DevOps Tasks

- Write bash script to loop on all databases into a **postgresql** server then **backup** and **compress** each database into a different directory then upload it to a **S3** bucket
- Create a **Terraform** project to create:
    - 1 VPC
    - 3 public subnets
    - 3 private subnets
    - 3 Private routing tables
    - 1 public routing table
    - 1 internet gateway
    - 3 Elastic IP's for NAT Gateways
    - 3 NAT GateWays
- Save the below python "**3.7**" script into a "**.py**" file then create a **Dockerfile** that will create a docker image for it which will run the python script into **CMD** command.
- Create a **yaml** file which will be used to deploy that docker image onto a Kubernetes cluster "**any cluster a minikube will be good**".
- Create a service file for it which should expose the port into the python script.
- Create a horizontal pod autoscaler file for it.
- Push all files to a github repository.
- Write a Jenkins pipeline script to:
    - Clone the repository you've created.
    - Build the docker image and give it a build number tag.
    - Push it on any docker registry.
    - Deploy it on a kubernetes cluster.

```python
#!/usr/bin/env python

import socket
from flask import Flask
app = Flask(__name__)

@app.route('/')
def gethostname():
   s = 'Container ID is: ' + socket.gethostname() + "This is the dev branch."
   return s

if __name__ == '__main__':
   app.run(host='0.0.0.0', port=8080)
```