CMPE 206 Spring 2020

ns-3 Instructions

Where to do the assignment?

You may work on a personal computer with a linux installation or MAC OS. If you do not have access to these, you may set up a virtual machine on your computer. If you still run into trouble getting a suitable environment to work in, please send a note to the instructor via Piazza.

Download prerequisites

Refer to the ns-3 wiki: https://www.nsnam.org/wiki/Installation

Please note that the downloads links are old and may not work. Please refer to it for the pre-requisites for your flavor of linux. You will require at least the minimal requirements for C++ (release), support to read pcap packet traces, and database support for statistics. Depending on your preferred build tool, you may require other packages as well. The suggested build tool is waf.

Learn the simulator

Follow the tutorial uploaded on Canvas. Alternatively, download it at:
https://www.nsnam.org/docs/release/3.30/tutorial/ns-3-tutorial.pdf

Make sure that you follow the tutorial carefully. Skipping steps will involve a lot of time retracing your steps and perhaps redoing everything. For HW1, complete up to Chapter 6 of the tutorial.

NOTE: There is no need to install the simulator in your system. We will be working with the source.

Before moving into the examples, make sure you check if the simulator is working by running the hello world application for ns-3, as described in the tutorial:

```
:: ./waf –-run hello-simulator
```
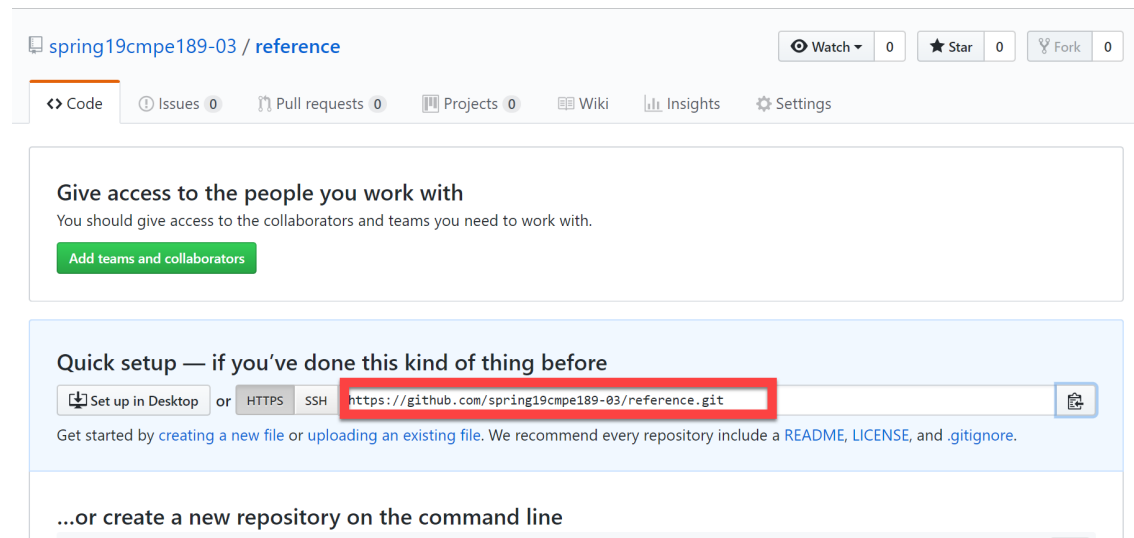
If you see Hello Simulator, you are good. If not, you are missing some steps.

NOTE: Do not forget to copy the scripts from examples/tutorial into the scratch folder before modifying them. You can easily fall back to the original code that way. Also remember to use github as often as needed. It will contribute to your final grade and help you keep track of the changes.

Github setup

Please fill the Google Form here: https://forms.gle/LBXYP5mAXx8r1fit7. Then, you will receive an email from github.com with the organization for this class. Accept the invitation. Go to github.com and create a repository under the organization with a name containing your SJSU ID. You may create a private repository. Now, copy the URL for your repository as shown below.

Note: The name shown below is only an example. Please use a meaningful name for your repository.

FAILING TO USE GITHUB WILL IMPACT YOUR GRADE!!

Once you download ns-3, you will need push the downloaded source code into your repository. If your source code is already in another git repository, run the following commands to switch repositories:

```
:: git remote rename origin upstream
```

If not, you will need to initialize the git repository by running the following command:

```
:: git init
:: git add .
:: git commit -m "Your message for your first commit"
```

In both cases, add your code by running the following command:

```
:: git remote add origin <git-url>
```

You can copy the url from github. It looks like this:

```
https://github.com/spring2020-cmpe206-01/<repository_name>.git
:: git push origin master
```

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