**AWS Assignment Set 2**

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**Statement:**

* Implement and end-to-end data pipeline to ingest specific data that satisfies a condition into a DynamoDB table from the CSV files uploaded into a source S3 bucket by using a Lambda function

**AWS services used in the lab**

* S3
* DynamoDB
* Lambda
* CloudWatch
* IAM

**Approximate time required**: 90 minutes

**Implement the following steps to complete the assignment**

* Create an S3 bucket using the following pattern: **cts\_assignement\_s3\_source\_XXXX**. Replace XXXX with your associate-id (example: *cts\_assignement\_s3\_source\_ 2223333* )
* Create a DynamoDB table
  + Table name: UsersXXXX (Replace XXXX with your associate-id)
  + Partition-Key: userid
* Attach the following IAM role to the lambda function: **CTSAssignmentLambdaRole**. Use the existing role with the above name. Create the role if the role does not exist. The role should have the following policies attached:
  + AmazonS3FullAccess, AmazonDynamoDBFullAccess, CloudWatchFullAccess
* Create a Lambda function using the following pattern: **cts\_assignment\_lambda\_XXXX**. Replace XXXX with your associate-id. Attached the above IAM role to lambda. Use python as the language.
* Add the S3 bucket as a trigger to the Lambda.
* As you upload the files provided to you (users1.csv, user2.csv, users3.csv) to the S3 bucket, the lambda should be triggered and **the rows with age > 30 only** in the CSV files should be added to the DynamoDB table.
  + Write appropriate code in the lambda function to facilitate this functionality.
  + Use boto3 for python.
  + Print each row to be added to DynamoDB so that you can see that in CloudWatch.
  + Use the following columns names to map the data: userid, name, gender, age, phone

**Guide lines for submitting the solution**

* The solutions file should **an MS Word document** created using the following patter. **AWS-Assignment-XXXX.docx**. Replace XXXX with your associate-id.
* The file should have the following screenshots to demonstrate the work you have done.
  + S3 bucket
  + Lambda Python Code
  + Lambda triggers
  + DynamoDB table rows that are added
  + CloudWatch logs.
* Each screenshot should clearly show the account-id (at the top-right corner) you are working with. This is for authenticating your solution.