Course: CS522 - Software Quality Assurance and Test Automation
Faculty: Prof. Henry Chang

Project: Remote Calculator + Expect + Cron job + Email notice

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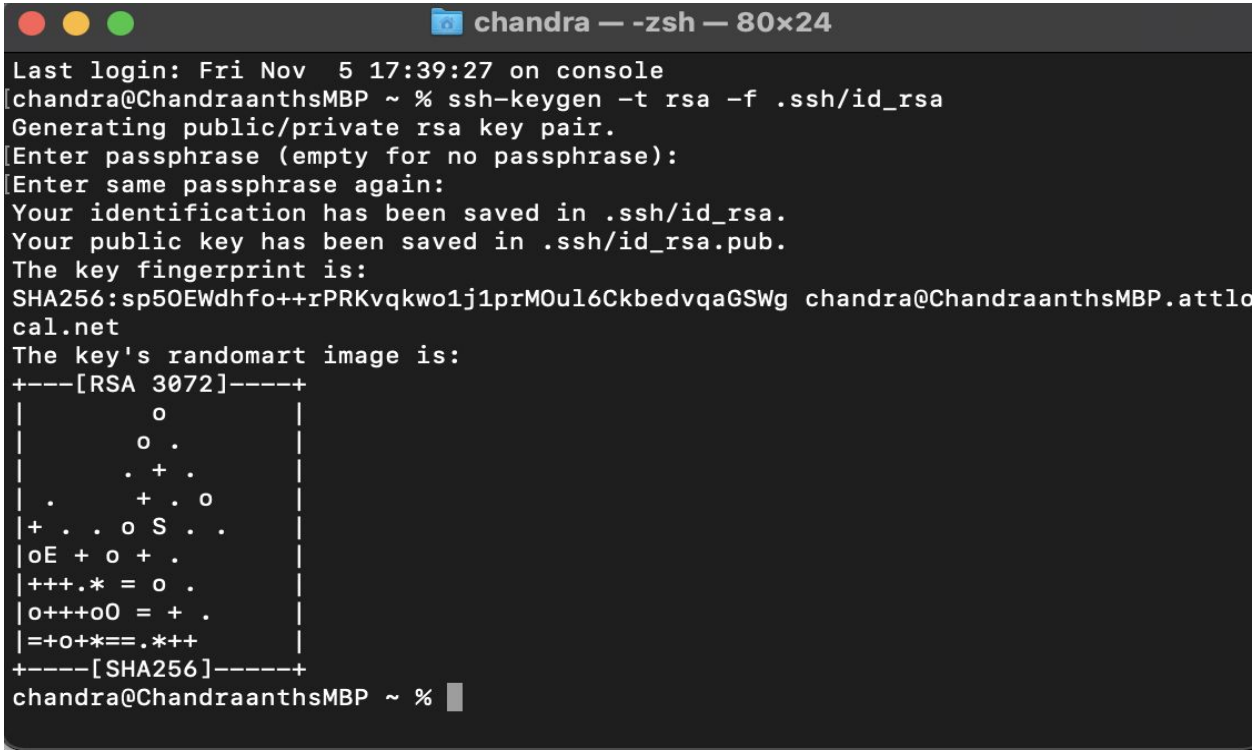
SSH setup mac Terminal

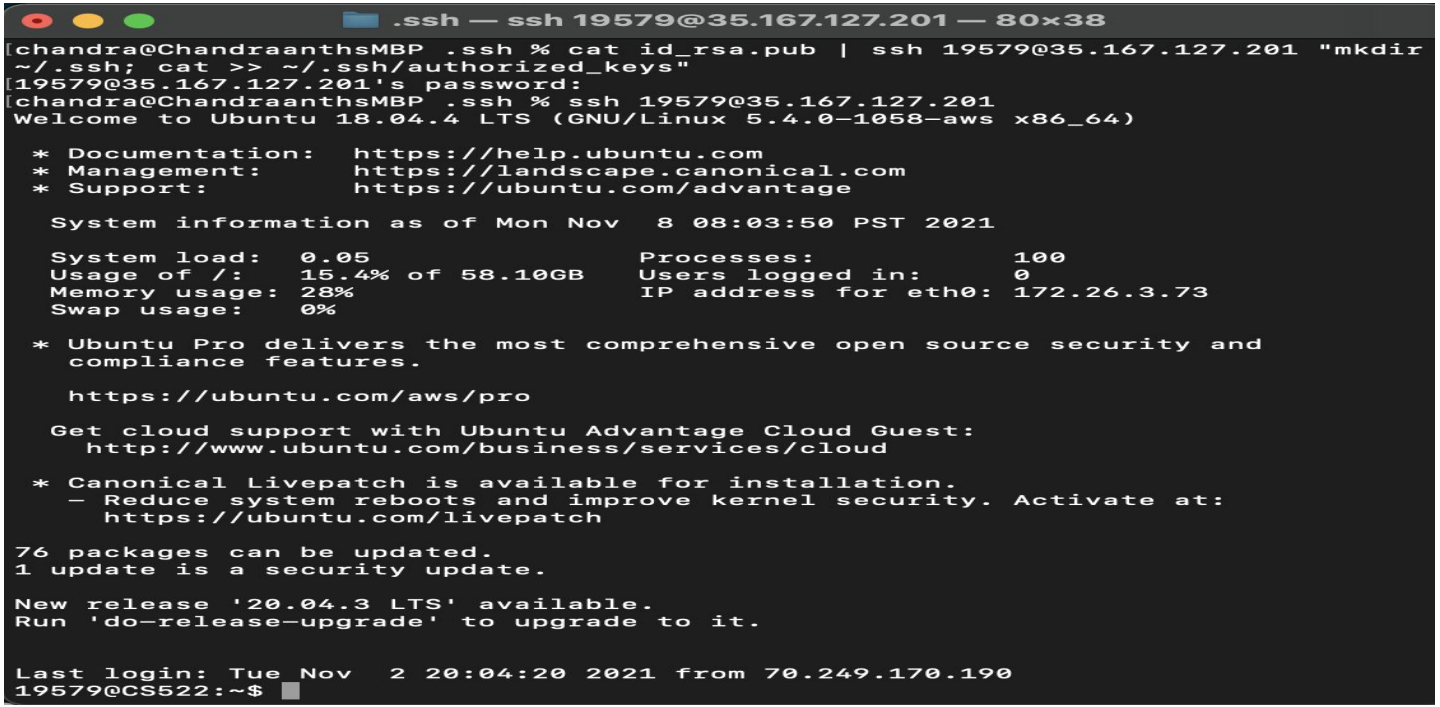
- Create .ssh directory in terminal
- Create the key.
- Command: ssh-keygen -t dsa -f .ssh/id_dsa
- Just press 'enter key' for “Enter passphrase”
- Change directory to .ssh Command: cd .ssh

SSH setup mac Terminal



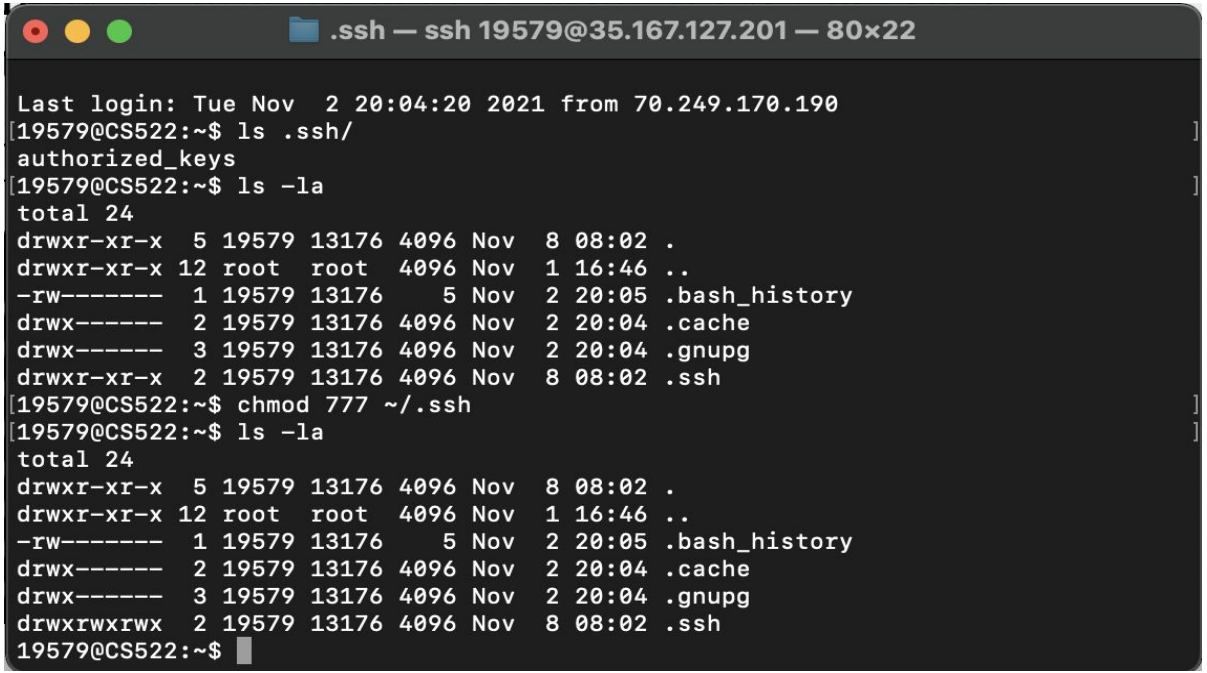
SSH setup mac Terminal

- Successful login to remote server without password.



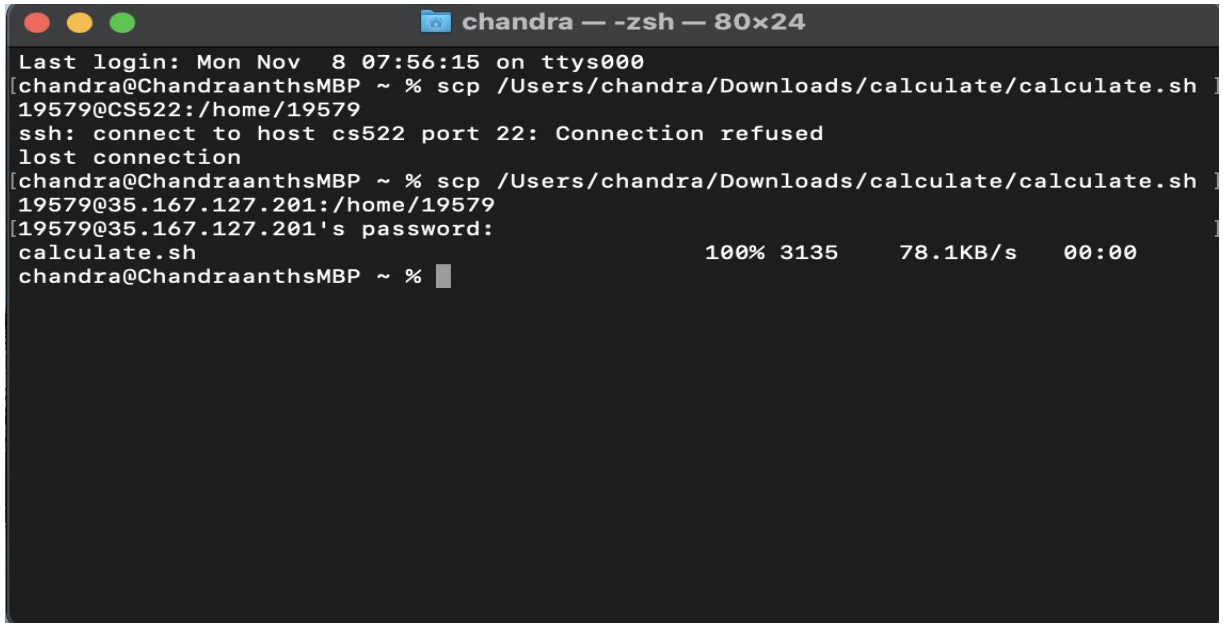
SSH setup mac Terminal

- Check the file permissions.



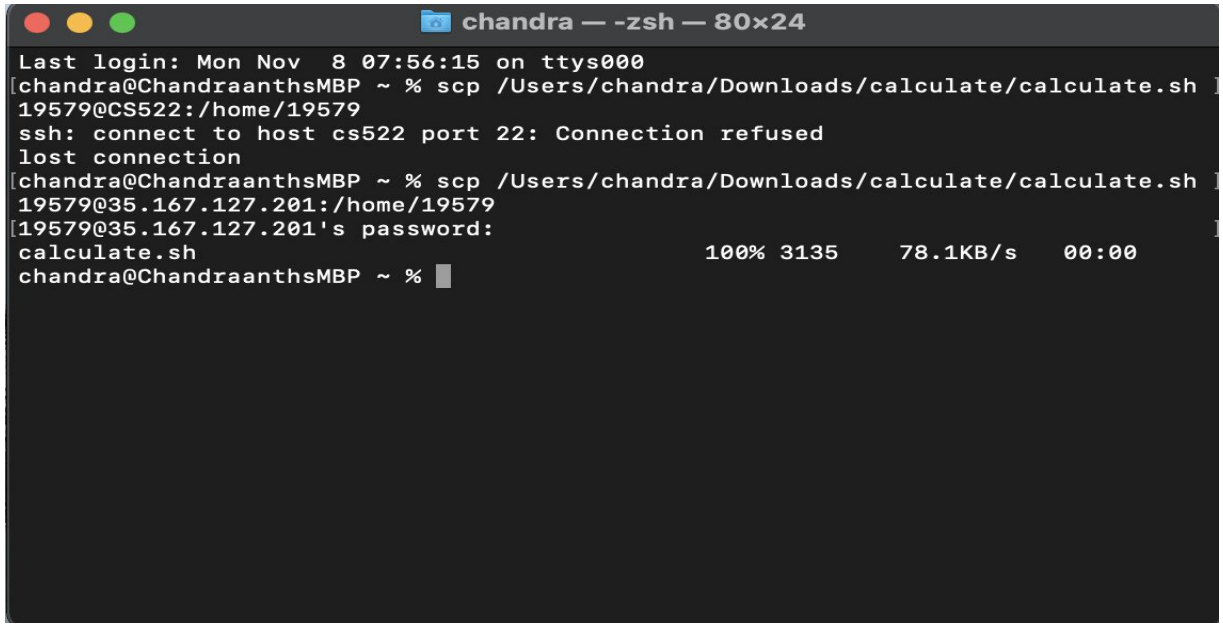
Server side: Interactive Calculator

- Using scp command copied calculate file to server.



Server side: Interactive Calculator

- Using scp command copied calculate file to server and changed the file permissions to executable.



Client side: activate.sh and expect

- Create exe and activate.sh files on client side.

activate.sh

activate

activate 〉No Selection

```
1  #!/bin/sh
2
3  N1=`shuf -i 1-100 -n 1`
4  N2=`shuf -i 1-100 -n 1`
5  ans=`shuf -i 1-4 -n 1`
6  if [ "$ans" -eq 1 ]
7  then
8      Operation="+"
9  elif [ "$ans" -eq 2 ]
10 then
11     Operation="-"
12 elif [ "$ans" -eq 3 ]
13 then
14     Operation="*"
```

exp

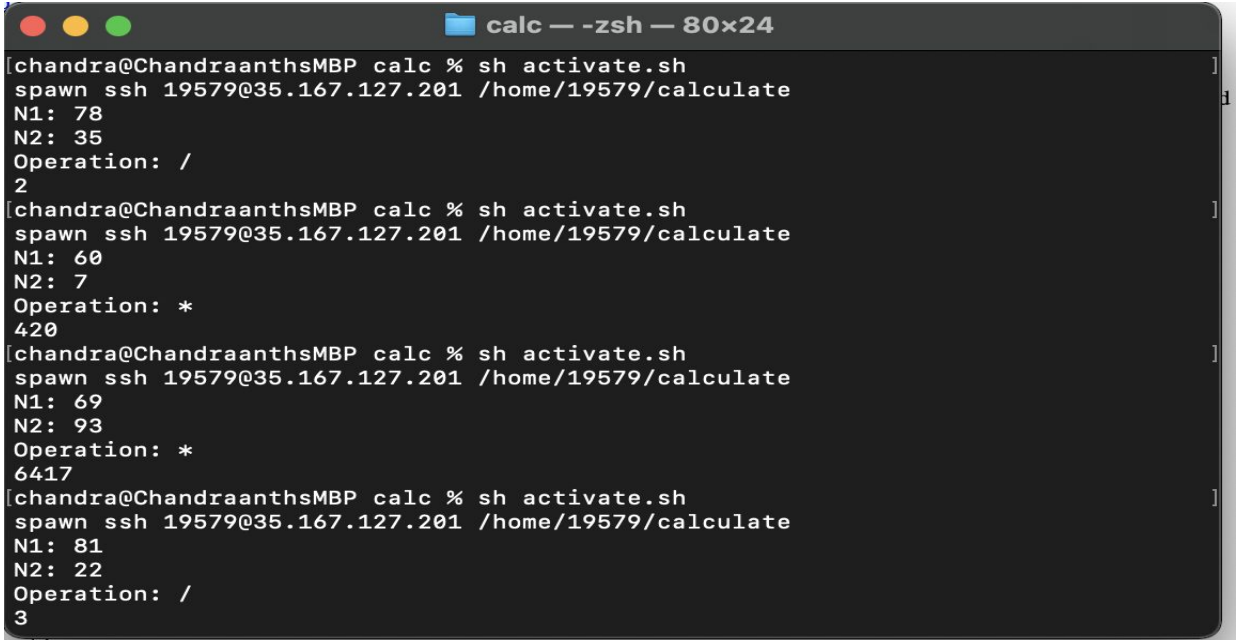
exp

exp 〉No Selection

```
1  #!/usr/bin/expect --
2
3  set timeout -1
4  set N1 [lindex $argv 0]
5  set N2 [lindex $argv 1]
6  set Operation [lindex $argv 2]
7  spawn ssh 19579@35.167.127.201 /home/19579/calculate
8  expect "N1:" { send "$N1\r" }
9  expect "N2:" { send "$N2\r" }
10 expect "Operation:" { send "$Operation\r" }
11 interact
12
```

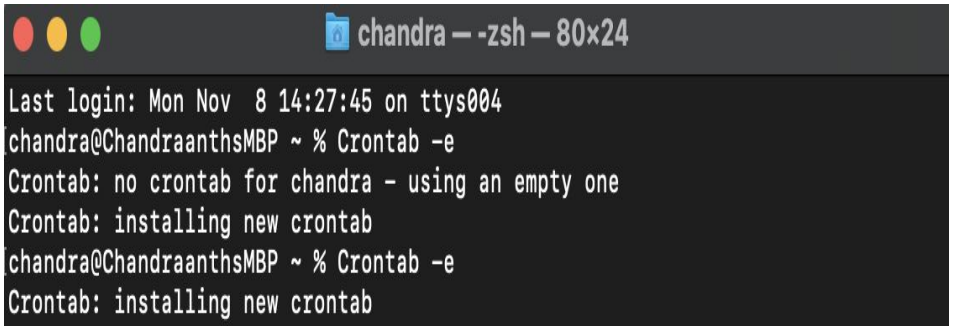
Client side: Execution of activate.sh

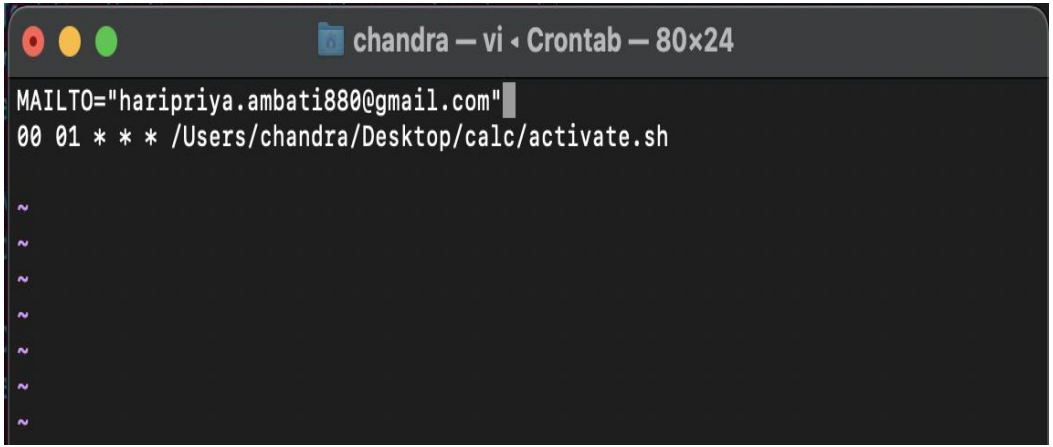
- Create shell script to automatically execute the server side interactive Caculator automatically.



Cron Job

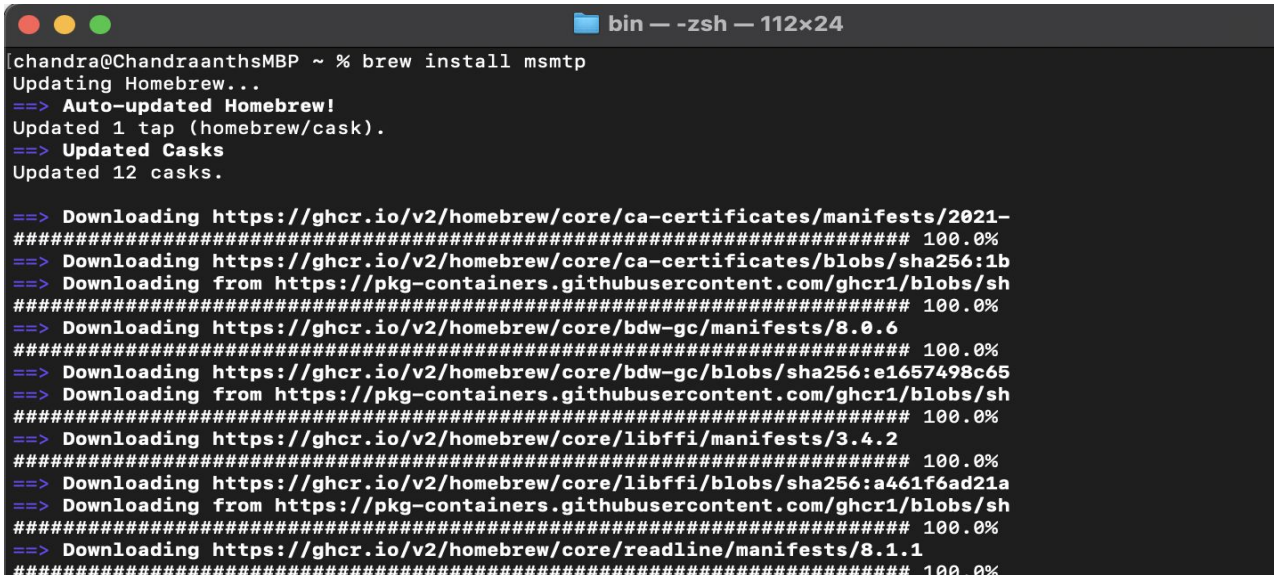
- Create cron job.
- Set to run at 1 am every day





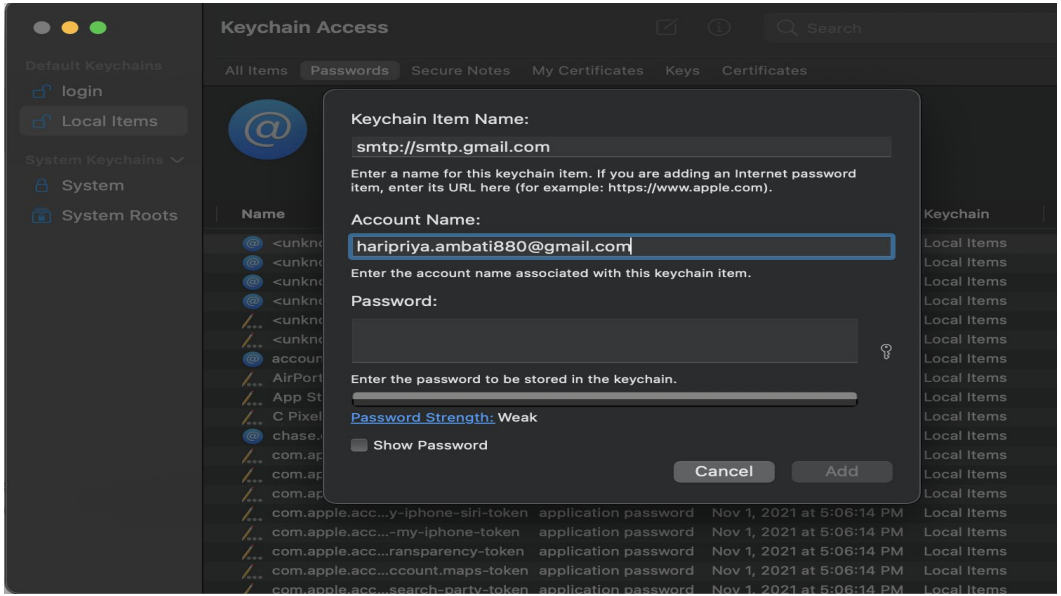
Configuring Email Notice

- Setup smtp on your Mac and send mail from the command line
- Install msmtp using brew install and create a directory which will hold the ssl-certificates
- Reference link: https://pauledenburg.com/setup-smtp-on-your-mac-and-send-mail-from-the-command-line/



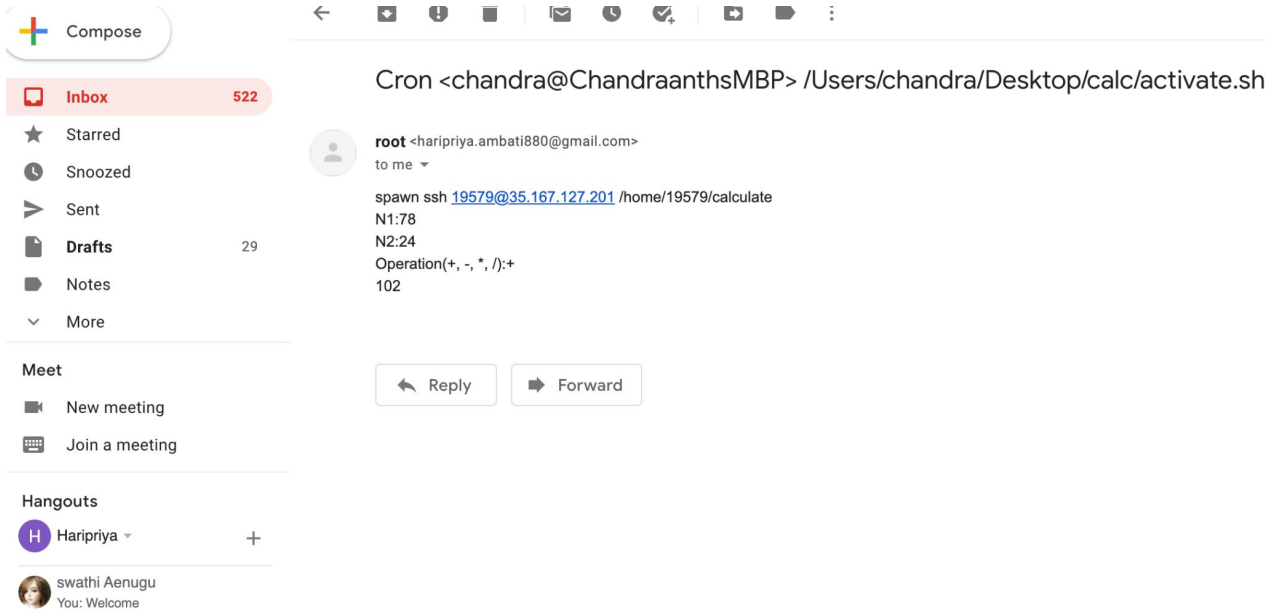
Configuring Email Notice

- Save your Gmail password in your keychain:



Configuring Email Notice

- Email notice received on gmail.



References

- https://npu85.npu.edu/~henry/npu/classes/shell_script/backup/slide/ssh_setup.html
- https://npu85.npu.edu/~henry/npu/classes/shell_script/backup/slide/expect.html#calculator
- https://npu85.npu.edu/~henry/npu/classes/qa/cron_job/slide/cron.html

Google slides URL :

https://docs.google.com/presentation/d/1rJ2RmYnnBfJdwwBRKDZArTQdmQl2OkqlJ9J592uV54A/edit?usp=sharing

GitHub:
https://github.com/HaripriyaReddy880/Software-Quality-Assurance-and-Test-Automation/tree/main/Shell%20Script/Project/URL