

EX.No:4 Installation of a GoogleApp Engine

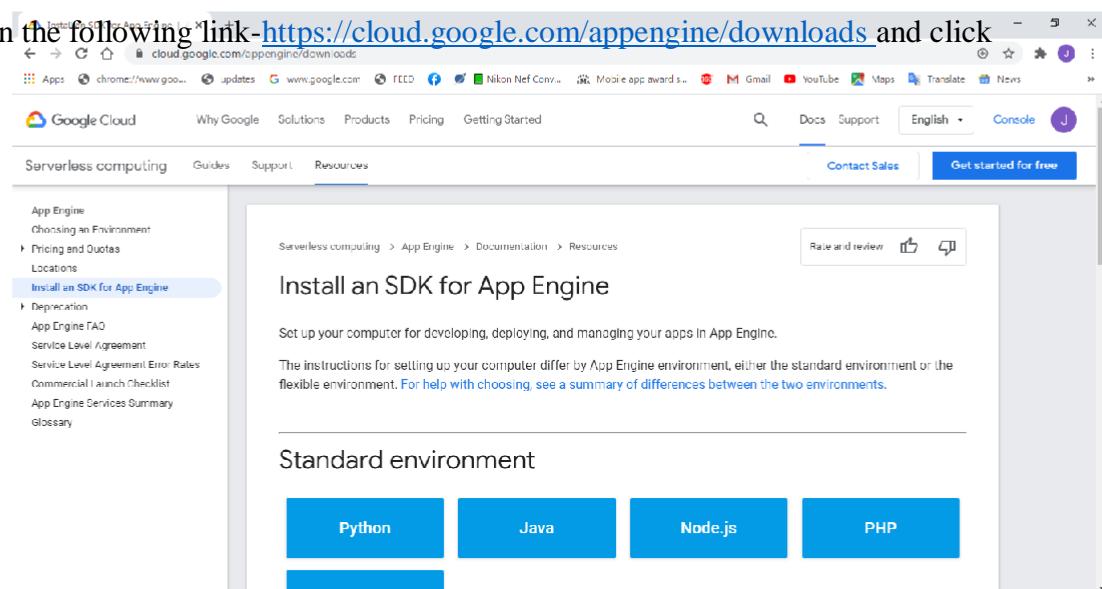
Date:

Aim:

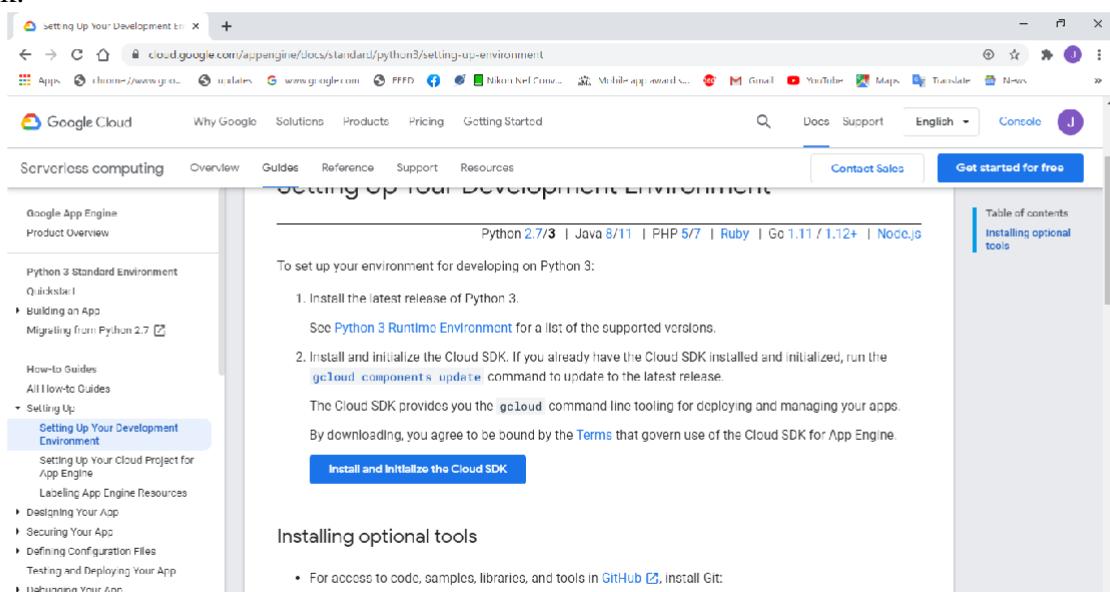
To install the Google app engine in the system.

Procedure:

Step1: Open the following link-<https://cloud.google.com/appengine/downloads> and click python.



Step2: Select setting up your environment development and click on install and initialize the cloud sdk.



Step3:Download the sdk installer and install it.

The screenshot shows a web browser window with the URL cloud.google.com/sdk/docs/install. The page is titled "Cloud SDK: Command Line Interface" and has a sidebar with links like "cloud SDK", "Quickstarts", "How-to guides", and "Installing the SDK". The main content area is titled "Installation instructions" and provides steps for Linux, Debian/Ubuntu, Red Hat/Fedora/CentOS, macOS, and Windows. The Windows tab is selected, showing PowerShell commands to download the installer and run it. A note at the top says: "★ Note: If you are behind a proxy/firewall, see the [proxy settings](#) page for more information on installation."

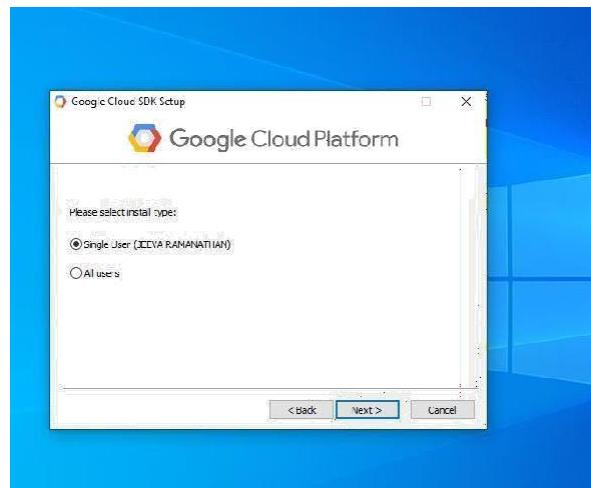
Step4: Click Next.



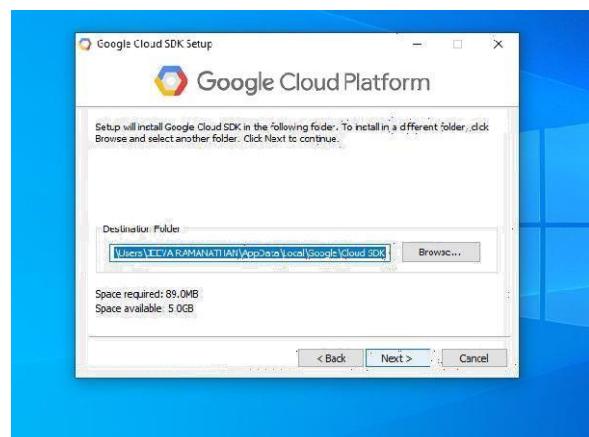
Step5: Click I Agree.



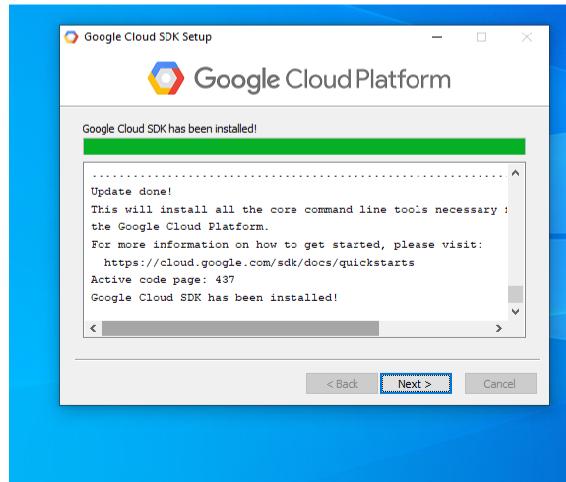
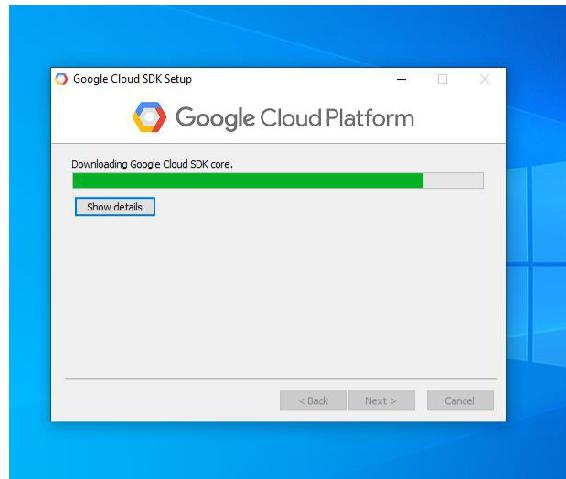
Step6: Select single user and click Next.



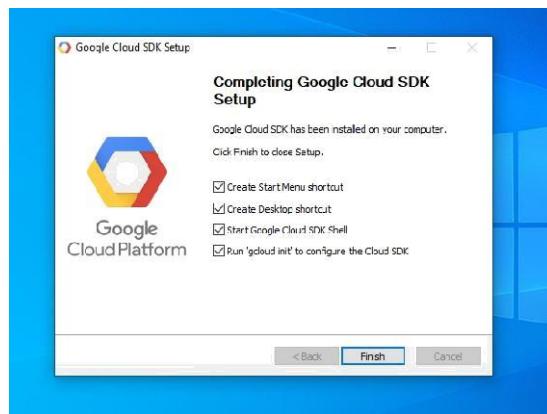
Step7: Select the destination location and click Next.



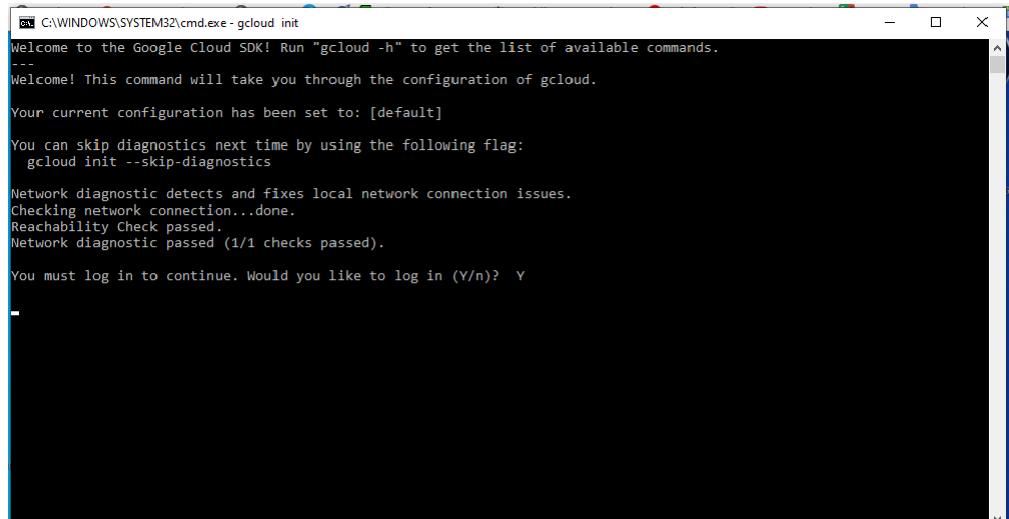
Step8: Downloading all the requirements and installing



Step9: Click Finish.



Step10:Once successfully installed cmd line in login with your Google account.



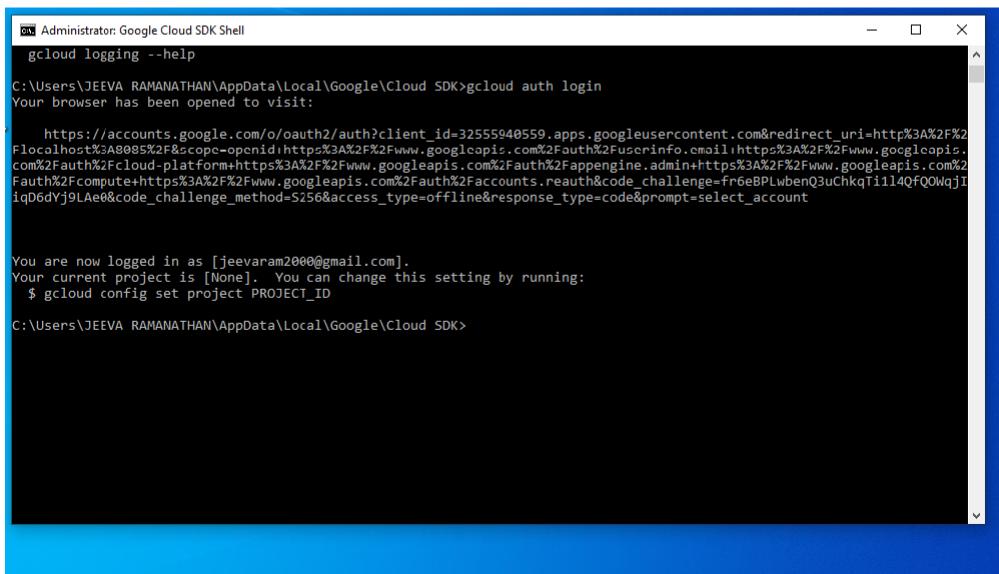
```
C:\WINDOWS\SYSTEM32\cmd.exe - gcloud init
Welcome to the Google Cloud SDK! Run "gcloud -h" to get the list of available commands.
...
Welcome! This command will take you through the configuration of gcloud.

Your current configuration has been set to: [default]

You can skip diagnostics next time by using the following flag:
  gcloud init --skip-diagnostics

Network diagnostic detects and fixes local network connection issues.
  Checking network connection...done.
  Reachability Check passed.
  Network diagnostic passed (1/1 checks passed).

You must log in to continue. Would you like to log in (Y/n)? Y
```



```
Administrator: Google Cloud SDK Shell
gcloud logging --help
C:\Users\JEEVA RAMANATHAN\AppData\Local\Google\Cloud SDK>gcloud auth login
Your browser has been opened to visit:
https://accounts.google.com/o/oauth2/auth?client_id=32555940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A9085%2F&scope=openid+http%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Faccounts.reauth&code_challenge=fr6eBPlwbenQ3uChkqTii14Qf00WqjIiqD6dYj9Lae0&code_challenge_method=s256&access_type=offline&response_type=code&prompt=select_account

You are now logged in as [jeevaram2000@gmail.com].
Your current project is [None]. You can change this setting by running:
$ gcloud config set project PROJECT_ID

C:\Users\JEEVA RAMANATHAN\AppData\Local\Google\Cloud SDK>
```

Result:

Thus googleapp engine is installed successfully in the system.

EX.No:4

Launch a web application using GAE launcher

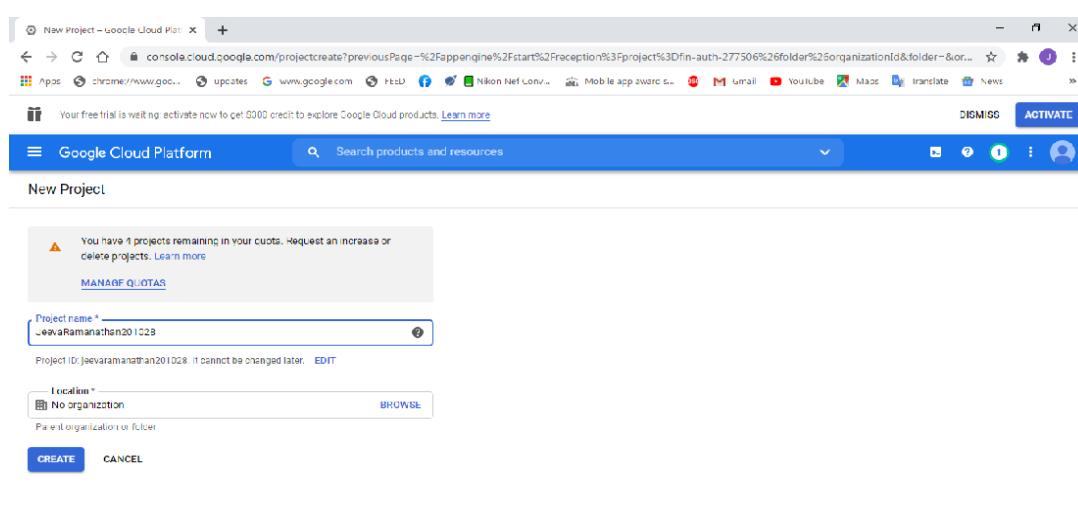
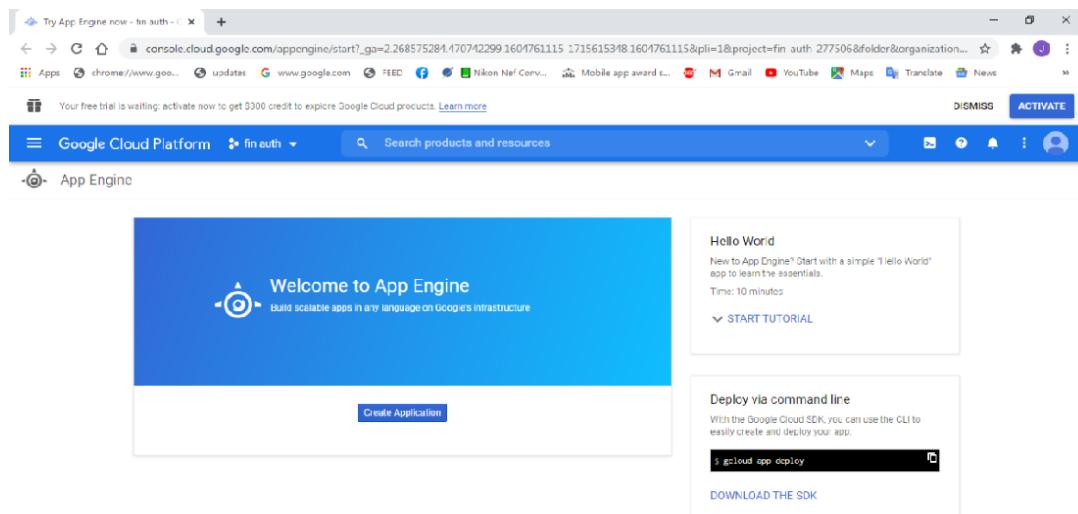
Aim:

To launch the web applications by using the GAE launcher.

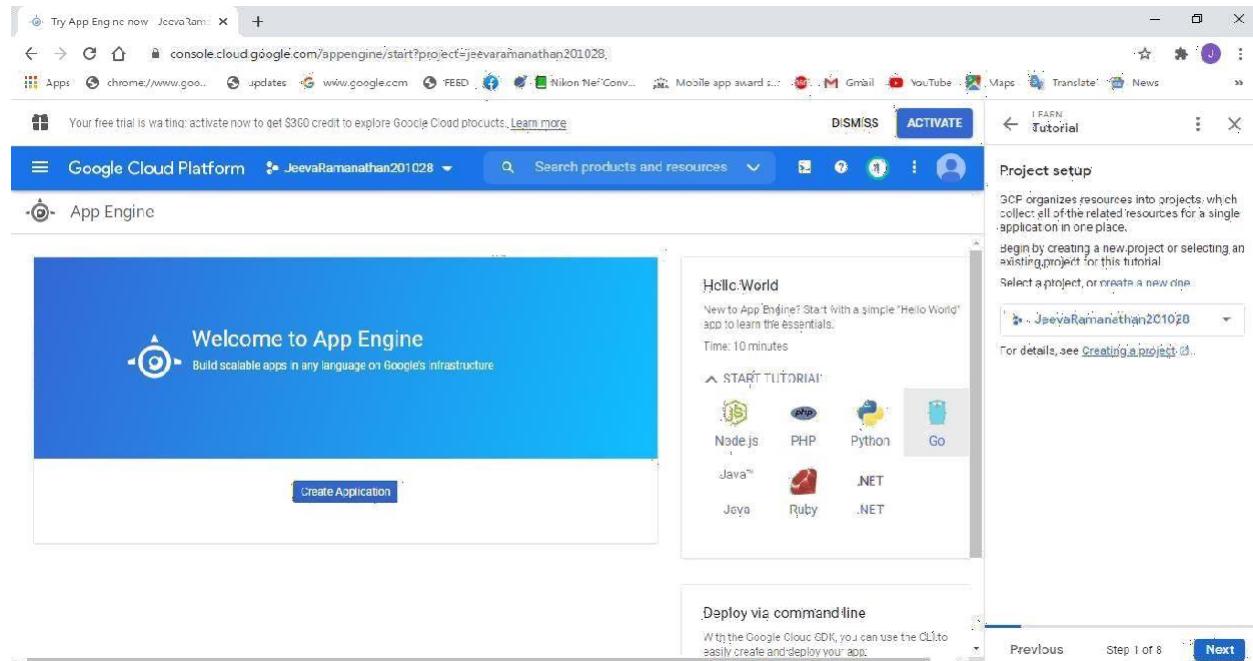
Procedure:

Step 1: Go to the following website

https://console.cloud.google.com/start/appengine?_ga=2.268575284.470742299.1604761115-1715615348.1604761115&pli=1 and create a new project.

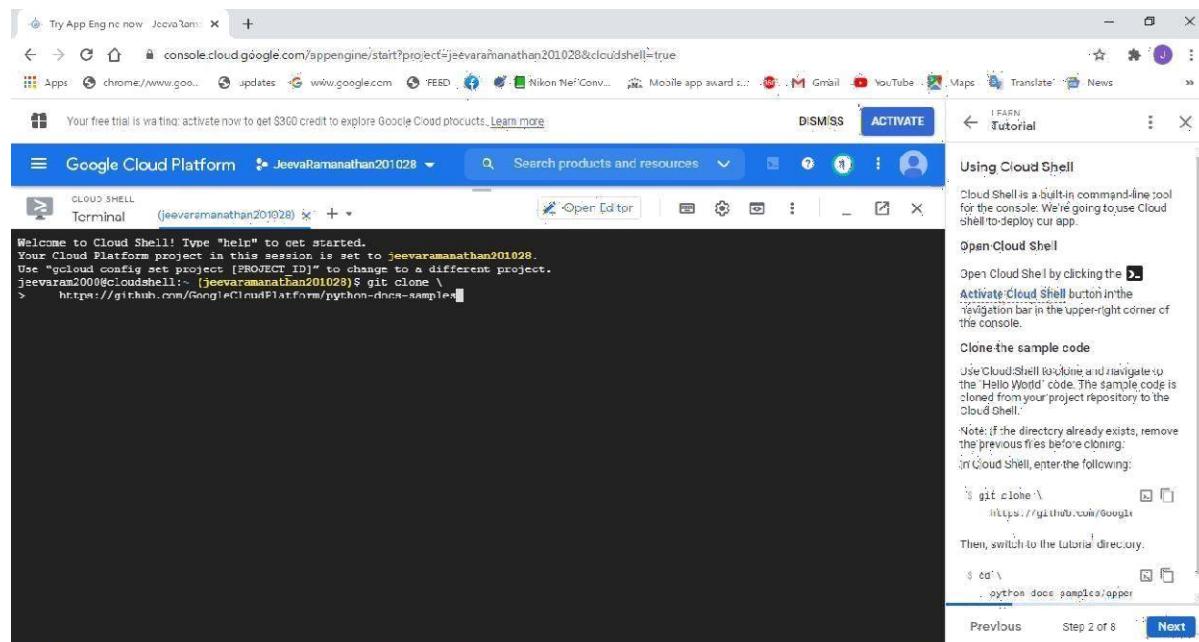


Step2:Select python and click next.



Step3: Open the cloud shell and follow the steps in the tutorial.

Clone the repository by using the given command



Step4: Create the virtual environment

The screenshot shows a Google Cloud Platform Cloud Shell terminal window. The terminal output shows the creation of a virtual environment named 'envs/hello_world'. It includes the command to create the environment, the path to the environment directory, and the command to run pip install requirements.

```
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

# [START gae_python38_app]
from flask import Flask

# If 'entrypoint' is not defined in app.yaml, App Engine will look for an app
# called 'app' in 'main.py'.
app = Flask(__name__)

@app.route('/')
def hello():
    """Return a friendly HTTP greeting."""
    return 'Hello World!'

if __name__ == '__main__':
    # This is used when running locally only. When deploying to Google App
    # Engine, a webserver process such as Gunicorn will serve the app. This
    # can be configured by adding an 'entrypoint' to app.yaml.
    # app.run(host='127.0.0.1', port=8080, debug=True)
# [END gae_python38_app]
jeevaramanathan201028@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ cat app.yaml
runtime: python38
jeevaraman2000@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ virtualenv --python python3 \
>     ~envs/hello_world

```

The right side of the screen displays a 'Tutorial' sidebar with steps for testing the app on Cloud Shell, activating the virtual environment, using pip to install dependencies, and finally running the app in Cloud Shell using the Flask development server.

Step5: Activate your virtual environment.

The screenshot shows a Google Cloud Platform Cloud Shell terminal window. The terminal output shows the activation of the previously created virtual environment 'envs/hello_world'. It includes the command to activate the environment, the path to the activation script, and the command to run python main.py.

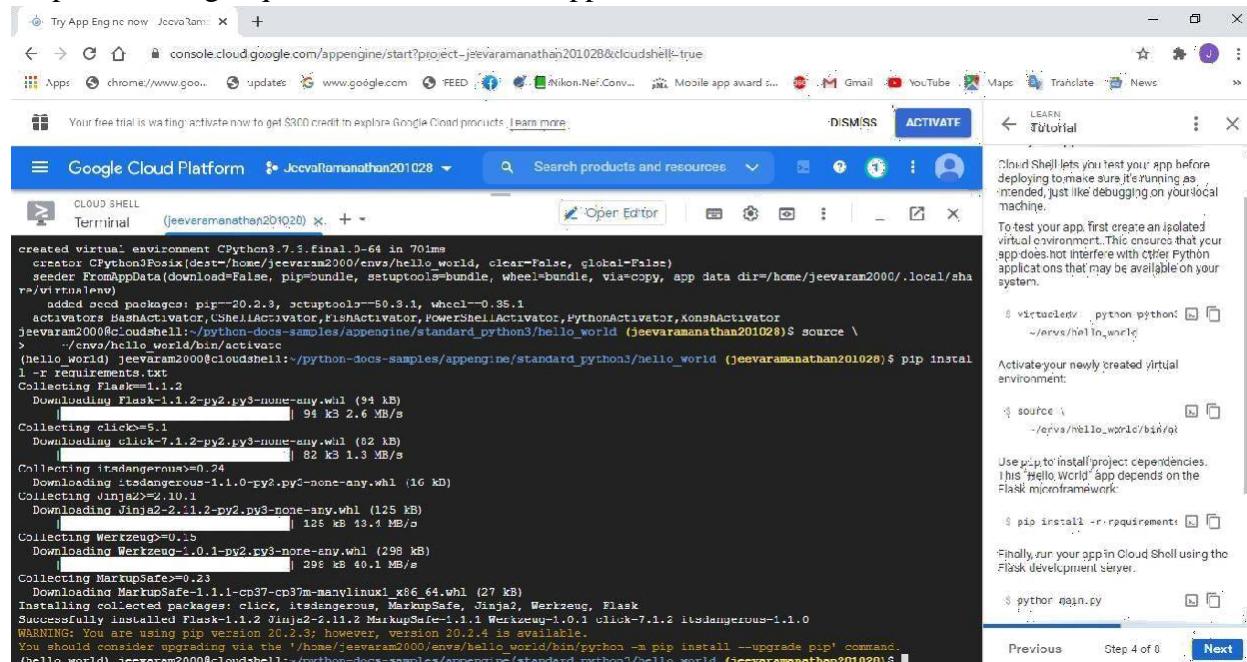
```
# If 'entrypoint' is not defined in app.yaml, App Engine will look for an app
# called 'app' in 'main.py'.
app = Flask(__name__)

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    # This is used when running locally only. When deploying to Google App
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    # can be configured by adding an 'entrypoint' to app.yaml.
    # app.run(host='127.0.0.1', port=8080, debug=True)
# [END gae_python38_app]
jeevaraman2000@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ cat app.yaml
runtime: python38
jeevaraman2000@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ virtualenv --python python3 \
>     ~envs/hello_world
created virtual environment CPython3.7.3.final.0-64 in 701ms
  creator CPython3Posix(dest=/home/jeevaraman2000/envs/hello_world, clear=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/home/jeevaraman2000/.local/share/virtualenvs)
  added seed packages: pip==20.2.3, setuptools==50.3.1, wheel==0.35.1
  activators BashActivator, CShellActivator, FishActivator, PowerShellActivator, PythonActivator, XonshActivator
jeevaraman2000@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ source \
>     ~envs/hello_world/bin/activate
(hello_world) jeevaraman2000@cloudshell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$
```

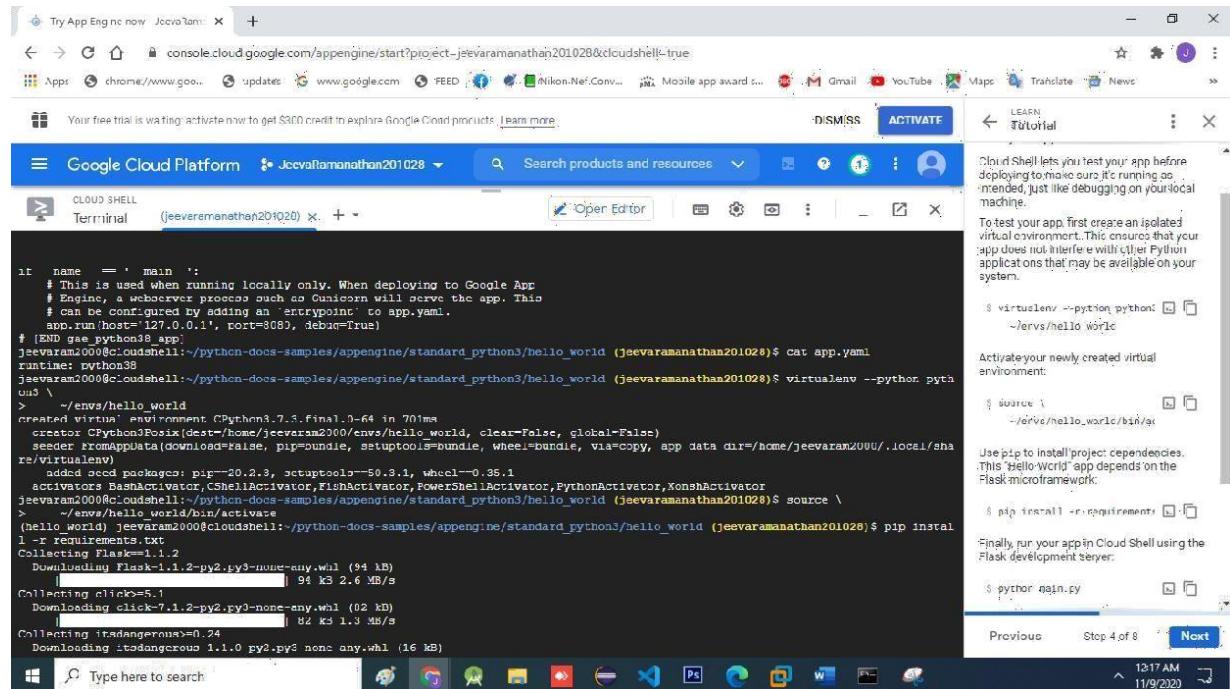
The right side of the screen displays a 'Tutorial' sidebar with steps for testing the app on Cloud Shell, activating the virtual environment, using pip to install dependencies, and finally running the app in Cloud Shell using the Flask development server. A message at the bottom indicates that the code has been copied to the clipboard.

Step6: Installing requirements and run the app.



```
Try App Engine now JeevaRamanathan201028 + console.cloud.google.com/appengine/start?project=jeevaramanathan201028&cloudbshell=true
Google Cloud Platform JeevaRamanathan201028 Search products and resources
CLOUD SHELL Terminal (jeevaramanathan201028) x + Open Editor
DISMISS ACTIVATE
Cloud Shell lets you test your app before deploying to make sure it's running as intended, just like debugging on your local machine.
To test your app, first create an isolated virtual environment. This ensures that your app does not interfere with other Python applications that may be available on your system.
$ virtualenv --python python3 ~/envs/hello_world
Activate your newly created virtual environment:
$ source venv/bin/activate
Use pip to install project dependencies. This "Hello World" app depends on the Flask microframework:
$ pip install -r requirements.txt
Finally, run your app in Cloud Shell using the Flask development server:
$ python main.py
Previous Step 4 of 8 Next
```

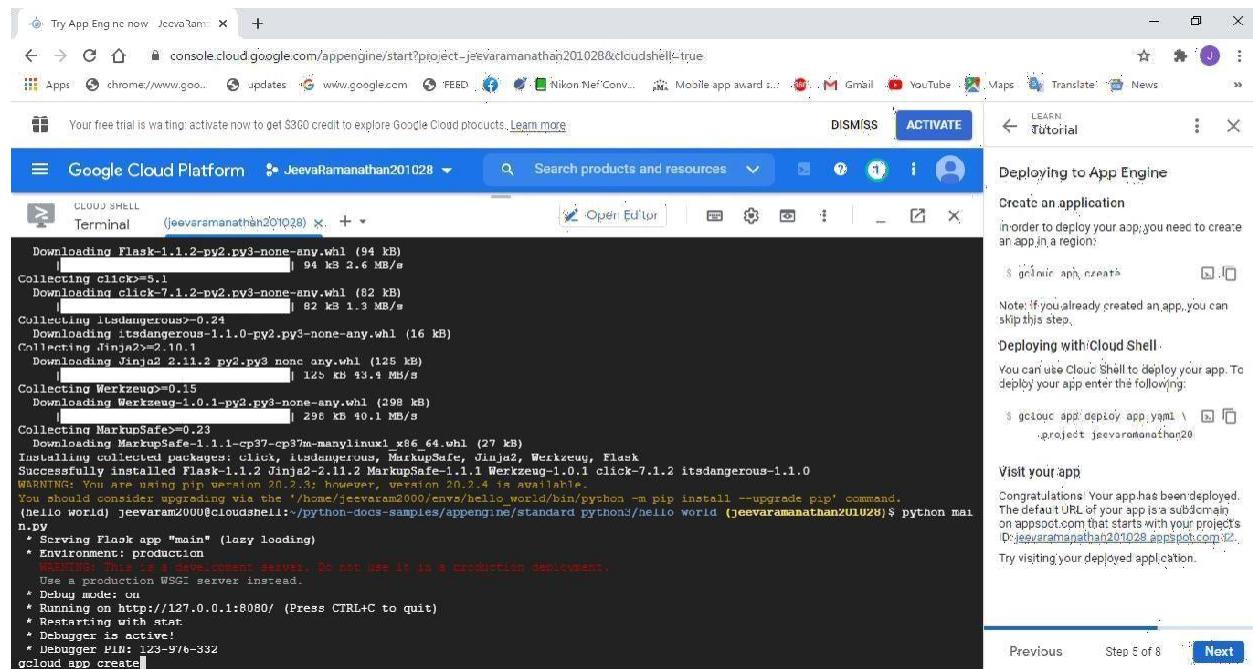
```
created virtual environment CPython3.7.3.final.0-64 in 701ms
  creator CPython3Posix(dest=/home/jeevaram2000/envs/hello_world, clear=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/home/jeevaram2000/.local/share/virtualenvs)
  added seed packages: pip==20.2.3, setuptools==50.3.1, wheel==0.36.1
  activators BashActivator, CShellActivator, FishActivator, PowerShellActivator, PythonActivator, KonshActivator
jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ source \
> ~/envs/hello_world/bin/activate
(hello_world) jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ pip instal
l -r requirements.txt
Collecting Flask<1.1.2
  Downloading Flask-1.1.2-py2.py3-none-any.whl (94 kB)
    94 kB 2.6 MB/s
Collecting click<5.1
  Downloading click-7.1.2-py2.py3-none-any.whl (62 kB)
    82 kB 1.3 MB/s
Collecting itsdangerous<0.24
  Downloading itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
Collecting Jinja2<2.10.1
  Downloading Jinja2-2.11.2-py2.py3-none-any.whl (125 kB)
    125 kB 13.4 MB/s
Collecting Werkzeug<0.15
  Downloading Werkzeug-0.15.0-py2.py3-none-any.whl (298 kB)
    298 kB 40.1 MB/s
Collecting MarkupSafe<0.23
  Downloading MarkupSafe-1.1.1-cp37-cp37m-manylinux1_x86_64.whl (27 kB)
Installing collected packages: click, itsdangerous, MarkupSafe, Jinja2, Werkzeug, Flask
Successfully installed Flask-1.1.2 Jinja2-2.11.2 MarkupSafe-1.1.1 Werkzeug-1.0.1 click-7.1.2 itsdangerous-1.1.0
WARNING: You are using pip version 20.2.3; however, version 20.2.4 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
(hello_world) jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$
```



```
Try App Engine now JeevaRamanathan201028 + console.cloud.google.com/appengine/start?project=jeevaramanathan201028&cloudbshell=true
Google Cloud Platform JeevaRamanathan201028 Search products and resources
CLOUD SHELL Terminal (jeevaramanathan201028) x + Open Editor
DISMISS ACTIVATE
Cloud Shell lets you test your app before deploying to make sure it's running as intended, just like debugging on your local machine.
To test your app, first create an isolated virtual environment. This ensures that your app does not interfere with other Python applications that may be available on your system.
$ virtualenv --python python3 ~/envs/hello_world
Activate your newly created virtual environment:
$ source venv/bin/activate
Use pip to install project dependencies. This "Hello World" app depends on the Flask microframework:
$ pip install -r requirements.txt
Finally, run your app in Cloud Shell using the Flask development server:
$ python main.py
Previous Step 4 of 8 Next
```

```
it name == '__main__':
  # This is used when running locally only. When deploying to Google App
  # Engine, a webserver process such as Unicorn will serve the app. This
  # can be configured by adding an 'entrypoint' to app.yaml.
  app.run(host='127.0.0.1', port=8080, debug=True)
# [START app]
[docs-internal-page] app
[docs-internal-page] app.yaml
jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ cat app.yaml
runtime: python38
jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ virtualenv --python python3 \
> ~/envs/hello_world
created virtual environment CPython3.7.3.final.0-64 in 701ms
  creator CPython3Posix(dest=/home/jeevaram2000/envs/hello_world, clear=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/home/jeevaram2000/.local/share/virtualenvs)
  added seed packages: pip==20.2.3, setuptools==50.3.1, wheel==0.36.1
  activators BashActivator, CShellActivator, FishActivator, PowerShellActivator, PythonActivator, KonshActivator
jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ source \
> ~/envs/hello_world/bin/activate
(hello_world) jeevaram2000@CloudShell:~/python-docs-samples/appengine/standard_python3/hello_world (jeevaramanathan201028)$ pip instal
l -r requirements.txt
Collecting Flask<1.1.2
  Downloading Flask-1.1.2-py2.py3-none-any.whl (94 kB)
    94 kB 2.6 MB/s
Collecting click<5.1
  Downloading click-7.1.2-py2.py3-none-any.whl (62 kB)
    82 kB 1.3 MB/s
Collecting itsdangerous<0.24
  Downloading itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
```

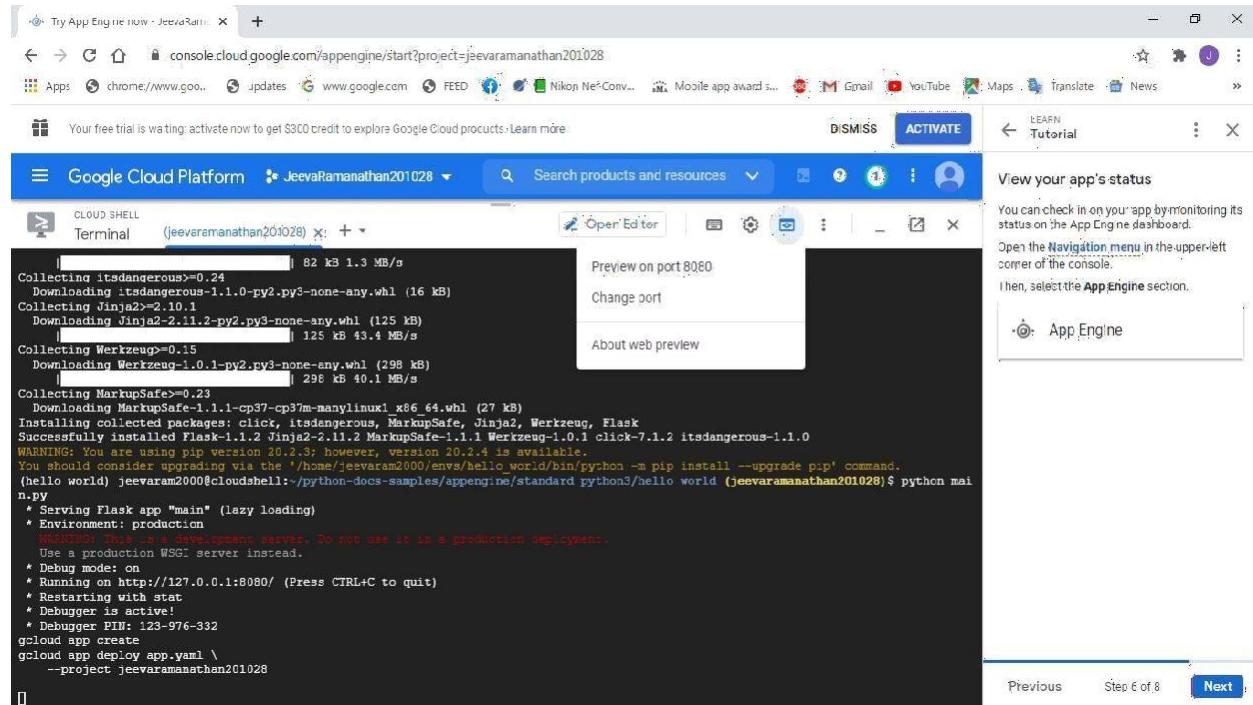
Step7: Create an application and deploy it in cloud shell.



The screenshot shows a Google Cloud Platform Cloud Shell terminal window. The terminal output displays the deployment process for a Python application:

```
Downloading Flask==1.1.2-py2.py3-none-any.whl (94 kB)
Collecting click==5.1
  Downloading click-7.1.2-py2.py3-none-any.whl (82 kB)
Collecting itsdangerous==0.24
  Downloading itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
Collecting Jinja2==2.10.1
  Downloading Jinja2-2.11.2-py2.py3-none-any.whl (125 kB)
Collecting Werkzeug==0.15
  Downloading Werkzeug-0.1.0-py2.py3-none-any.whl (298 kB)
Collecting MarkupSafe==0.23
  Downloading MarkupSafe-1.1.1-cp37-cp37m-manylinux1_x86_64.whl (27 kB)
Installing collected packages: click, itsdangerous, MarkupSafe, Jinja2, Werkzeug, Flask
Successfully installed Flask-1.1.2 Jinja2-2.11.2 MarkupSafe-1.1.1 Werkzeug-0.1.0 click-7.1.2 itsdangerous-1.1.0
WARNING: You are using pip version 20.2.3; however, version 20.2.4 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
(hello-world) jeevaramanathan200@cloudshell:~/python-docs-samples/appengine-standard/python3/hello_world (jeevaramanathan201028)$ python main.py
* Serving Flask app "main" (lazy loading)
* Environment: production
  * READING: This is a development server. Do not use it in a production deployment.
  * Debug mode: on
  * Running on http://127.0.0.1:8080/ (Press CTRL+C to quit)
  * Restarting with stat
  * Debugger is active!
  * Debugger PIN: 123-976-332
gcloud app create
```

Step8: Click preview on port 8080 to see your deployed application



Step9: Finally the application is deployed and the output is seen.



Result:

Thus a web application is launched by using the GAE launcher and the output is obtained successfully.