SPIN 2020 / 2021 Exercise

Prerequisites

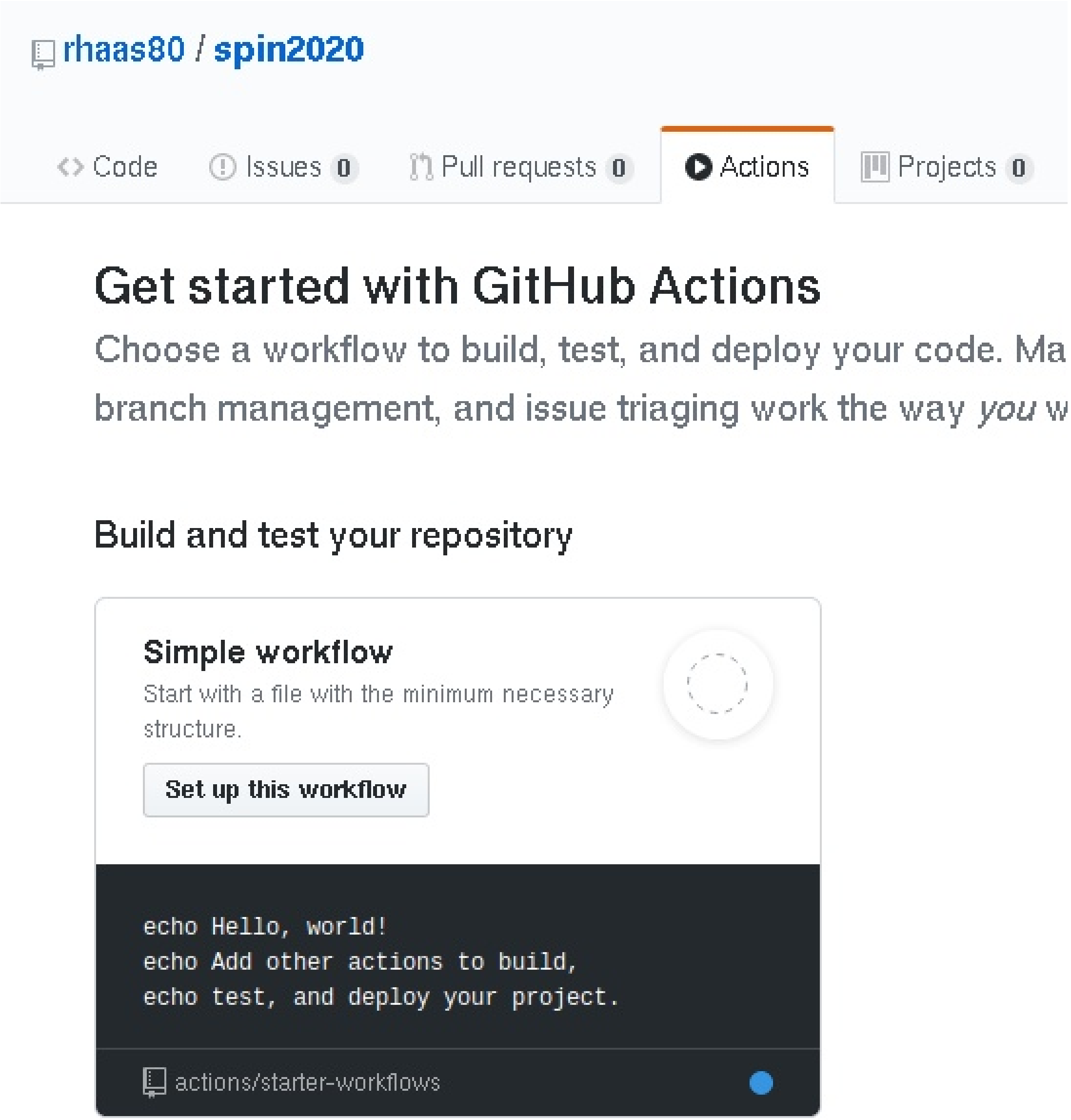
Make sure you have a version of git installed and have a GitHub account.

Setup

Fork the repository https://github.com/rhaas80/spin2020 into a repository of your own and clone your forked repository to your laptop.

Exercise

- Add a new "Simple workflow" using the Action tab of you repository page on GitHub (this would be https://github.com/rhaas80/spin2020/actions/new for the demo repo).



Get started with GitHub Actions

Choose a workflow to build, test, and deploy your code. Ma branch management, and issue triaging work the way *you* w

Build and test your repository

Simple workflow

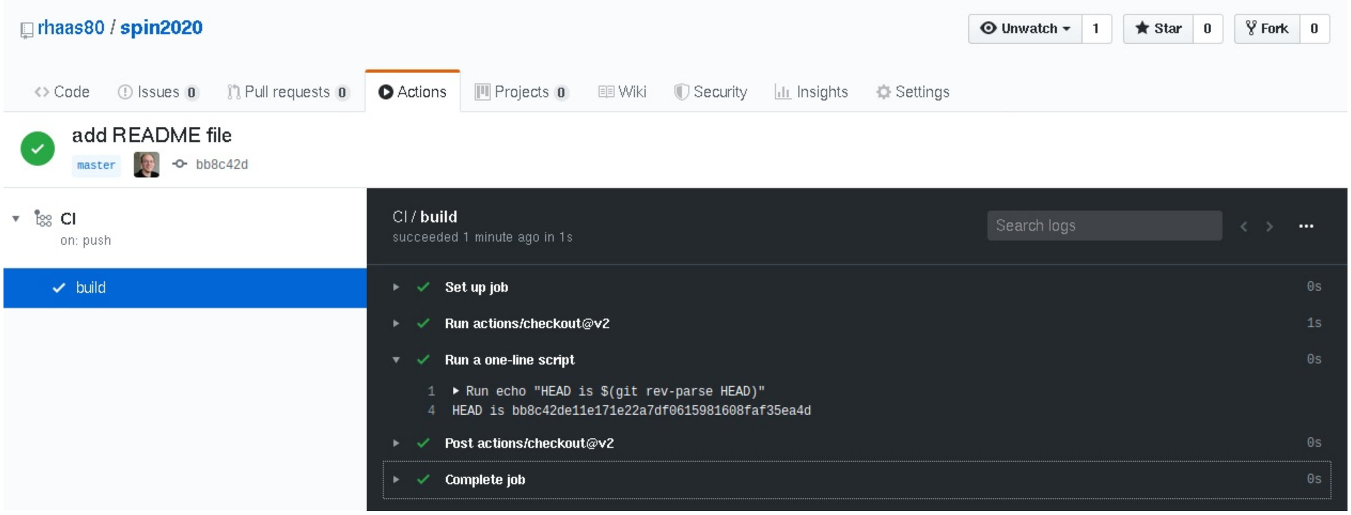
Start with a file with the minimum necessary structure.

```
echo Hello, world!
echo Add other actions to build,
echo test, and deploy your project.
```

- Configure an action that outputs the commit hash of HEAD using the command `git rev-parse` and whose output it if a form similar to

```
HEAD is bb8c42de11e171e22a7df0615981608faf35ea4d
```

- Once the action is in place on GitHub, add a line consisting of your name to README.md and commit it to trigger the workflow. Check that the workflow triggered and produced output on the Actions pane. You should see output similar to this:



add README file

CI / build
succeeded 1 minute ago in 1s

```
Set up job                              0s
Run actions/checkout@v2                 1s
Run a one-line script                   0s
  ▸ Run echo "HEAD is $(git rev-parse HEAD)"
  HEAD is bb8c42de11e171e22a7df0615981608faf35ea4d
Post actions/checkout@v2                0s
Complete job                            0s
```

- Finally, write and push to the repository a script using Perl or Python that counts the number of lines in README.md and creates a HTML document whose body reads "Number of lines in README.md is N" where "N" is the number of lines in README.md.

Sending in results

Once done, please send me the URL of your repository on GitHub using my rhaas@illinois.edu email address. Please make sure that your repository:

- contains you workflow yaml file
- shows output of the workflow in the Actions pane
- contains your script to count the number of lines in README.md

Current Jenkins setup

As part of the project we would like to implement as much of the functionality currently offered by Jenkins as feasible. You can have a look at a sample Jenkins report for a test run that resulted in some failures on: https://build-test.barrywardell.net/job/EinsteinToolkit/1672 using the user name Albert and password Einstein .

Items to implement:

- identifying the updates to submodules that triggered each test run
- capture log output
- capture information which test failed and keep track of changes in the number of failing tests
- send email to Einstein Toolkit mailing list when tests start to fail and are no longer failing