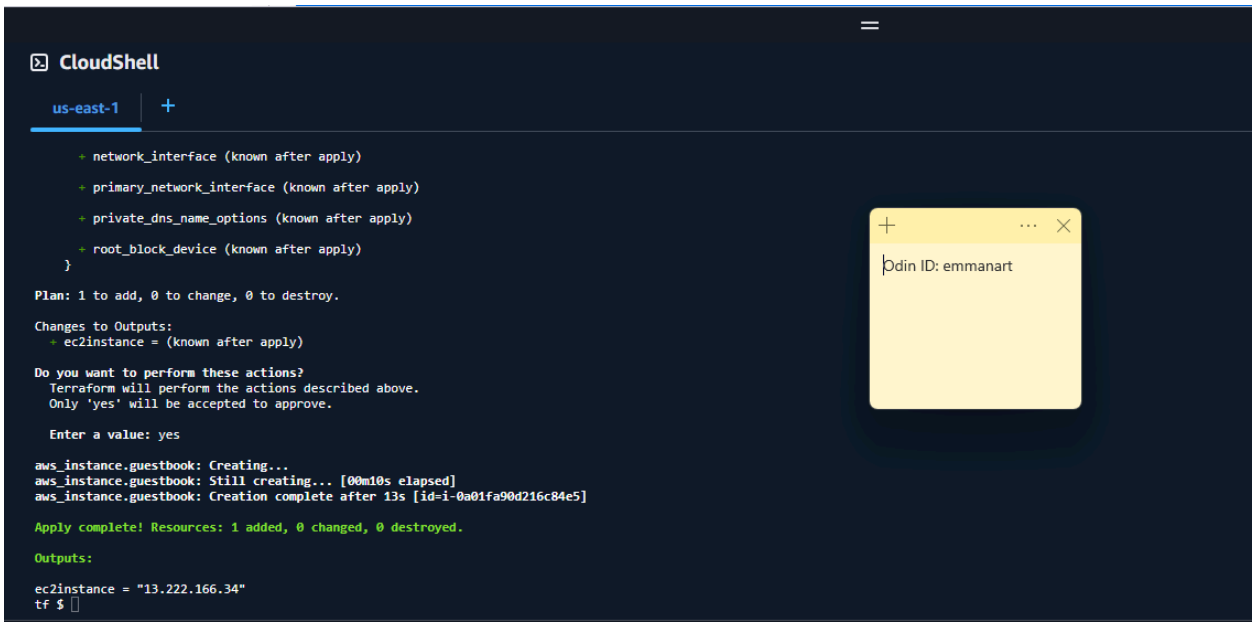
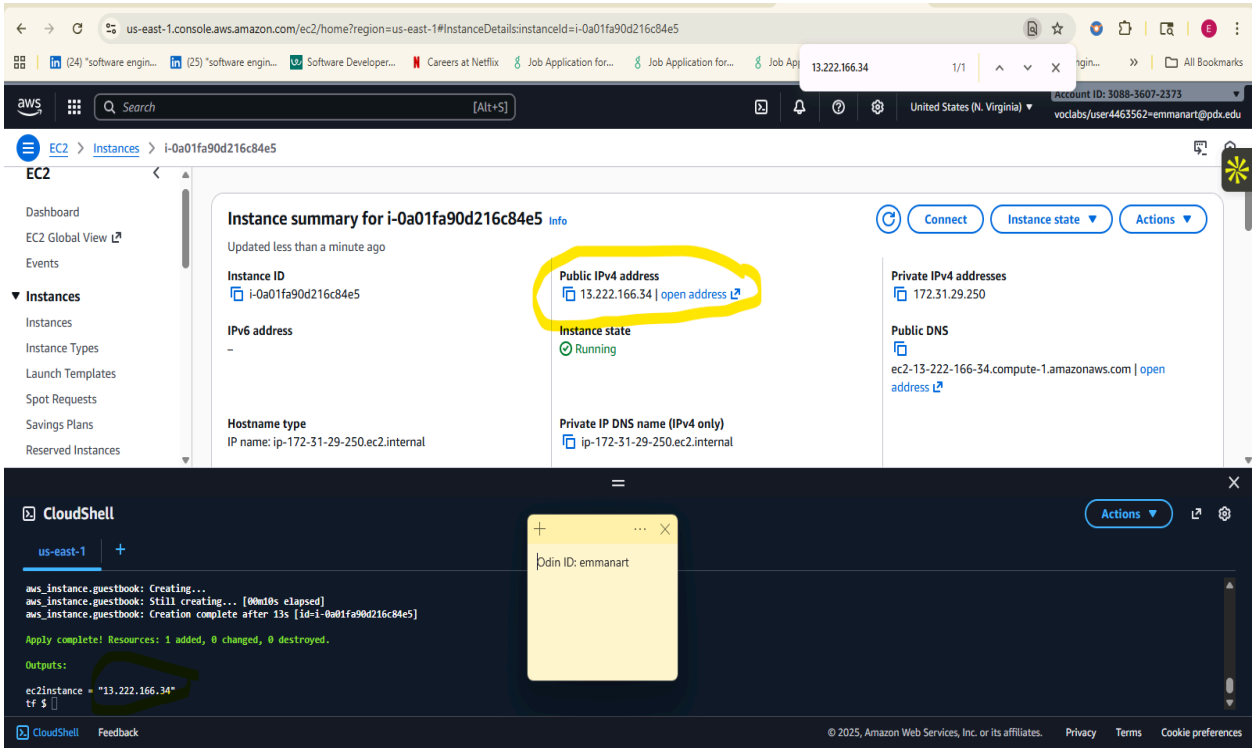
Lab 7.1 a

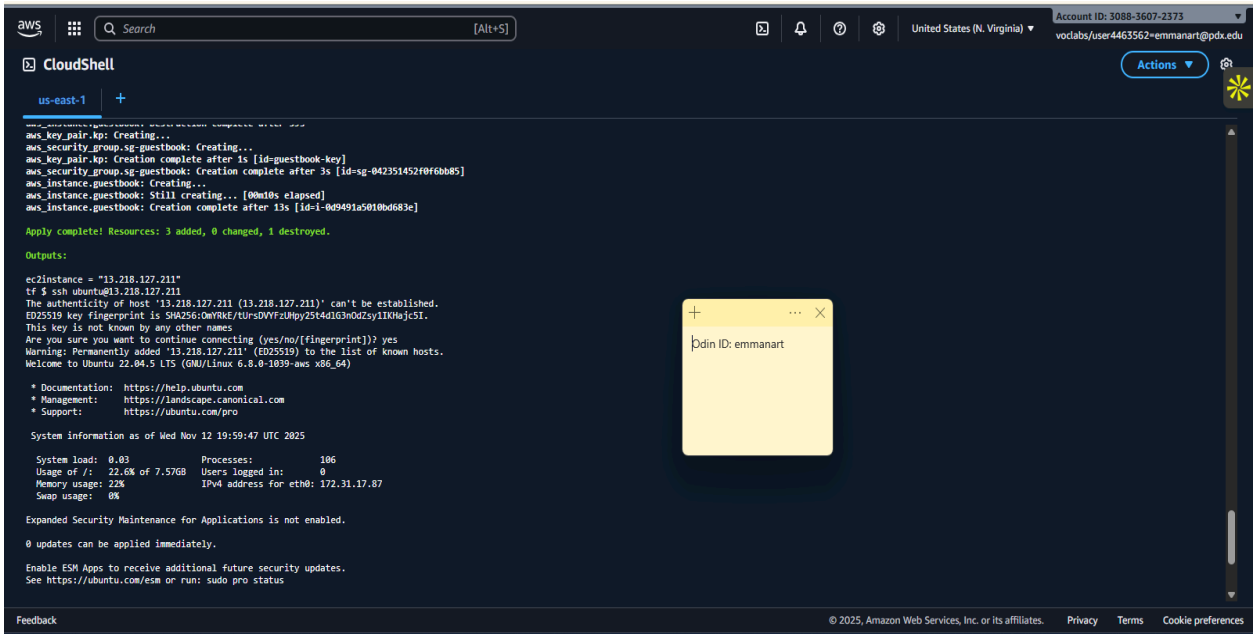
- Take a screenshot showing the completion of the command including its output

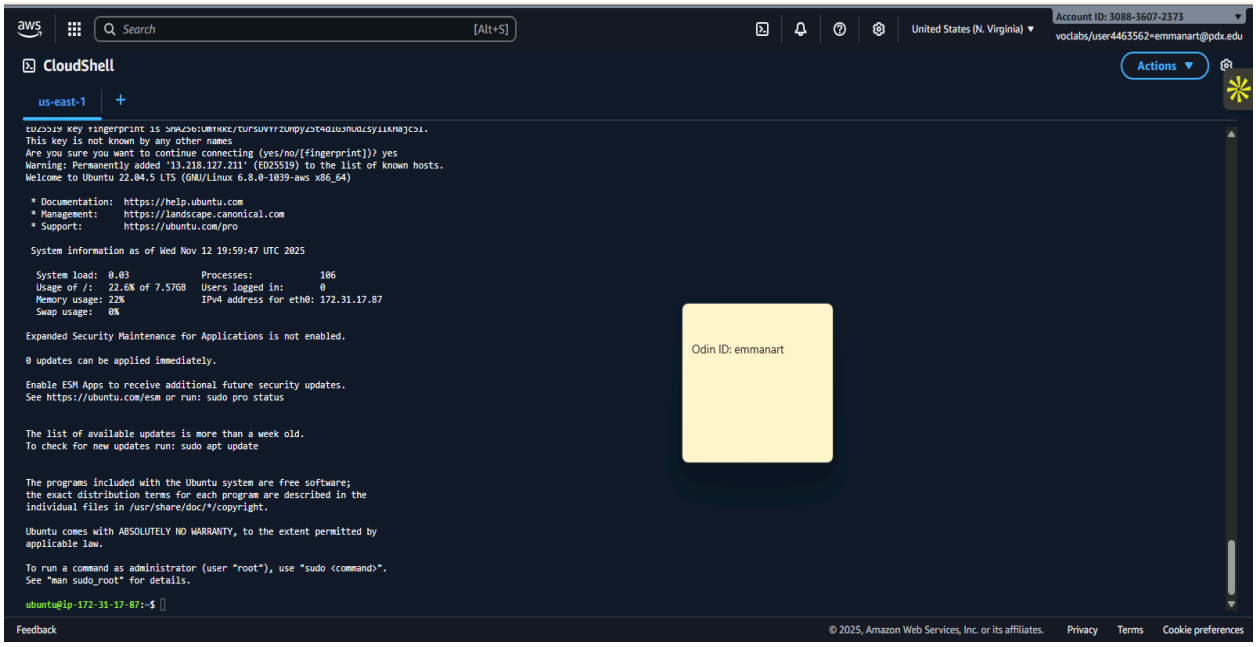


- Take a screenshot that includes the VM's IP addresses

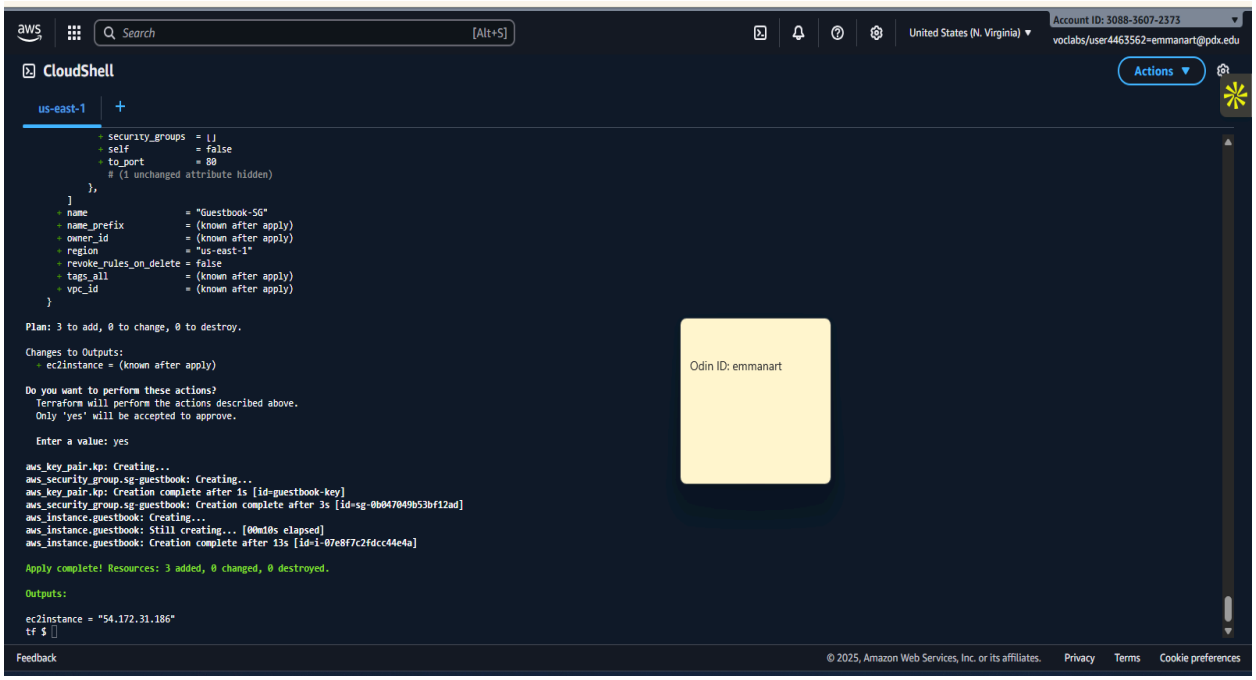


- Take a screenshot of the successful ssh login from Cloud Shell.

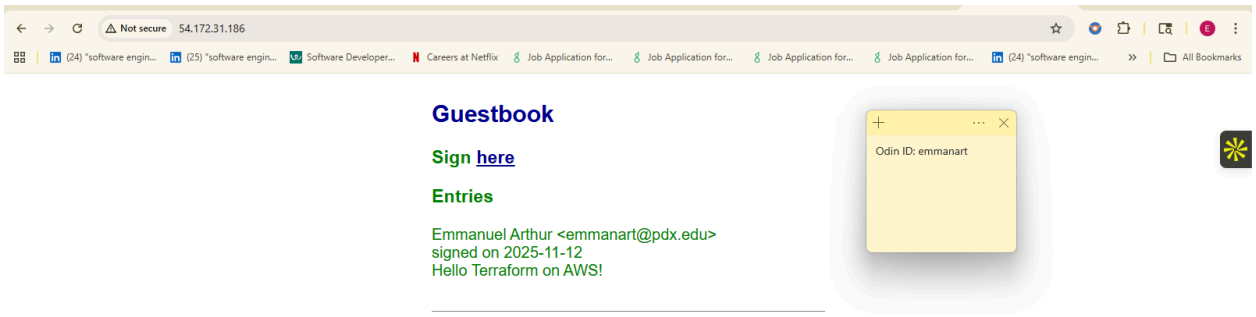




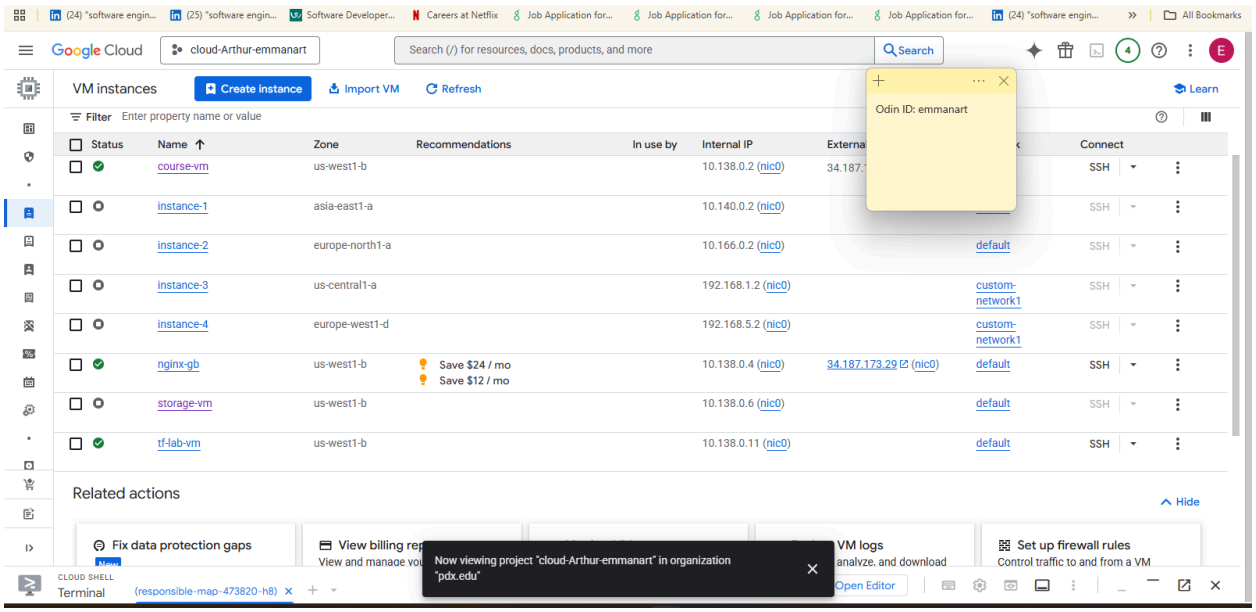
- Take a screenshot of the output of the command that includes the IP address of the instance



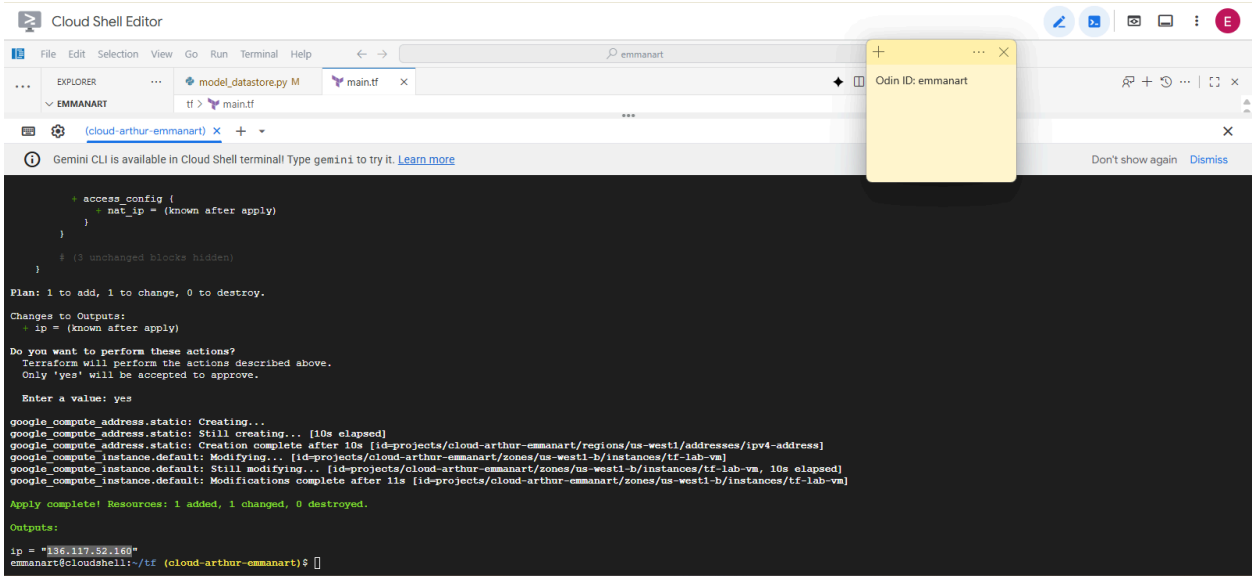
- Take a screenshot of the Guestbook including the URL with the entry in it.



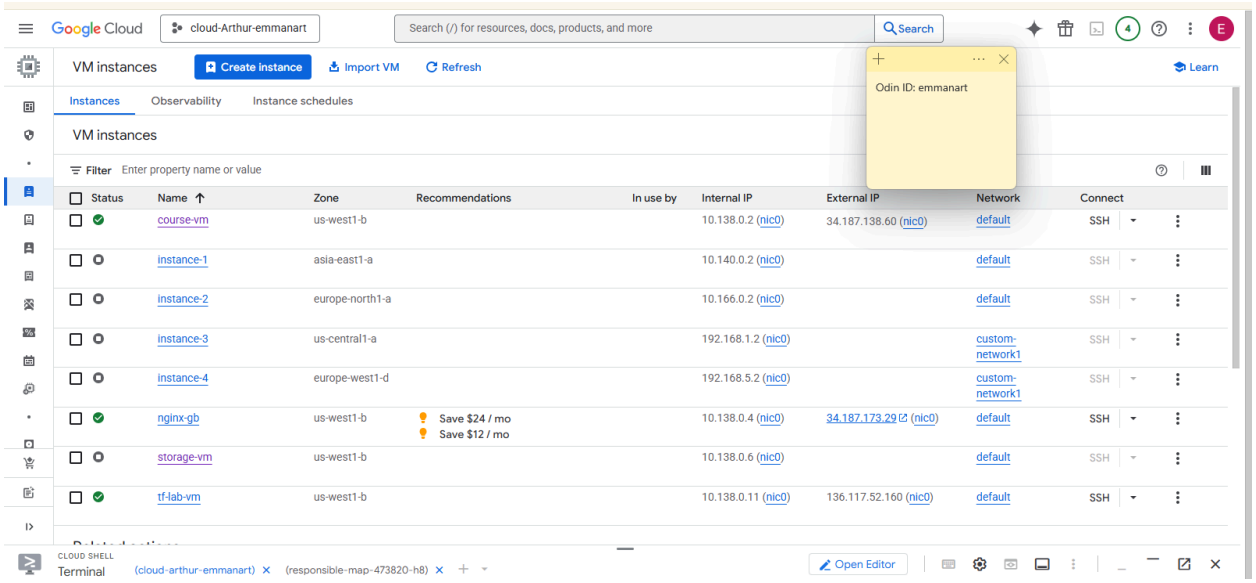
- Take a screenshot that includes the VM's IP addresses



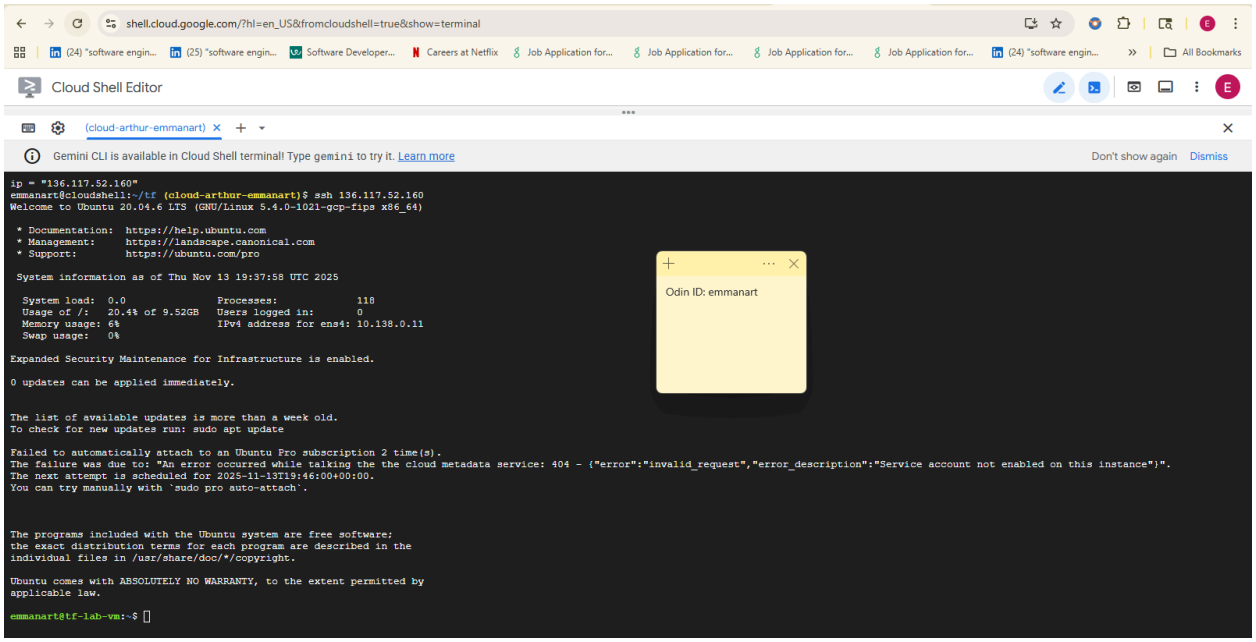
- Take a screenshot showing the completion of the command including its output



- Take a screenshot that includes the VM's IP addresses



- Take a screenshot of the successful ssh login from Cloud Shell.



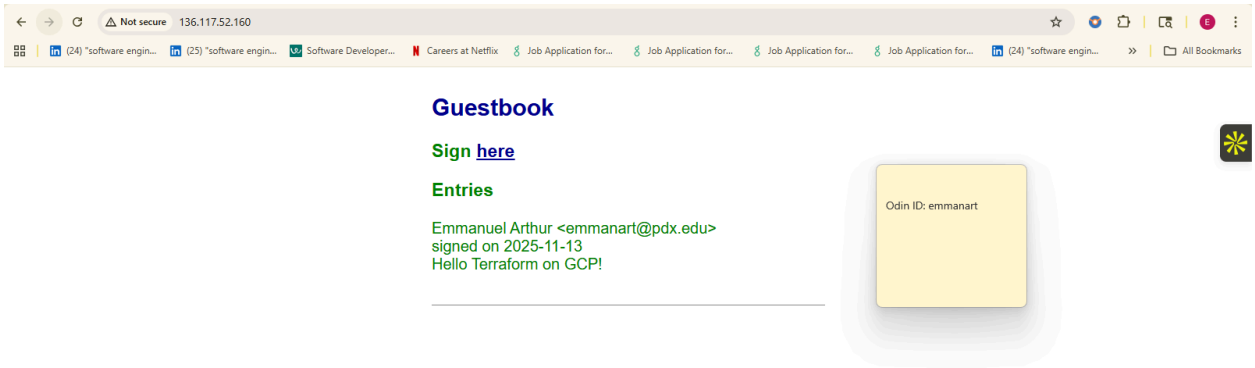
- What resources are being added, changed, or destroyed?

  The google_compute_instance.default resource is being replaced (destroyed and recreated). No new standalone resources are being added. The replacement is triggered because the metadata_startup_script field was added, and this field forces Terraform to recreate the entire VM instead of updating it in place.

- What part of the configuration forces a replacement to occur?

  The addition of the metadata_startup_script field forces the replacement.

- Take a screenshot of the Guestbook including the URL with the entry in it.



Lab 7.2g

- What is the name of the Instance Template dynamically generated to create the two nodes (VMs)?

  gke-guestbook-default-pool-b823f3e2

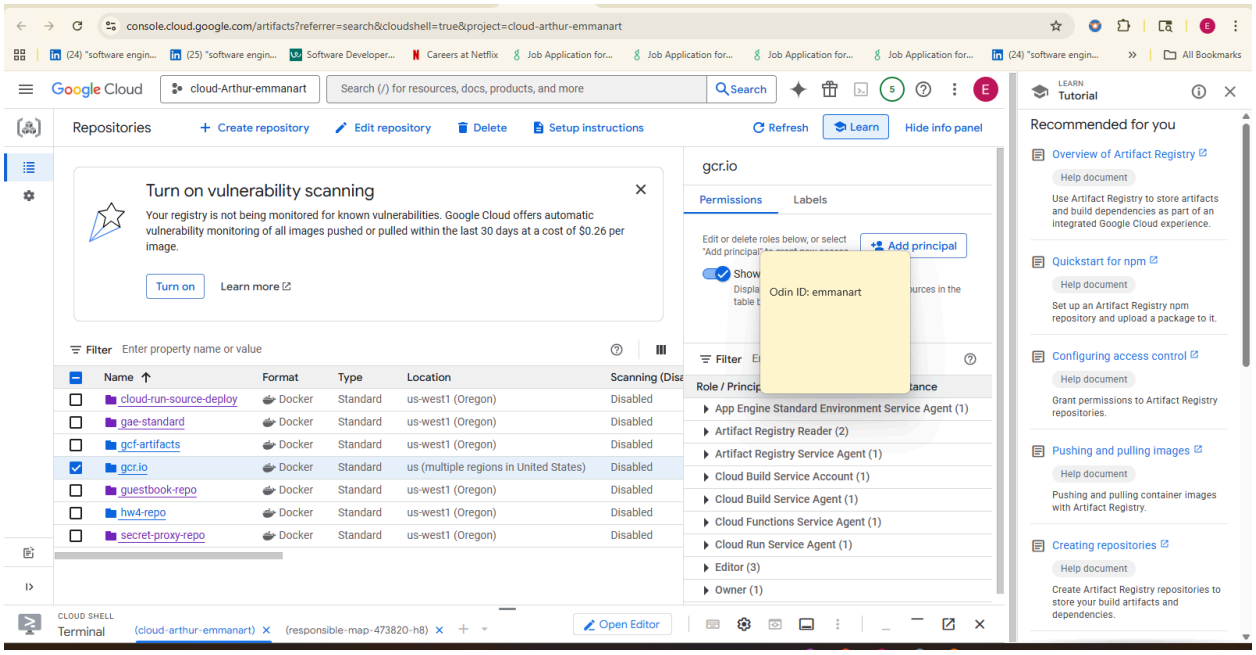
- What is the name of the Instance Group dynamically generated that the two nodes belong to?

  gke-guestbook-default-pool-b823f3e2-grp

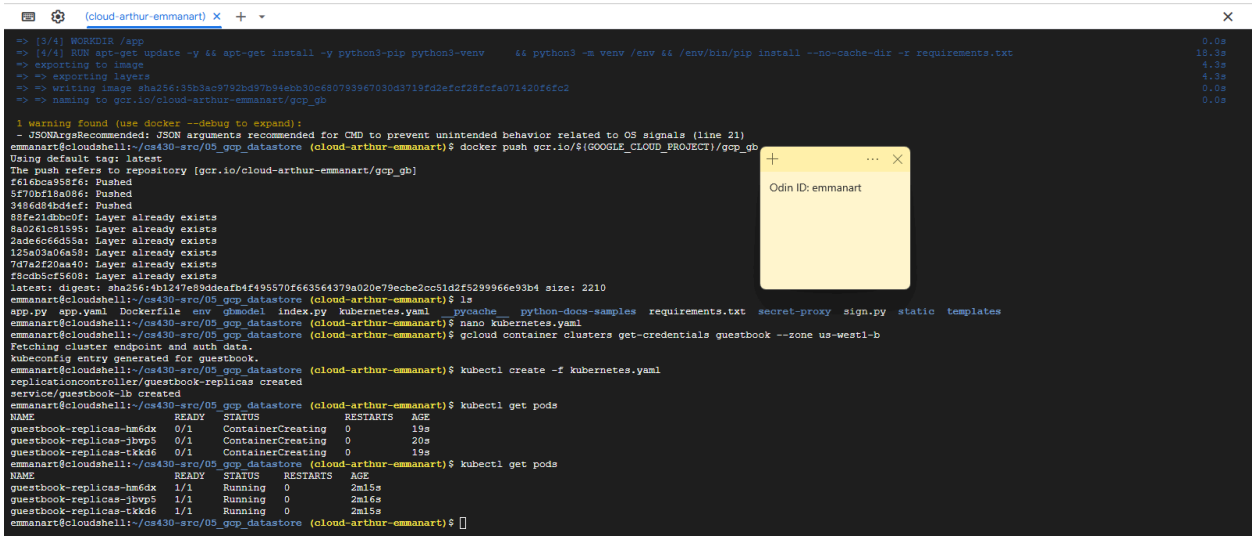
- What are the names of the two nodes?

gke-guestbook-default-pool-b823f3e2-mnv2 and
gke-guestbook-default-pool-b823f3e2-pxwq

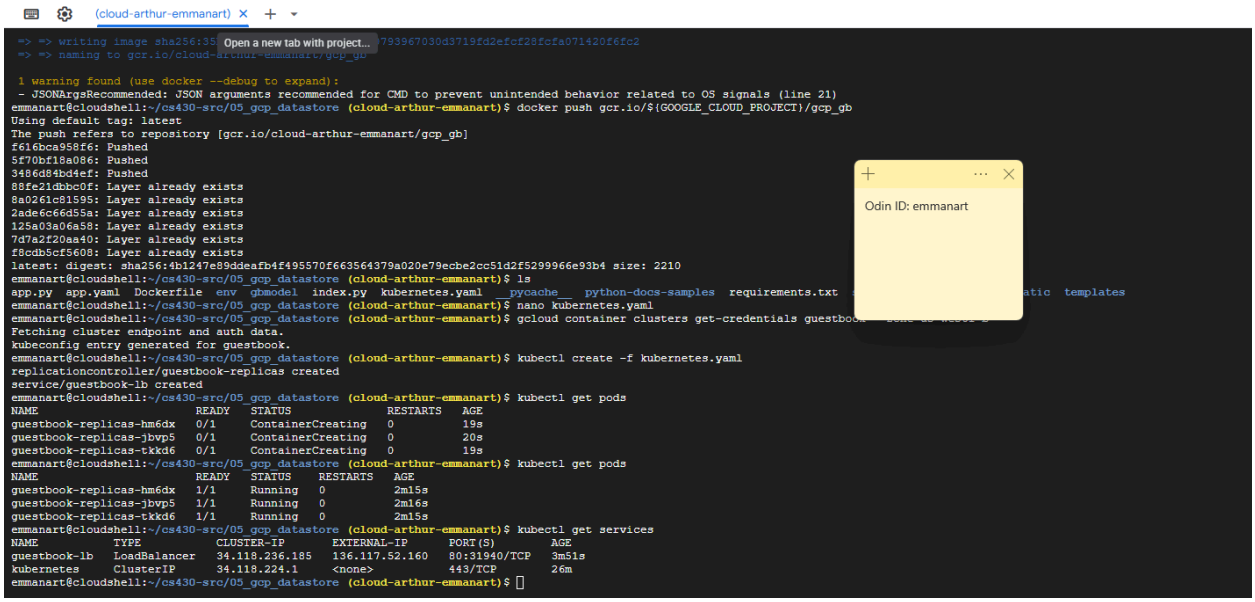
- Take a screenshot of the container image created



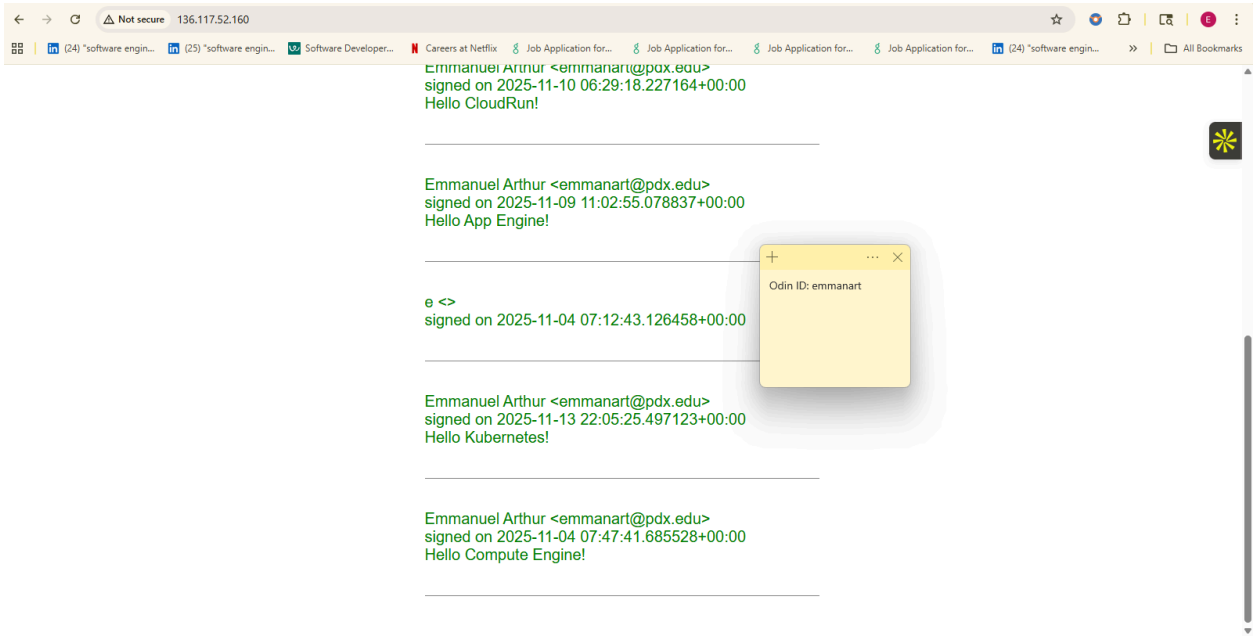
- Take a screenshot of the output of the following command when all 3 replicas reach a "Running" state.



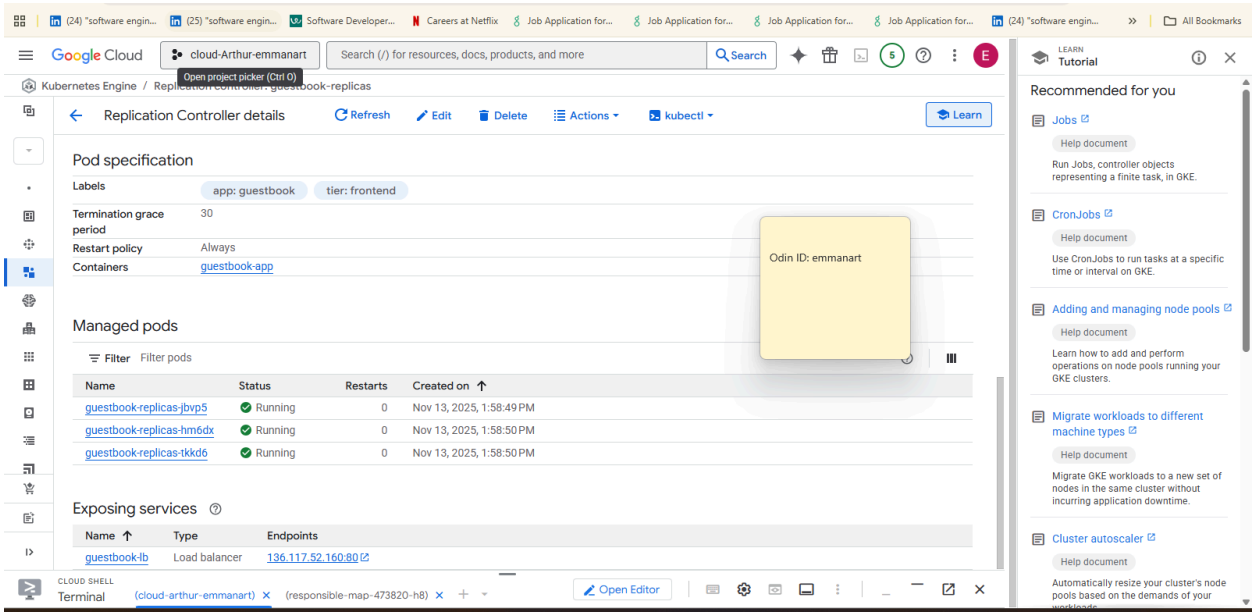
- Take a screenshot of listing services with LoadBalancer indicating an external IP address that is ready for access.



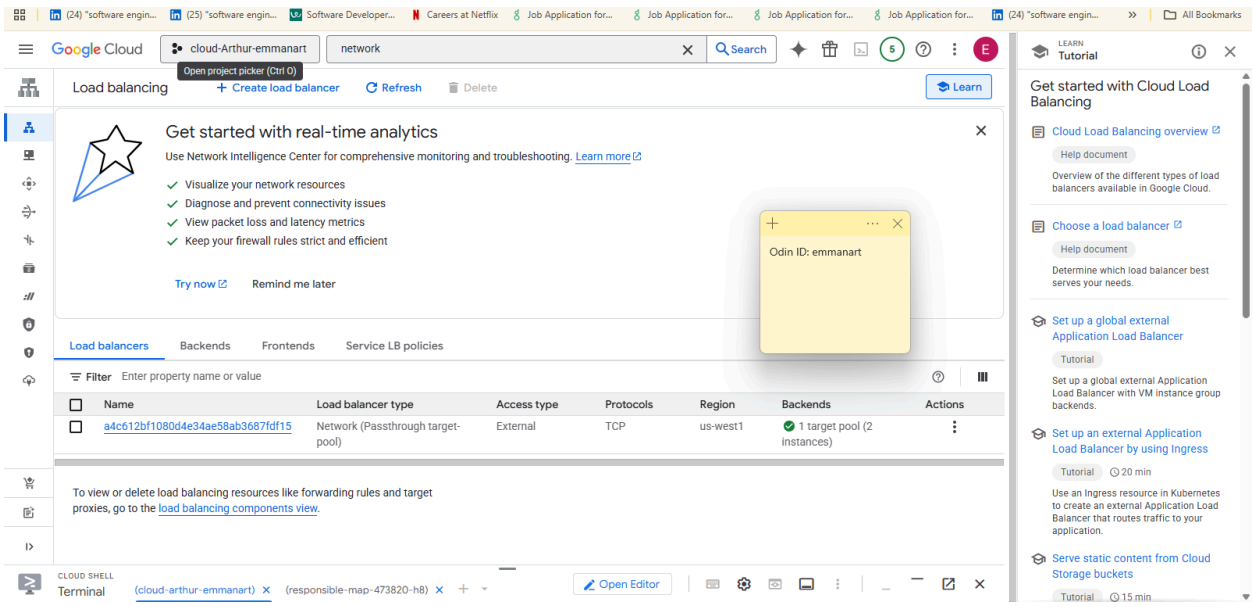
- Take a screenshot of the Guestbook including the URL with the entry in it.



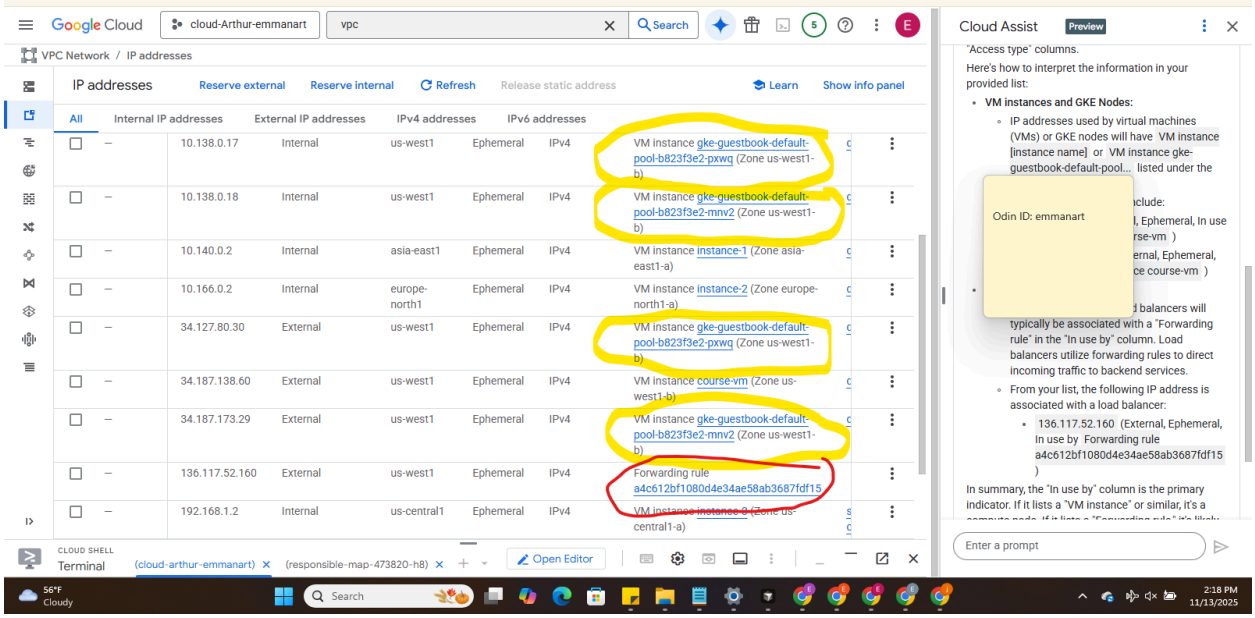
- Take a screenshot of the managed guestbook pods and the service being exposed.



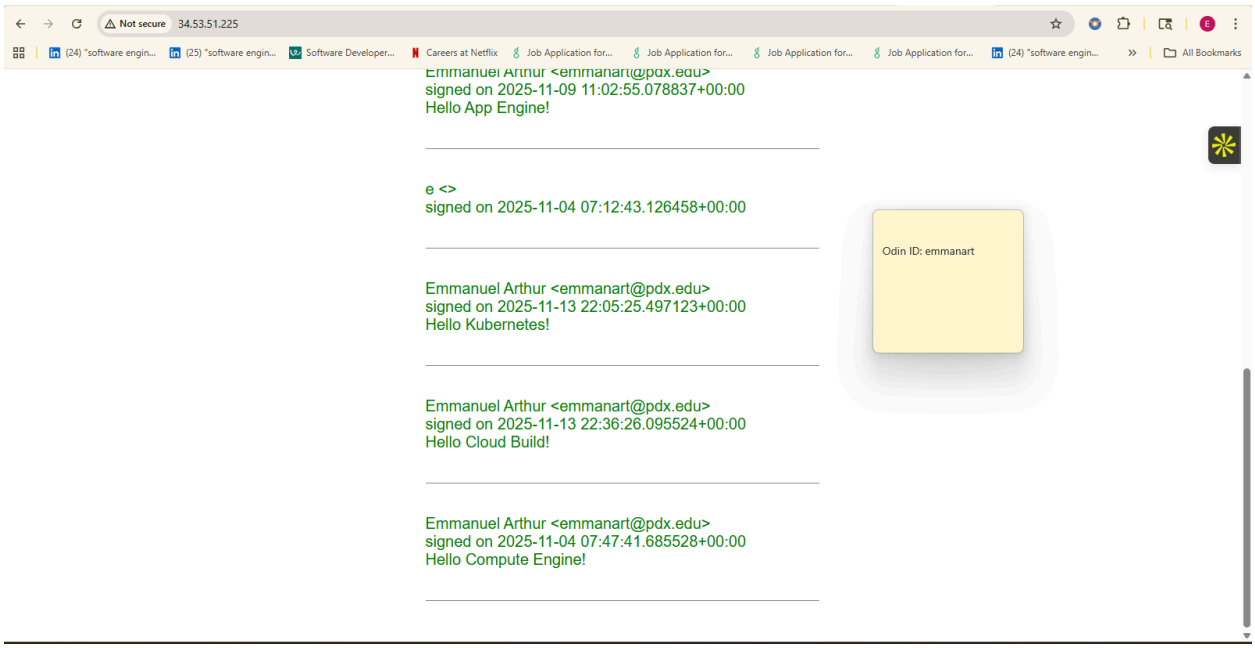
- Take a screenshot of the load balancer and its details



- Take a screenshot of the addresses allocated and indicate the ones associated with nodes versus the one associated with the load balancer.



- Take a screenshot of the Guestbook including the URL with the entry in it.



Lab 7.3g

- Does Google provide a Python package specifically for accessing the Knowledge Graph API?

  No there are no Python packages specifically for accessing the Knowledge Graph API

- Show the source line that constructs the query we wish to send to the Knowledge Graph API.

  req = kgsearch.entities().search(query=query, limit=1)

- Show the source line that then executes the query and saves the response. What is the name of the method that sends the query to the Knowledge Graph API?

  res = req.execute()

  The name of the method that sends the query is execute()

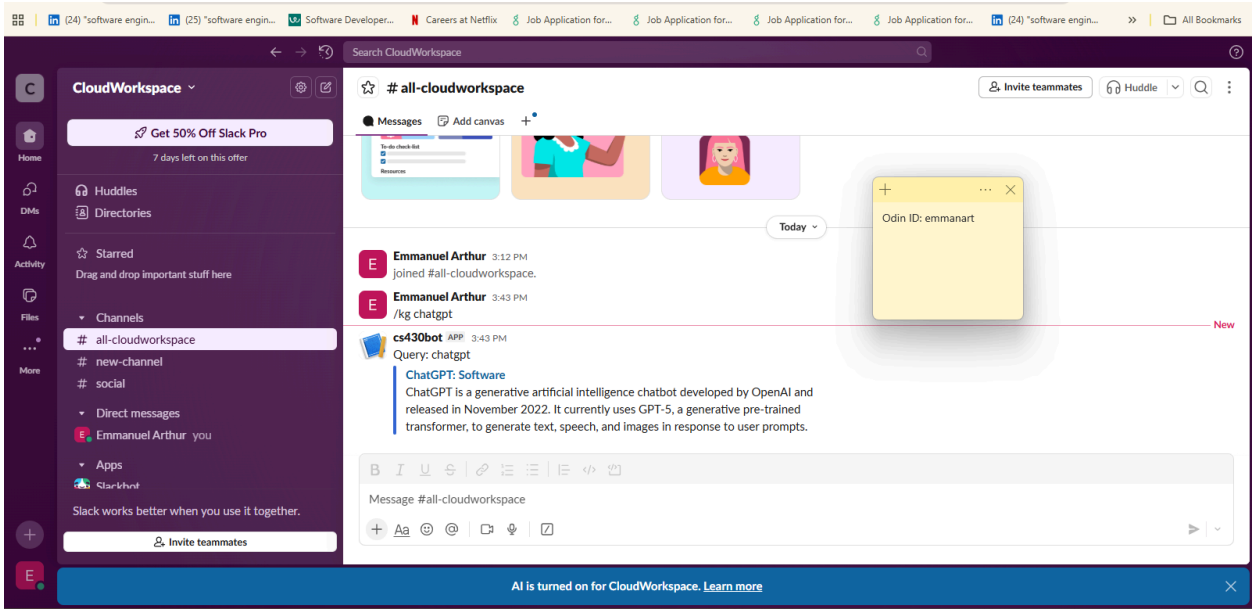
- What is the Python data type that is used to represent the formatted message?

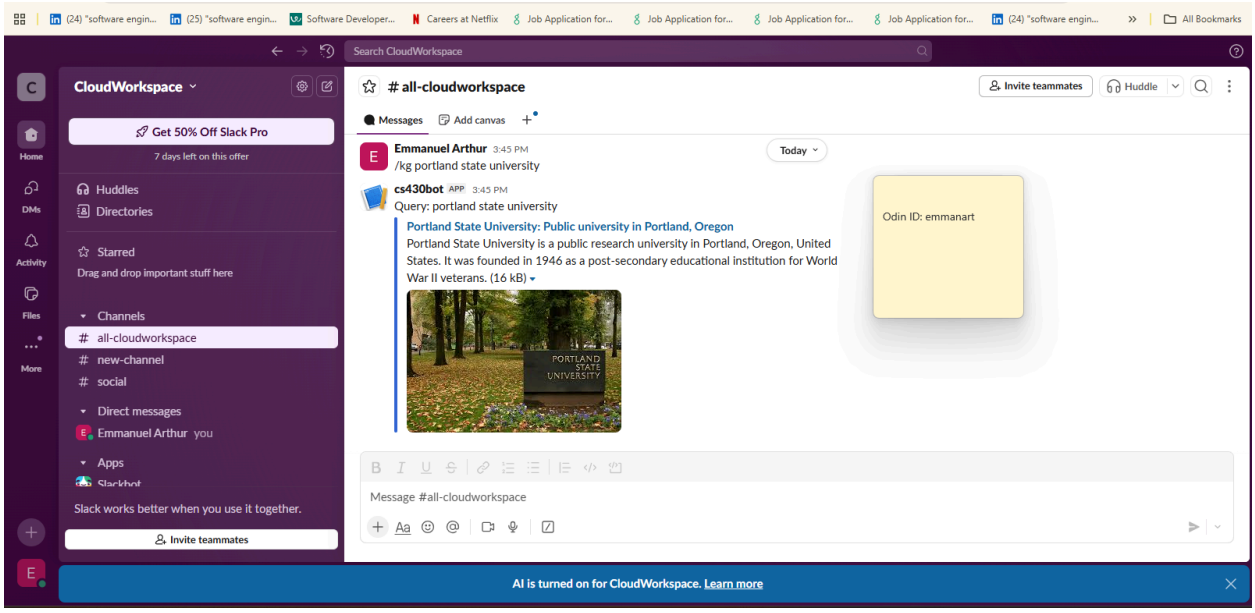
  Dictionary

- What are the three main attributes of the formatted message passed back to Slack?

  response_type , text, attachments

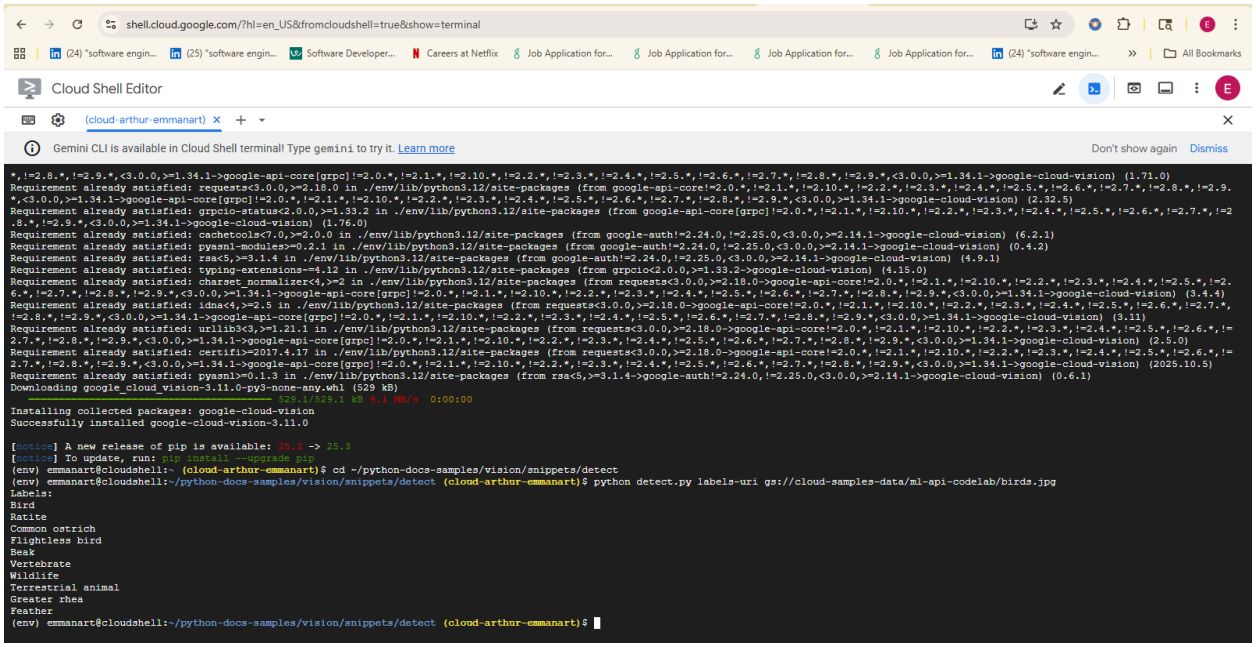
- Take a screenshot of its response for your lab notebook.





Lab 7.4g

- Show the output for your lab notebook



- What is the name of the function?

- What type of Vision client is instantiated in it?

  Image Annotator client (`vision.ImageAnnotatorClient()`)

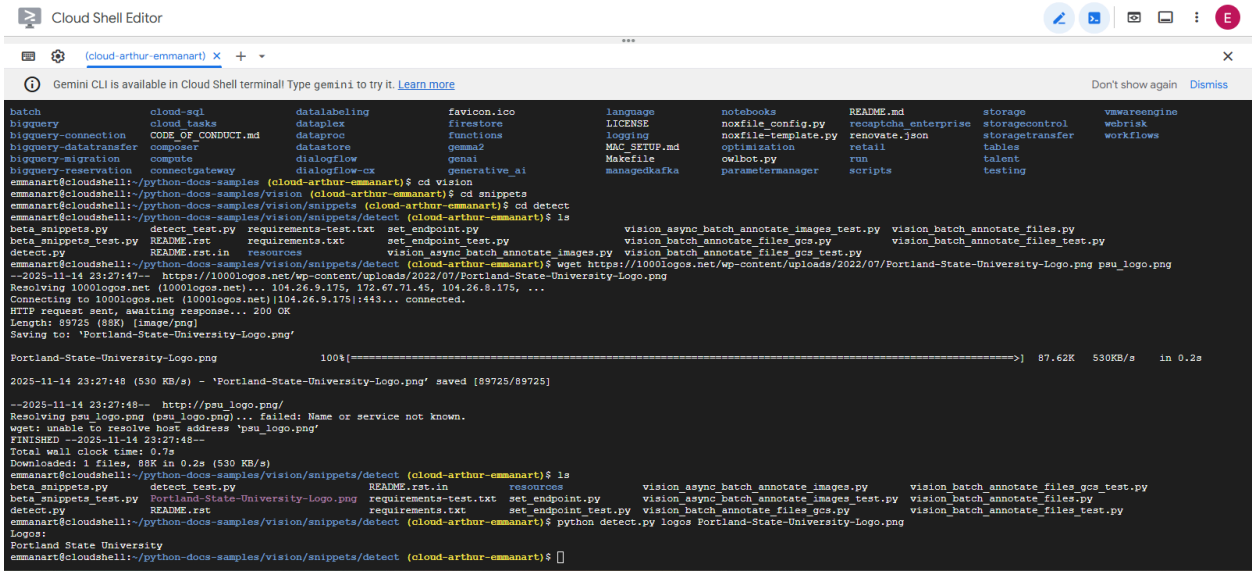
- What method is invoked in the Vision client to perform the detection?

  The “label_detection” method

- What is the name of the attribute in the response object that contains the results we seek?

  The `label_annotations` attribute

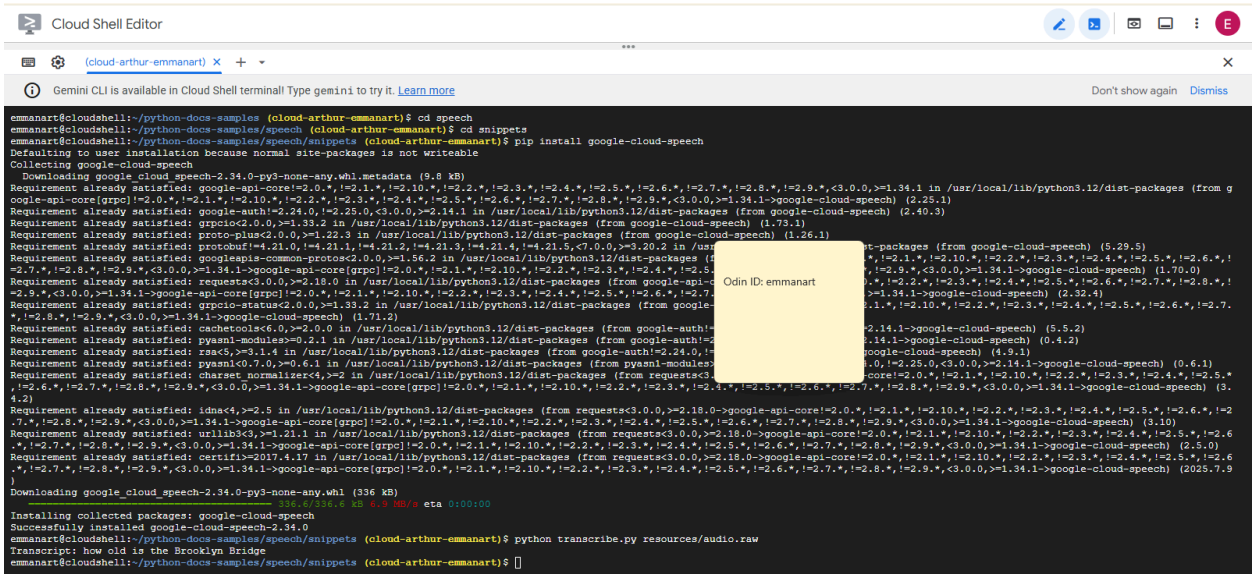
- Take a screenshot of the output for the above commands



- What method is invoked in the Vision client to perform the detection?

  .logo_detection method

- Show the output for your lab notebook



- What is the name of the function?

  Since the path to the audio file did not start with gcs the name of the function must be `transcribe_file`

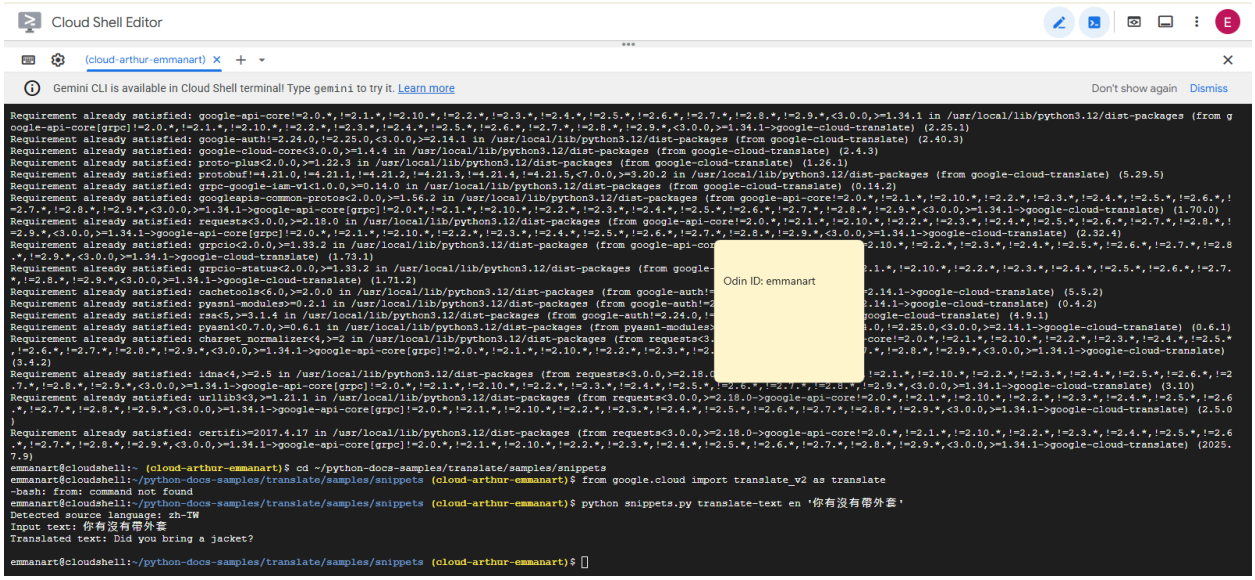
- What method is invoked in the Speech client to perform the detection?

  The recognize method

- What is the name of the attribute in the response object that contains the results we seek?

  The results attribute

- Show the output for your lab notebook



- What is the name of the function?

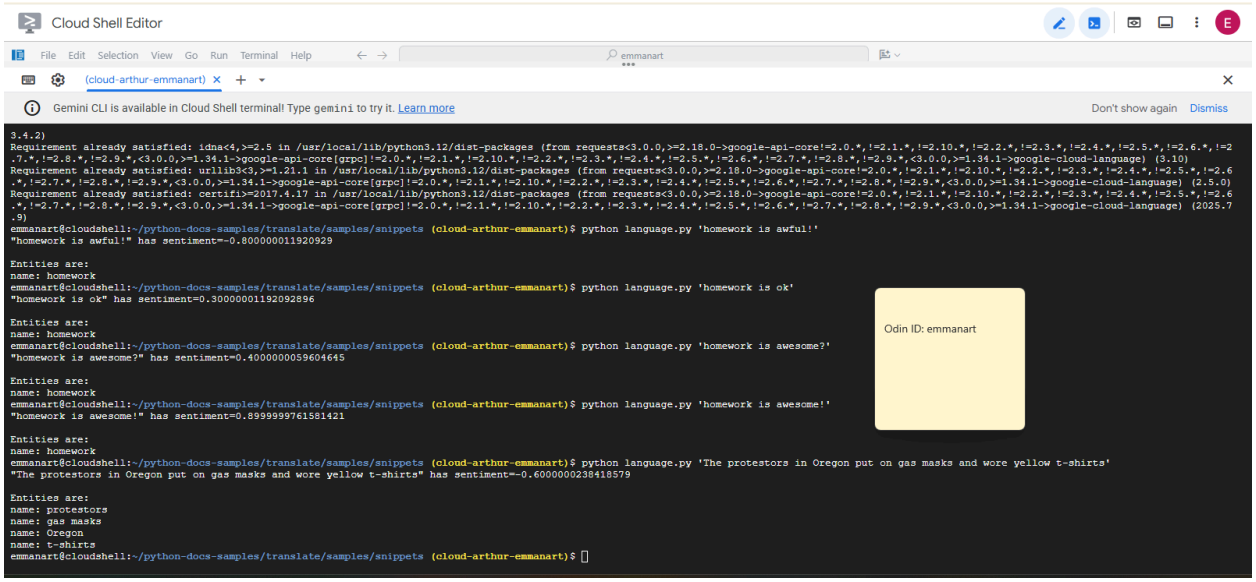
  It's the translate_text function

- What method is invoked in the Translate client to perform the detection?

  translate method of the translate.client object

- What is the name of the attribute in the response object that contains the results we seek?

- Show the output for your lab notebook



- What is the name of the function that performs the transcription?

  transcribe_gcs

- What is the name of the function that performs the translation?

  translate_text

- What is the name of the function that performs the entity analysis on the translation?

  entities_text

- What is the name of the function that performs the entity analysis on the image?

  Detect_labels_uri

- If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

  Not much needs to be changed for the ball stadium situation

- If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

  For the bicycle situation it seems bike is not matched with Bicycle so we need

- If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

  For the ostrich situation we need to alter the code to account for the fact that a major substring of a string in entities could match a major substring of a string in the labels.

- What are the 3 labels with the highest confidence that the Video Intelligence API associates with the video and what are the confidences for each?

Sports: Confidence: 0.9218811392784119

Basketball: Confidence: 0.9137870669364929

Player: Confidence: 0.8446521162986755

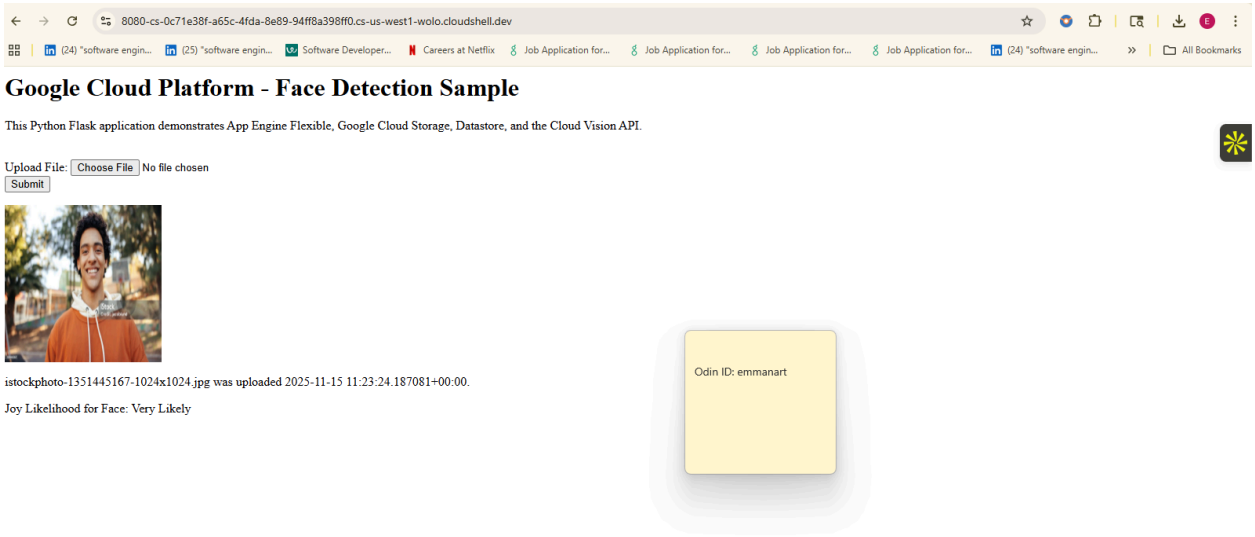
- What is the name of the client class in the package that is used?

  VideoIntelligenceServiceClient

- What method is used in that class to perform the annotation?

  annotate_video

- Take a screenshot for your lab notebook that includes the URL.



- What line of code creates the query for previous detections?

```
query = datastore_client.query(kind="Faces")
```

- What line of code sends the query to Cloud Datastore?

```
image_entities = list(query.fetch())
```

Then, view the `upload_photo` route.

- Show the line that retrieves the name of the storage bucket to use.

```
bucket = storage_client.get_bucket(CLOUD_STORAGE_BUCKET)
```

- What form field is used to specify the uploaded photo?

  Upload photo

- Show the line that copies the photo's contents to the storage bucket.

```
blob = bucket.blob(photo.filename)

blob.upload_from_string(photo.read(),
content_type=photo.content_type)
```

- What method in Vision's annotation client is used to perform the analysis?

  face_detection as seen in this line: `faces = vision_client.face_detection(image=image).face_annotations`

- What fields are stored in Cloud Datastore for each image?

  blob_name, image_public_url, timestamp, joy as seen in the code below:

```
entity = datastore.Entity(key)

    entity["blob_name"] = blob.name
```

```
        entity["image_public_url"] = blob.public_url

        entity["timestamp"] = current_datetime

        entity["joy"] = face_joy
```

- What happens at the end of the `upload_photo` route?

  It redirects to the home page