Documentation

Before starting to programs, i need to create Amazon Web Services account.

It was important to create IAM - Identity and Access Management, where I needed to create group and user. When I created user I got user id key and user access key which I needed to put in python to connect to SQS server. I could also install “AWScli” to have it on windows as a folder where I could put this keys and make python file to read it from this file, but I thought it is better in case if “awscli” is not installed in computer. So later on we needed to install “boto3 sdk”. To install this sdk I runed “pip install boto3” on command prompt.

Boto3 lets us access to SQS server and manage queues.

```
import boto3

AWSID = {'Your ID'}
AWSKEY = {'Your Key'}

sqs = boto3.resource('sqs', aws_access_key_id=AWSID,
    aws_secret_access_key=AWSKEY,
    region_name={'Your region'}
)
```

So here Imported “boto3” and created variables “AWSID” and “AWSKEY” where I wrote keys I got when I created user on “IAM”. I used “boto3.resource” to connect sqs server.

```
queue_name = ('Your Queue.fifo')

response = sqs.create_queue( QueueName=queue_name,
Attributes={'FifoQueue': 'true',
'ContentBasedDeduplication': 'true'})
```

Here I create variable which has queue name “Your Queue.fifo”. Reason I use “.fifo” is I need lines send in order first in first out instead of lines be sent randomly. So I create here Queue in sqs using variable “queue_name”.

```
queue = sqs.get_queue_by_name(QueueName='Your Queue.fifo')

with open("read.txt",'r') as myfile:
    for line in myfile:
        queue.send_message(MessageBody=line, MessageGroupId='Group1')
```

Here I am reading ‘text’ in text file to sqs queue line by line as new message. That is why first I find the queue “Your Queue.fifo” and by using “with open("read.txt",'r') as myfile:” to open the “read.txt” file and close it as soon as it is done with reading. So I need to send text, line by line as new message, that is why I use for each loop to send message body, the text in “read.txt” and I call this messages “Group1” in SQS server.

Now as I finished with first program I need to retrive all messages from specified Queue to write it in new file.

I start second program again with connecting sqs server:

```
import boto3

queue_name = ('Your Queue.fifo')

response = sqs.create_queue( QueueName=queue_name,
Attributes={'FifoQueue': 'true',
'ContentBasedDeduplication': 'true'})
```

I am finding and connecting the queue “Your Queue.fifo” to retrieve all messages.

```
queue_name = 'Your Queue.fifo'
queue = sqs.get_queue_by_name(QueueName=queue_name)
```

So later I use for each loop again.

```
for i in range(0, 1):
```

This helps me to decide how many time it should iterate in queue to get the messages, of coure in this case one time.

```
msg_list = queue.receive_messages(VisibilityTimeout=1,
MaxNumberOfMessages=10, WaitTimeSeconds=5)
```

Here I create “msg_list” to put all messages I recive in it. “VisibilityTimeout=1” lets us get message one tame, “MaxNumberOfMessages=10” this had to be minimum maximum 10 messages a time. From what I understood, AWS doesn’t let get more than 10 messages in a time. “WaitTimeSeconds=5” lets us wait 5 second to poll messages.

```
for msg in msg_list:

    with open("writemsg.txt", 'a') as write_file:
        write_file.write(format(msg.body))
```

Now in the end I create for each loop again to create "writemsg.txt" file to write the messages in this file. I need that messages write after each other in next line in file that is why I use “a” instead of “w”. So I need to write only the text that is on message body, that is why I use “format(msg.body)”

I am sending the programs as “mazahir.zip” fle. It contains firstprogram which is “submit_message.py” and “read.txt” and second program “message_retriever.py”. I sent “read.txt”, since it contains messages to send to SQS. I did not sent “writemsg.txt” since it creates it automaticly if the file doesn’t exist.