
- ONS GitHub introductory course ([here](#))



# git glossary

Command	Definition
git status	Check current status of local repository - is it up to date?
git branch	List existing branches
git branch [branchName]	Create new branch
git branch -d [branchName]	Delete branch
git checkout [branchName]	Switch to branch
git push -u [branchName]	Push a branch online
git add [FileName]	Stage file for committing
git commit -m [message]	Commit staged changes to GitHub. Always add meaningful message.
git push	Push committed changes to GitHub
git pull	Pull changes from GitHub to local repository
git fetch	Fetch changes from GitHub to local repository