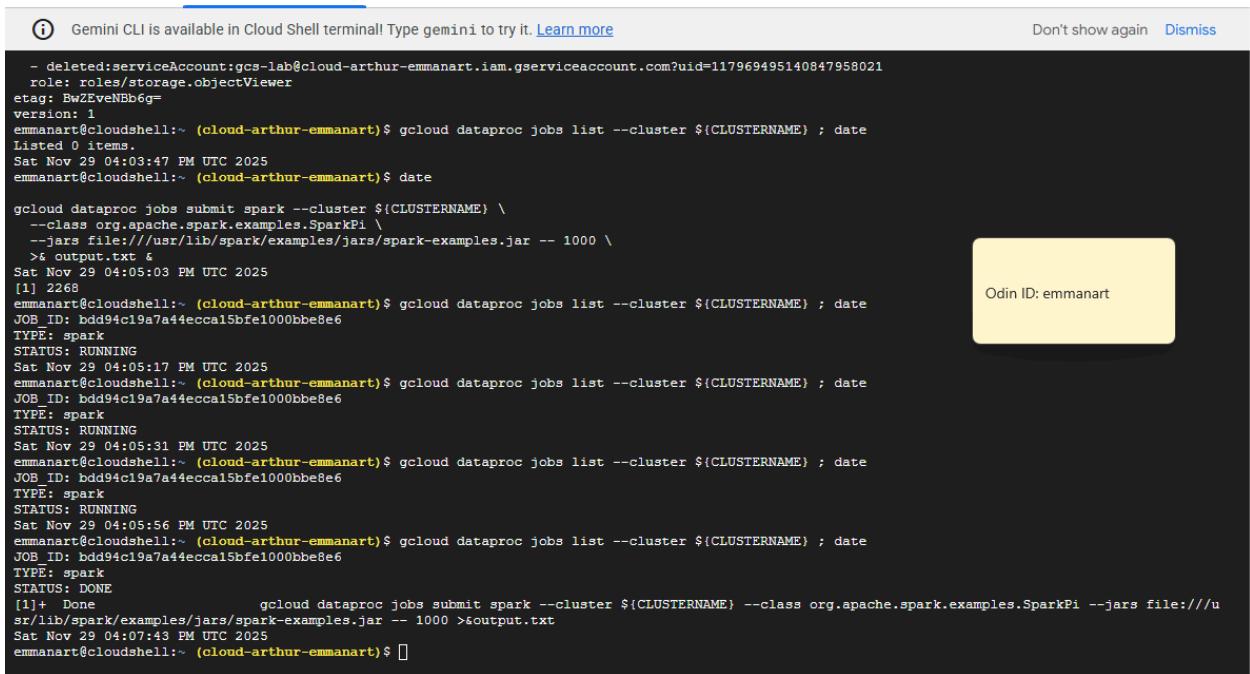


Lab 10.1g

- How long did the job take to execute?

About 2.5 minutes



The screenshot shows a Cloud Shell terminal window. At the top, there's a message: "Gemini CLI is available in Cloud Shell terminal! Type gemini to try it. [Learn more](#)". On the right, there are "Don't show again" and "Dismiss" buttons. Below the message, the terminal output is displayed:

```
- deleted:serviceAccount:gcs-lab@cloud-arthur-emmanart.iam.gserviceaccount.com?uid=117969495140847958021
  role: roles/storage.objectViewer
etag: BwZEvNBb6g=
version: 1
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud dataproc jobs list --cluster ${CLUSTERNAME} ; date
Listed 0 items.
Sat Nov 29 04:03:47 PM UTC 2025
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ date

gcloud dataproc jobs submit spark --cluster ${CLUSTERNAME} \
  --class org.apache.spark.examples.SparkPi \
  --jars file:///usr/lib/spark/examples/jars/spark-examples.jar -- 1000 \
>& output.txt &
Sat Nov 29 04:05:03 PM UTC 2025
[1]+ 2268
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud dataproc jobs list --cluster ${CLUSTERNAME} ; date
JOB_ID: bdd94c19a7a44eccal5bfe1000bbe8e6
TYPE: spark
STATUS: RUNNING
Sat Nov 29 04:05:17 PM UTC 2025
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud dataproc jobs list --cluster ${CLUSTERNAME} ; date
JOB_ID: bdd94c19a7a44eccal5bfe1000bbe8e6
TYPE: spark
STATUS: RUNNING
Sat Nov 29 04:05:31 PM UTC 2025
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud dataproc jobs list --cluster ${CLUSTERNAME} ; date
JOB_ID: bdd94c19a7a44eccal5bfe1000bbe8e6
TYPE: spark
STATUS: RUNNING
Sat Nov 29 04:05:56 PM UTC 2025
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud dataproc jobs list --cluster ${CLUSTERNAME} ; date
JOB_ID: bdd94c19a7a44eccal5bfe1000bbe8e6
TYPE: spark
STATUS: DONE
[1]+ Done          gcloud dataproc jobs submit spark --cluster ${CLUSTERNAME} --class org.apache.spark.examples.SparkPi --jars file:///u
sr/lib/spark/examples/jars/spark-examples.jar -- 1000 >&output.txt
Sat Nov 29 04:07:43 PM UTC 2025
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ []
```

In the bottom right corner of the terminal window, there is a yellow box containing the text "Odin ID: emmanart".

- Examine `output.txt` and show the estimate of π calculated.

Directly from `output.txt`, there is a line that says "Pi is roughly 3.1417748314177483"

- How long did the job take to execute? How much faster did it take?

A little over a minute from examining `output.txt`

- Examine `output2.txt` and show the estimate of π calculated.

Directly from `output2.txt`, there is a line that says "Pi is roughly 3.1416026714160266"

Lab 10.2g

- Where is the input taken from by default?

'..../javahelp/src/main/java/com/google/cloud/training/dataanalyst/javahelp/'

- Where does the output go by default? /tmp/output
- Examine both the `getPackages()` function and the `splitPackageName()` function. What operation does the `'PackageUse()'` transform implement?

It takes each Java import statement and breaks it down into all of its parent packages.

- Look up Beam's `CombinePerKey`. What operation does the `TotalUse` operation implement?

It counts the number of times each package is being used by counting the frequency of the occurrence of each package in the dataset

- Which operations correspond to a "Map"?

```
'GetImports' >> beam.FlatMap(lambda line: startsWith(line, keyword))
```

- Which operation corresponds to a "Shuffle-Reduce"?

```
'TotalUse' >> beam.CombinePerKey(sum)
```

- Which operation corresponds to a "Reduce"?

```
'Top_5' >> beam.transforms.combiners.Top.Of(5, key=lambda kv: kv[1])
```

- Take a screenshot of its contents

```
(beamenv) emmanart@course-vm:~/training-data-analyst/courses/machine_learning/deepdive/04_features/dataflow/python$ python is_popular.py
/home/emmanart/beamenv/lib/python3.10/site-packages/google/api_core/python_version_support.py:266: FutureWarning: You are using a Python version (3.10.12) which Google will stop supporting in new releases of google.api_core once it reaches its end of life (2026-10-04). Please upgrade to the latest Python version, or at least Python 3.11, to continue receiving updates for google.api_core past th
at date.
  warnings.warn(message, FutureWarning)
WARNING:apache_beam.transforms.core:(No iterator is returned by the process method in #., <class 'apache_beam.transforms.combiners._TopPerBundle'>
(beamenv) emmanart@course-vm:~/training-data-analyst/courses/machine_learning/deepdive/04_features/dataflow/python$ ls
JavaProjectsThatNeedHelp_PY2_Version.py OLD_grep.py grep.py grepc.py install_packages.sh install_packages_OLD.sh is_popular.py
(beamenv) emmanart@course-vm:~/training-data-analyst/courses/machine_learning/deepdive/04_features/dataflow/python$ cd /tmp/
(beamenv) emmanart@course-vm:/tmp$ cat output*
output-00000-of-00001
(beamenv) emmanart@course-vm:/tmp$ cat output-00000-of-00001
[('org', 45), ('org.apache.beam', 44), ('org.apache', 44), ('org.apache.beam.sdk', 43), ('org.apache.beam.sdk.transforms', 16)]
(beamenv) emmanart@course-vm:/tmp$
```

- Explain what the data in this output file corresponds to based on your understanding of the program.
This output shows the top 5 most frequently imported Java packages (including parent packages) from the java files in that were given as input
- What are the names of the stages in the pipeline?

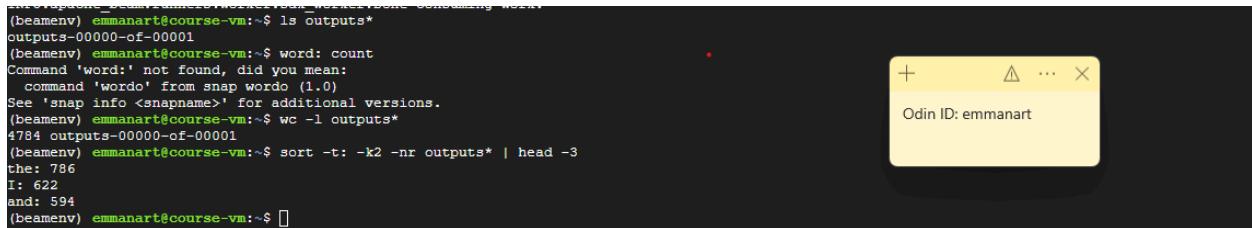
The stages are : Split, PairWithOne, GroupAndSum

- Describe what each stage does.

Split breaks input text into individual words; PairWithOne attaches the number 1 to each word.; GroupAndSum counts how many times each word appears.

- Use `wc` with an appropriate flag to determine the number of different words in King Lear.
- Use sort with appropriate flags to perform a *numeric* sort on the *key field* containing the count for each word in *descending* order. Pipe the output into `head` to show the top 3 words in King Lear and the number of times they appear

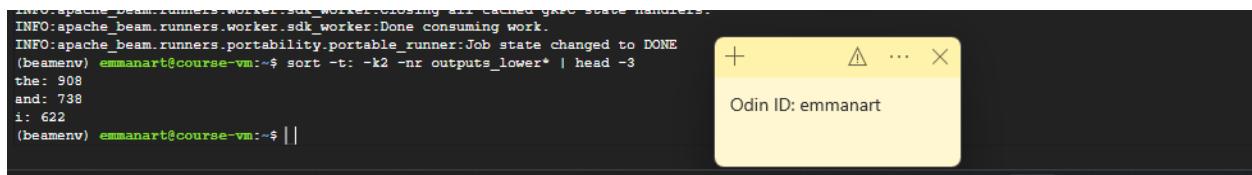
This screenshot is for both requests above



```
(beamenv) emmanart@course-vm:~$ ls outputs*
outputs-00000-of-00001
(beamenv) emmanart@course-vm:~$ word: count
Command 'word:' not found, did you mean:
  command 'wordo' from snap wordo (1.0)
See 'snap info <snapname>' for additional versions.
(beamenv) emmanart@course-vm:~$ wc -l outputs*
4784 outputs-00000-of-00001
(beamenv) emmanart@course-vm:~$ sort -t: -k2 -nr outputs* | head -3
the: 786
I: 622
and: 594
(beamenv) emmanart@course-vm:~$
```

The terminal shows a command-line session where the user lists files in the 'outputs' directory, runs a command that fails ('word:'), and then counts the lines in the files. The output of the 'sort' command is then piped into 'head -3' to show the top three words and their counts. A yellow status bar at the bottom right of the terminal window displays the text 'Odin ID: emmanart'.

- Use the previous method to show the top 3 words in King Lear, case-insensitive, and the number of times they appear.



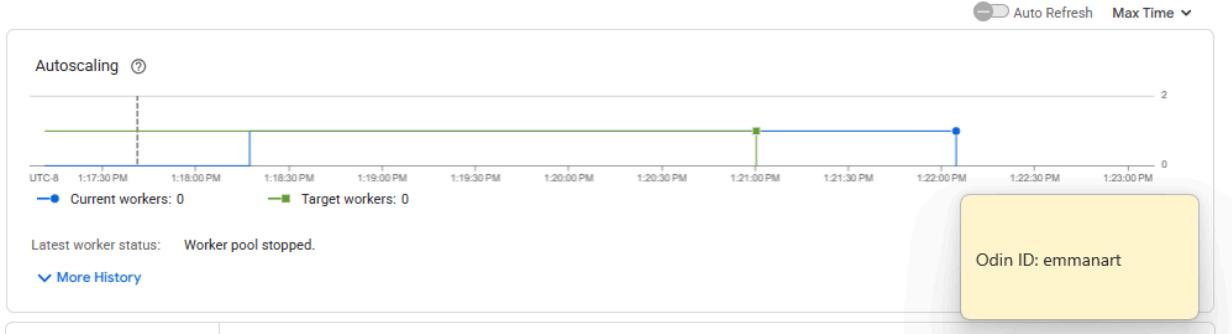
```
INFO:apache_beam.runners.worker.sdk.Worker:Closing all cached gRPC state handlers.
INFO:apache_beam.runners.worker.sdk.Worker:Done consuming work.
INFO:apache_beam.runners.portability.portable_runner:Job state changed to DONE
(beamenv) emmanart@course-vm:~$ sort -t: -k2 -nr outputs_lower* | head -3
the: 908
and: 738
i: 622
(beamenv) emmanart@course-vm:~$ ||
```

The terminal shows a command-line session where the user sorts the files in the 'outputs' directory by word count, ignoring case. The output is then piped into 'head -3' to show the top three words and their counts. A yellow status bar at the bottom right of the terminal window displays the text 'Odin ID: emmanart'.

- The part of the job graph that has taken the longest time to complete.

Read part

- The autoscaling graph showing when the worker was created and stopped.



- Examine the output directory in Cloud Storage. How many files has the final write stage in the pipeline created?

It created 3 files

Buckets > cloud-arthur-emmanart > tmp > beamapp-emmanart-1129211704-929992-loo1fn6j.1764451024.930183

Create folder Upload Transfer data Other services

Show Live objects only

Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption
pipeline.pb	48.8 KB	application/octet-stream	Nov 29, 2025, 1:17:05PM	Standard	Nov 29, 2025, 1:17:05PM	Not public	—	Google-managed
submission_environment_depend_	2.8 KB	application/octet-stream	Nov 29, 2025, 1:17:05PM	Standard	Nov 29, 2025, 1:17:05PM	Not public	—	Google-managed
tmp-1117e76fd53bf997-00000-of_-	1.2 KB		Nov 29, 2025, 1:20:48PM	Standard	Nov 29, 2025, 1:20:48PM	Not public	—	Google-managed

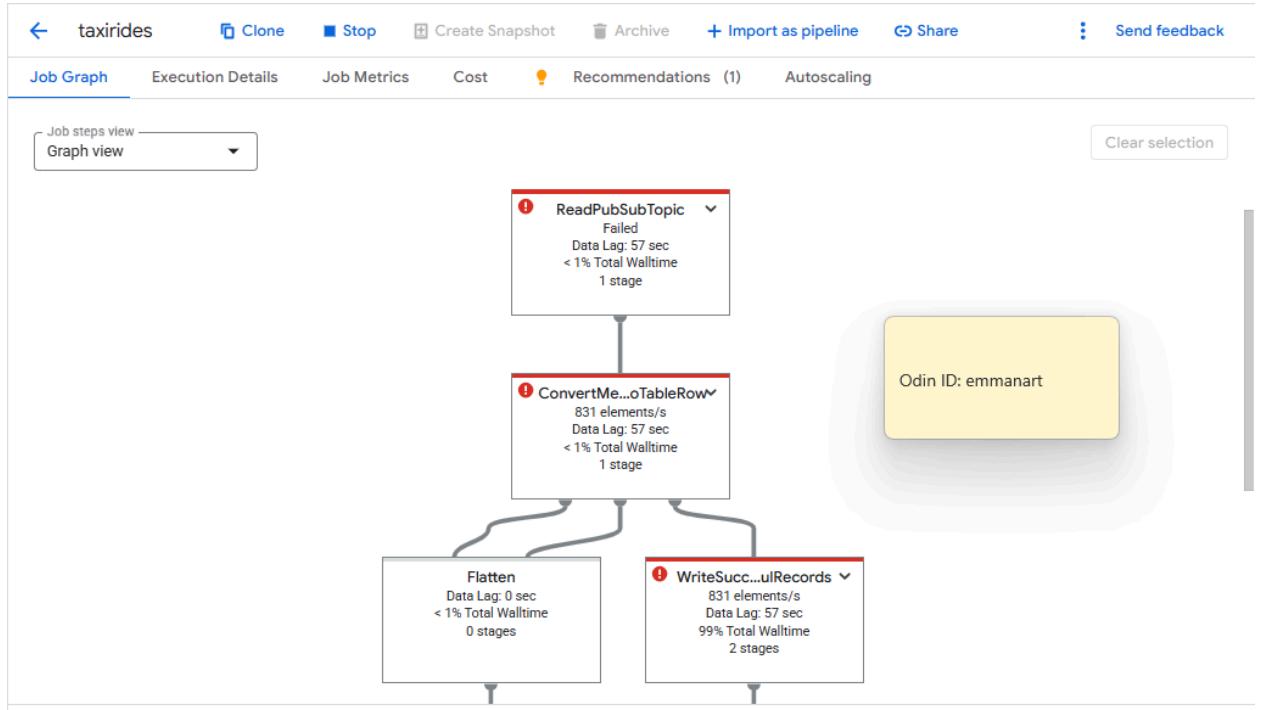
Odin ID: emmanart

- Take a screenshot listing the different fields of this object.

```
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ gcloud pubsub subscriptions pull taxiub --auto-ack
DATA: {"ride_id": "7026d995-eb78-40f1-9c81-0112ed44995b", "point_idx": 58, "longitude": -40.765280000000004, "latitude": -70.98765, "timestamp": "2025-11-29T18:03:48.14645-05:00", "meter_reading": 2.4426088, "meter_increment": 0.04608696, "ride_status": "enroute", "passenger_count": 1}
MESSAGE_ID: 17109522923060873
ORDERING_KEY:
ATTRIBUTES: ts=2025-11-29T18:03:48.14645-05:00
DELIVERY_ATTEMPT:
ACK_STATUS: SUCCESS
emmanart@cloudshell:~ (cloud-arthur-emmanart)$ |||
```

Odin ID: emmanart

- Take a screenshot of the pipeline that includes its stages and the number of elements per second being handled by individual stages.



- Take a screenshot showing the number of passengers and the amount paid for the first ride

The screenshot shows the Google Cloud BigQuery interface. The left sidebar includes sections for Home, Starred, Shared with, Job history, Datasets, Connections, Queries, (Classic) Queries, Notebooks, Data canvas, Pipelines, and Repositories. The main area displays a table with the following columns: Row, ride_id, point_idx, latitude, longitude, timestamp, meter_reading, meter_increment, ride_status, and passenger_count. The table contains 22 rows of data. A yellow callout box labeled 'Odin ID: emmanart' points to the first row of the table.

Row	ride_id	point_idx	latitude	longitude	timestamp	meter_reading	meter_increment	ride_status	passenger_count
1	b1b2fe41-09fc-42ba-a7c7-af2c...	187	40.6447200...	-73.795340...	2025-11-29 23:10:274580 U...	4.4809666	0.023962388	enroute	1
2	6795748-be94-467b-a007-acf...	234	40.75441	-73.96443	2025-11-29 23:13:31.598070 U...	9.042586	0.03864533	enroute	1
3	ea305fa8-657d-44ca-b20f-2ec...	560	40.73834	-73.94985	2025-11-29 23:13:31.809760 U...	12.812339	0.022879176	enroute	5
4	e01cac80-db5d-4bf1-b207-9a1...	2105	40.76941	-73.91182	2025-11-29 23:13:31.795810 U...	42.1195	0.020007579	enroute	1
5	9e68ea81-5339-44c6-9ed7-80...	155	40.7718000...	-73.95616	2025-11-29 23:13:29.667770 U...	6.35022	0.04096163	enroute	1
6	67e704be-4885-4097-a079-25...	42	40.7414600...	-73.97829	2025-11-29 23:13:29.711520 U...	1.5862662	0.03776824	enroute	2
7	6fc92fb1740d-4159-b762-f7db...	439	40.78987	-73.982120...	2025-11-29 23:13:31.671940 U...	11.223803	0.02556675	enroute	2
8	24975703-041f-4b3b-883d-98...	25	40.7483600...	-73.982500...	2025-11-29 23:13:31.822070 U...	1.0309278	0.041237112	enroute	2
9	2cd562e2-bdbf-4313-b34d-7da...	31	40.6598300...	-73.79331	2025-11-29 23:13:29.883410 U...	0.21896203	0.007063291	enroute	1
10	9da965b3-7a4d-4161-bbde-f02...	334	40.7579...	-74.004370...	2025-11-29 23:13:31.629590 U...	9.97518	0.02987812	enroute	1
11	bcc0ccb8-ad9a-4797-b57e-351...	605	40.73814	-74.01008	2025-11-29 23:13:31.741540 U...	14.3185215	0.023666978	enroute	5
12	f695bc49-3848-4d17-9f2a-5cc...	184	40.7042800...	-73.994740...	2025-11-29 23:13:31.603030 U...	4.386498	0.023839664	enroute	1
13	7477e6b-711a-481d-b0dc-0d70...	1160	40.7716900...	-73.871140...	2025-11-29 23:13:31.846240 U...	32.951897	0.028406804	enroute	1
14	a639fe67-c1b6-4963-8011-4ed...	226	40.76339	-73.95626	2025-11-29 23:13:32.033410 U...	7.105303	0.031493994	enroute	5
15	837004be-61dd-4072-8b48-45...	430	40.7619000...	-73.99682	2025-11-29 23:13:31.924970 U...	10.583477	0.024612738	enroute	1
16	02df0033-dbe1-4f6c-9198-6188...	452	40.76944	-73.97148	2025-11-29 23:13:29.853080 U...	14.217623	0.031454917	enroute	1
17	65ca0f0e-3623-d22b-b6e7-935...	673	40.7484900...	-73.96895	2025-11-29 23:13:30.033410 U...	17.175203	0.025520362	enroute	1
18	b0c86316-9088-452a-9275-00b...	175	40.73004	-74.010470...	2025-11-29 23:13:31.581700 U...	4.758435	0.027191678	enroute	1
19	556fe9b2-7982-4c4e-85d1-73a...	205	40.76195	-73.97548	2025-11-29 23:13:31.683890 U...	6.76699	0.033009708	enroute	1
20	e20004ac-26b2-452b-b89b-99e...	170	40.76189	-73.99382	2025-11-29 23:13:31.684360 U...	5.0824738	0.029896906	enroute	1
21	c6b703c-10ae-4f2b-b51e-e8...	336	40.7648	-73.98429	2025-11-29 23:13:31.892910 U...	11.385124	0.033884298	enroute	1
22	b4c45705-0bb1-47e7-8b8f-e49...	914	40.7116700...	-73.82250...	2025-11-29 23:13:31.815900 U...	17.172121	0.018787878	enroute	1

- Take a screenshot showing the estimated number of rows in the table.

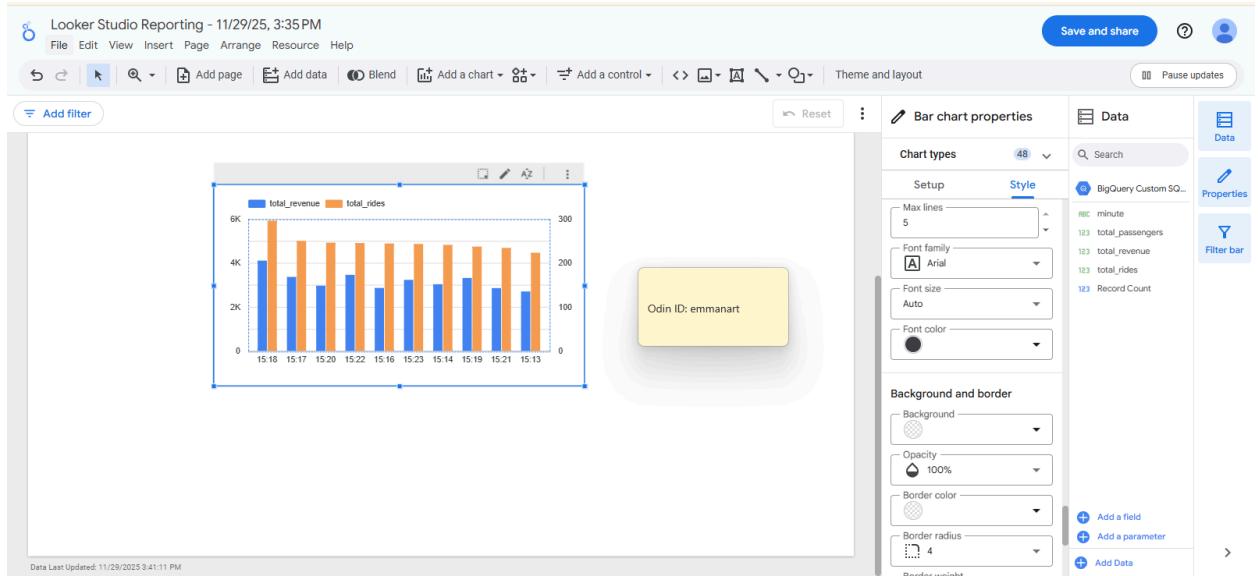
This screenshot shows the Apache Flink Data Stream Processing interface. The top navigation bar includes tabs for 'realtime' (selected), 'Query', 'Open in', 'Share', 'Copy', 'Snapshot', 'Delete', and 'Export'. A message at the top states, 'This is a partitioned table. [Learn more](#)' with a 'Dismiss' button. Below this, there are tabs for 'Schema', 'Details' (selected), 'Preview', 'Table Explorer', 'Preview', 'Insights', 'Lineage', 'Data Profile', and 'Data Quality'. The 'Details' tab displays metrics such as 'Long term logical bytes' (0 B), 'Current physical bytes' (0 B), 'Total physical bytes' (0 B), 'Active physical bytes' (0 B), 'Long term physical bytes' (0 B), and 'Time travel physical bytes' (0 B). A yellow callout box highlights the 'Odin ID: emmanart' entry in the 'Streaming buffer statistics' section, which also lists 'Estimated size' (211.24 MB), 'Estimated rows' (1,272,319), and 'Earliest entry time' (Nov 29, 2025, 3:15:24 PM UTC-8). At the bottom, there is a 'Job history' section with a 'Show' link.

- Take a screenshot showing the per-minute number of rides, passengers, and revenue for the data collected

This screenshot shows the Apache Flink Data Stream Processing interface displaying query results. A green checkmark icon indicates 'Query completed'. The results are presented in a table with columns: 'Job information', 'Results' (selected), 'Visualization', 'JSON', 'Execution details', and 'Execution graph'. The 'Results' table has rows from 1 to 12, each containing a timestamp ('minute') and three numerical values: 'total_rides', 'total_passengers', and 'total_revenue'. A yellow callout box highlights the 'Odin ID: emmanart' entry in the table, specifically the row for minute 15:19.

Row	minute	total_rides	total_passenger	total_revenue
1	15:13	223	360	2701.640009600...
2	15:14	241	364	3028.9199975
3	15:15	222	365	2792.340001300...
4	15:16	244	360	2861.379982600...
5	15:17	250	373	3362.459995599...
6	15:18	296	468	4103.050007100...
7	15:19	237	381	3314.509993899...
8	15:20	246	372	2962.240006099...
9	15:21	234	377	2853.929991899...
10	15:22	245	408	3456.599993199...
11	15:23	243	392	3227.9599978
12	15:24	147	261	1760.769996099...

- Take a screenshot showing the plot for your data for your lab notebook



Lab 10.3g

- Take a screenshot of the output to include in your lab notebook. How many networks, subnetworks, and VM instances have been created?

```

Google Cloud * cloud-Arthur-emmanart
Cloud Dataflow X Search
Cloud Shell Terminal (cloud-arthur-emmanart) + +
Cloud Shell (cloud-arthur-emmanart) x + +
Odin ID: emmanart

google compute subnetwork.us-west-1: Creation complete after 21s [id=projects/cloud-arthur-emmanart/regions/us-west-1/subnetworks/us-west-1]
google compute instance.w1: Creating...
google compute subnetwork.europe-west1: Creation complete after 23s [id=projects/cloud-arthur-emmanart/regions/europe-west1/subnetworks/europe-west1]
google compute instance.w1: Still creating... [10s elapsed]
google compute subnetwork.us-east1: Creation complete after 24s [id=projects/cloud-arthur-emmanart/regions/us-east1/subnetworks/us-east1]
google compute instance.w1: Creating...
google compute subnetwork.asia-east1: Still creating... [30s elapsed]
google compute instance.w1: Still creating... [10s elapsed]
google compute instance.w1: Still creating... [10s elapsed]
google compute subnetwork.asia-east1: Creation complete after 32s [id=projects/cloud-arthur-emmanart/regions/asia-east1/subnetworks/asia-east1]
google compute instance.asia1: Creating...
google compute instance.e1: Still creating... [10s elapsed]
google compute instance.e1: Still creating... [10s elapsed]
google compute instance.w1: Still creating... [20s elapsed]
google compute instance.w1: Still creating... [20s elapsed]
google compute instance.asia1: Still creating... [10s elapsed]
google compute instance.w1: Still creating... [20s elapsed]
google compute instance.e1: Still creating... [20s elapsed]
google compute instance.w1: Creation complete after 26s [id=projects/cloud-arthur-emmanart/zones/us-west1-b/instances/w1-vm]
google compute instance.w2: Creation complete after 26s [id=projects/cloud-arthur-emmanart/zones/us-west1-b/instances/w2-vm]
google compute instance.e1: Creation complete after 27s [id=projects/cloud-arthur-emmanart/zones/europe-west1-b/instances/e1-vm]
google compute instance.e2: Creation complete after 28s [id=projects/cloud-arthur-emmanart/zones/us-east1-b/instances/e2-vm]
google compute instance.asia1: Creation complete after 30s [id=projects/cloud-arthur-emmanart/zones/asia-east1-b/instances/asia1-vm]

Apply complete! Resources: 11 added, 0 changed, 0 destroyed.

Outputs:
instance_internal_ip = {
    "asia1" = "10.45.0.2"
    "e1" = "10.20.0.2"
    "eul" = "10.30.0.2"
    "w1" = "10.10.0.2"
    "w2" = "10.11.0.100"
}
instance_nat_ip = {
    "asia1" = "104.199.130.203"
    "e1" = "34.162.221.221"
    "eul" = "34.162.221.124"
    "w1" = "34.187.193.11"
    "w2" = "34.19.35.39"
}
emmanart@cloudshell:~/cm430-src/cm430 |||

```

1 network 5 subnets and 5 vms were created

- Visit the web console for VPC network and show the network and the subnetworks that have been created. Validate that it has created the infrastructure in the initial figure. Note the lack of firewall rules that have been created.

The screenshot shows the Google Cloud VPC Network details page for the network 'networking101'. The 'Subnets' tab is selected. A modal window titled 'Odin ID: emmanart' is open at the top right. The subnet table lists five entries:

Name	Region	Stack Type	Primary IPv4 range	Secondary IPv4 ranges	IPv6 ranges	Reserved internal ranges	PDP	Gateway	Private Google Access
asia-east1	asia-east1	IPv4 (single-stack)	10.40.0.0/16			None	None	10.40.0.1	On
europe-west1	europe-west1	IPv4 (single-stack)	10.30.0.0/16			None	None	10.30.0.1	On
us-east5	us-east5	IPv4 (single-stack)	10.20.0.0/16			None	None	10.20.0.1	On
us-west-s1	us-west1	IPv4 (single-stack)	10.10.0.0/16			None	None	10.10.0.1	On
us-west-s2	us-west1	IPv4 (single-stack)	10.11.0.0/16			None	None	10.11.0.1	On

Below the table, there is a section for 'Reserved proxy-only subnets for load balancing' which is currently empty.

- Visit the web console for Compute Engine and show all VMs that have been created, their internal IP addresses and the subnetworks they have been instantiated on. Validate that it has created the infrastructure shown in the initial figure.

The screenshot shows the Google Cloud VM Instances page. The 'Instances' tab is selected. A modal window titled 'Odin ID: emmanart' is open at the top right. The instance table lists five entries:

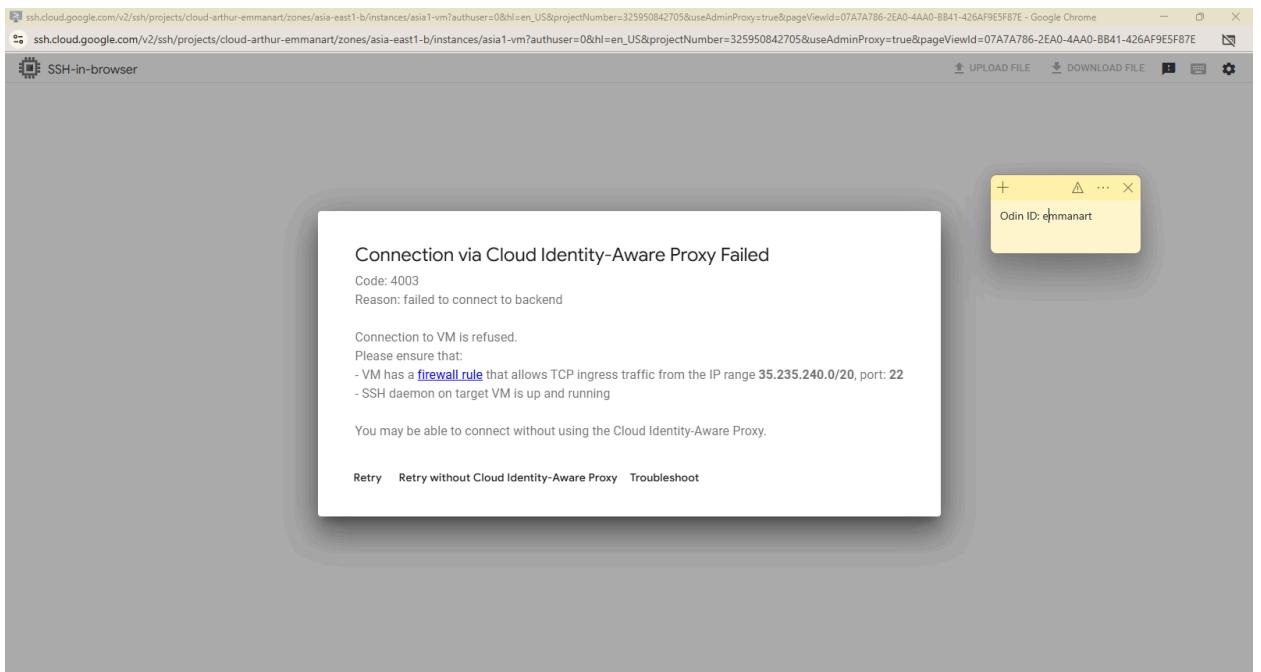
Status	Name	Zone	Creation time	Recommendations	In use by	Internal IP	External IP	Network	Connect
OK	asia1-vm	asia-east1-b	Nov 29, 2025, 6:17:44 PM			10.40.0.2 (nic0)	104.199.130.203 (nic0)	networking101	SSH
OK	e1-vm	us-east5-a	Nov 29, 2025, 6:17:35 PM			10.20.0.2 (nic0)	34.162.221.221 (nic0)	networking101	SSH
OK	eu1-vm	europe-west1-d	Nov 29, 2025, 6:17:32 PM			10.30.0.2 (nic0)	35.205.244.124 (nic0)	networking101	SSH
OK	w1-vm	us-west1-b	Nov 29, 2025, 6:17:30 PM			10.10.0.2 (nic0)	34.187.193.61 (nic0)	networking101	SSH
OK	w2-vm	us-west1-b	Nov 29, 2025, 6:17:30 PM			10.11.0.100 (nic0)	34.19.35.39 (nic0)	networking101	SSH

Below the table, there is a 'Related actions' section with several cards:

- Fix data protection gaps (New): Assesses data protection gaps at no cost. You can use the Backup and DR Service to configure VM backups with backup vault storage.
- View billing report: View and manage your Compute Engine billing.
- Monitor VMs: View outlier VMs across metrics like CPU and network.
- Explore VM logs: View, search, analyze, and download VM instance logs.
- Set up firewall rules: Control traffic to and from a VM instance.
- Patch management: Schedule patch updates and view patch compliance on VM instances.
- Load balance between VMs: Set up Load Balancing for your applications as your traffic and users grow.

- Click on the **ssh** button for one of the VMs and attempt to connect. Did it succeed?

No

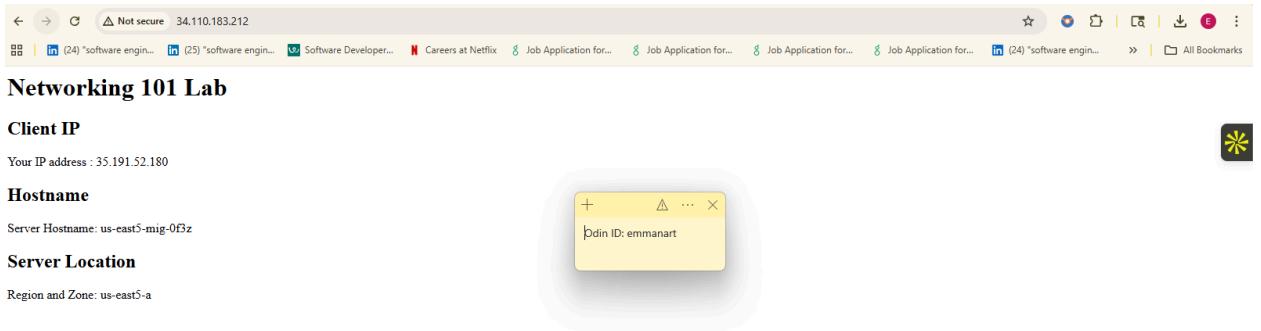


- Take a screenshot that indicates the new rules have been deployed

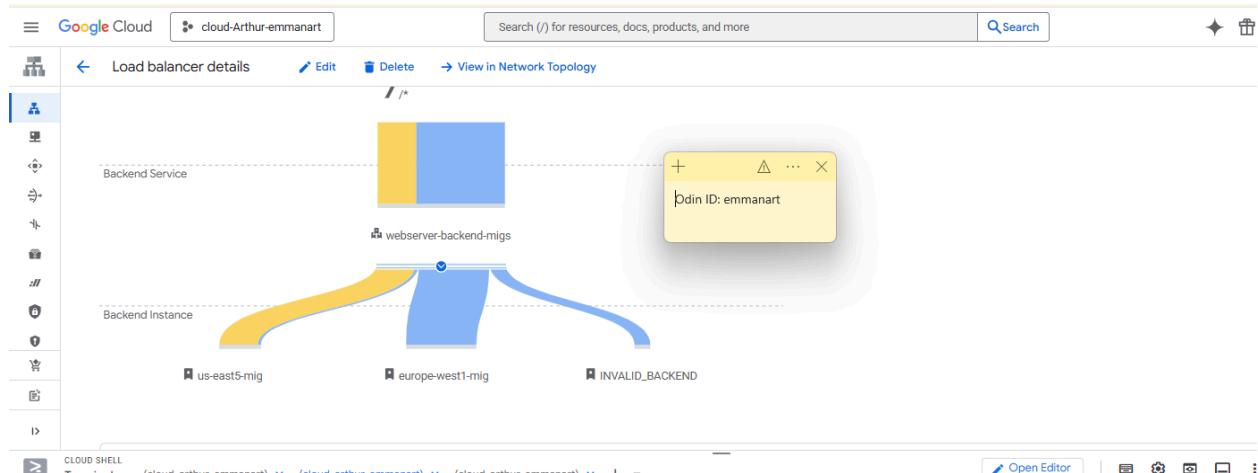
- Given this, fill in the table with the measured latencies between the 6 pairs and include it in your lab notebook. Use the shortest latency measured for each pair.

Location pair	Ideal latency	Measured latency
us-west1 us-east5	~45 ms	56.6
us-west1 europe-west1	~93 ms	133.1
us-west1 asia-east1	~114 ms	116.2
us-east5 europe-west1	~76 ms	98.5
us-east5 asia-east1	~141 ms	163.6
europe-west1 asia-east1	~110 ms	248.8

- Are the instances in the same availability zone or in different ones?
- List all availability zones that your servers show up in for your lab notebook.
- Show a screenshot of the page that is returned.



- Which availability zone does the server handling your request reside in?
- Does the backend server handling the request change?
- Take a screenshot of the initial traffic distribution



- Take a screenshot of the UI as additional instances are brought up and show that the traffic distribution shifts
- Show a screenshot of the final traffic distribution.

console.cloud.google.com/net-services/loadbalancing/details/http/webserver-frontend-lb?project=cloud-arthur-emmanart&cloudshell=true

(24) "software engin... (25) "software engin... Software Developer... Careers at Netflix Job Application for... Job Application for... Job Application for... Job Application for... (24) "software engin... >> All Bookmarks

Google Cloud cloud-Arthur-emmanart Search (/) for resources, docs, products, and more Q Search

Load balancer details Edit Delete View in Network Topology

URL Rule

Backend Service

Odin ID: emmanart

CLOUD SHELL Terminal (cloud-arthur-emmanart) x (cloud-arthur-emmanart) x (cloud-arthur-emmanart) x + Open Editor

Gemini CLI is available in Cloud Shell terminal! Type gemini to try it. [Learn more](#)

Don't show again Dismiss

```
response_time": 14.25,
"transaction_rate": 13.53,
"throughput": 0.01,
"concurrent_tx": 190.74,
"successful_transactions": 577,
"failed_transactions": 1030,
"longest_transaction": 19.29,
"shortest_transaction": 0.00
}
```

emmanart@eui-vm:~\$ |

The screenshot shows the Google Cloud Load Balancer details page for a project named 'cloud-arthur-emmanart'. It displays two main components: a URL Rule and a Backend Service. The URL Rule is configured with a path of '/'. The Backend Service is associated with a 'webserver-backend-migs' instance. To the right of the URL Rule, there is a yellow box labeled 'Odin ID: emmanart'. Below the URL Rule, there is a yellow box containing the text 'Gemini CLI is available in Cloud Shell terminal! Type gemini to try it.' followed by a link to 'Learn more'. At the bottom of the terminal window, there is a command prompt: 'emmanart@eui-vm:~\$ |'. The terminal also shows some performance metrics output from the Gemini CLI.