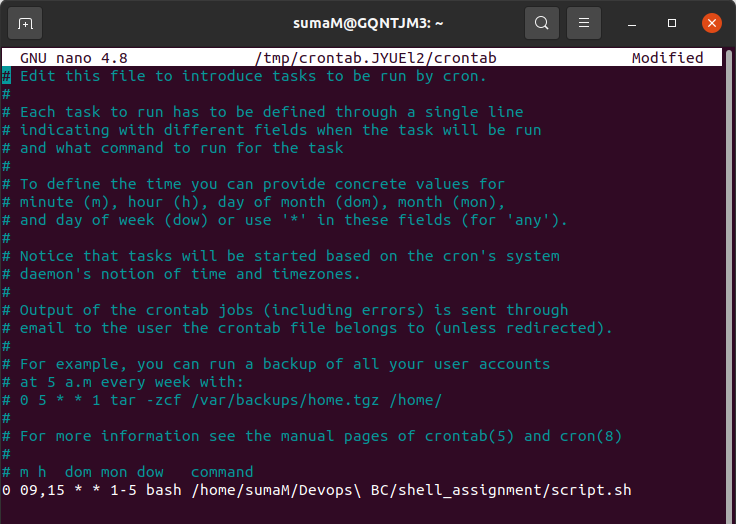
**ASSIGNMENT – SHELL SCRIPTING**

Run a git pull and compile for a project every week day at 9am and 3pm India time in a (CentOS/Rocky Linux) server on UTC time zone. Post a notification to Google Chat space once that compile is successful and if unsuccessful post a failure message.

* To perform a task at scheduled times without manual work, we have cronjobs.
* We need to setup a cron job to perform a certain task.



* I have written the task to be performed in a shell file : script.sh
* The minutes set to 0, Hours is set to 09, 15 for 9 AM and 3 PM respectively.
* The dow – Days of week is set to 1-5 specifying Monday to Friday.
* Command is to bash execute script and script path is specified.

In the assignment, we need to pull a java program from a remote repository.

So, I have created a simple java program

**sample.java**

public class sample {

public static void main(String args[]) {

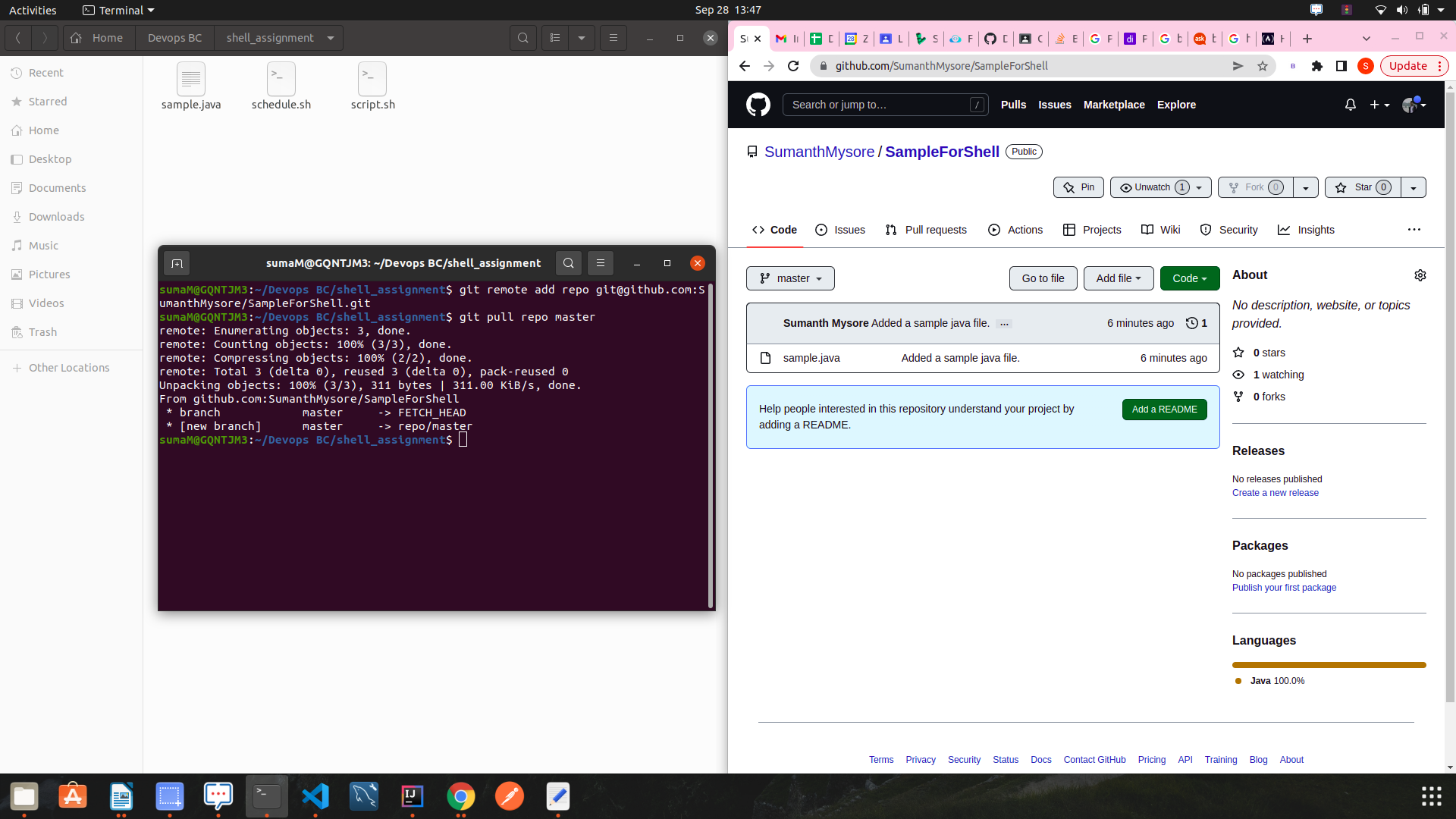
System.out.println("Hello World");

}

}

I have pushed this program to a remote git repository – **SampleForShell**

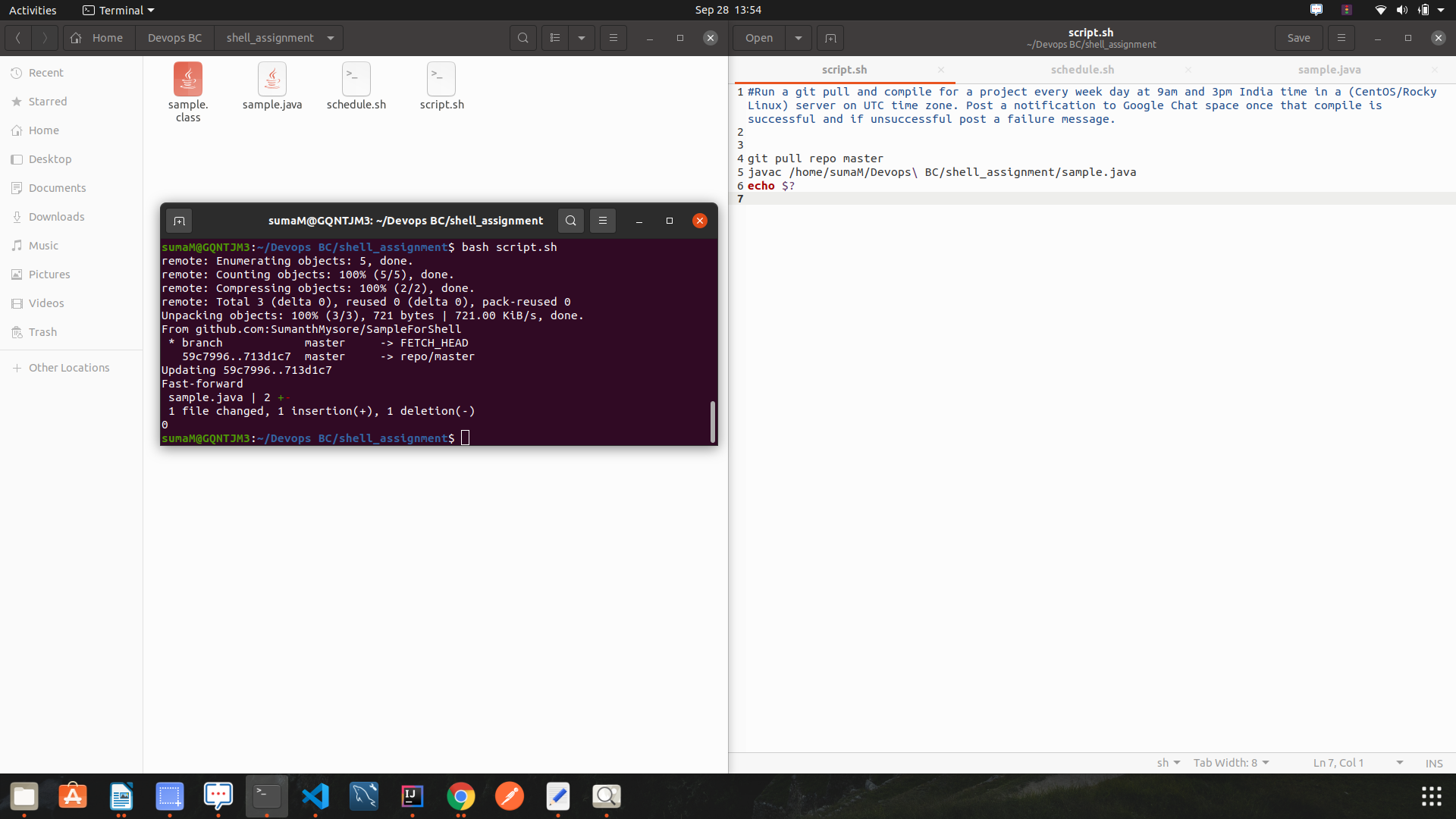
and configured it as origin in the working directory terminal.



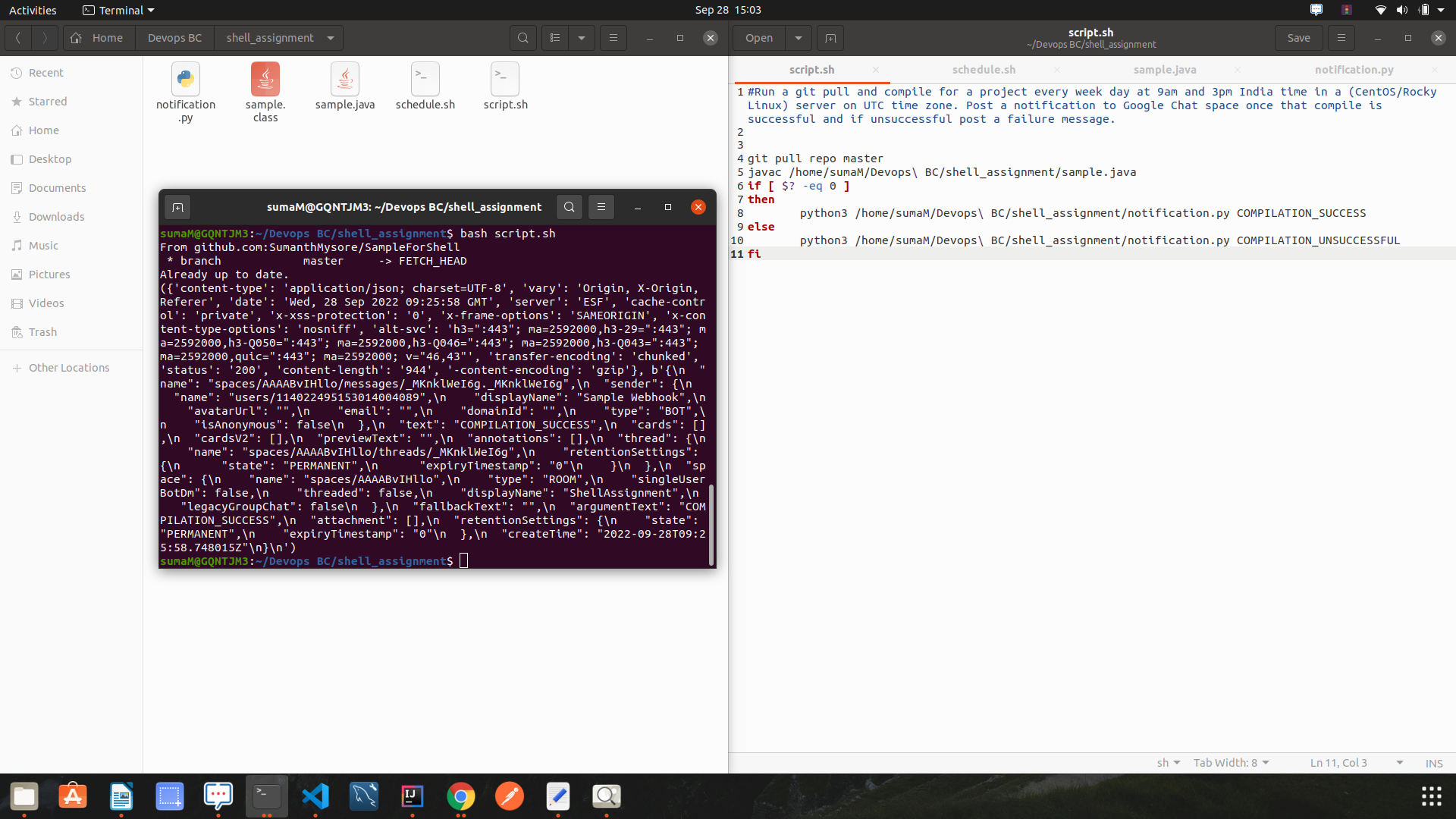
A sample pull command is ran to fetch the java program from remote repository.

Now, we need to write a script in which,

* We need to pull the program from remote repository, then compile it and send the status as a notification to google chat space.
* First, lets check the exit code of the program after the compilation.



* The exit code found to be 0. That means that the program has compiled successfully without any errors.If the program has any errors, then the exit code will be any value except 0.
* So, we need to change this script such a way that when the exit code is zero, a task is to be performed. Else, another task is to be performed.
* So, when the exit code is 0, a python program notification.py is executed with the command line argument as **COMPILATION\_SUCCESS**
* Else the argument must be **COMPILATION\_UNSUCCESSFUL**



* In the python script **notification.py,** we wite

from json import dumps

from httplib2 import Http

import sys

def main(status):

"""Hangouts Chat incoming webhook quickstart."""

url = '<https://chat.googleapis.com/v1/spaces/AAAABvIHllo/messages>? key=AIzaSyDdI0hCZtE6vySjMm- WEfRq3CPzqKqqsHI&token=0NMrJ0M4iFQe30VsuNABmBvbK8Wm3tPsCgFStSnQn2E%3D'

bot\_message = {‘text': status}

message\_headers = {'Content-Type': 'application/json; charset=UTF-8'}

http\_obj = Http()

response = http\_obj.request(

uri=url,

method='POST',

headers=message\_headers,

body=dumps(bot\_message),

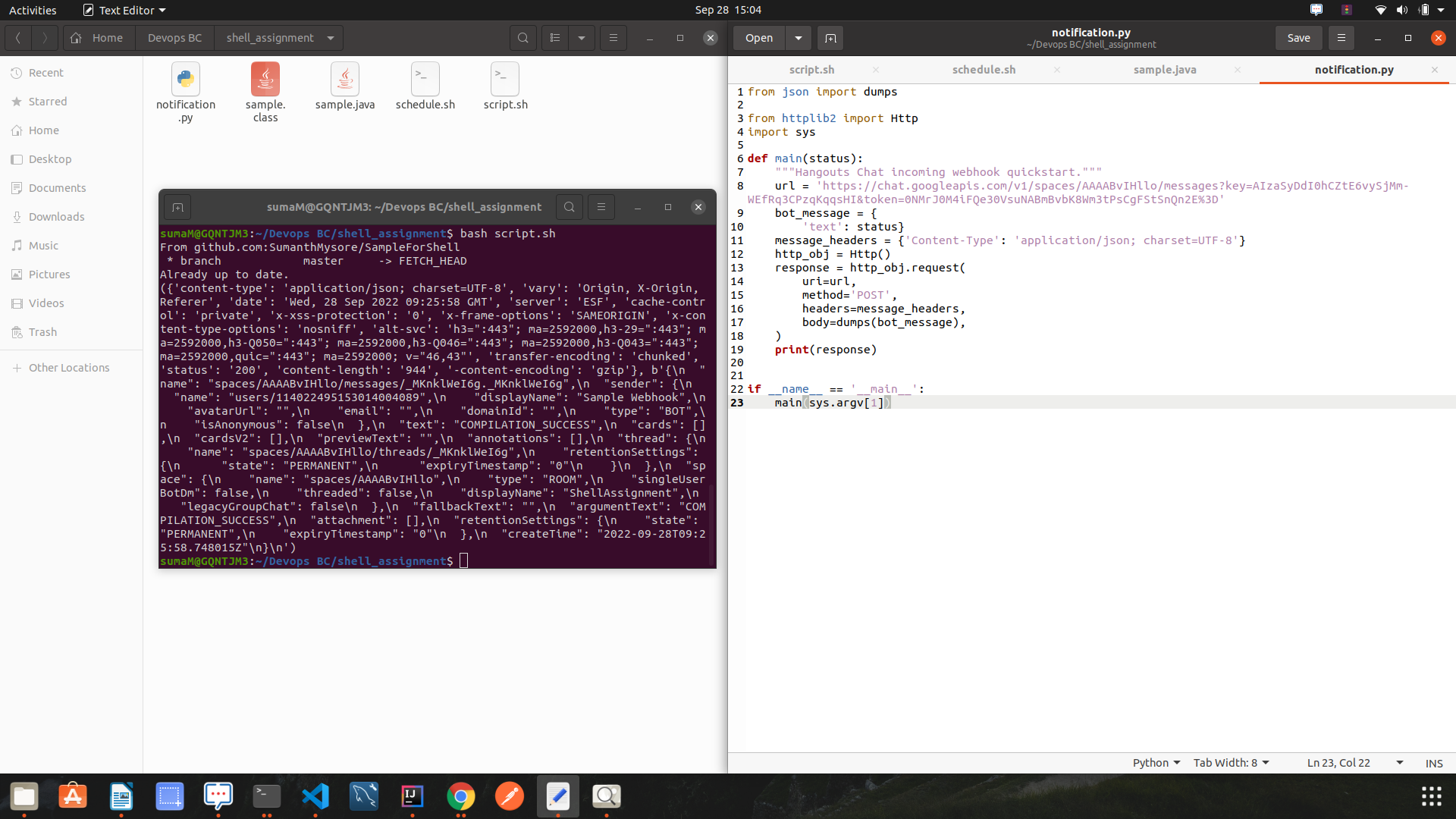
)

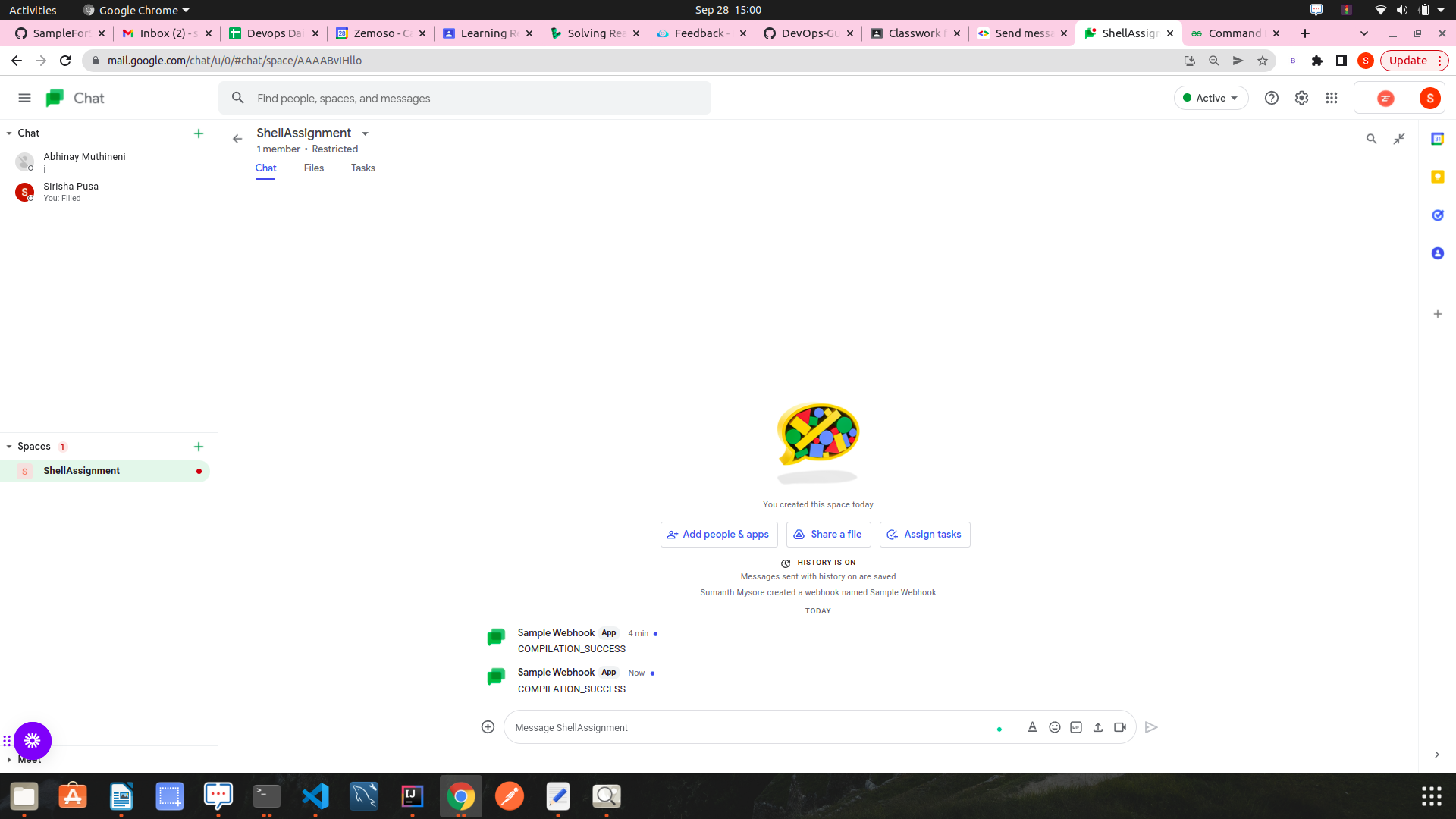
print(response)

if \_\_name\_\_ == '\_\_main\_\_':

main(sys.argv[1])

* So, we need to create a webhook in the google chat space and attach the webhook url in the above program.
* The **httplib2** library is to be installed using **pip install httplib2.** It is used to send the HTTP post request to the server.
* The argument COMPILATION SUCCESS or COMPILATION\_UNSUCCESSFUL is taken by the sys library using argv attribute.



* Then, on cronjob executing the script.sh, the java program is pulled from remote repository and compiled.
* Then, Based on the exit code, an argument is passed to the python script and its then executed.
* On the execution of the python script, we get the status as a notification in the google chat space.