1 GitLab Setup

We will be using git for project submissions:

- You will be submitting your course projects using a private git repository on gitlab.com.

- Project submission will be done from a clone of your gitlab repository on your course VM.

You should obtain basic familiarity with `git` by looking at the copious documentation and tutorials available on the web.

1.1 Quick Start

If you know what you are doing, this `tl;dr` section should largely suffice:

1. Set up a personal gitlab account and create a `i480w` or `i580w` git project, depending on the course you are registered for. Set up two gitlab users to share your project with assigned role `Reporter`:

   (a) `@umrigar`.

   (b) **One of** `@mjohns54` (for CS 480W), `@vkudalk1` (for CS 580W-01), `@nraverk1` (for CS 580W-02).

   As there are many similar names and some people may have multiple accounts, **make 100% sure that you have the correct gitlab accounts** (the `@`*ID*'s must match).

2. Clone your gitlab project into the `~/git-repos` directory on your VM.

3. Create a top-level `.gitignore` file in your git project to ignore `node_¬ modules` and `*~`.

4. Within the cloned directory, use a `work` subdirectory for working on projects and a `submit` subdirectory for submitting projects. If submitting late, email the grader assigned to your course.

The following sections explain each of the above steps in detail.

1.2 Setting Up A Git Lab Repository

Each student needs to set up a **private** git project called `i480w` or `i580¬ w` (depending on the course you are registered for) on gitlab. It will be referred to as *iXXX* in the sequel. This repository will be shared with the instructor and course grader and will be used for submitting projects for grading.

1. Go to gitlab.com.

2. Click on `Sign In/Register`, select the **Register** tab and complete the form. You may choose any appropriate **Username**, but it is strongly recommended that you use the user-name associated with your `bingham-ton.edu` email id (if it is available).

   Please ensure that you provide your `binghamton.edu` email address in the **Email** field. This may make it slightly easier for the grader to associate your gitlab account with your BU id.

3. Once you have submitted your form, you will need to complete your registration by clicking on the link provided in an email which will be sent to the email address you provided during registration.

4. Set up your account appropriately. Upload the generated **public** ssh-key from your VM (default `~/.ssh/id_rsa.pub`) to gitlab by copying-and-pasting it into your profile.

5. To set up a project for the course, click on the green **New Project** button on your *gitlab home page*.

6. Fill in the project name as `i480w` or `i580w` depending on which course you are registered for (this is absolutely essential). Make sure that you set up your project as **Private**. Provide a suitable description for the project. Make sure to select `Initialize repository with a README`. Hit the **Create project** button.

7. Go to your project using the link you will now find on your gitlab homepage. Go to `Settings->Members` from the left-hand side navigation. Go to the **Add member** tab and add in the course grader and instructor as project members with **Reporter** roles.

   You can get to the gitlab user id by searching on the person's name.

   (a) Add in your grader with role `Reporter`:

   - If registered for CS 480W (meeting MWF 3:30-4:30p), add Mr. Maryson Johnson having gitlab id `@mjohns54` as your grader.

   - If registered for CS 580W-01 (meeting MW 6:15-7:40p), add Ms. Vidisha Kudalkar having gitlab id `@vkudalk1` as your grader.

   - If registered for CS 580W-02 (meeting MW 12:30-2:00p), add Mr. Nikhil Raverkar having gitlab id `@nraverk1` as your grader.

   Since multiple accounts will show up in the search results, please ensure that you choose the correct account with the matching @ID.

   (b) Add in the member with gitlab id `@umrigar` with role **Reporter**. You can get to the gitlab id by doing a search for `umrigar`

   Since multiple accounts will show up in the search results for "umrigar", please ensure that you choose the correct

account @umrigar.

Make sure to specify the **Reporter** role for both new members.

1.3 Initializing Your Repository on your VM

Clone your gitlab repository into your `~/git-repos` directory:

```
$ cd ~/git-repos
$ git clone YOUR_GITLAB_PROJECT_URL
```

You can copy and paste your gitlab project URL from your project page. If you get an error when doing so, recheck your ssh keys.

Set up a `.gitignore` (note the leading .) at the top-level of your git project to contain at least the following two lines:

```
node_modules
*~
```

and commit:

```
    git add .gitignore
    git commit -m 'ignore node_modules dir & emacs backups'
```

1.4 Working On and Submitting Projects

To work on and submit projects, you must create `work` and `submit` directories within your *iXXX* directory where *iXXX* is the directory containing the clone of your gitlab project:

```
$ cd ~/git-repos/iXXX
$ mkdir work submit
```
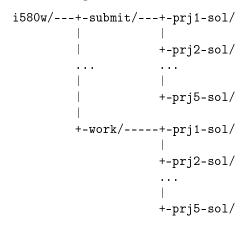
Create your project solution directories `prj`*i*`-sol` within your `work` directory. As you work on your project, keep committing and pushing your changes. This ensures that you do not accidentally loose your work.

When ready to submit your project, you must move it over to your `submit` directory. Assuming that you are in your *iXXX* directory:

```
$ git mv work/prji-sol submit
$ git commit -m 'submitted project i'
$ git push
```

If you find a problem with your submission, you may directly update your project in the `submit` directory. The timestamp of the latest commit and push within the `submit` directory will count as the submission time for your project.

Do not confuse the gitlab project with the course projects you will be submitting. You will only have a single gitlab *iXXX* project, but will have multiple course projects (typically 5) under your gitab project. So by the end of the semester your `i580w` gitlab project may look like:

```
i580w/---+-submit/---+-prj1-sol/
         |           |
         |           +-prj2-sol/
         ...         ...
         |           |
         |           +-prj5-sol/
         |
         +-work/-----+-prj1-sol/
                     |
                     +-prj2-sol/
                     ...
                     |
                     +-prj5-sol/
```

You should feel free to create any other subdirectories within your *iXXX* directory. The only directory which will be monitored for submitted projects is the `submit` directory.

If the submission is late, please email the grader assigned to your course:

CS 480W (meeting MWF 3:30-4:30p) Maryson Johnson mjohns54@binghamton.edu

CS 580W-01 (meeting MW 6:15-7:40p) Vidisha P Kudalkar vkudalk1@binghamton.edu

CS 580W-02 (meeting MW 12:30-2:00p) Nikhil C Raverkar nraverk1@binghamton.edu