How to use Git and GitHub with RStudio

Prerequisites

- You've registered a free GitHub account.
- You've installed/updated R and RStudio.
- You've installed Git.
- You've introduced yourself to Git.

Step 1: Make a repository (repo) on GitHub

- Log into https://github.com and make sure you are logged in.

- Click the green "New repository" button. Or, if you are on your own profile page, click on "Repositories", then click the green "New" button.

- How to fill this in:

- Repository name: `myrepo` (or whatever you wish)
- Description: "testing my setup" (or whatever, but some text is good for the README).
- Set it public or private.
- Tick: Add a README file, add .gitignore in R (The **.gitignore** file is a text file that tells Git which files or folders to ignore in a project.)
- Copy the URL to your clipboard via the green "Clone or Download" button.

Step 2: Clone the new GitHub repo to your computer via Rstudio

In RStudio:

- *File > New Project > Version Control > Git*. In "Repository URL", paste the URL of your new GitHub repository (that you just copied) ➔ IF this doesn't work, see Notes below.
- Accept the default project directory name, e.g. `myrepo`, which coincides with the GitHub repo name.
- Notice where the Project will be saved locally.
- Click "Create Project".

You should find yourself in a new local RStudio Project that represents the new test repo we just created on GitHub. This should download the `README.md` file from GitHub. Look in RStudio's file browser pane for the `README.md` file.

Notes:

If you go to *File > New Project >* and there is no option for Version Control, here is what you can do:

From RStudio, go to *Tools > Global Options > Git/SVN* and make sure that the box *Git executable* points to your Git executable.

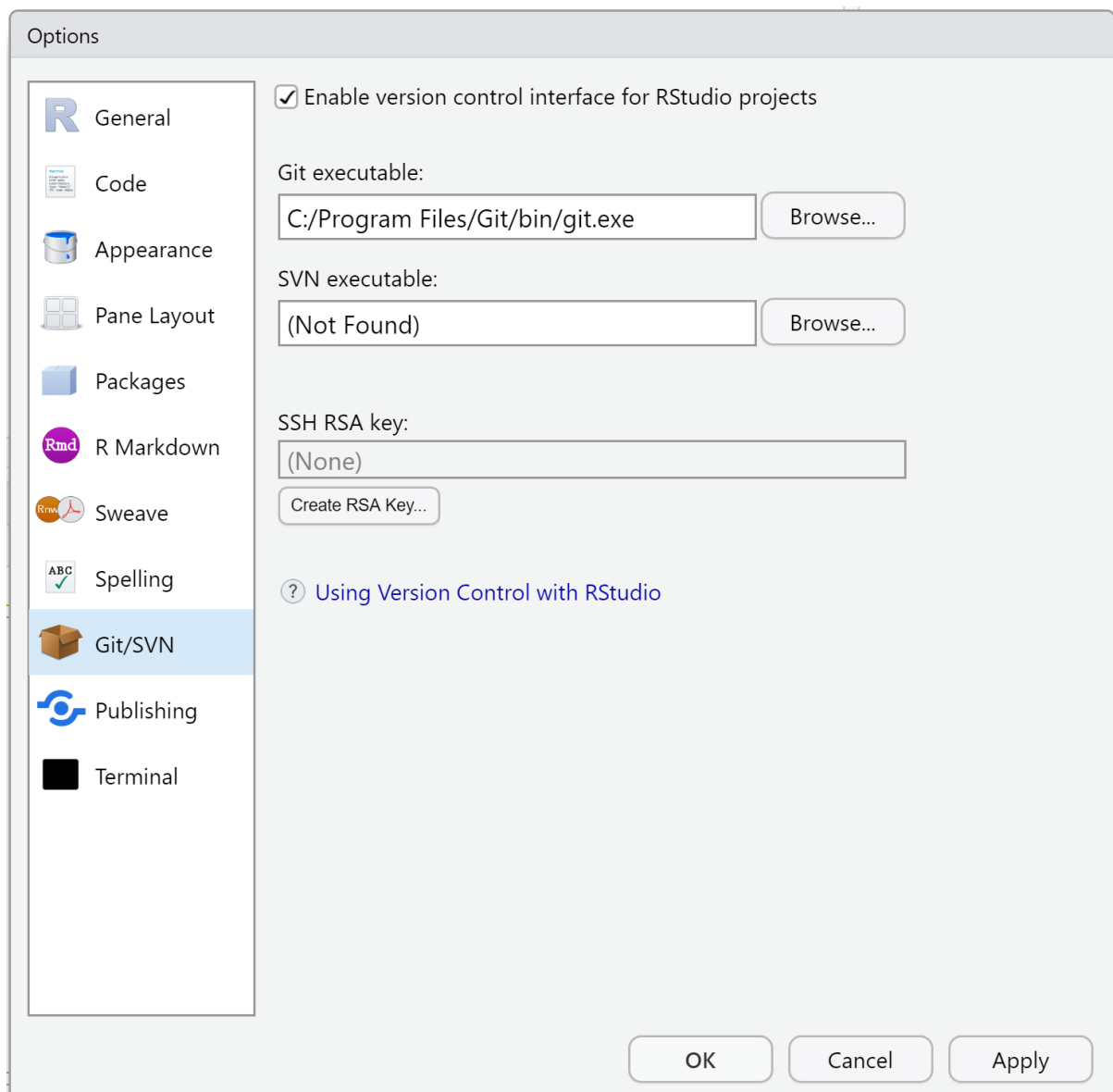On macOS and Linux, the path usually looks something like this:

```
/usr/bin/git
```
If you need to set this on macOS, it can sometimes be hard to navigate to the necessary directory, once you've clicked "Browse" and are working with a Finder-type window. The keyboard shortcut "command + shift + g" will summon "Go To Folder", where you will be able to type or paste any path you want.

On Windows, this path should look something like this:

```
C:/Program Files/Git/bin/git.exe
```
and here is a screenshot on Windows:

RStudio screenshot showing path to Git executable

Step 3: Make local changes, save, commit

From RStudio, create a script.
From RStudio, modify the `README.md` file, e.g., by adding the line "This is a line from RStudio". Save your changes.
Commit these changes to your local repo. How?

From RStudio:

- Click the "Git" tab in upper right pane.
- Check "Staged" box for `README.md`.
- If you're not already in the Git pop-up, click "Commit".
- Type a message in "Commit message", such as "Commit from RStudio".
- Click "Commit".

Step 4: Push your local changes online to GitHub

Click the green "Push" button to send your local changes to GitHub.

More resources?

1. [Chapter 12 Connect RStudio to Git and GitHub | Happy Git and GitHub for the useR (happygitwithr.com)](happygitwithr.com)
2. If you already have a local repo, you can also link that to Github! [Adding an existing project to GitHub using the command line - GitHub Docs](#)