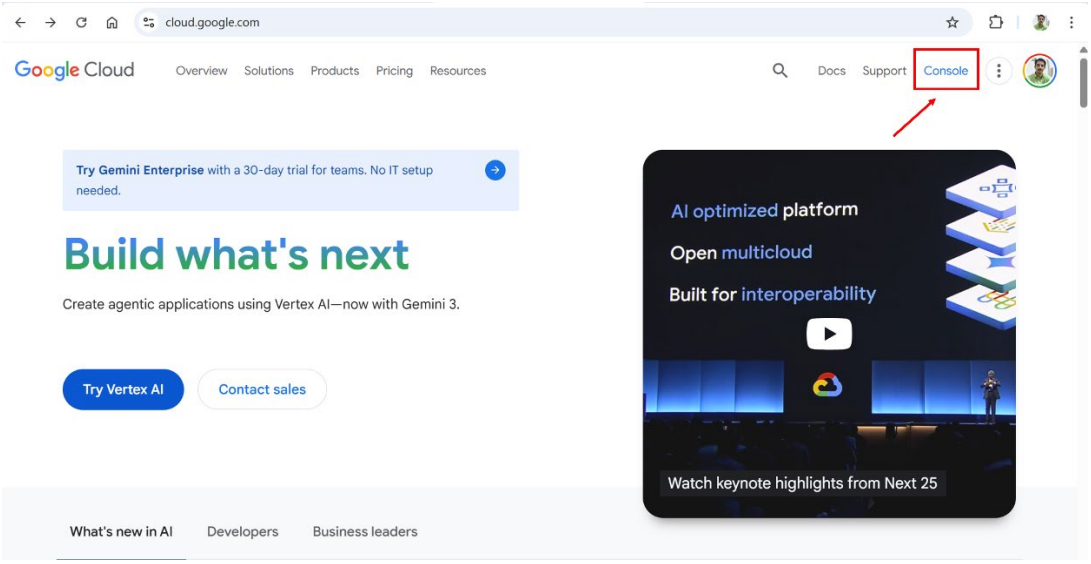
CLOUD COMPUTING LABORATORY

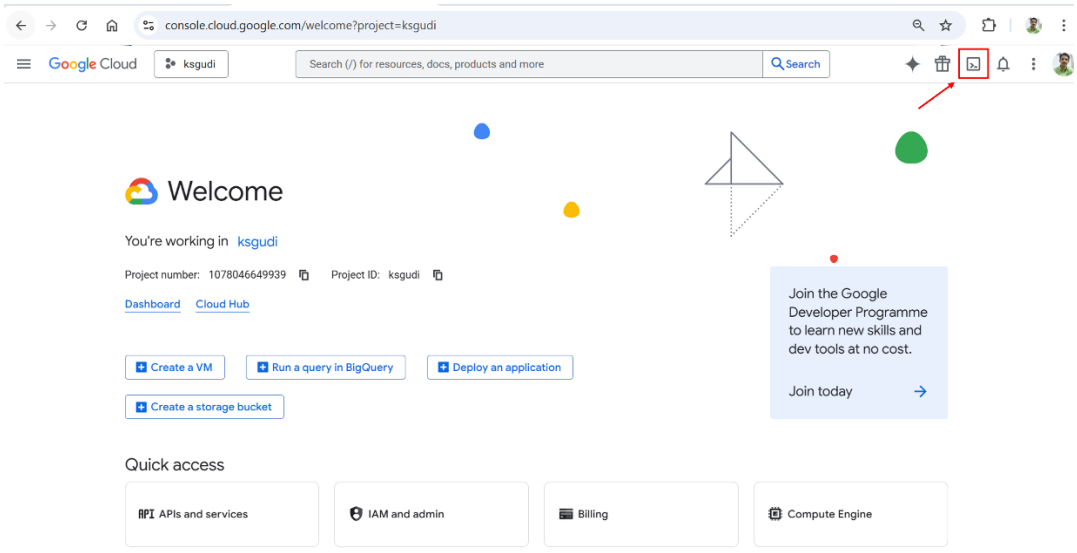
Experiment – 4:

Deploy a web application on App Engine with automatic scaling enabled.

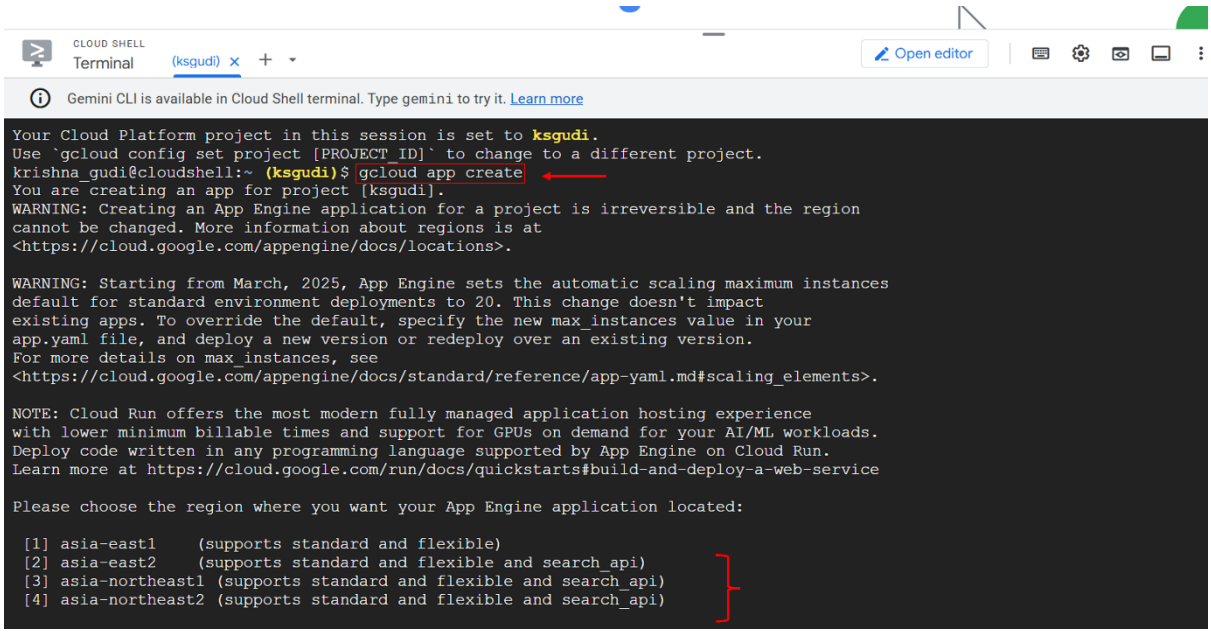
Step 1: From the Google Cloud homepage, click on **Console** to open the Google Cloud Console.



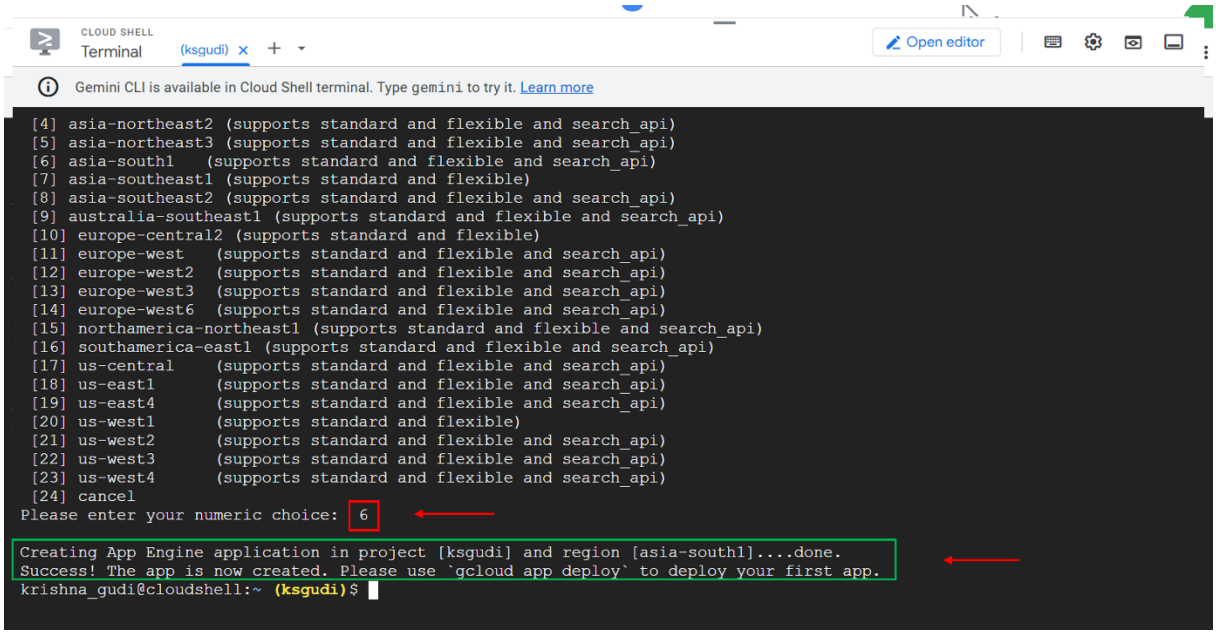
Step 2: Open Google Cloud console and click the **Cloud Shell icon** to launch the terminal.



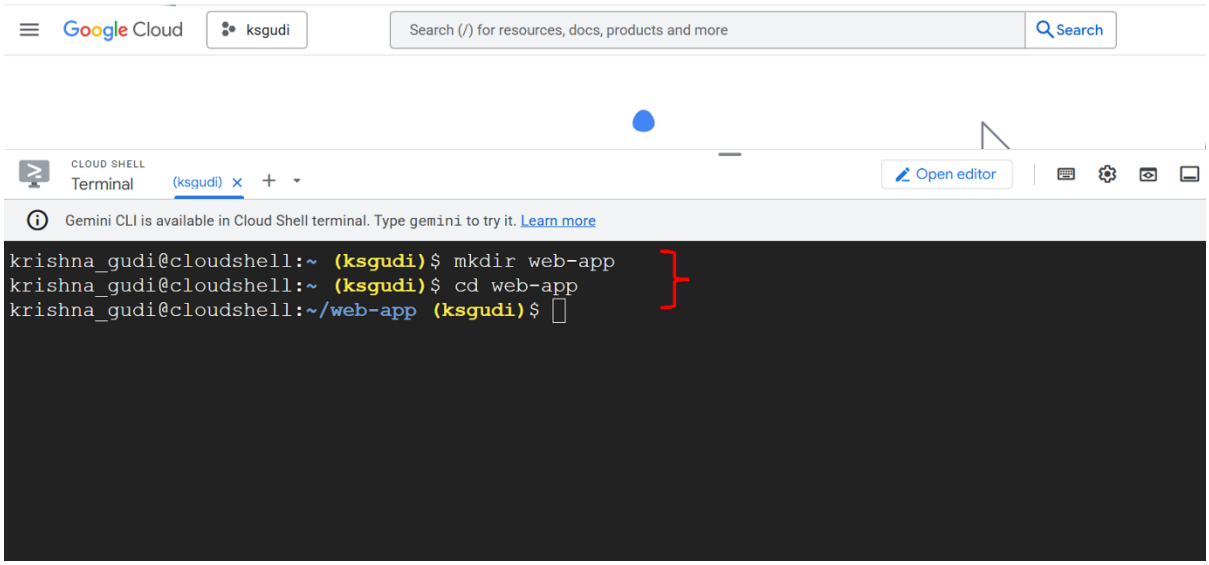
Step 3: Execute the command **gcloud app create** in Cloud Shell to start creating an App Engine application.



View the list of available regions displayed in the terminal for App Engine deployment. **Enter the region choice (e.g., 6)** to create the App Engine application successfully.

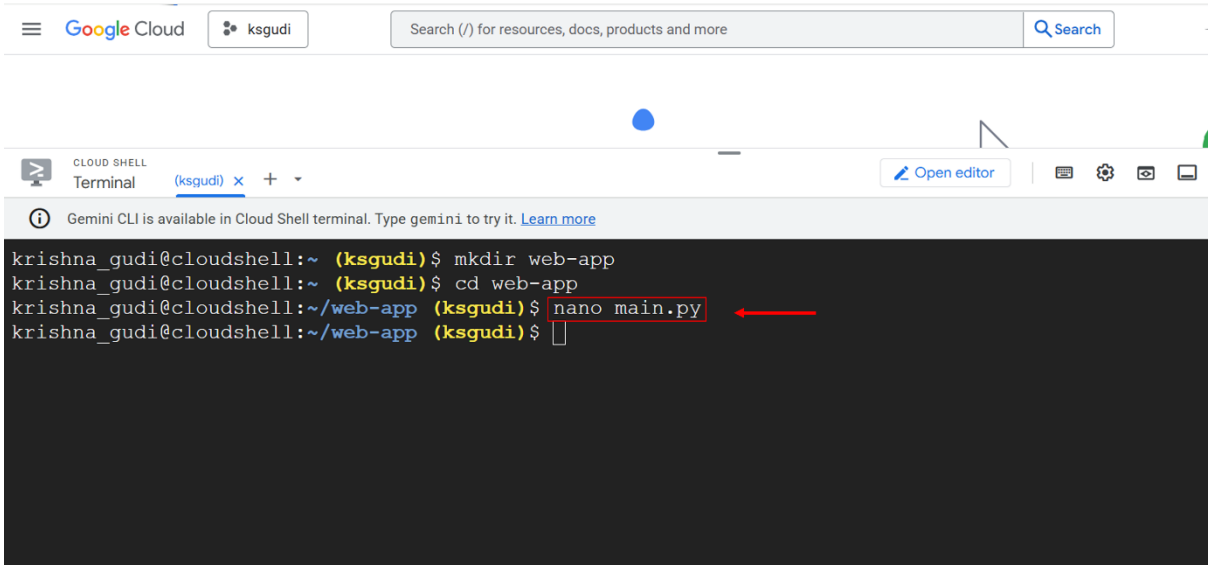


Step 4: Create a new project directory and navigate into it.

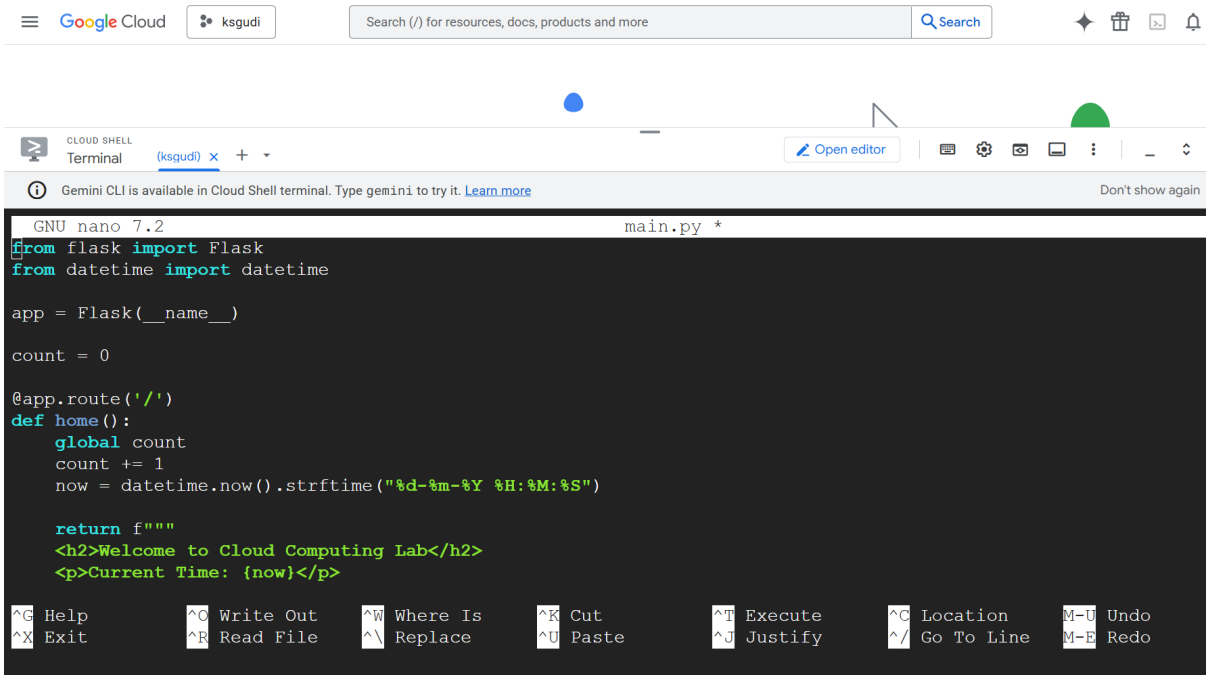


Step 5: Create the **Python application file** by executing the command:

```
nano main.py
```

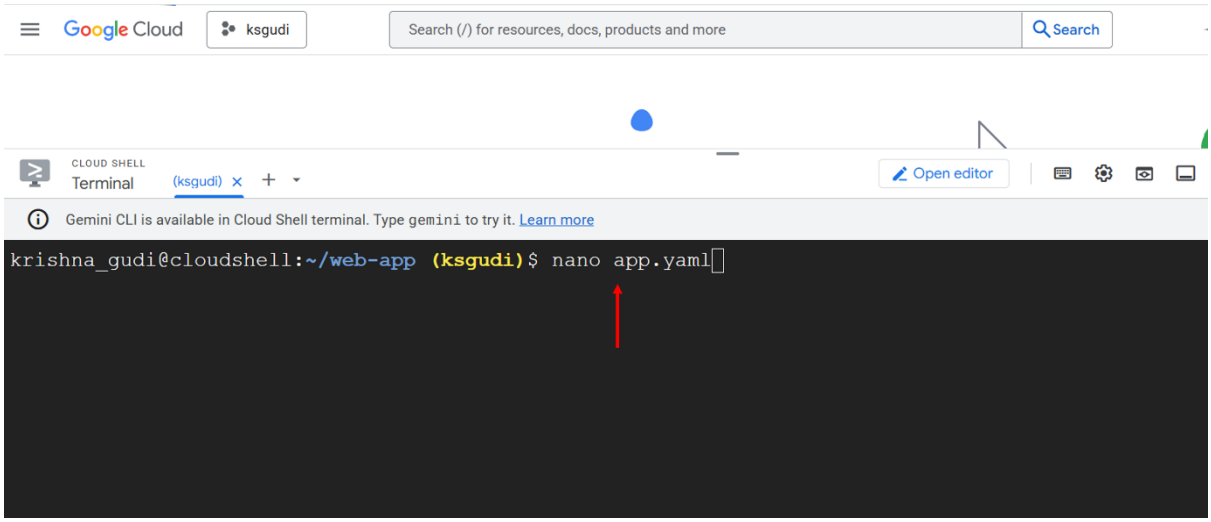


Write the Flask web application code inside the **main.py** file using the nano editor.

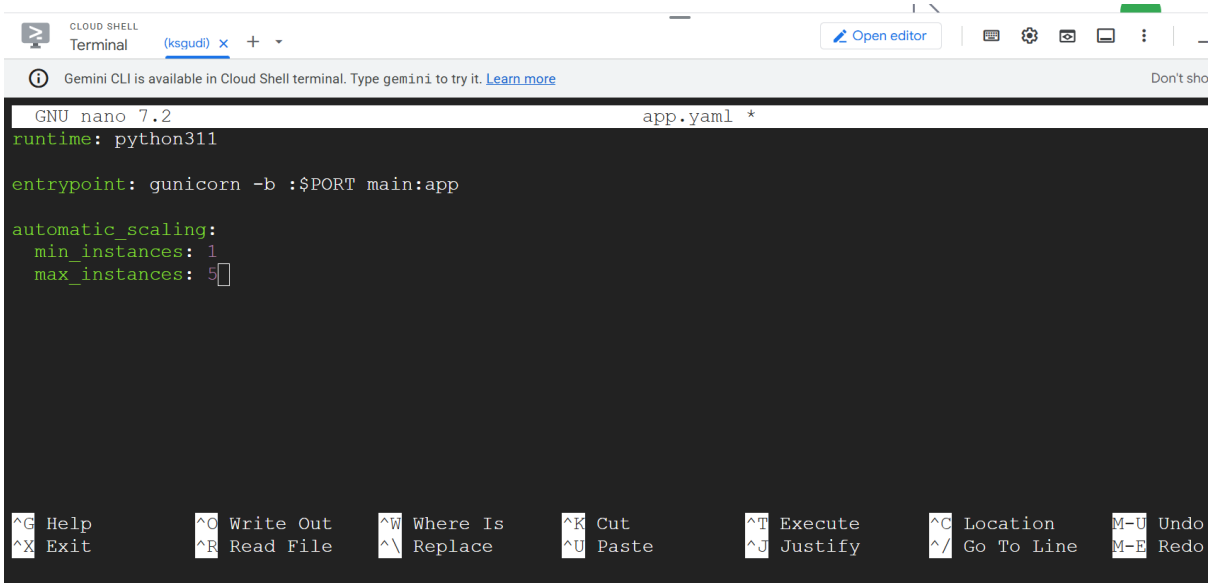


Step 6: Create the **App Engine configuration file** using the command:

```
nano app.yaml
```

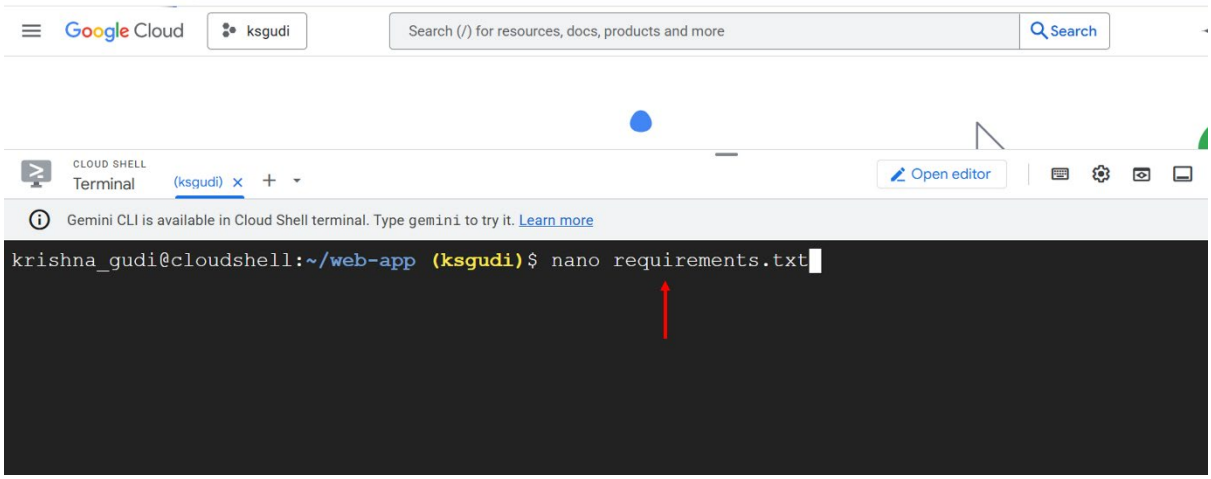


Add **runtime, entry point, and scaling configuration** in the app.yaml file.

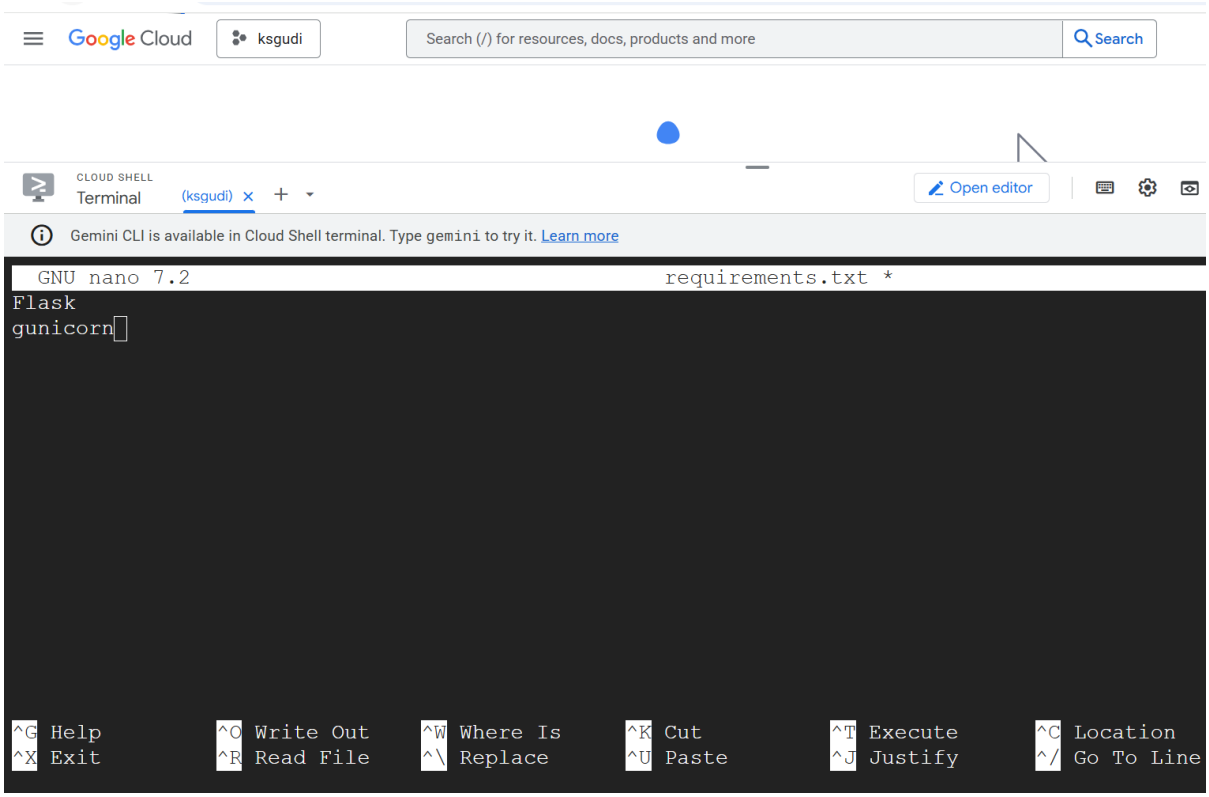


Step 7: **Create the dependency file** using the command:

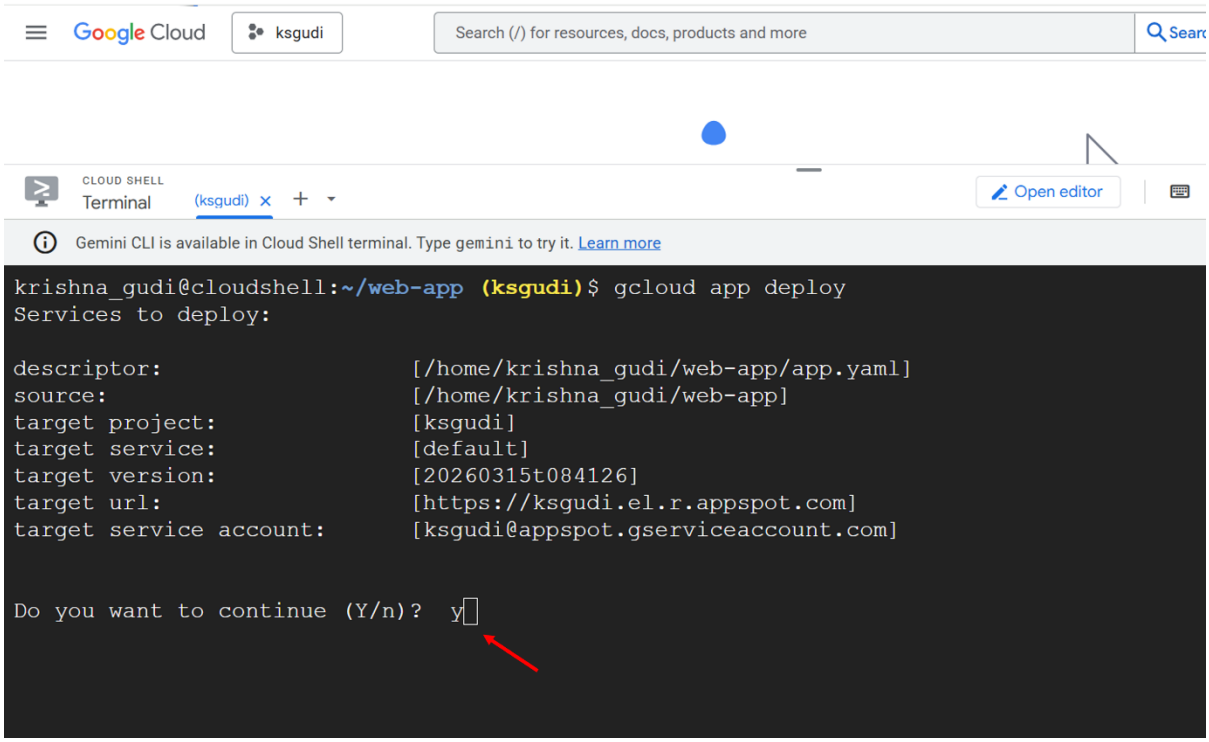
```
nano requirements.txt
```



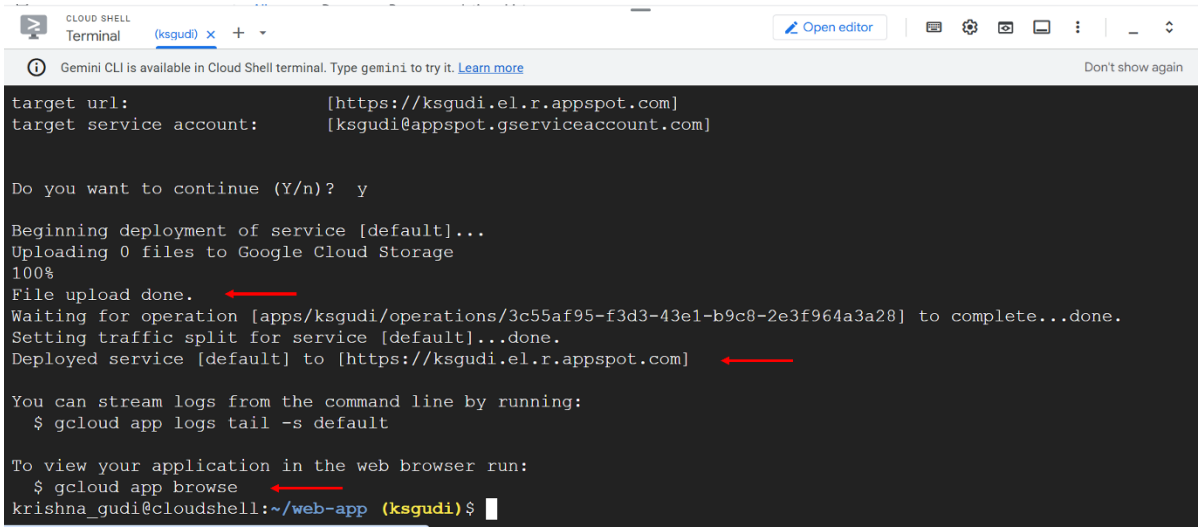
Specify the required libraries (Flask and gunicorn) in the requirements.txt file.



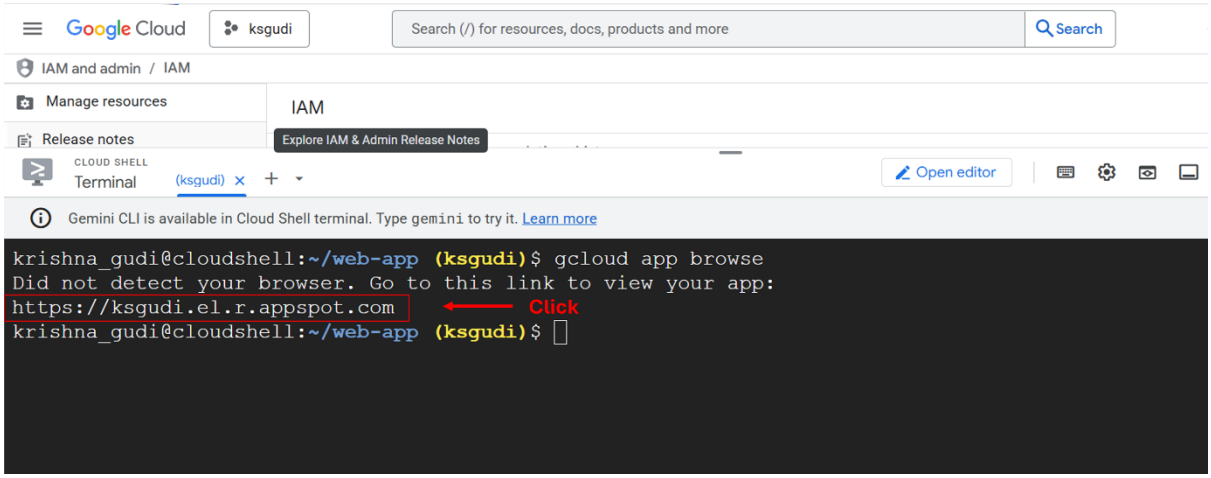
Step 8: Deploy the application to App Engine by running the command "**`gcloud app deploy`**" and confirm the deployment



Observe the successful deployment message and application URL.

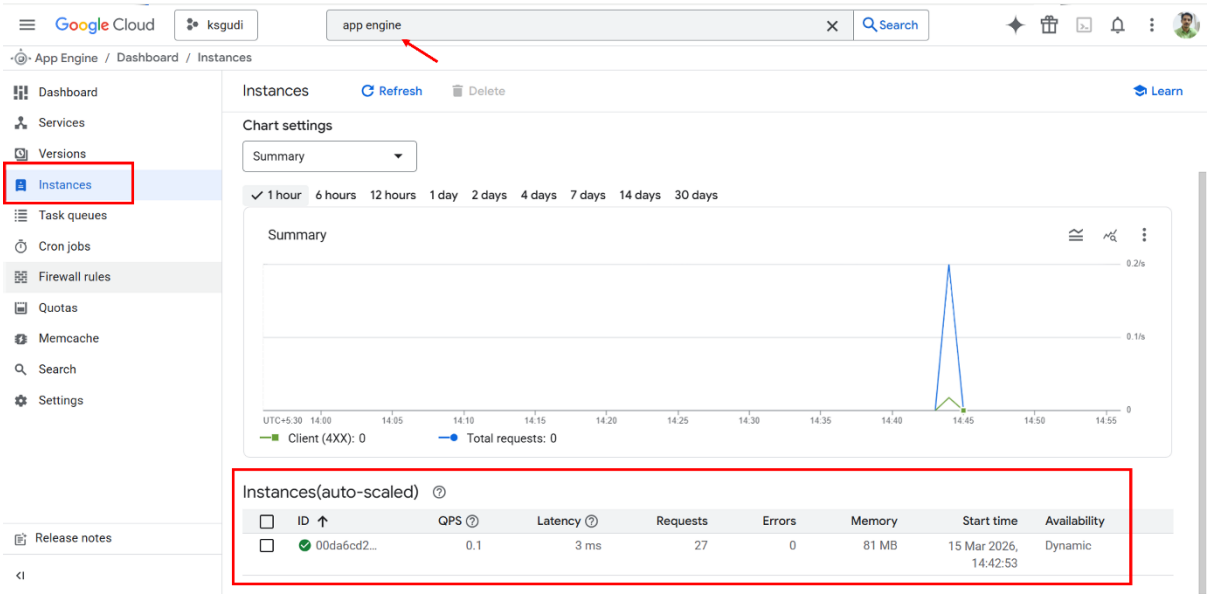


Step 9: Open the deployed application in the browser to view the web page output.



Step 10: Verify the **running application instance** in the **App Engine Instances** dashboard.

- Type "**App Engine**" in the search bar.
- Click on the Navigation menu on the left and select "**Instances**".
- View the running auto-scaled instance details.



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