**Step : Download AWS SDK**

**Step : Set Up Your Environment**

1. **Install Boto3**: Make sure you have Python installed, then install Boto3 using pip:

pip install boto3

1. **Configure AWS Credentials**: Set up your AWS credentials. You can create an IAM user in AWS with the necessary permissions and configure your local environment using the AWS CLI.

aws configure

Follow the prompts to enter your AWS Access Key, Secret Key, region, and output format.

**Step : Create a Python Script**

Here’s a Python script that creates a simple VPC along with a subnet, an internet gateway, and a route table.

import boto3

def create\_vpc():

ec2 = boto3.client('ec2')

# Create VPC

vpc = ec2.create\_vpc(CidrBlock='10.0.0.0/16')

vpc\_id = vpc['Vpc']['VpcId']

print(f"VPC created with ID: {vpc\_id}")

# Tag the VPC

ec2.create\_tags(Resources=[vpc\_id], Tags=[{"Key": "Name", "Value": "MyVPC"}])

# Create Subnet

subnet = ec2.create\_subnet(VpcId=vpc\_id, CidrBlock='10.0.1.0/24')

subnet\_id = subnet['Subnet']['SubnetId']

print(f"Subnet created with ID: {subnet\_id}")

# Create Internet Gateway

igw = ec2.create\_internet\_gateway()

igw\_id = igw['InternetGateway']['InternetGatewayId']

ec2.attach\_internet\_gateway(InternetGatewayId=igw\_id, VpcId=vpc\_id)

print(f"Internet Gateway created and attached: {igw\_id}")

# Create Route Table

route\_table = ec2.create\_route\_table(VpcId=vpc\_id)

route\_table\_id = route\_table['RouteTable']['RouteTableId']

print(f"Route Table created with ID: {route\_table\_id}")

# Create Route

ec2.create\_route(

RouteTableId=route\_table\_id,

DestinationCidrBlock='0.0.0.0/0',

GatewayId=igw\_id

)

print(f"Route added to Route Table: {route\_table\_id}")

# Associate Route Table with Subnet

ec2.associate\_route\_table(SubnetId=subnet\_id, RouteTableId=route\_table\_id)

print(f"Route Table {route\_table\_id} associated with Subnet {subnet\_id}")

return vpc\_id, subnet\_id, igw\_id, route\_table\_id

if \_\_name\_\_ == "\_\_main\_\_":

create\_vpc()

**Step : Run the Script**

Save the script as create\_vpc.py and run it:

python create\_vpc.py

**Step : Verify the Creation in AWS Console**

After running the script, log in to the AWS Management Console and navigate to the **VPC Dashboard** to verify that your VPC, subnet, internet gateway, and route table have been created successfully.