

Lab 1: Getting Started / Environment Setup

Deadline: Friday, Jan. 26 at 11:59pm

1) Find a lab partner!

Once you have a partner, send an email with the following details:

- Your name, EID, GitHub username
- Partner's name, EID, GitHub username
- Requested repo name for your team
- Email should be addressed to the Prof. and TAs (scohen@cs.utexas.edu, chowhan@utexas.edu, william.chia@utexas.edu)
- Copy your partner on the email
- Email subject line should be: [CS 327E] Sp18 Team Info

Very important: You'll need to send this email by Wednesday at the latest, so that you have enough time to complete the assignment by Friday.

You will receive an invitation to join our GitHub organization once you have been added and your team's repo has been created.

2) Create Google Cloud account and sign up for free-trial:

<https://console.cloud.google.com>

Very important: you need a gmail account to sign-up for Google Cloud. If you don't have a gmail account, create one first before signing up for Google Cloud.

3) Retrieve education coupon:

<http://google.force.com/GCPEDU?cid=Cvr4%2BiTE46v1G80jSE0CrahXR8v13WvjV6F0LvJdf7VkBc0uP0iSHP2T3ZBMdIsN/>

Very important: enter your utexas email to retrieve the coupon code. You won't be able to retrieve the coupon with your gmail account.

4) Redeem coupon:

<https://console.cloud.google.com/education>

Very important: when redeeming the coupon, you must be logged in to the Google Console with your gmail account (not your utexas account).

Enter coupon code and click "Accept and continue".

5) Create new Google Cloud project:

From the Google Cloud Console, select IAM & admin -> Manage resources and click on Create Project

Enter the name of your repo for the project name

Choose "CS 327E Elements of Databases- Jan 2018" for your billing account

Click Create.

6) Set project permissions:

Go to the IAM console

Click ADD to add a member

Member: cs327e.spring2018@gmail.com

Roles: Project -> Editor

Click Add

This action grants the TAs and Prof. access to all your Google cloud resources (e.g. Cloud SQL, etc.)

7) Google Cloud Shell:

Activate Google Cloud Shell from top-right corner of screen. This may take a minute.

Once activated, you should see a shell pop-up at bottom of screen with a welcome message.

8) Basic Unix commands:

Familiarize yourself with some basic Unix commands:

Unix command reference:

<https://files.fosswire.com/2007/08/fwunixref.pdf>

Unix tutorials: <http://mally.stanford.edu/~sr/computing/basic-unix.html>

9) GCloud Reference:

We will be making use of gcloud commands in this course. For now, simply bookmark this page:

<https://cloud.google.com/sdk/gcloud/reference/>

10) Create and Configure Postgres SQL Cloud instance:

Perform these steps to create your Postgres SQL Cloud instance:

<https://github.com/cs327e-spring2018/snippets/wiki/Creating-a-Postgres-instance-with-Cloud-SQL>

Perform these steps to configure your Postgres SQL Cloud instance:

<https://github.com/cs327e-spring2018/snippets/wiki/Configuring-Postgres-instance-in-Cloud-SQL>

11) Install Postgres client:

Perform these steps to install psql client on your laptop:

[https://github.com/cs327e-spring2018/snippets/wiki/Downloading-and-Installing-Postgres-client-\(psql\)](https://github.com/cs327e-spring2018/snippets/wiki/Downloading-and-Installing-Postgres-client-(psql))

12) Connect to Postgres SQL Cloud Instance from psql:

Perform these steps to remotely connect to your Postgres SQL Cloud instance: <https://github.com/cs327e->

[spring2018/snippets/wiki/Connecting-to-remote-Postgres-instance-on-Cloud-SQL-from-psql](https://github.com/cs327e-spring2018/snippets/wiki/Connecting-to-remote-Postgres-instance-on-Cloud-SQL-from-psql)

Take a screenshot of your connection test. Name the file connection-test- $\$$ EID.png (where $\$$ EID is your actual EID).

13) Create LucidChart account:

We will use LucidChart to create ER diagrams.

Sign up for a LucidChart Education account:

<https://www.lucidchart.com/pages/usecase/education>

You must use your utexas email to receive an education account

14) Install git client on your laptop:

<https://git-scm.com/downloads>

15) GitHub Readme:

Go to your new repo under <https://github.com/cs327e-spring2018/>

Edit the readme file (README.md) for your repo as follows:

Add full name and EID for each team member

Save the readme file

16) Clone your git repo to your local machine:

Open your git client

Navigate to the folder where you want your repo to be located

Run command: git clone <https://github.com/cs327e-spring2018/XYZ.git> (where XYZ is the actual name of your repo)

Add the screenshot of your connection test and push it to your remote repo

Follow this how-to guide if you need instructions on how to perform these tasks: <https://github.com/cs327e-spring2018/snippets/wiki/Git-Guide>

17) Create Stache entry:

Stache is a tool that lets you securely share passwords.

Go to: <https://stache.utexas.edu/>

Click "+ new entry" from left-hand navigation

In the nickname field, enter your repo name

In the secret field, enter your Postgres instance IP address, username (should be postgres), and your password

Under permissions, add these EIDs: cohens5, prc699, wyc225, as readers. Also, add your partner's EID as a reader.

Save your Stache entry

Note: There should be only 1 Stache entry per team. Both team members can and should create their own Postgres instances, but only the Postgres instance listed in the Stache entry will be used for grading.

18) Canvas submission:

Open the Lab 1 assignment in Canvas

Locate the commit id from your GitHub repo page (see previously mentioned Git Guide if you need help locating your commit id)

Create a submission.json file with your GitHub commit id

Upload submission.json to Canvas by submission deadline

Note: There should be only 1 submission per team.