DevOps Engineer Assessment

**Duration: 5 Hours**

**Section 1: Coding/Technical Question**

Write a Python script that uses the AWS Boto3 library to list all EC2 instances in a specific AWS region. Include error handling in your script. You can use Lambda for running that script.

**Craete VPC + SUBNET= ROUTABLE = INTERNET GATREWAY**

**ALL IN PUBLIC**

CREATE **EC2 INSTANCE**

INSTANCE NAME = **listEC2Instances**

CONNECT EC2

**Command**

**Step 1: Install pip**

sudo yum install python3-pip -y

**Step 2: Verify Installation**

pip3 –version

**Step 3: Install boto3 using pip**

pip3 install boto3

**Step 4: Confirm boto3 Installation**

python3 -c "import boto3; print(boto3.\_\_version\_\_)"

**Step 5: Create a Python Script File**

nano list\_ec2.py

**Step 6: Paste the Script**

import boto3

from botocore.exceptions import NoCredentialsError, PartialCredentialsError, EndpointConnectionError

def list\_ec2\_instances(region):

try:

# Create an EC2 client

ec2 = boto3.client('ec2', region\_name=region)

# Call EC2 to retrieve instance information

response = ec2.describe\_instances()

# Parse and print instance IDs

for reservation in response['Reservations']:

for instance in reservation['Instances']:

print(f"Instance ID: {instance['InstanceId']}")

except NoCredentialsError:

print("Error: No credentials found. Please configure your AWS credentials.")

except PartialCredentialsError:

print("Error: Incomplete AWS credentials. Please check your AWS configuration.")

except EndpointConnectionError:

print("Error: Cannot connect to the AWS endpoint. Please check your region or network.")

except Exception as e:

print(f"An unexpected error occurred: {str(e)}")

# Specify the AWS region

region = 'us-east-1' # Replace with your desired region

list\_ec2\_instances(region)

**Step 7: SAVE AND EXIT**

CTRLX , CTRL Y , ENTER

**Step 8: Run the Script**

python3 list\_ec2.py

**Step 9: Configure AWS CLI**

sudo yum install aws-cli -y

**Step 10 ; = Configure AWS CLI with your credentials**:

AWS\_REGION=us-east-1

AWS\_ACCESS\_KEY\_ID=AKIA6G75DWSGNUKMUUX4

AWS\_SECRET\_ACCESS\_KEY=2LxzhfJzeIfMGBQGaIRjcwWKfUbrrxWFfViV1vNg

**Step 11: Verify Credentials**

aws sts get-caller-identity

**Step 12: Run Your Python Script Again**

python3 list\_ec2.py

AND CHECK YOUR INSTANCE ID



