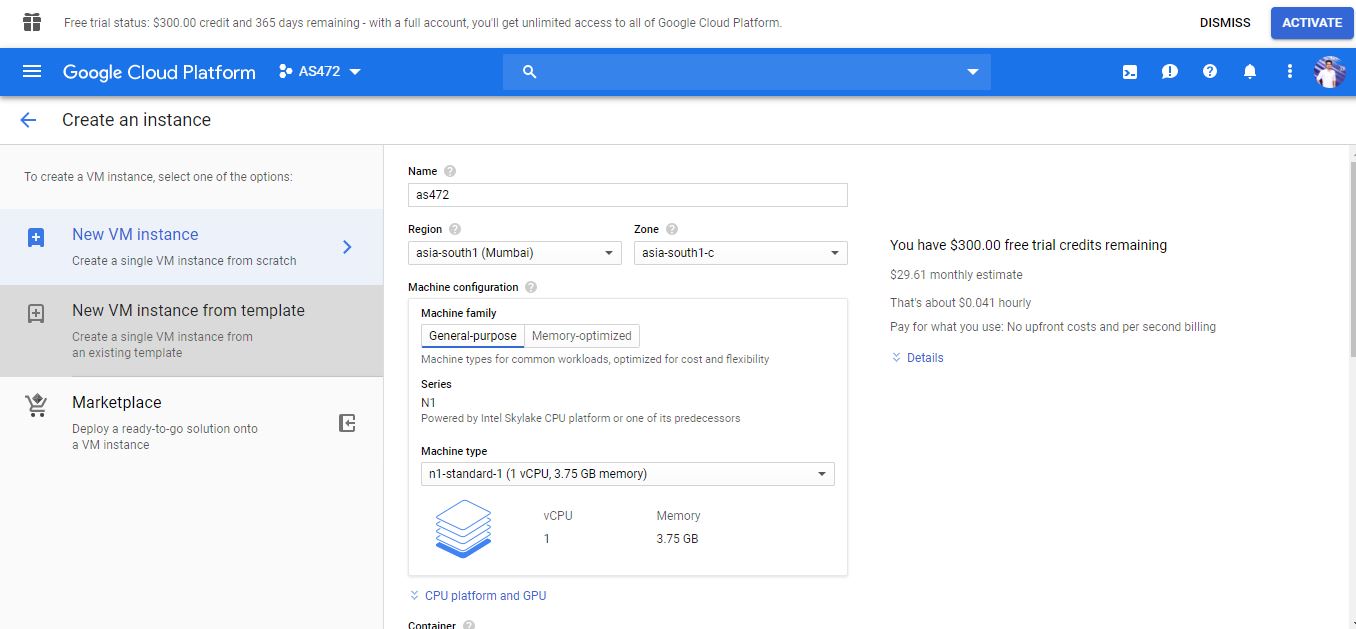
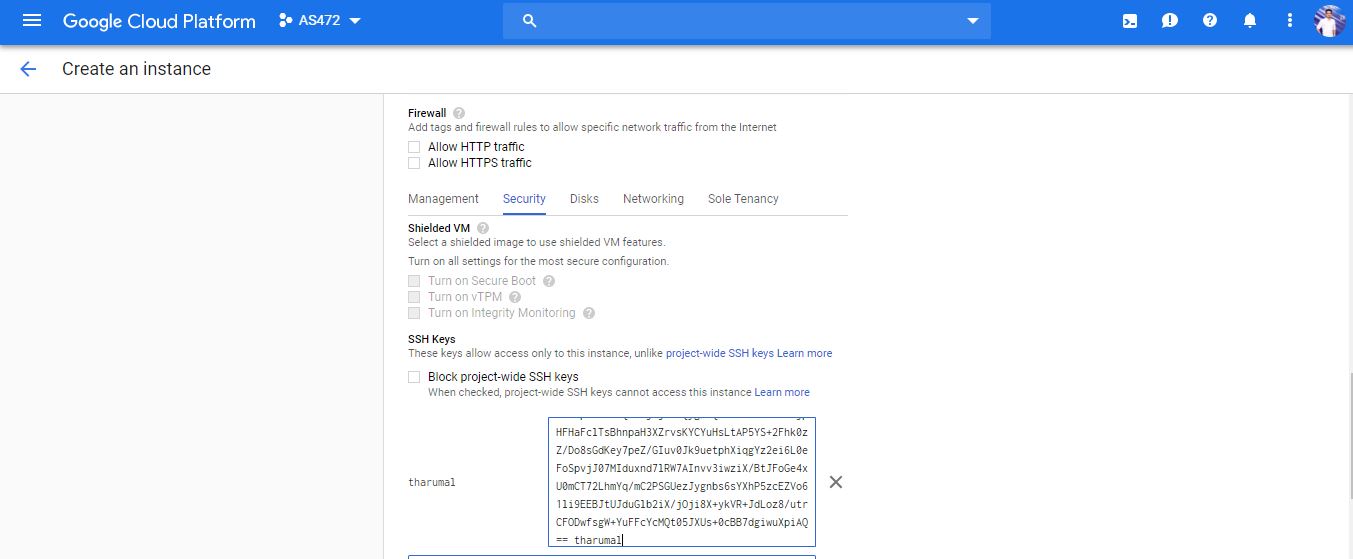
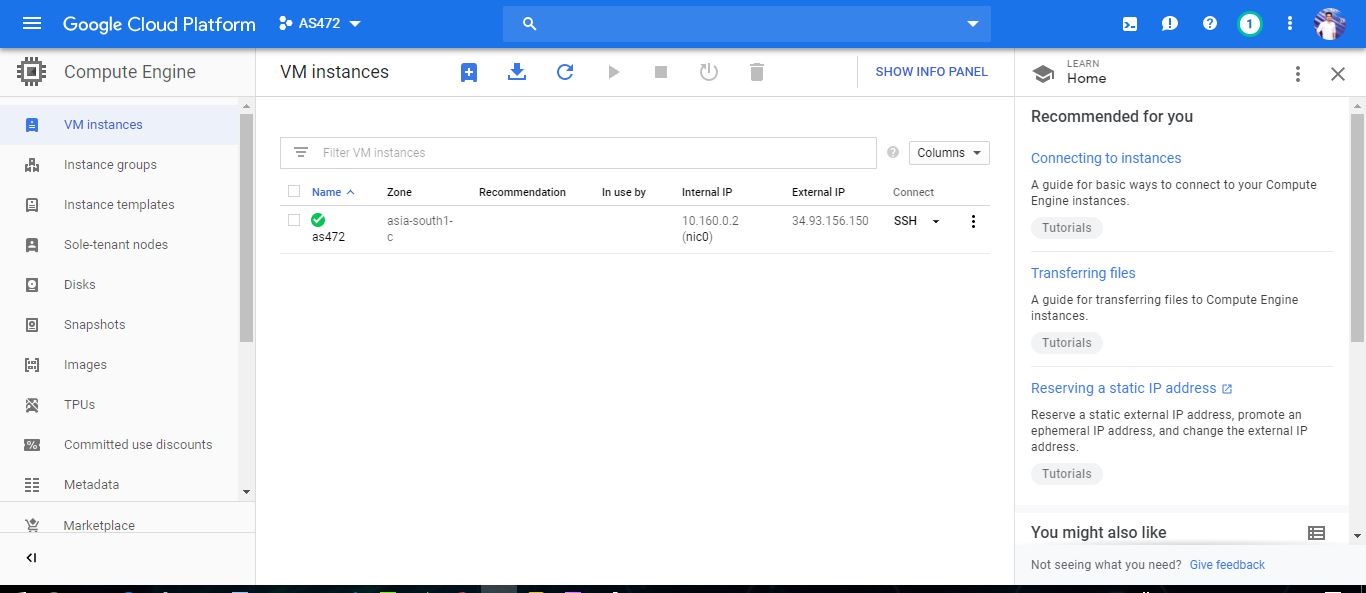
**AS471-Assignment**

1. **Create a Google Cloud instance**

Create Ubuntu 18.04 Virtual Machine







1. **SSH**

 SSH is a network protocol for securely communicating between computers.  Often when people refer to 'using SSH', they are referring to using an SSH client to connect to another computer's SSH server in order to remotely run commands on that computer.  Any computer is capable of running both an SSH client and a server.

**SSH Public And Private Keys**

 SSH can work with password authentication, but the more modern way to use SSH makes use of public key cryptography instead of passwords.  This is the part of using SSH that can be most confusing for beginners.  It's actually not that complicated, and once you've done it a few times it will become natural.

Most people are used to the type of authentication where you specify a username and a password which gets sent to a server.  The server then checks if your password matches and if it does you are allowed access.  Public key cryptography is a bit different and works by requiring the user to create a 'key pair' which consists of:

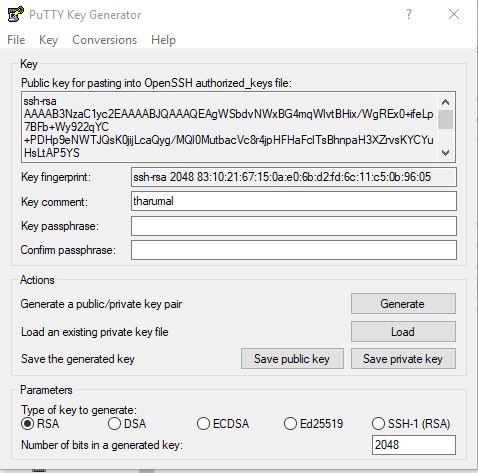
* A **public key** that you can distribute to anyone.
* A **private key** that should be kept secret by the person who created it.

There is a complex mathematical relationship between the public and private key.

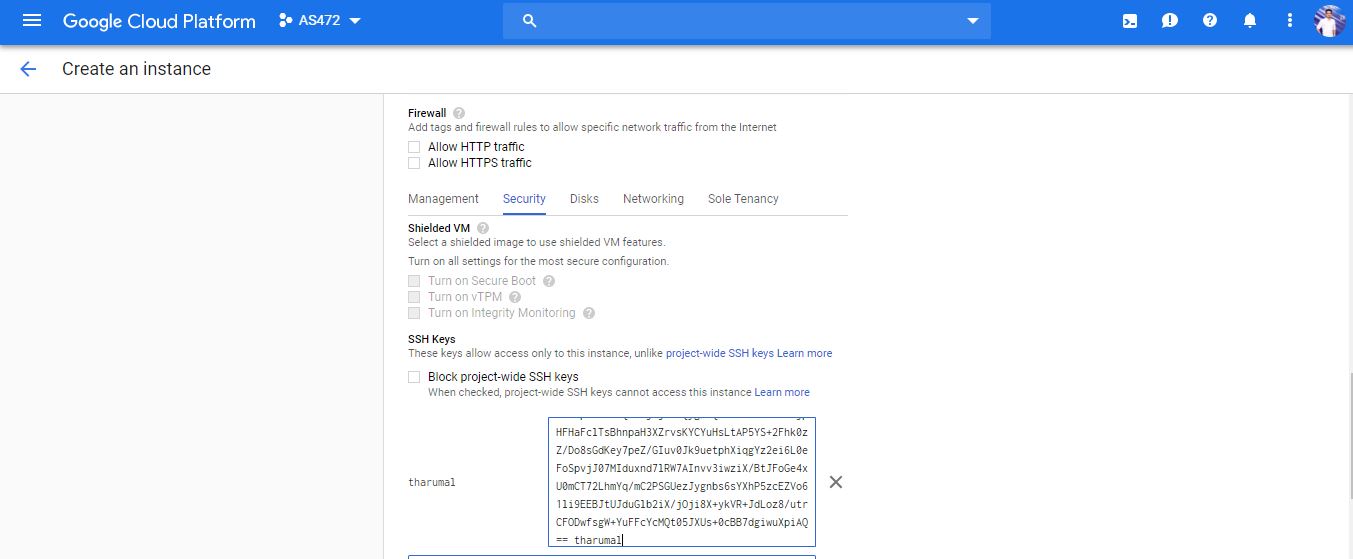
* A **public key** can be used to encrypt messages, but not decrypt them.
* A **private key** can decrypt messages encrypted with the public key.

**Steps**

1. Generate SSH key using Putty Generator



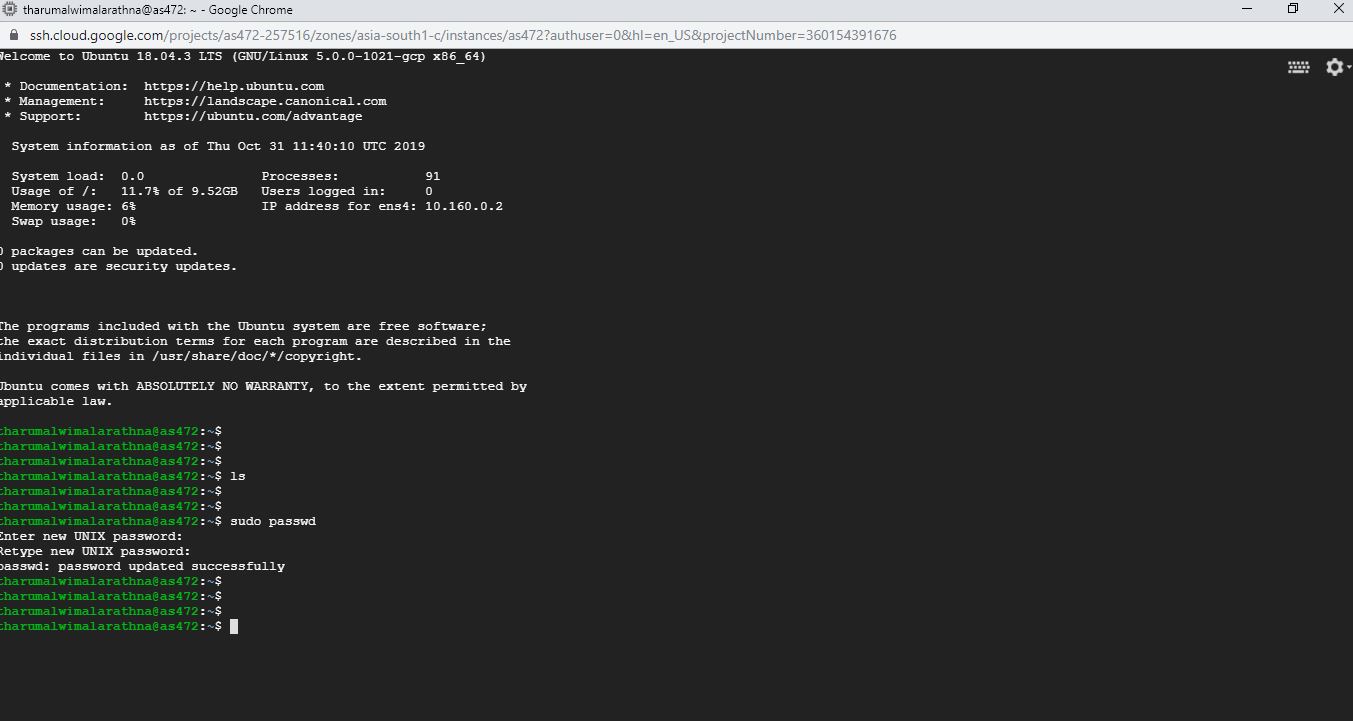
1. When create cloud instance, use that key as SSH key.



Generated SSH key

ssh-rsa AAAAB3NzaC1yc2EAAAABJQAAAQEApFXj3TmSA/PbYkhUzoX8GZ6jipJhdRC5tkF0+8ANNq3DASaZGuqHFBdIufXCglGkDGe7WvLHghk1d0chI25GkIJPUAzdhfKRa1aEH/+yGErqW4OipWNnMon9gq14X6ibIypiGwX1GP0RUploFq+Zy22YVI98FQ7l/xIoruqmj8Me8Fif8nOYfH2d2bR2HWUj9AUpccmuJJ3LboD7XgasmHPvUeZvvHJt+CX9HbohzgtXal/1n/Y2zrIznwIMcHY6HjSp4nLdkeolBnhep2ai2E3s5BlBMDuFTq+ouA6URAOsJYTxzzhF3XLHy9xLFKn0rak3dVDe8AzBYB55E7u5zQ== tharumal

1. Run Ubuntu 18.04 VM



1. **Install Docker**



**What is Docker?**

Docker is a tool designed to make it easier to create, deploy, and run applications by using containers. Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and ship it all out as one package. By doing so, thanks to the container, the developer can rest assured that the application will run on any other Linux machine regardless of any customized settings that machine might have that could differ from the machine used for writing and testing the code.

1. **Create MySQL database in Docker container**

