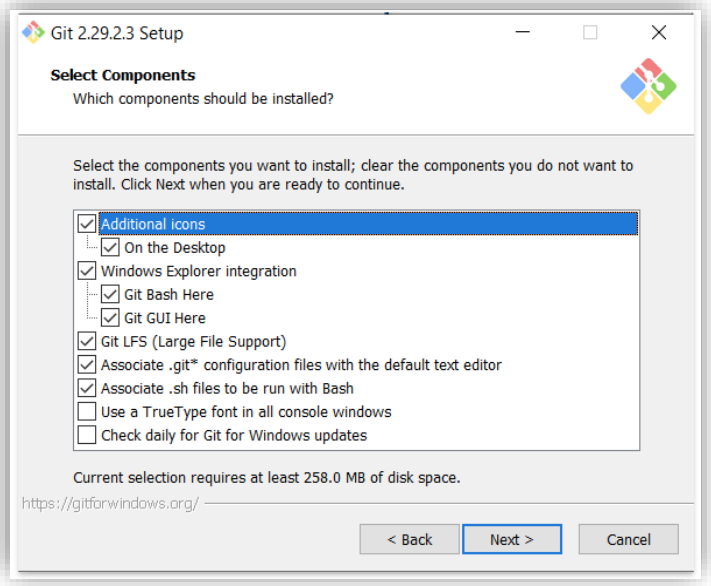
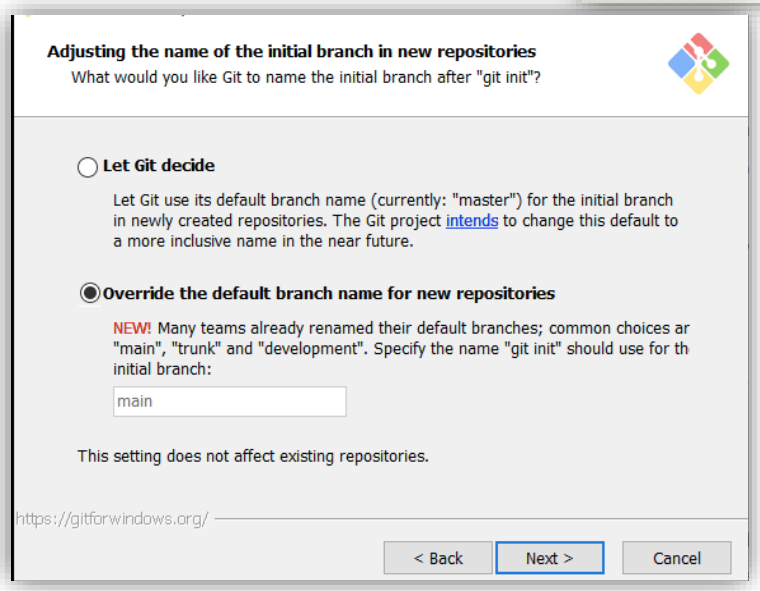
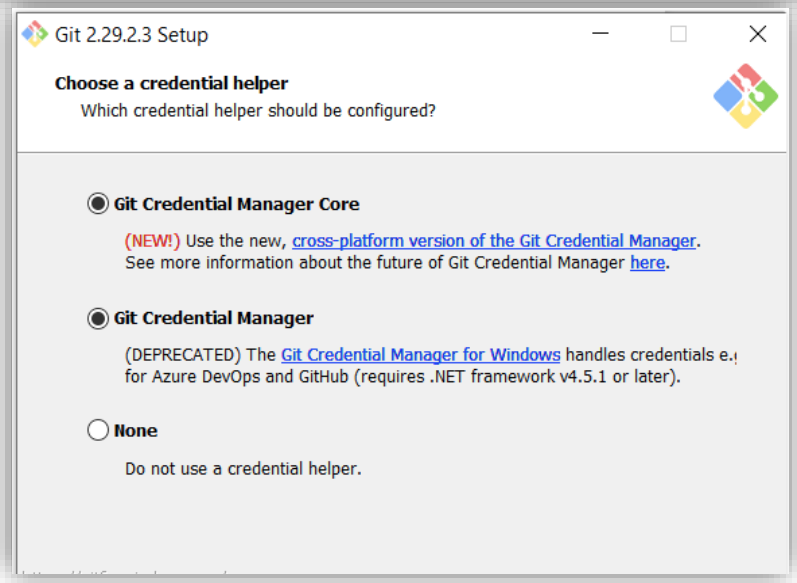
GIT HUB SET-UP & BASIC COMMANDS

INSTALLING GIT

- Open the link https://git-scm.com/
- Click on "Download for Windows"
- Run the setup file and follow the instructions to install

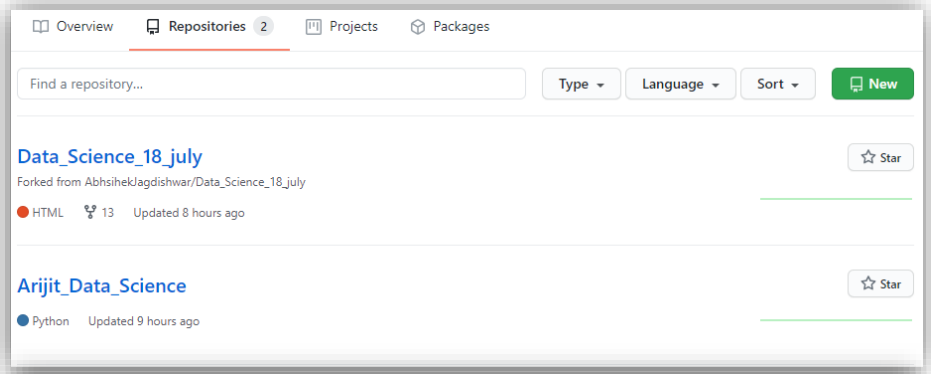


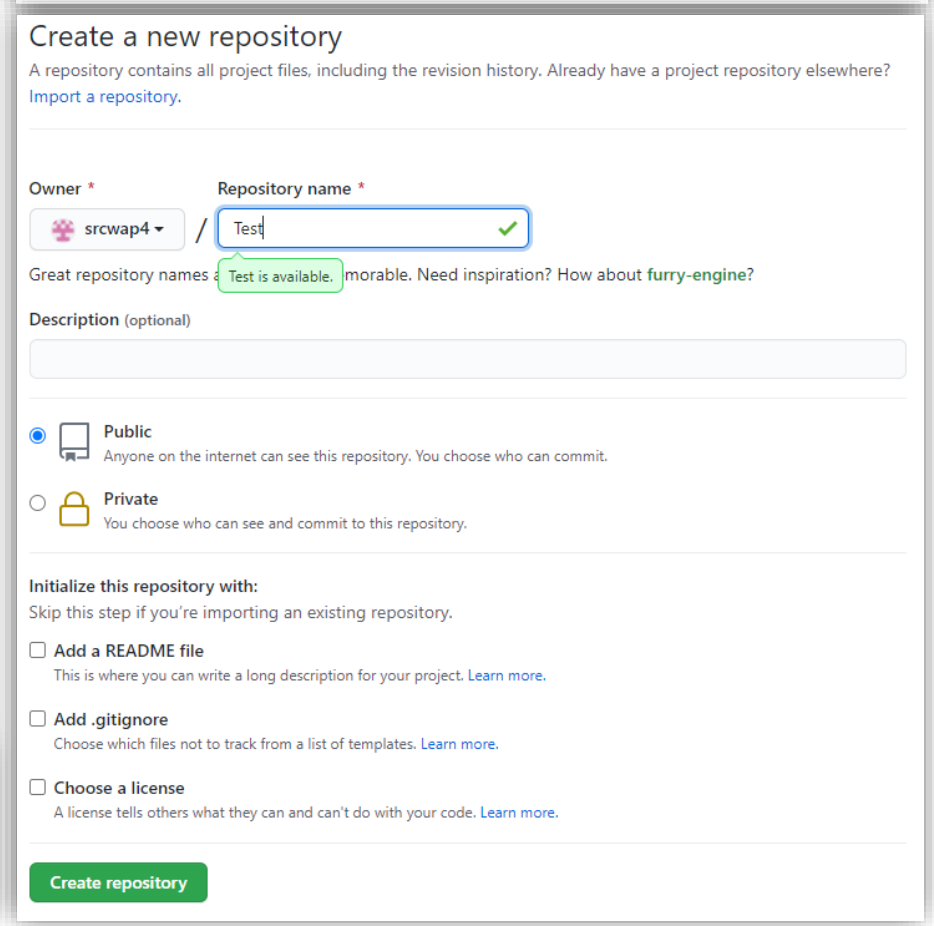


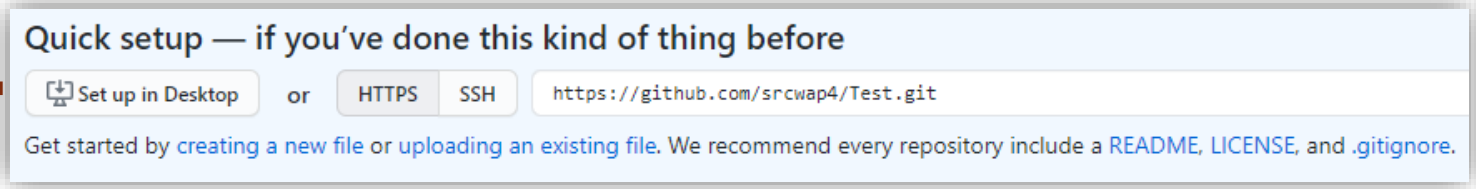


GIT HUB ACCOUNT

- Log in to https://github.com/ (create an account if not already created)
- Switch to "Repositories" tab
- Check if the required repository already exists
- If not, Click on "New" to create a new repository
  - Key in a Repository Name
  - Select "Public"
  - Click on "Create Repository"







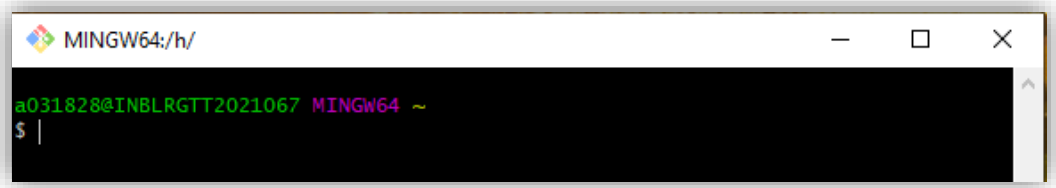
SET UP GIT BASH AND PWD LOCALLY

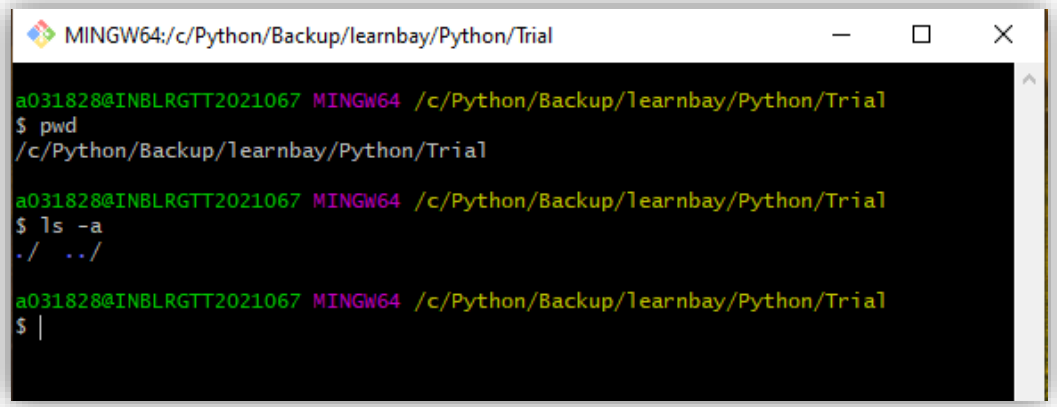
- Launch "Git Bash" from Windows Start Menu

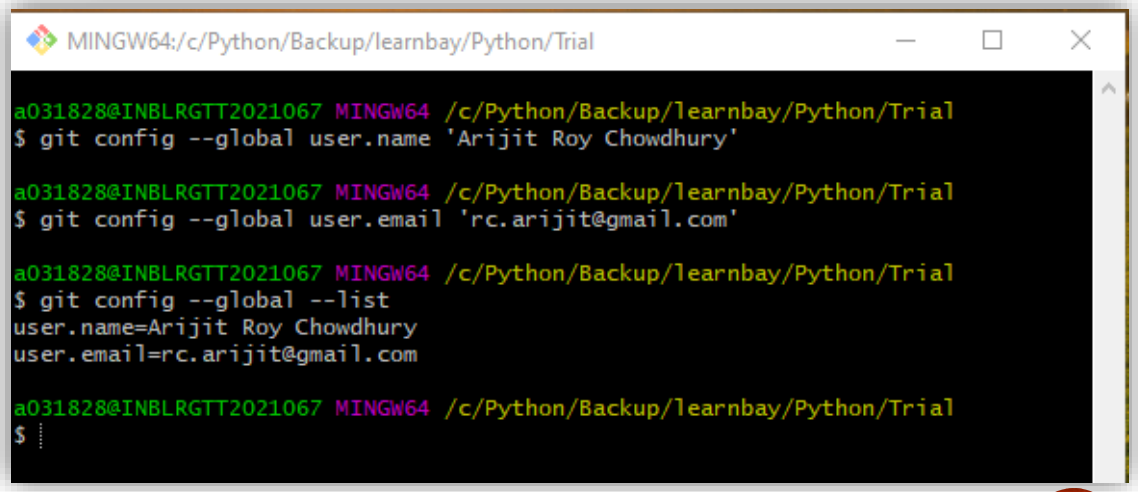
- Check Present Working Directory
  - Command: ***pwd***

- Change Directory to your respective one using cd, ls and mkdir commands
  - Command: ***cd*** (for change directory)
  - Command: ***ls*** (to check contents of directory)
  - Command: ***mkdir*** (to create a new directory in PWD)
  - Command: ***clear*** (to clear the screen)

- Configure Username and Email ID
  - Command: ***git config --global user.name 'Arijit Roy Chowdhury'***
  - Command: ***git config --global user.email 'rc.arijit@gmail.com'***
  - Command: ***git config --global --list***



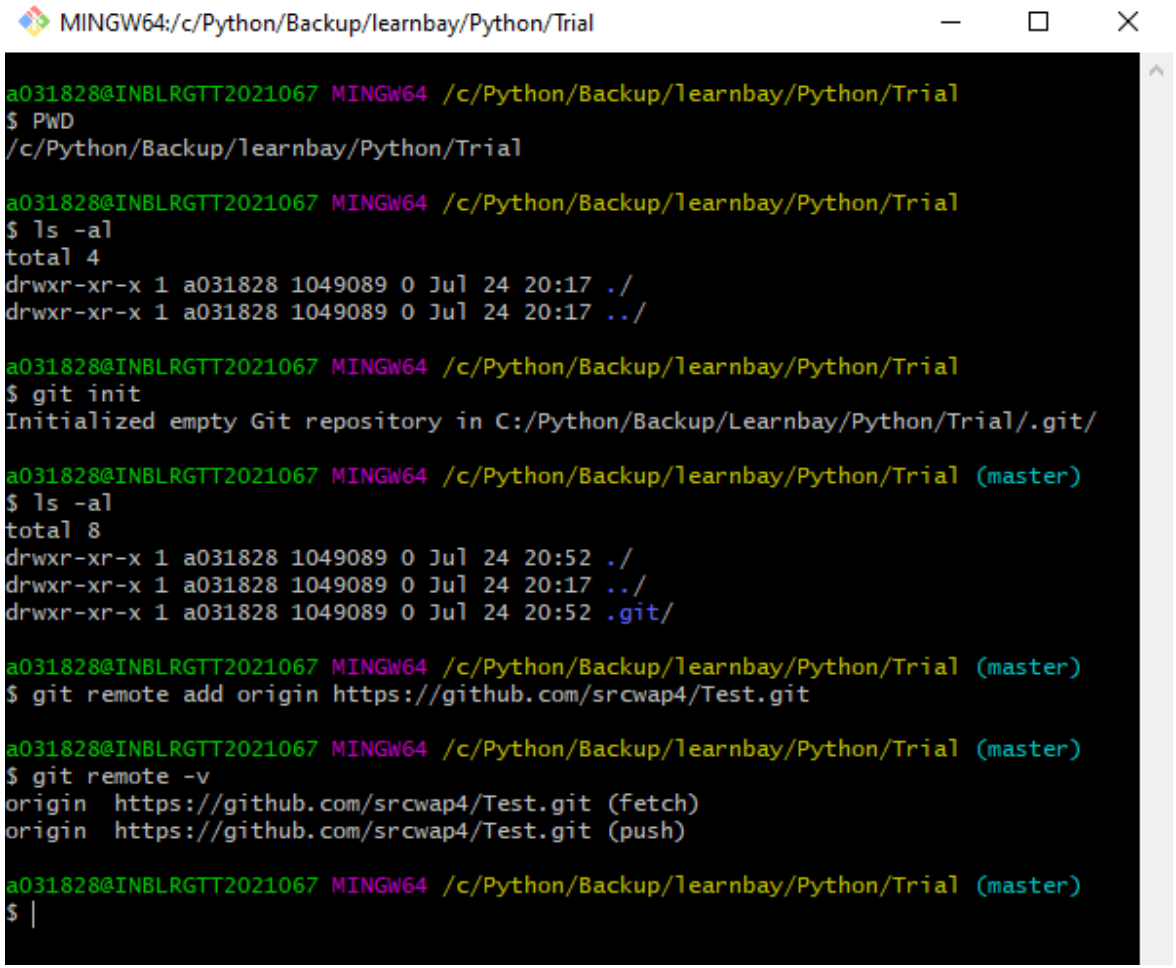




INITIALIZE PWD AS REMOTE GIT REPOSITORY

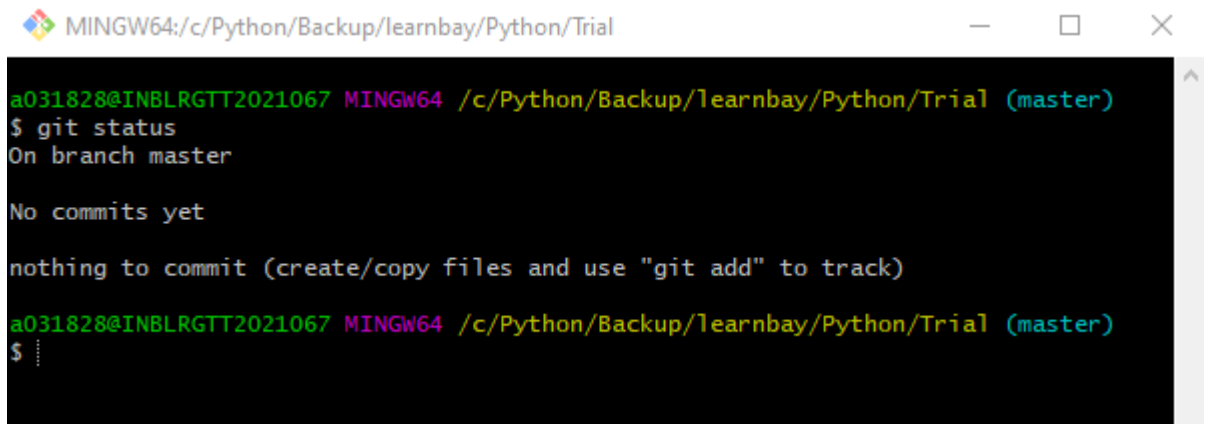
- Verify PWD using the command ***pwd***
- Use Command ***ls -al*** (show all hidden files and folders in PWD)
- If there is no file by name ".git" (hidden) we need to initialize using command ***git init***
- Use Command:

  git remote add origin https://github.com/srcwap4/Test.git to link your local repository to Git Hub Cloud
- Use Command: ***git remote -v*** to verify the connection to cloud repository



CREATE FILES

- Use Command ***git status*** to get a list of past commits.

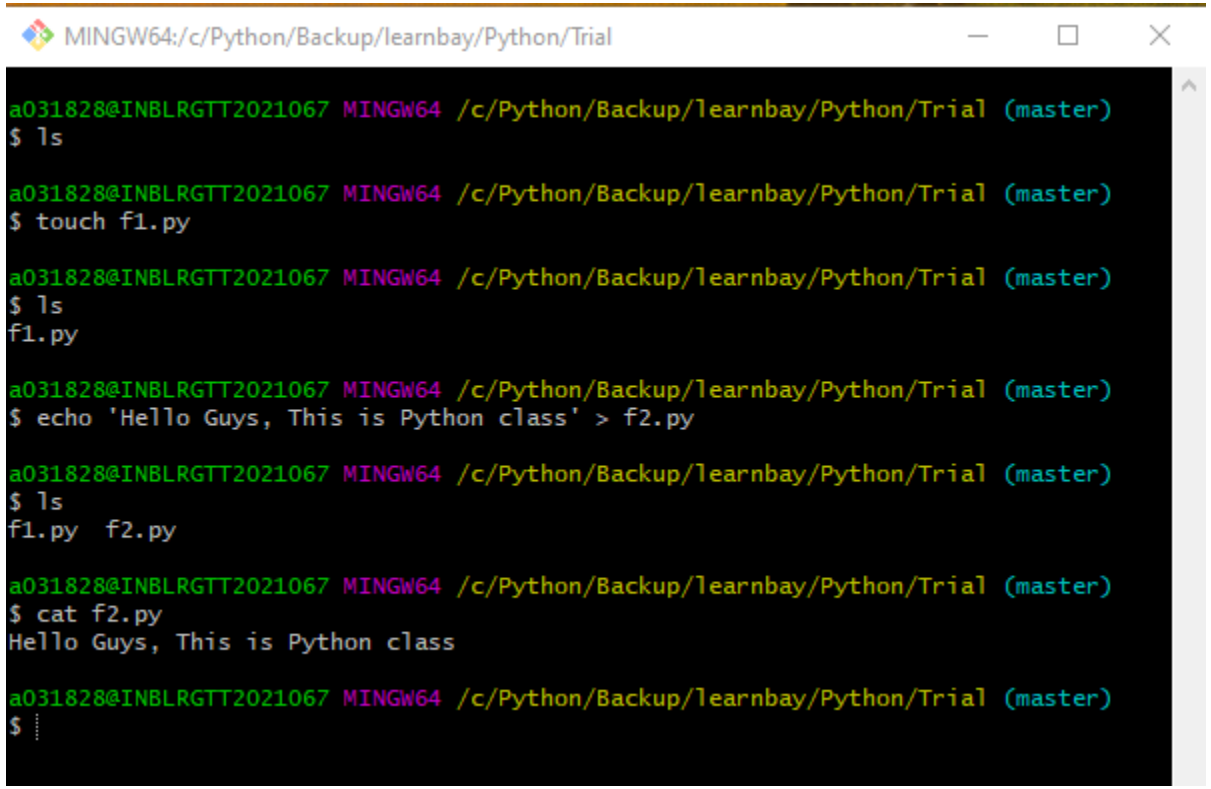


- Use Command ***touch f1.py*** to create a new empty file

- Use Command

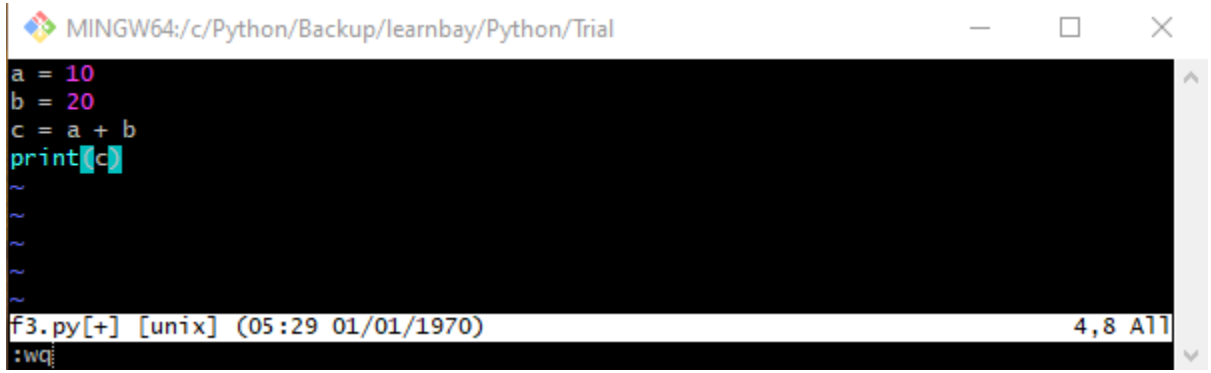
  echo 'Hello Guys, This is Python class' > f2.py

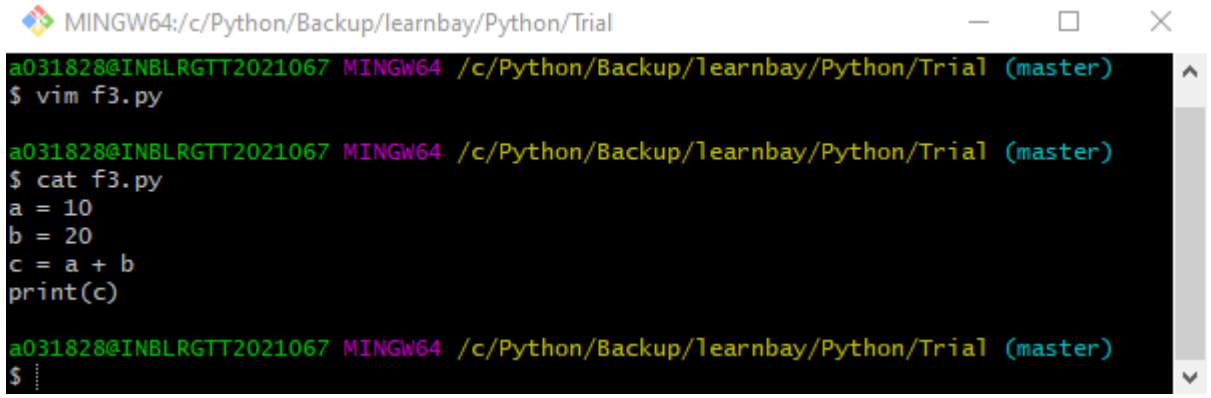
  to create a new file with 1 line of text



CREATE AND WRITE TO FILES

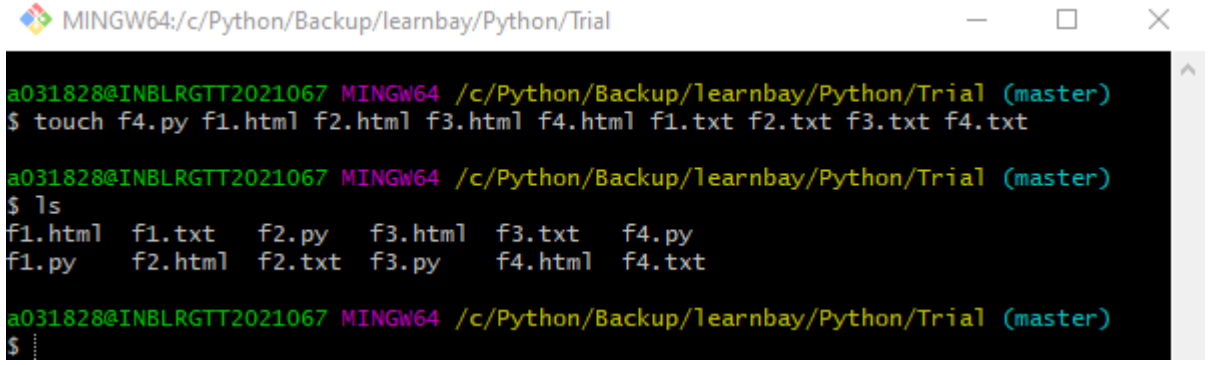
- Use Command ***vim f3.py*** to create a file and open it to write multiple lines.
- Press ' i ' to insert lines to the file
- Once done typing, press 'ESC' key
- Type ':wq' to save and close
- Type ***cat f3.py*** to view the contents of the file





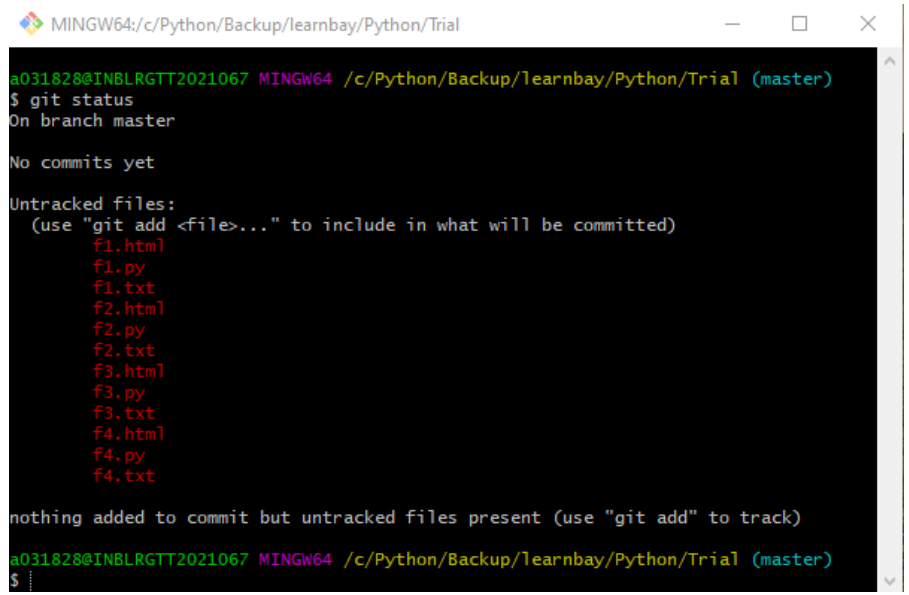
- Create some sample files using command:

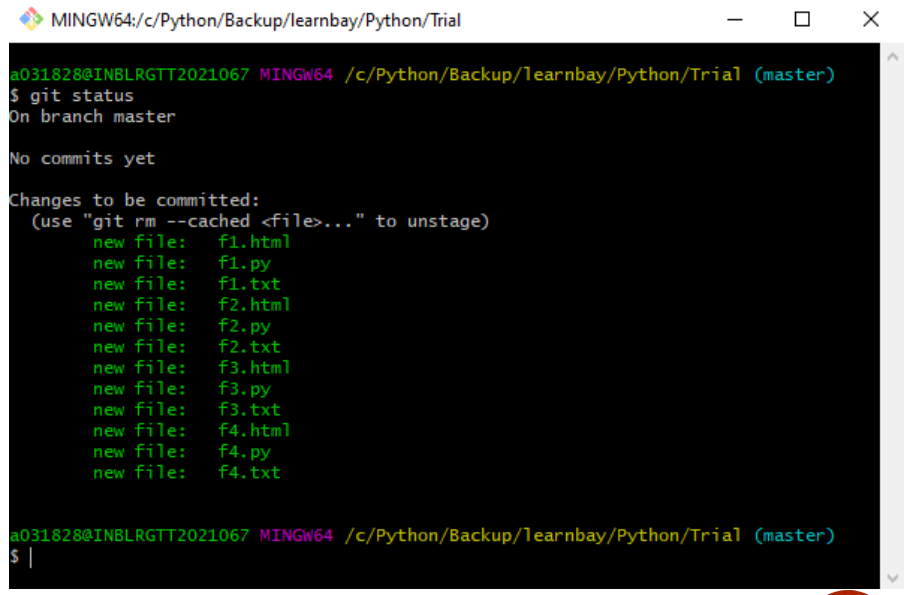
touch f4.py f1.html f2.html f3.html f4.html f1.txt f2.txt f3.txt f4.txt



SEND FILES TO STAGING AREA

- Use Command ***git status*** to know the status of files newly created / modified
- Use Command ***git add f1.py*** to move the file to Staging Area
- Use Command ***git add f2.py f3.html*** to move multiple files to Staging Area
- Use Command ***git add *.txt*** to move all files of a particular type to Staging Area
- Use Command ***git add .*** to move all files to Staging Area



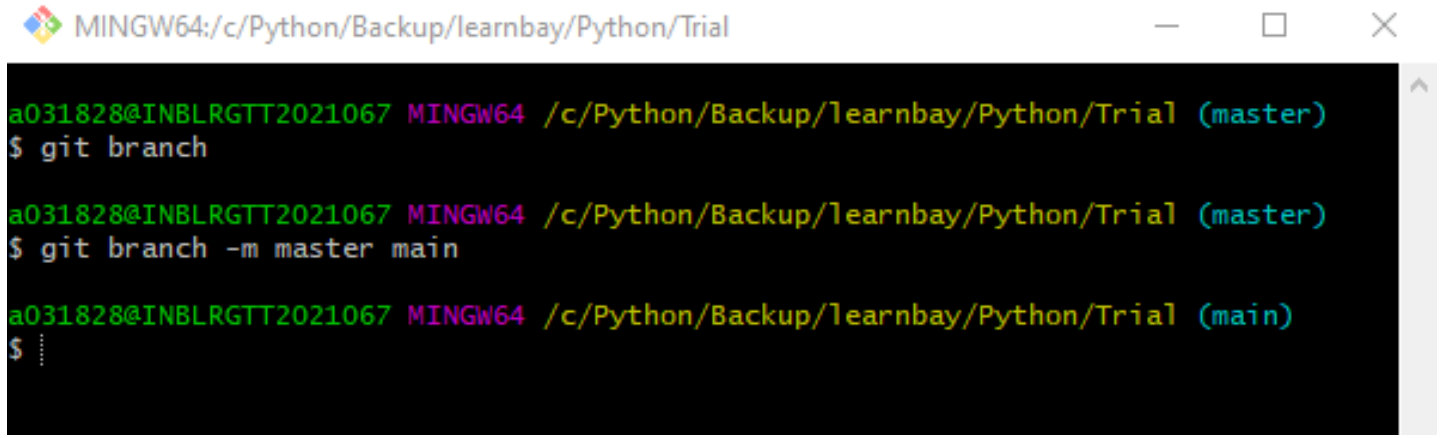


RENAME GIT BRANCH NAME FROM MASTER TO MAIN

- GIT Branch name in Git Hub is Main but in local system it is Master. Hence we need to rename the Branch from Master to Main locally

** Git Hub has renamed Master to Main as the word Master comes from the concept of Master – Slave. But Locally installed GIT is yet to rename it. Hence it is renamed manually*

- Use Command ***git branch -m master main*** to rename the branch from master to main



PUSH FILES TO GIT HUB

- Use Command ***git push -f origin main*** to push files to Git Hub Cloud Repository

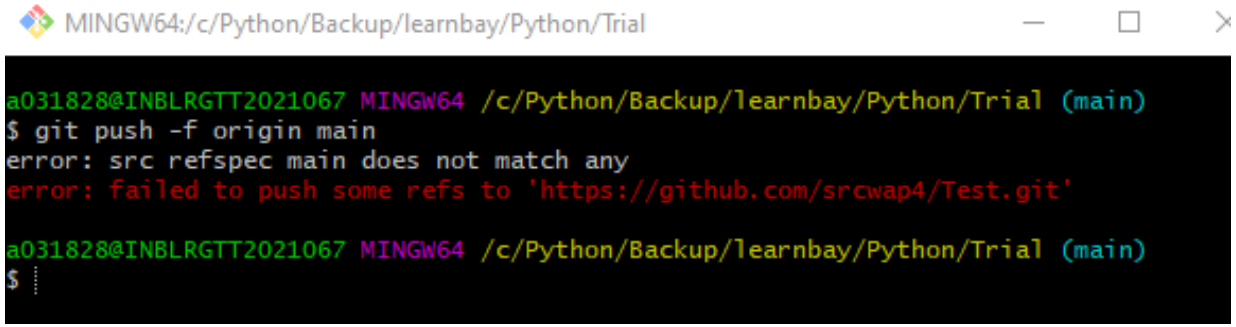
- If you get SSL error as shown in the screenshot, use command ***git config --global http.sslVerify false***

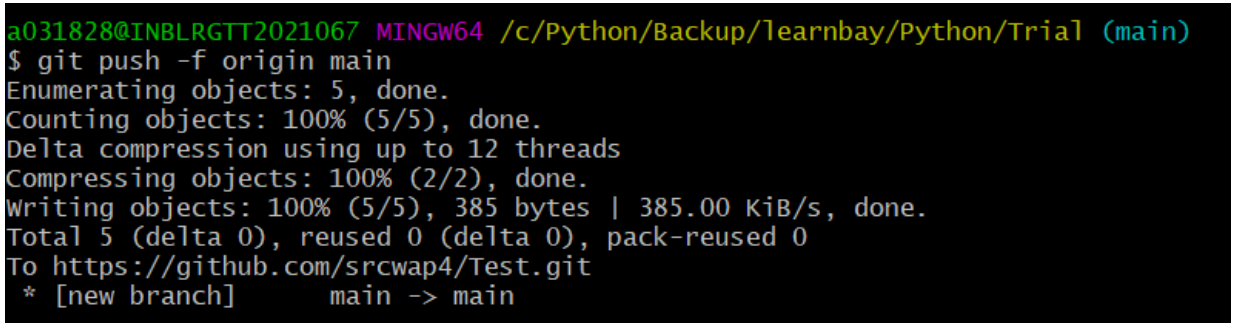
- Re-check User Name and Email ID assigned initially using command ***git config --global --list***

- If all OK, re-execute the command

  git push -f origin main and enter Git Hub credentials

  if required

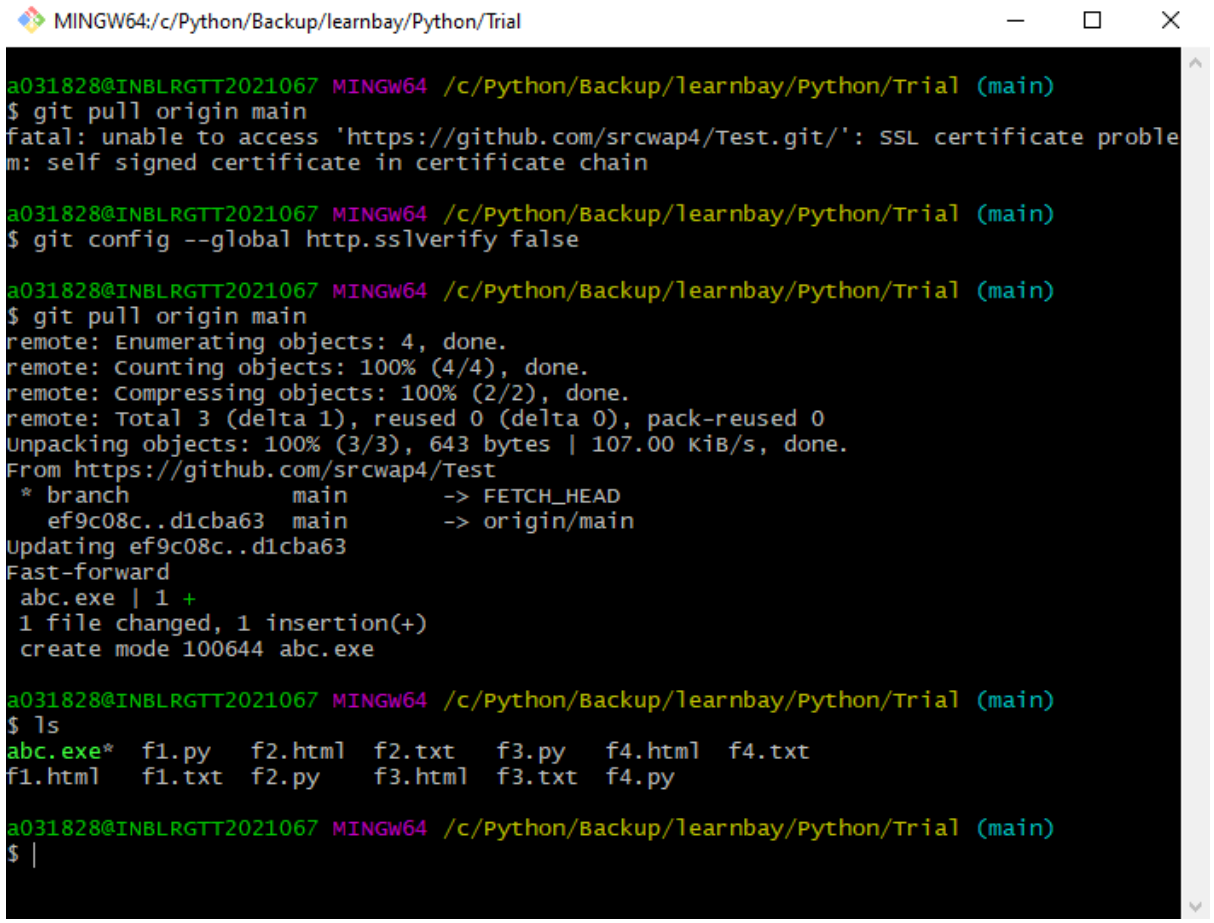




PULL FILES FROM GIT HUB

- Use Command ***git pull origin main*** to pull files from Git Hub Cloud Repository to PWD

- Use Command ***git config --global http.sslVerify false*** if you get ssl error

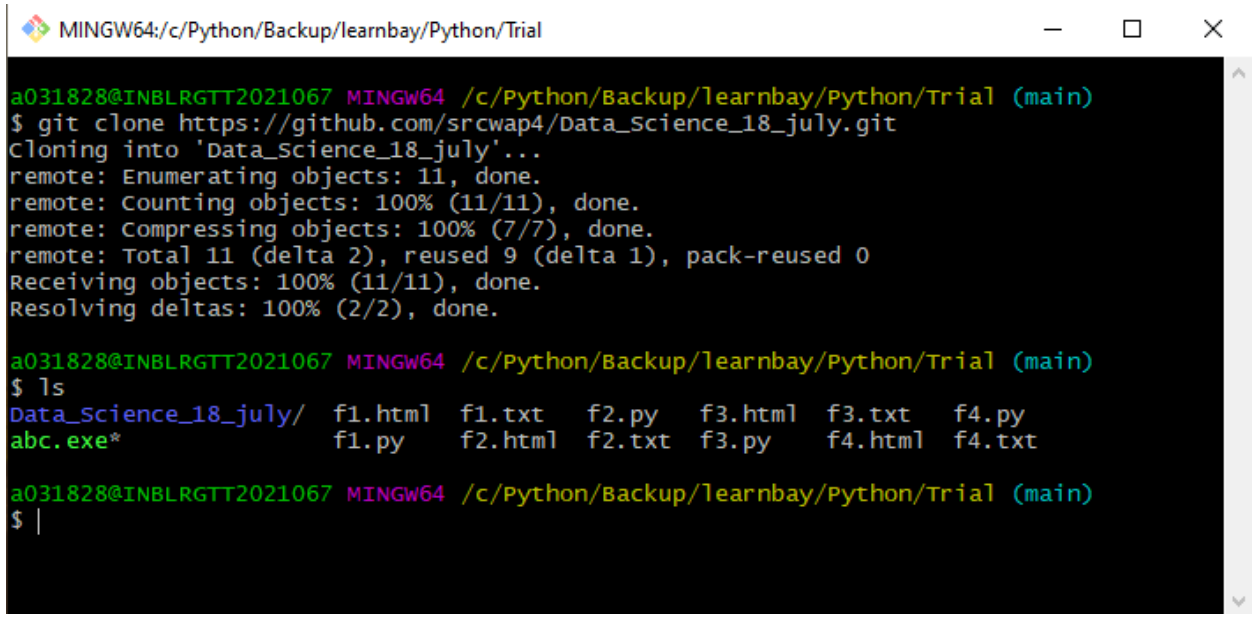


CLONE

- Use Command

git clone https://github.com/srcwap4/Data_Science_18_july.git to clone another repository to local system in PWD

- Use Command ***git config --global http.sslVerify false*** if you get ssl error



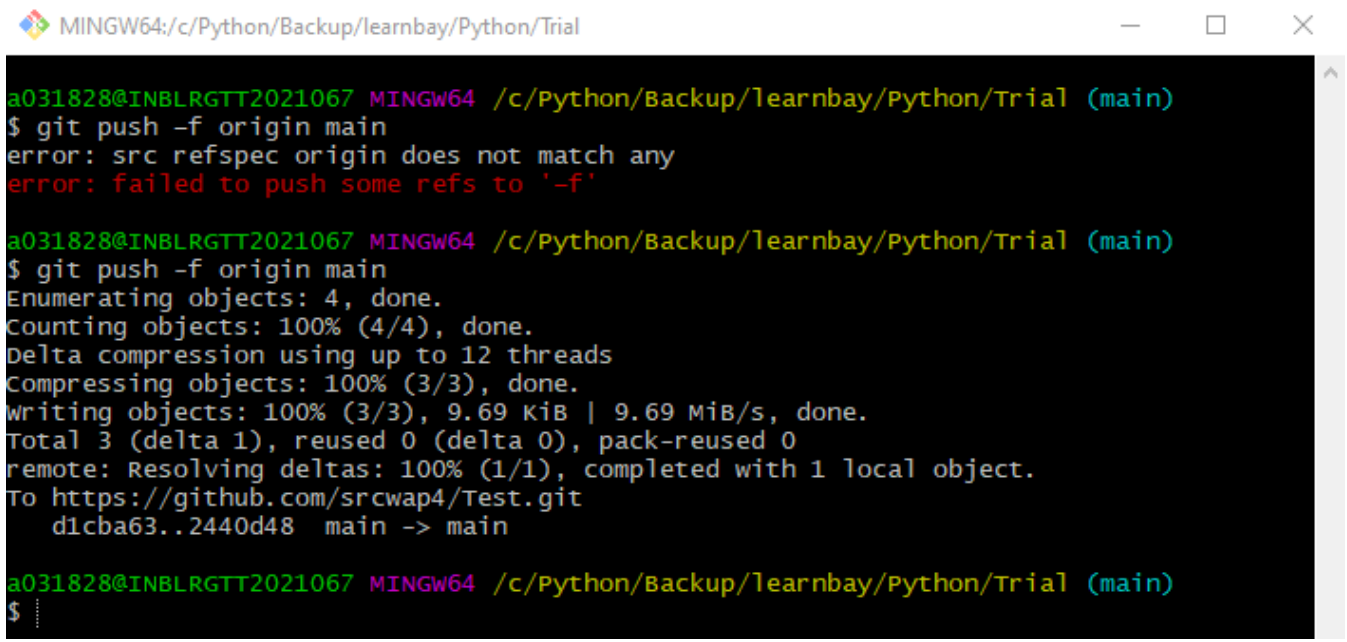
ADD A NEW FILE TO CLOUD REPOSITORY

- Copy the file to PWD

- Use command ***git add <filename>*** to add the file to Staging Area

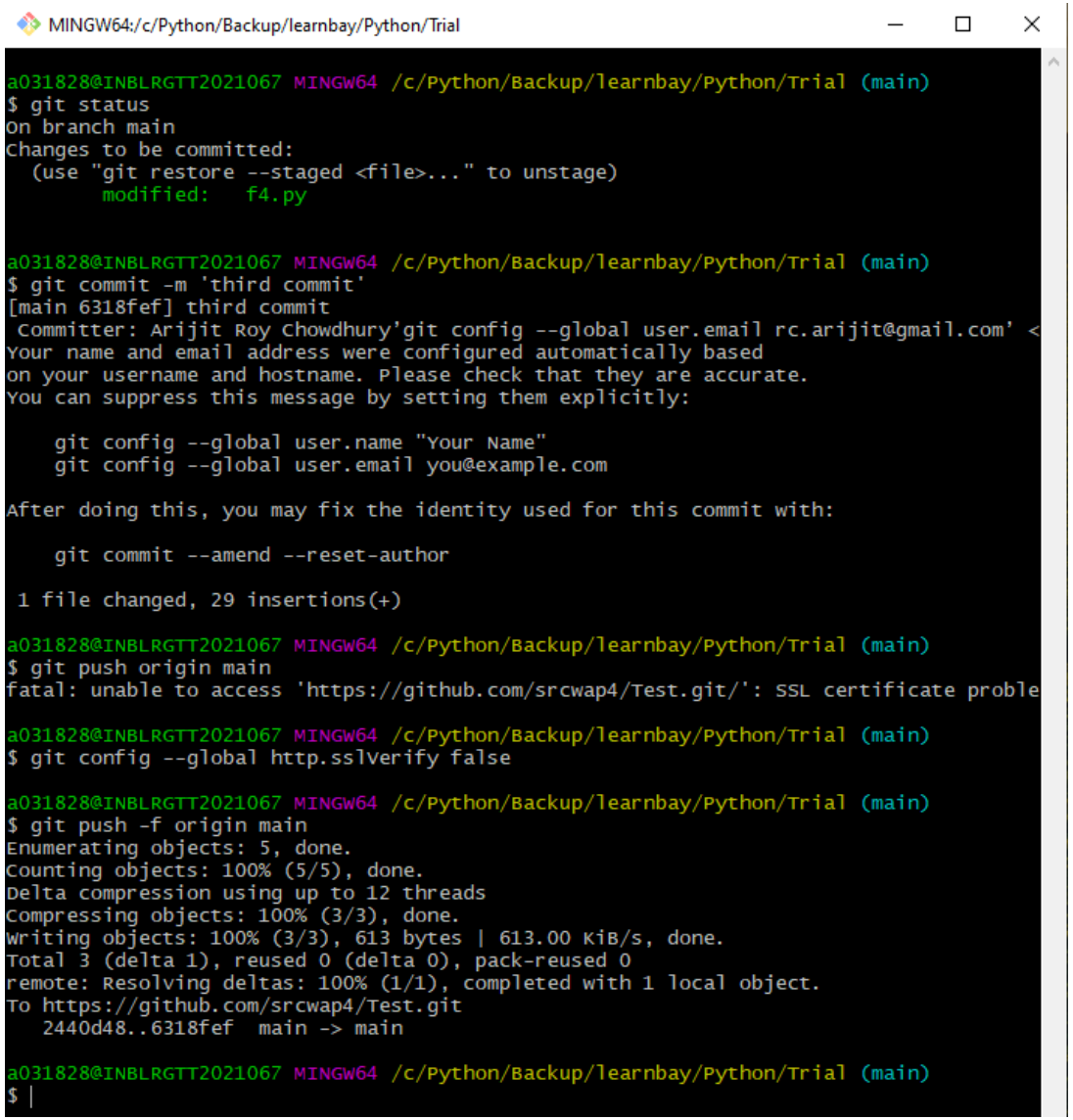
- Use Command ***git commit -m 'second commit'*** to add the file to Commit Area

- Use Command ***git push -f origin main*** to add the file to Cloud Repository



UPDATE A FILE AND PUSH IT TO CLOUD REPOSITORY

- Use Command ***pwd*** to verify Present Working Directory
- Use Command ***ls*** to list the files in PWD
- Use Command ***vim f4.py*** to open the file to be updated
- Update the file and save it (mentioned in slide #7)
- Use Command ***git add .*** to add the file to staging area
- Use Command ***git commit -m 'third commit'*** to add the file to commit
- In case of error, try configuring your user name and email id again
  - Command: ***git config --global user.name 'Arijit Roy Chowdhury'***
  - Command: ***git config --global user.email 'rc.arijit@gmail.com'***
  - Command: ***git config --global --list***



FREQUENTLY USED COMMANDS

Sl No	Command	Purpose
1	pwd	Check Present Working Directory
2	cd	change directory
3	ls	check contents of directory
4	ls -al	show all hidden files and folders in PWD
5	mkdir	create a new directory in PWD
6	clear	clear the screen
7	git config --global user.name 'Arijit Roy Chowdhury’	Configure User Name
8	git config --global user.email 'rc.arijit@gmail.com’	Configure Email ID
9	git config --global --list	View Username and Email ID
10	git init	Initialize a folder as Local GIT Repository
11	git remote add origin https://github.com/srcwap4/Test.git	Add a remote URL in Git Hub Cloud to sync with
12	git remote -v	verify the connection to cloud repository
13	git status	get a list of past commits and current commit status
14	touch f1.py	create a new empty file with name f1.py locally
15	touch f4.py f1.html f2.html f3.html f4.html f1.txt f2.txt f3.txt f4.txt	create multiple empty files locally
16	echo 'Hello Guys, This is Python class' > f2.py	to create a new file with 1 line of text
17	vim f3.py	create a file and open it to write multiple lines
18	cat f3.py	view the contents of a file
19	git status	know the status of files newly created / modified
20	git add f1.py	move the file to Staging Area
21	git add f2.py f3.html	move multiple files to Staging
22	git add *.txt	move all files of a particular type to Staging Area
23	git add .	move all files to Staging Area
24	git branch -m master main	rename the branch from master to main
25	git push -f origin main	push files to Git Hub Cloud Repository
26	git config --global http.sslVerify false	to ignore ssl error
27	git pull origin main	pull files from Git Hub Cloud Repository to PWD
28	git clone https://github.com/srcwap4/Data_Science_18_july.git	clone another repository to local system in PWD
29	git commit -m 'second commit’	add a new / updated file to Commit Area