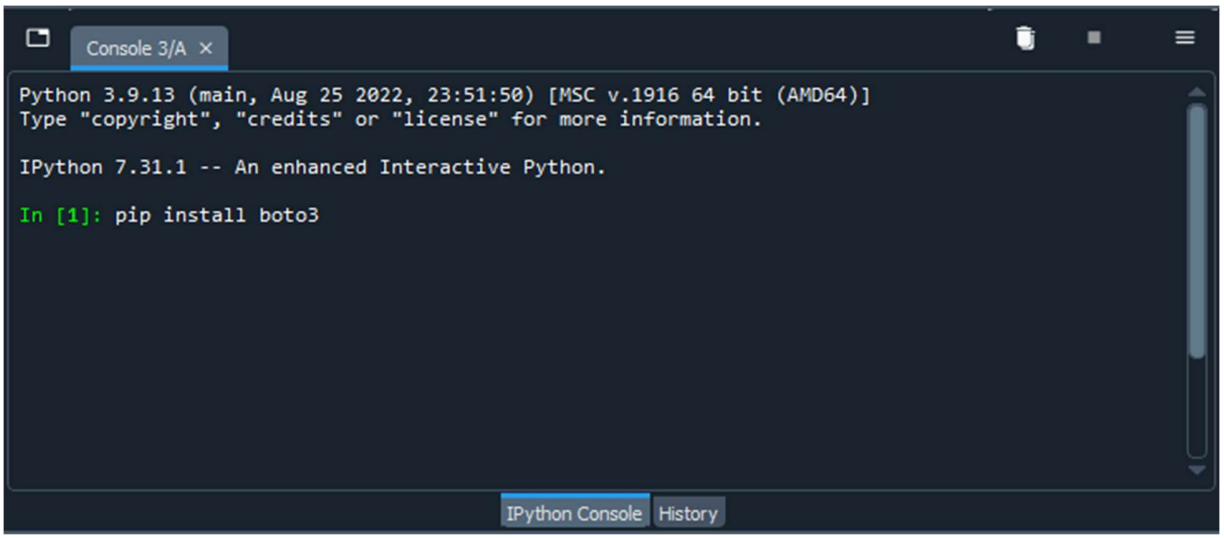
To upload files to Amazon S3 using Python

To move files to Amazon S3 using Python, you can use the AWS SDK for Python, also known as Boto3. Boto3 makes it easy to interact with AWS services, including Amazon S3. Here's a step-by-step description of how to move files to S3 using Python:

- **Install Boto3:** If you haven't already, install Boto3 using pip:

  pip install boto3



- **Set Up AWS Credentials:** Before you can interact with AWS services, you need to configure your AWS credentials. You can do this by setting up your **AWS Access Key ID** and **Secret Access Key** as environment variables or using AWS CLI's aws configure command.
  - **If you are not root user for AWS account contact admin for this.**
  - **If you have access to configure user, follow steps in below link**
    - How to set up AWS Credentials - Complete Coding
- **Import Boto3 and define all the required variables:**
  Import boto3

  AWS_ACCESS_KEY_ID = 'Place the aws access key id here within quotes'
  AWS_SECRET_ACCESS_KEY = 'Place the aws secret access key here within quotes '

  # Keep in mind to only place the name of bucket (The top level)
  BUCKET_NAME='Name of the s3 bucket in which you want to upload file '

Keep the path of folder in which file need to be uploaded
For e.g folder/subfolder/file_name(with extension)
UPLOAD_TARGET='Place the folder subfolder & file name here'

 # Keep the path of local file
 # Make sure we are using forward slash "/" in the path
LOCAL_SOURCE_FILE='Place the path of local file to be uploaded'

```
# -*- coding: utf-8 -*-
"""
Created on Sun Sep 24 15:47:24 2023

@author: Pandas Analytics Hub   ||   p.analyticshub@gmail.com   || +91-9774083186



#---------------Code to upload files from local to S3----------------#

"""

# Importing the Pacakages
import boto3

# Defining the variables
# A good practice to define keys or variables.
# Easier to manage  & easier to update.

AWS_ACCESS_KEY_ID = 'Place the aws access key id here within quotes'
AWS_SECRET_ACCESS_KEY = 'Place the aws secret access key here within quotes '

# Keep in mind to only place the name of bucket (The top level)
BUCKET_NAME='Name of the s3 bucket in which you want to upload file '

# Keep the path of folder in which file need to be uploaded
# For e.g folder/subfolder/file_name(with extension)
UPLOAD_TARGET='Place the folder subfolder & file name here'

# Keep the path of local file
# Make sure we are using forward slash "/" in the path
LOCAL_SOURCE_FILE='Place the path of local file to be uploaded'
```

- **Creating a function to upload file to s3:**
    - While defining a function, pass all the required values as parameters in function.
      def upload_local_to_s3(AWS_ACCESS_KEY_ID,AWS_SECRET_ACCESS_KEY
      ,BUCKET_NAME,LOCAL_SOURCE_FILE,UPLOAD_TARGET):
    - Create a session by passing AWS ID & AWS Secret Key.
      session = boto3.Session(
      aws_access_key_id=AWS_ACCESS_KEY_ID,
      aws_secret_access_key=AWS_SECRET_ACCESS_KEY
)
    - Create an S3 object to access the resources of S3.
      s3 = session.resource('s3')

- Calling the upload_file function of boto3 on s3 object.
  s3.meta.client.upload_file(Filename=LOCAL_SOURCE_FILE, Bucket=BUCKET_NAME, Key=UPLOAD_TARGET)

```
39  def upload_local_to_s3(AWS_ACCESS_KEY_ID,AWS_SECRET_ACCESS_KEY
40                         ,BUCKET_NAME,LOCAL_SOURCE_FILE,UPLOAD_TARGET):
41      # Creating session for logging in the AWS
42      # Session would use AWS Access Key ID & AWS Secret access key to lgin
43      session = boto3.Session(
44          aws_access_key_id=AWS_ACCESS_KEY_ID,
45          aws_secret_access_key=AWS_SECRET_ACCESS_KEY
46      )
47      # creating an S3 object to access the resources of AWS S3
48      s3 = session.resource('s3')
49
50      # Filename - File to upload
51      # Bucket - Bucket to upload to (the top level directory under AWS S3)
52      # Key - S3 object name (can contain subdirectories).
53      s3.meta.client.upload_file(Filename=LOCAL_SOURCE_FILE, Bucket=BUCKET_NAME, Key=UPLOAD_TARGET)
54
```

- Call the upload function withing the main block.

```
if __name__ == '__main__':
    try :
        upload_local_to_s3(AWS_ACCESS_KEY_ID,AWS_SECRET_ACCESS_KEY
                           ,BUCKET_NAME,LOCAL_SOURCE_FILE,UPLOAD_TARGET)
        print("File Uploaded Sucessfully")
    except Exception as e:
        print(f"Failed to upload because :\n{e}")
```