

CMPSC 312
Database Systems
Spring 2019

Lab 1 Assignment:
Researching and Reporting on Database Tools
Submit deliverables through your assignment GitHub repository.
Place report document writing/ directory

Part 1: GitHub Repository Set Up

Objectives

To learn how to navigate the directories within Ubuntu operating system using command line interface. To establish and configure GitHub repositories that will be used in this course throughout the semester; learn basic commands for downloading course materials from the instructor and for submitting material to the instructor using `git`.

GitHub Starter Links

Create your Account on GitHub

It is assumed that you already have an account on GitHub but if you do not, then please visit the below link to create your account using your Allegheny email address. Follow the account generation links and be sure to add a current photo of yourself when completing your profile.

<https://github.com/>

Clone Your classDocs Repository

The ClassDocs repository is used to deliver class materials to members of the course. All class documents and material, including syllabus, slides and other resources, will be delivered to you using `git` from GitHub.

At the beginning of each class and lab session, you will type `git pull` from your classDocs repository root directory to pull (i.e., download) your new material. Before you can use the `git` command, you must first make a copy of the repository locally on your machine using the below link. This is called, *cloning* a repository and will create an exact copy of all course material found in the repository locally for you. We note, that you will only use this below command once! After you have cloned the repository, you will use the command, `git pull` to update your files when they are available in the repository. Remember, do not change the files in the *classDocs* repository. Instead, copy them into a working directory to work on them there, if necessary. Be sure to make a root directory that makes sense to contain this repository such as, `cs312/` or similar.

```
git clone git@github.com:Allegheny-Computer-Science-312-S2019/classDocs.git
```

Clone Your Assignment Repository

In many cases, you will be given a new repository containing assignment materials and you will save your files in this assignment repository as you work on them. In this case, you would leave these files in the assignment repository as you complete your work. Copy and paste the assignment-repository cloning command (to be used in the terminal) to create your assignment repositories. Be sure to place your assignment repositories in directory under the root `cs312/` (or similar) to keep your class materials organized by class.

Today's assignment repository can be found at the below link. Here you will work on your assignment and then push your work to the cloud where the instructor will be able to view your work for grading. Often, there will be files in your assignment repositories which you are to edit before you submit them by using the below commands for `git`.

<https://classroom.github.com/a/NFU5Sg5t>

To use this link, please follow the steps below.

- Click on the link and accept the assignment
- Once the importing task has completed, click on the created assignment link which will take you to your newly created GitHub repository for this lab,
- Clone this repository (bearing your name) and work locally
- As you are working on your lab, you are to commit and push regularly. The commands are the following.

```
- git add -A
- git commit <nameOfFile> -m "Your notes about commit here"
- git push
```

Part 2: Database Tool Research

You are to prepare a comprehensive listing of ten free and open-source tools that provide data management facilities. It is up to you to discern between these tools in order to build your list. The software, methods or web-based tools may cover any area as long as there is an obvious connection to our databases class.

- Your report should give the name of the tool, the Web site(s) and/or an article that introduces it. In addition, you are to provide a brief, but detailed, description of the features that the tool provides. Why is this tool important to databases? What does it do? Who uses it?
- **Please use the Markdown file to prepare your report. For this, you will have to edit the file; writing/report.md. Be sure to add your name and the date to your work.**

Required Deliverables

1. Please locate the Markdown file, `writing/report.md` in your cloned assignment directory. Edit this file using Markdown code to reflect your work. If you need help on this formatting, visit the below link for help.

<https://github.com/adam-p/markdown-here/wiki/Markdown-Cheatsheet>

2. Do not forget to use the above `git` commands to push your work to the cloud for the instructor to grade your assignment. Please see the instructor if you have any questions about assignment submission.