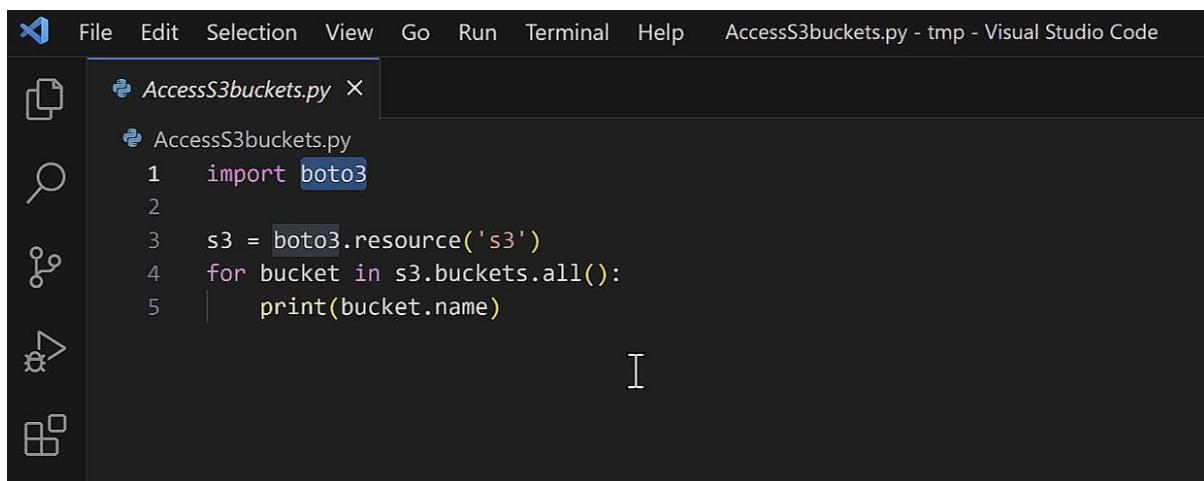




## USING PYTHON TO ACCESS AWS S3

1. In this lab you are going to use python programming language to access AWS S3.
2. For this you will run python in command prompt.
3. But first you need to download Python SDK if not downloaded. Use this link to download and install python or you search on google itself.  
<https://www.python.org/>
4. After installing python successfully.
5. You need to have this code. This code will help you to access buckets in your S3.
6. Make a file out of this code then you have to implement this. You can also get this from GitHub.



```
File Edit Selection View Go Run Terminal Help AccessS3buckets.py - tmp - Visual Studio Code
AccessS3buckets.py X
AccessS3buckets.py
1 import boto3
2
3 s3 = boto3.resource('s3')
4 for bucket in s3.buckets.all():
5     print(bucket.name)
```

```
import boto3
```

```
s3 = boto3.resource('s3')
```

```
for bucket in s3.buckets.all():
```

```
    print(bucket.name)
```

7. Now open command prompt and check for python version, through this action you can check whether python is installed successfully or not.
8. You can see that it is showing you the python version which means that it has been installed successfully.

```
Command Prompt      X + ▾
Microsoft Windows [Version 10.0.22621.1992]
(c) Microsoft Corporation. All rights reserved.

C:\Users\      >python --version
Python 3.11.4

C:\Users\alash>
```

9. After check this you need to navigate to the folder where you have this python file.
10. Here you can see you are on the folder which has your python file.

```
C:\Users\      >cd ..
C:\Users>cd ..
C:\>cd tmp
C:\tmp>dir
Volume in drive C is Local Disk
Volume Serial Number is 2E1A-0F16

Directory of C:\tmp

21/08/2023  05:18 PM    <DIR>
18/08/2023  05:24 PM
21/08/2023  05:18 PM
04/08/2023  12:24 PM
                  3 File(s)       2,158 bytes
                  1 Dir(s)  780,585,709,568 bytes free

C:\tmp>
```

11. After this you are going to make your access keys for your account if you have the previous ones then no need to create a new pair of access keys.
12. Now you need to configure AWS.  
**Aws configure**
13. Here you can see that the command prompt has recognized your previous keys. If you still have previous keys intact then use them. For that you just need to press enter.

14. If you don't have the previous access keys then you need to create new and paste them here.

```
C:\tmp>aws configure
AWS Access Key ID [*****5BGP]:
AWS Secret Access Key [*****NSvL]:
Default region name [ap-south-1]:
Default output format [None]:
```

C:\tmp>

15. Now you need to make use of AWS SDK for python. You can use the below link to visit on the official site.

<https://boto3.amazonaws.com/v1/documentation/api/latest/guide/quickstart.html>

**So, for programming languages, you have a separate kit that is available that allows the programming language to interact with AWS. In terms of Python, you have Boto3, so you first have to install it on your local machine.**

16. The code to install boto3 is:

**pip install boto3**

17. As you can see that boto3 has been installed successfully.

```
C:\tmp>pip install boto3
Collecting boto3
  Downloading boto3-1.28.30-py3-none-any.whl (135 kB)
    135.8/135.8 kB 4.0 MB/s eta 0:00:00
Collecting botocore<1.32.0,>=1.31.30 (from boto3)
  Downloading botocore-1.31.30-py3-none-any.whl (11.1 kB)
    11.1/11.1 kB 8.8 MB/s eta 0:00:00
Collecting jmespath<2.0.0,>=0.7.1 (from boto3)
  Downloading jmespath-1.0.1-py3-none-any.whl (20 kB)
Collecting s3transfer<0.7.0,>=0.6.0 (from boto3)
  Downloading s3transfer-0.6.2-py3-none-any.whl (79 kB)
    79.8/79.8 kB ? eta 0:00:00
Collecting python-dateutil<3.0.0,>=2.1 (from botocore<1.32.0,>=1.31.30->boto3)
  Downloading python_dateutil-2.8.2-py3-none-any.whl (297 kB)
    247.7/247.7 kB 7.7 MB/s eta 0:00:00
Collecting urllib3<1.27,>=1.25.4 (from botocore<1.32.0,>=1.31.30->boto3)
  Downloading urllib3-1.26.16-py2.py3-none-any.whl (143 kB)
    143.1/143.1 kB 4.3 MB/s eta 0:00:00
Collecting six>=1.5 (from python-dateutil<3.0.0,>=2.1->botocore<1.32.0,>=1.31.30->boto3)
  Downloading six-1.16.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: urllib3, six, jmespath, python-dateutil, botocore, s3transfer, boto3
Successfully installed boto3-1.28.30 botocore-1.31.30 jmespath-1.0.1 python-dateutil-2.8.2 s3transfer-0.6.2 six-1.16.0 urllib3-1.26.16
[notice] A new release of pip is available: 23.1.2 -> 23.2.1
[notice] To update, run: python.exe -m pip install --upgrade pip
```

C:\tmp>

18. Now clear your screen, and type this command.

**python AccessS3buckets.py**

19. This accessS3buckets is the program name.

```
C:\tmp>python AccessS3buckets.py
appbucket8000
appbucket9000
```

C:\tmp>