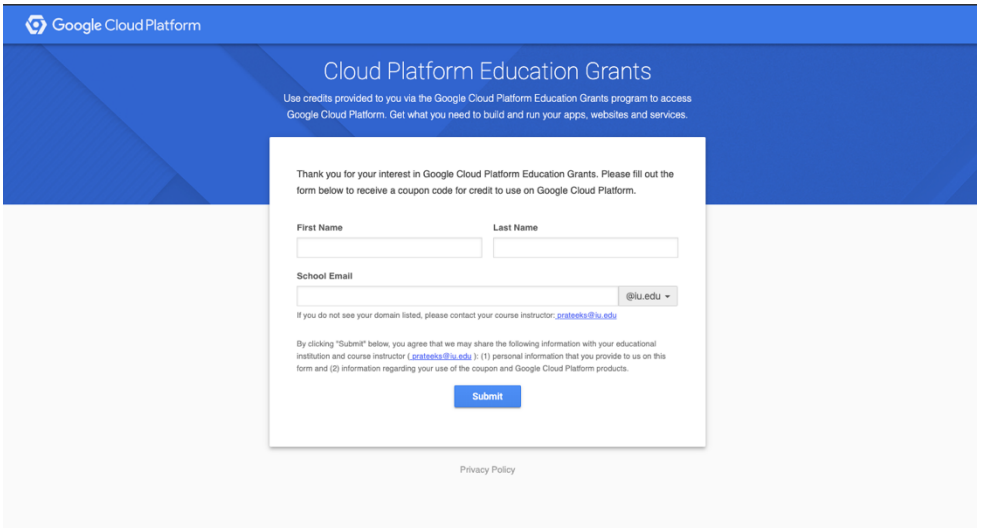
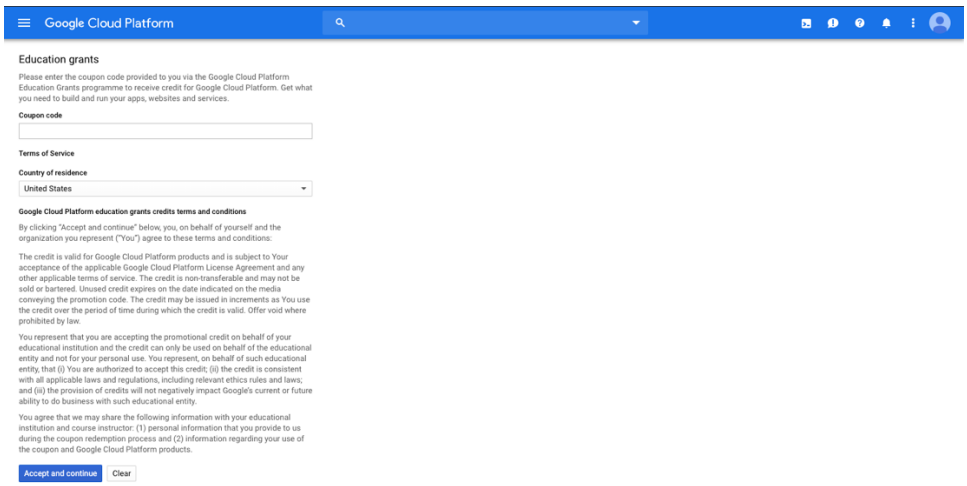
Google Cloud Platform (GCP) account setup

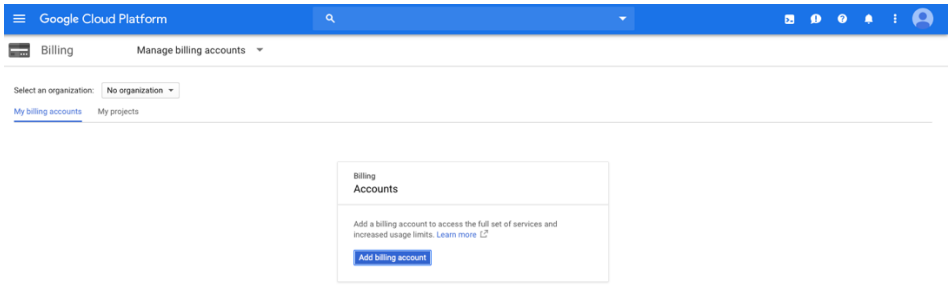
1.) Login and create your GCP accounts and claim the credits offered by Google. This should be visible in your browser console. Use the following link to enter your details and claim credits: student coupon retrieval link. PLEASE MAKE SURE TO USE YOUR IU ACCOUNTS WHEN CLAIMING CREDITS AND LOGGING IN TO GCP! This is only for when you log in separately to your GCP console as the link for the education grant automatically takes an IU account.



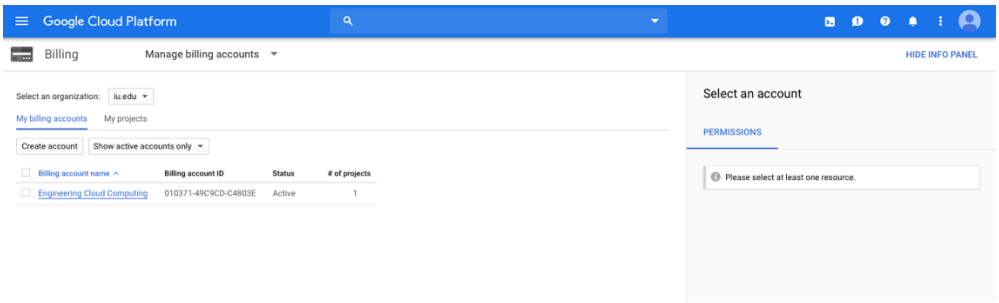
2.) After step 1, you should login to your GCP web browser console (with your IU id), and claim the coupons.



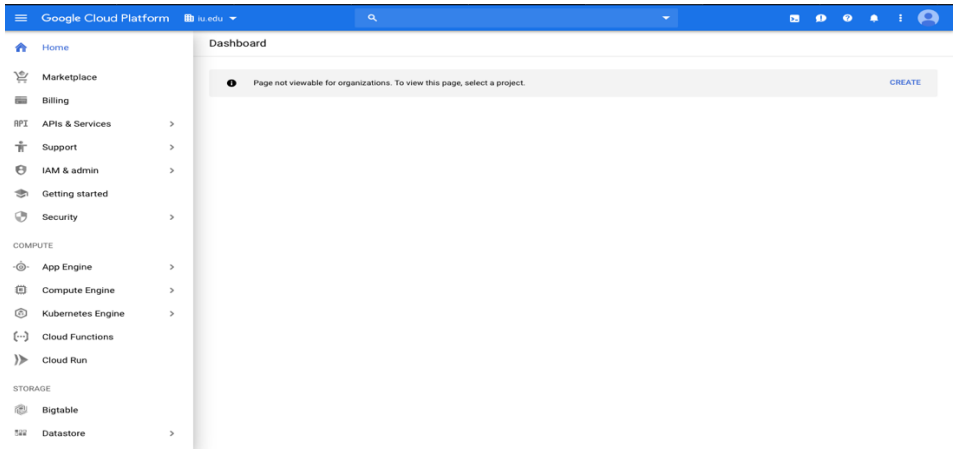
3.) Make sure the credit reflects in your account by checking the billing method in your console. The billing page is here.



4.) Without a valid billing method, you cannot create projects and hence, create any VM instances or launch services on the cloud. The coupons you just claimed should be visible under the billing account name Engineering Cloud Computing. Select 'iu.edu' as a drop-down from 'Select an organization'. You should then see something like this:

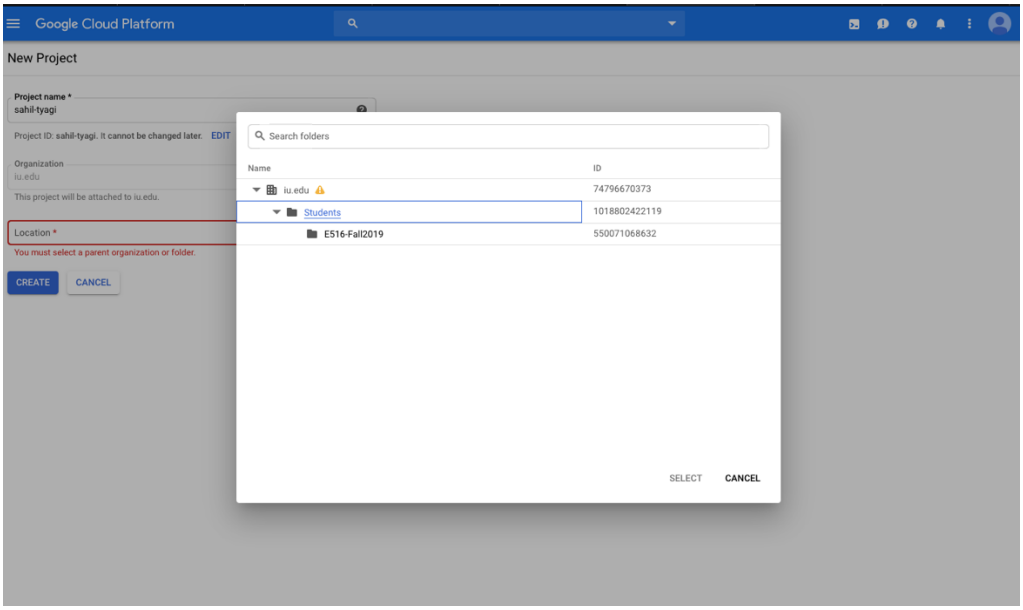


5.) Once that is done, each one of you should create a project to get started with using the cloud services. If you're already logged in to GCP, browse to Home where you will see something like:



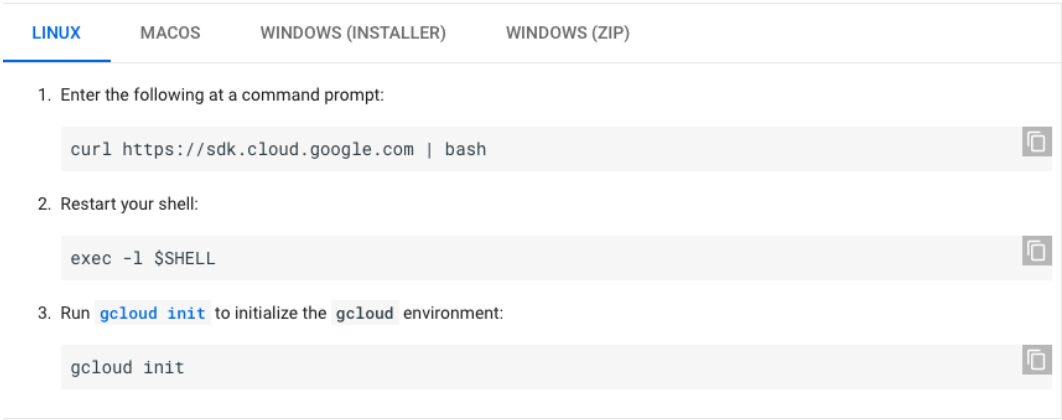
6.) Click on CREATE and enter the Project name. Please use the project name in the format of ***your-first-name*** *__hyphen__* ***your-last-name***. Projects by default will be converted to lowercase format fyi. For example, I have created a project with my name as *sahil-tyagi*. This is to help us monitor/assist each of you with future tasks.

The organization will be iu.edu. You create your projects in the location: Students-> E516-Fall2019.



GCP SDK setup:

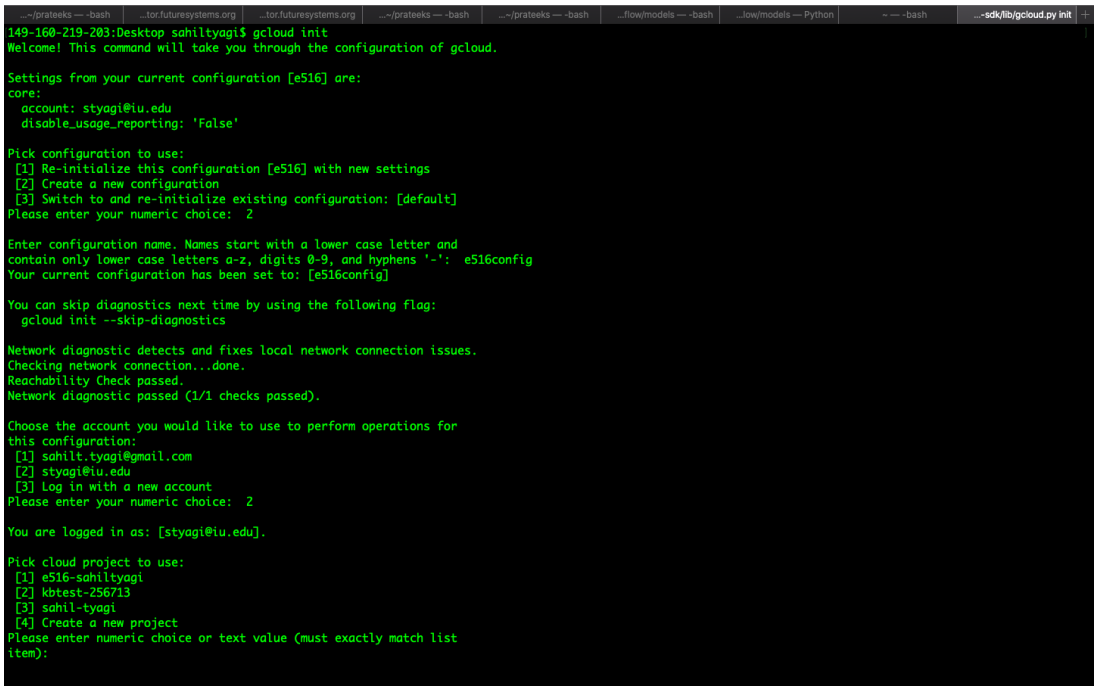
7.) Open the following and follow the steps for the OS that you're using: https://cloud.google.com/sdk/install. Assuming most of you are using Windows or MacOS, use the interactive installer to download the cloud SDK. People with Ubuntu can the apt-get or yum installer and follow steps, although I would strongly suggest you use the interactive installer.



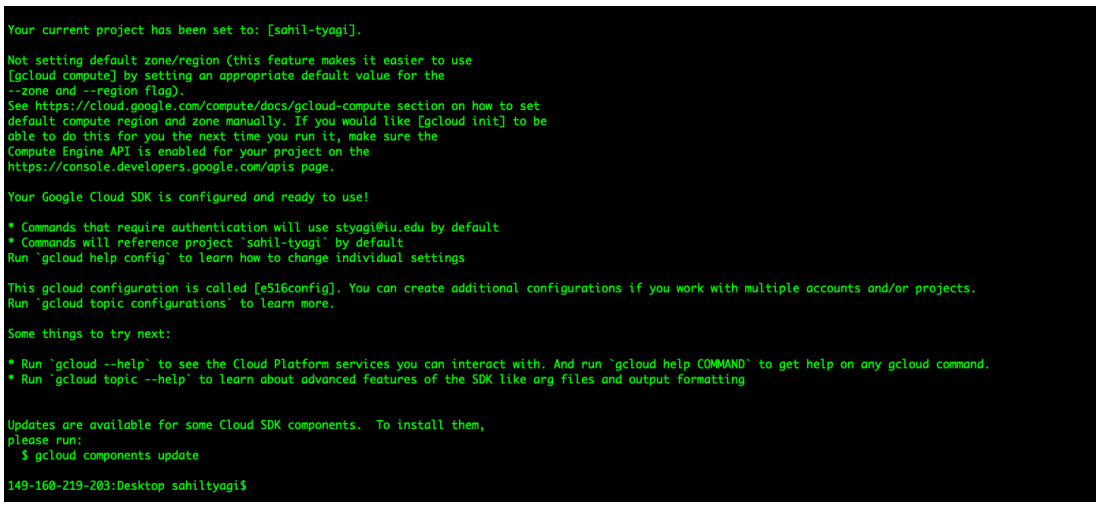
8.) For Windows users, you can either download the zip file and execute the install.bat script. Alternatively, you can use the installer mode.

9.) You need to enter your GCP credentials that you created in step 1 to proceed with the setup of the SDK after *gcloud init*. If you do run the init command multiple times,

you can just pick the same old configuration (which would be option 1). If you have already created the project from step 6, you should see it listed in the terminal.

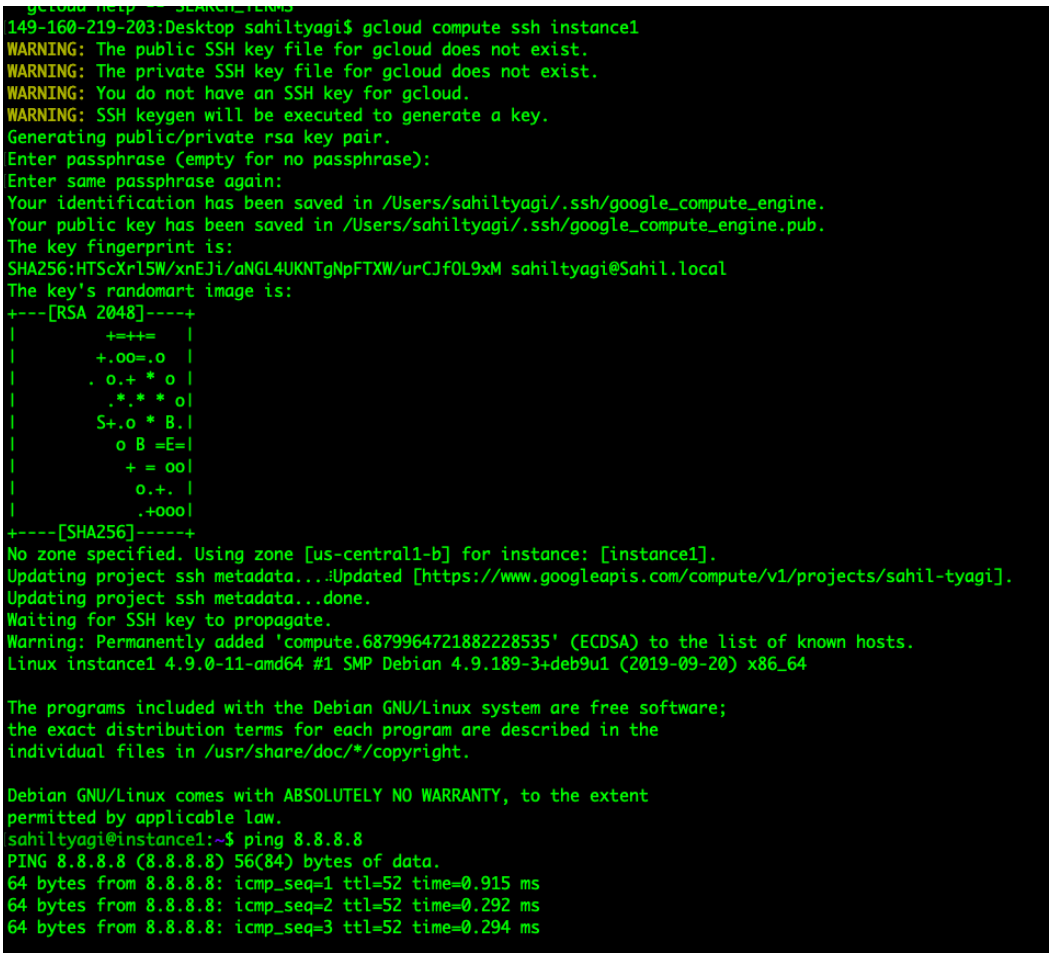


10.) Once set, you should see the confirmation as shown below and you're good to go. I would suggest that you update the components with ***gcloud components update***.



11.) When you try to use command line APIs, you might have to enable them from the command line itself before using them (it's going to be a simple y/N option). Try to list your project from the terminal with ***gcloud projects list***.

12.) Now let's try to create a compute instance and add ssh keys so we can access the same from the command line. To create an instance, use the command ***gcloud compute instances create *instance_name****. You'll be asked to select the region to spawn the instance (you can select any, though # 46-50 make most sense since they're closest, hence least latency!). You can list your instances with ***gcloud compute instances list***. SSH keys will be generated automatically when you try to ssh to a remote instance and the key will be automatically saved in the metadata when you use the cloud SDK. Run ***gcloud compute ssh *instance name****. You don't have to enter a passphrase if you don't want to (just hit enter!). You can also login to the browser console and had over to metadata to see your key.(ping is a simple command to test transmission of network packets to a server). If you want to exit the instance, just hit ***exit***.



13.) To stop or start an instance, use ***gcloud compute instances start/stop *instance_name****. If you want to delete an instance, replace the start/stop above with delete . MAKE SURE TO STOP ALL INSTANCES WHEN YOU'RE DONE USING THEM AS THIS WOULD COST YOU CREDITS (unless the work you're doing requires you to do otherwise).

14.) Report the output of **gcloud compute operations list** as part of your assignment submission.