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Step 1 : Create a Vm in GCP

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VM instances

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<input type="checkbox"/> Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	instance-20250126-155023	us-central1-c			10.128.0.2 (nic0)	34.72.0.132 (nic0)	SSH ⌵

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Step 2 : Create a Storage bucket and upload a text file to it

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test_iitm_bucket_gokul_gcp

Public to internet: This bucket is publicly accessible because allUsers or allAuthenticatedUsers have one or more permissions. Remove these principals to stop public access. [EDIT ACCESS](#) [DISMISS](#)

Location	Storage class	Public access	Protection
asia-south1 (Mumbai)	Standard	Public to internet	Soft Delete

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Folder browser

[test_iitm_bucket_gokul_gcp](#)

Buckets > test_iitm_bucket_gokul_gcp [📁](#)

[CREATE FOLDER](#) [UPLOAD](#) [TRANSFER DATA](#) [OTHER SERVICES](#)

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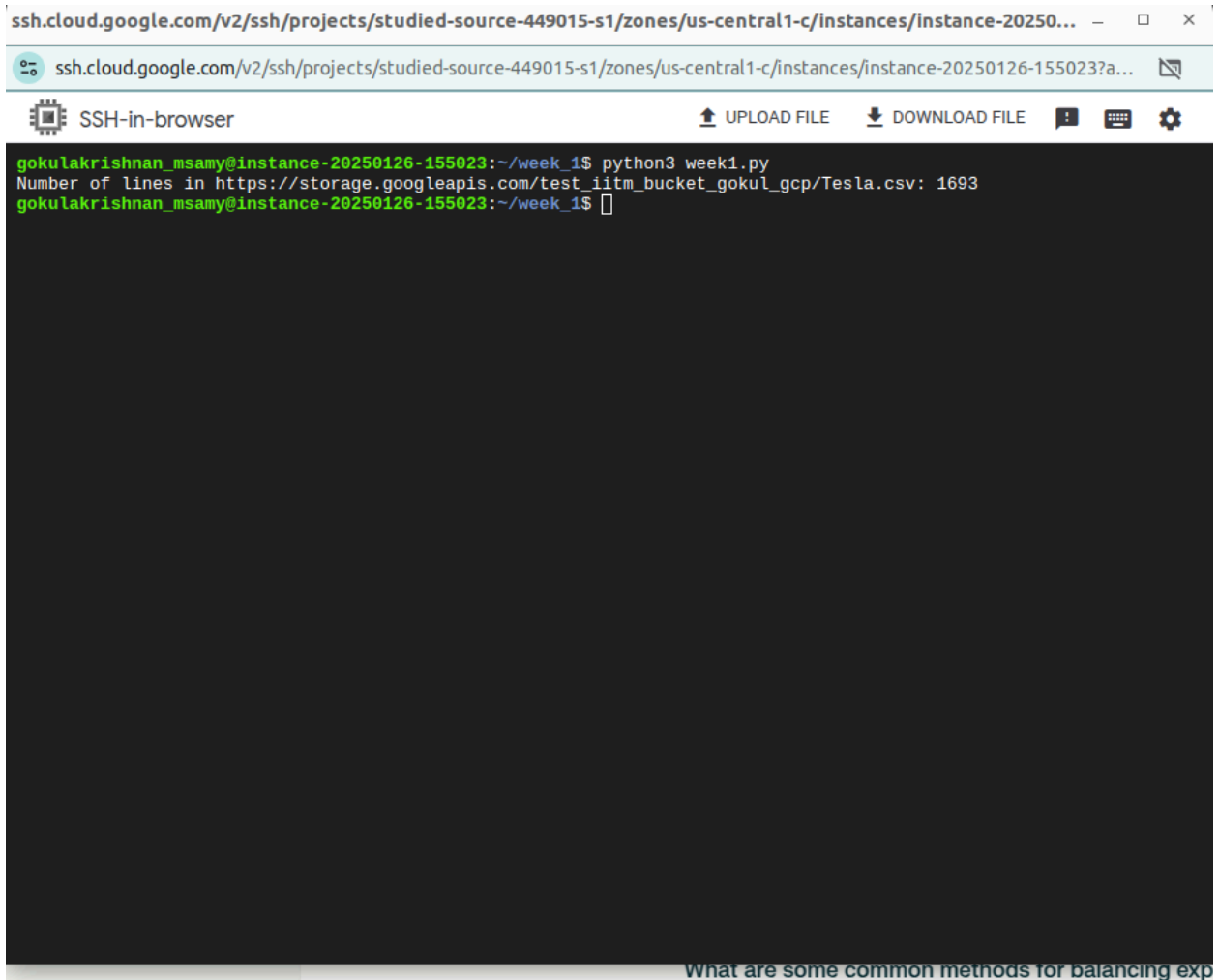
Filter by name prefix only [⌵](#) [Show Live objects only](#) [⌵](#)

<input type="checkbox"/> Name	Size	Type	Created	Storage class	Last modified	Public access
<input type="checkbox"/> Tesla.csv	107.4 KB	text/csv	Jan 26, 2025, 9:27:12 PM	Standard	Jan 26, 2025, 9:27:12 PM	Public to internet Copy URL ⌵

Step 3 : create a python file to count the number of lines in the file and upload it to the vm

```
Week 2 > aa.py > ...
1  import requests
2
3  def count_lines_in_https_file(https_url):
4      # Download the file content from HTTPS URL
5      response = requests.get(https_url)
6      response.raise_for_status() # Raise an exception for HTTP errors
7
8      # Get the content as text
9      content = response.text
10
11     # Count the lines
12     line_count = len(content.splitlines())
13
14     return line_count
15
16     # Full HTTPS path
17     https_path = 'https://storage.googleapis.com/test_iitm_bucket_gokul_gcp/Tesla.csv'
18
19     line_count = count_lines_in_https_file(https_path)
20     print(f"Number of lines in {https_path}: {line_count}")
21     Ctrl+I for Command, Ctrl+L for Cascade
```

Step 4: Run the file in the vm and show the output



The screenshot shows a web browser window with the address bar displaying the SSH URL: `ssh.cloud.google.com/v2/ssh/projects/studied-source-449015-s1/zones/us-central1-c/instances/instance-20250126-155023?...`. The browser tab is titled "SSH-in-browser". Below the browser window is a terminal interface. The terminal prompt is `gokulakrishnan_msamy@instance-20250126-155023:~/week_1$`. The user has entered the command `python3 week1.py`. The output of the script is displayed on the next line: `Number of lines in https://storage.googleapis.com/test_iitm_bucket_gokul_gcp/Tesla.csv: 1693`. The terminal prompt is now `gokulakrishnan_msamy@instance-20250126-155023:~/week_1$` with a cursor. At the bottom of the terminal window, there is a text input field containing the text "What are some common methods for balancing exp".

```
gokulakrishnan_msamy@instance-20250126-155023:~/week_1$ python3 week1.py
Number of lines in https://storage.googleapis.com/test_iitm_bucket_gokul_gcp/Tesla.csv: 1693
gokulakrishnan_msamy@instance-20250126-155023:~/week_1$
```

What are some common methods for balancing exp

ssh.cloud.google.com/v2/ssh/projects/studied-source-449015-s1/zones/us-central1-c/instances/instance-20250... — □ ×

ssh.cloud.google.com/v2/ssh/projects/studied-source-449015-s1/zones/us-central1-c/instances/instance-20250126-155023?...



SSH-in-browser

↑ UPLOAD FILE

↓ DOWNLOAD FILE



```
Setting up libisl22:amd64 (0.22.1-1) ...
Setting up python-pip-whl (20.0.2-5ubuntu1.11) ...
Setting up libbinutils:amd64 (2.34-6ubuntu1.9) ...
Setting up libc-dev-bin (2.31-0ubuntu9.16) ...
Setting up libalgorithm-diff-xs-perl (0.04-6) ...
Setting up libcc1-0:amd64 (10.5.0-1ubuntu1~20.04) ...
Setting up liblsan0:amd64 (10.5.0-1ubuntu1~20.04) ...
Setting up libitm1:amd64 (10.5.0-1ubuntu1~20.04) ...
Setting up gcc-9-base:amd64 (9.4.0-1ubuntu1~20.04.2) ...
Setting up libalgorithm-merge-perl (0.08-3) ...
Setting up libtsan0:amd64 (10.5.0-1ubuntu1~20.04) ...
Setting up libctf0:amd64 (2.34-6ubuntu1.9) ...
Setting up libasan5:amd64 (9.4.0-1ubuntu1~20.04.2) ...
Setting up python3-pip (20.0.2-5ubuntu1.11) ...
Setting up cpp-9 (9.4.0-1ubuntu1~20.04.2) ...
Setting up libc6-dev:amd64 (2.31-0ubuntu9.16) ...
Setting up binutils-x86-64-linux-gnu (2.34-6ubuntu1.9) ...
Setting up binutils (2.34-6ubuntu1.9) ...
Setting up dpkg-dev (1.19.7ubuntu3.2) ...
Setting up libgcc-9-dev:amd64 (9.4.0-1ubuntu1~20.04.2) ...
Setting up libexpat1-dev:amd64 (2.2.9-1ubuntu0.8) ...
Setting up libpython3.8-dev:amd64 (3.8.10-0ubuntu1~20.04.14) ...
Setting up zlib1g-dev:amd64 (1:1.2.11.dfsg-2ubuntu1.5) ...
Setting up cpp (4:9.3.0-1ubuntu2) ...
Setting up gcc-9 (9.4.0-1ubuntu1~20.04.2) ...
Setting up libpython3-dev:amd64 (3.8.2-0ubuntu2) ...
Setting up libstdc++-9-dev:amd64 (9.4.0-1ubuntu1~20.04.2) ...
Setting up gcc (4:9.3.0-1ubuntu2) ...
Setting up g++-9 (9.4.0-1ubuntu1~20.04.2) ...
Setting up python3.8-dev (3.8.10-0ubuntu1~20.04.14) ...
Setting up g++ (4:9.3.0-1ubuntu2) ...
update-alternatives: using /usr/bin/g++ to provide /usr/bin/c++ (c++) in auto mode
Setting up build-essential (12.8ubuntu1.1) ...
Setting up python3-dev (3.8.2-0ubuntu2) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.16) ...
gokulakrishnan_msamy@instance-20250126-155023:~/week_1$ python3 week1.py
Number of lines in https://storage.googleapis.com/test_iitm_bucket_goku1_gcp/Tesla.csv: 1693
gokulakrishnan_msamy@instance-20250126-155023:~/week_1$
```