# In-class assignment

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## Git and Rmarkdown

### Get to know git

1. Make a new repository.
2. Clone it using R Studio to make a local repository.
3. Write a (short) README file for your test repository using Markdown formatting.
4. Add your unstaged files, commit the changes, push to the remote repository.

### Branch out

Now it is time to make a development branch. You can also do this within RStudio but let's try out the terminal!

5. Open the terminal in RStudio. Make sure you are in the right directory. Type:

```
git checkout -b dev
```

This moves you to the new branch called dev. You can also see it in the git interface in RStudio (typically top right panel).

Now you are ready to go to work!

### Interact with git repositories and use rmarkdown

Now it is time to put your new knowledge on Rmarkdown and git to good use.

6. Open a new Rmd file and save it in the git repository.

We will now use a data set from another repo for a simple analysis. This repository contains data from several cognitive tasks. The R-file in the repo loads and cleans the data.

7. Source the R-file from github directly. *Hint:* Google is your best friend

You should now have the data set `stroop` loaded in R.

```
##    ID  congruency  RT accuracy cond trial    rt
## 6   1 incongruent 701        1    2     6 0.701
## 7   1 incongruent 838        1    2     7 0.838
## 8   1 incongruent 659        1    2     8 0.659
## 9   1   congruent 739        1    1     9 0.739
## 12  1   congruent 670        1    1    12 0.670
## 13  1   congruent 626        1    1    13 0.626
```

We want to analyze the response time (`rt`) as a function of condition (`cond`).

8. Conduct a paired t-test for the stroop task data.

*Hint 1:* You first need to aggregate the data.

*Hint 2:* This should be the results

```
##
##  Paired t-test
##
## data:  mean_rt by cond
## t = -15.089, df = 120, p-value < 2.2e-16
## alternative hypothesis: true mean difference is not equal to 0
## 95 percent confidence interval:
##  -0.07350869 -0.05645509
## sample estimates:
## mean difference
##      -0.06498189
```

9. Make sure to knit your Rmarkdown document either to html or pdf.

## Back to git

10. Now add, commit, and push both the rmd file and the result file.

You can either use the RStudio GUI or the terminal.

```
git add myfile.Rmd myfile.html
git commit -am "my commit message"
git push --set-upstream origin dev
```

11. And then merge the `dev` branch into `master`. You need to use the terminal for this.

```
git checkout master
git merge dev --no-ff -m "merge dev"
git push
```