

1. Register or sign in to GCP
(<https://console.cloud.google.com/>).
2. Download and install GCP SDK
(<https://cloud.google.com/sdk/install>).
3. Enable Cloud Run API
(<https://console.cloud.google.com/apis/library/run.googleapis.com>)
4. Google cloud shell
5. Create a project
6. Search for google cloud shell console
7. Open the terminal and enter the following
8. `Python3 -m venv .venv`
9. `. ../.venv/bin/activate`
10. `pip freeze > requirements.txt`
11. Copy the created dash .py file and paste inside the editor inside the GCP
12. Add the following command right after the my_app: Name the file app.py

```
import dash_core_components as dcc
import dash_html_components as html
from dash.dependencies import Input, Output
import dash as dash
external_stylesheets =
['https://codepen.io/chriddyp/pen/bWLwgP.css']
my_app = dash.Dash('My app',
external_stylesheets=external_stylesheets)
```

```
server = my_app.server
```

```
my_app.layout = html.Div([
    dcc.Slider(id='my-input',
        min = 0,
        max = 90,
        step= 1,
        value= 70,
    ),
    html.Br(),
    dcc.Slider(id="second_slider",
        min=-10,
        max=35,
        step=.5,
    ),
])
```

```
@my_app.callback(
    Output(component_id='second_slider', component_property='value'),
    [Input(component_id='my-input', component_property='value')]
)
```

```
def update_reza(input):
    return (input-32)/1.8
```

```
if __name__ == '__main__':
```

```
    my_app.run_server(debug=True, host='0.0.0.0', port=8080)
```

13. Add the Docker file inside the editor- Name the file as 'Dockerfile'.

```
# https://hub.docker.com/_/python
```

```
FROM python:3.8-slim-buster
```

```
# Copy local code to the container image.
```

```
ENV APP_HOME /app
```

```
ENV PYTHONUNBUFFERED True
```

```
WORKDIR $APP_HOME
```

```
# Install Python dependencies and Gunicorn
```

```
ADD requirements.txt .
```

```
RUN pip install --no-cache-dir -r requirements.txt && pip install --no-cache-dir gunicorn
```

```
RUN groupadd -r app && useradd -r -g app app
```

```
# Copy the rest of the codebase into the image
```

```
COPY --chown=app:app . ./
```

```
USER app
```

```
# Run the web service on container startup. Here we use the gunicorn
```

```
# webserver, with one worker process and 8 threads.
```

```
# For environments with multiple CPU cores, increase the number of workers
```

```
# to be equal to the cores available in Cloud Run.
```

```
CMD exec gunicorn --bind :$PORT --log-level info --workers 1 --threads 8 --timeout 0 app:server
```

14. Enable services through GCP terminal

```
gcloud services enable containerregistry.googleapis.com
```

15. Docker build

```
docker build -f Dockerfile -t gcr.io/covid-341822/test:test .
```

16. Docker push

```
docker push gcr.io/covid-341822/test:test
```

17. Docker deploy

```
gcloud run deploy dashapp --image gcr.io/covid-341822/test:test
```