**Question#1:**

With the help of AWS Lambda read a JSON file from S3 and Print **Title** and **Author** (check in cloud watch logs). Uploading file to S3 should trigger the Lambda function automatically.

**The JSON File would look like attached JSON file:**

****

You need to take care of all permissions required for Lambda to access S3 using AWS IAM.

**Question#2:**

With the help of AWS Lambda function, insert each items from the S3 JSON file used into DynamoDB **Book** table. Use python programming. Book Table has Primary Key (Partition Key) as BookID (Number)

The DynamoDB Items would look like below sample:

***{***

***"BookID": 100,***

***"Year": 1954,***

***"Title": "The Lord of the Rings - The Fellowship of the Ring",***

***"Author": "J. R. R. Tolkien",***

***"Price": 550,***

***"Info": {***

***"Pages": 325,***

***"Critic Rating": 4.7***

***}***

***}***

You can either use the any existing role for Lambda or create a new role for your lambda function in order to access DynamoDB table and S3 bucket using AWS IAM.

**Question#3:**

Create a Lambda function to capture event trigger from DynamoDB table Book. Upon items being inserted into Books table, trigger the Lambda function.

Create an SNS Topic and add email subscriber to it. When the Lambda gets triggered Publish a Message with the below information to the email subscribers.

**Subject:** Your order of has Arrived

**Message: Book Name –** **"The Lord of the Rings - The Fellowship of the Ring"**

**Book Price - 550**

**Question#4:**

Create a Lambda function to parse .JSON files being uploaded to S3 Bucket. Only Trigger the Lambda function when .JSON file is uploaded. Test and ensure the Lambda should not trigger for other formats.

**Question#5:**

Create a Lambda function to copy different files from a Source S3 bucket to different S3 Folders (Prefix) based on file names. Take the Target S3 Bucket, Target S3 Prefix from lambda **environment variables**.

Example below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source S3 Bucket** | **Source File Name** |  | **Target S3 Bucket** | **Target S3 Prefix** |
| TEST-SOURCE-BUCKET | Customer\_12202019.CSV | TEST-TARGET-BUCKET | CUSTOMER |
| TEST-SOURCE-BUCKET | Product\_12202019.JSON | TEST-TARGET-BUCKET | PRODUCT |
| TEST-SOURCE-BUCKET | StoreLocation\_12202019.CSV | TEST-TARGET-BUCKET | STORE |

**Question#6:**

Create an SNS Topic. Publish Message to this SNS topic based on File Upload on S3 bucket.

Create a Lambda function and add this SNS topic event as trigger.

Print the S3 Bucket name, Key Name and file size in MB from the SNS event information (check in cloud watch logs).

**Question#7:**

Create an SQS Queue. Publish Message to this SQS Queue based on File Upload on S3 bucket.

Create a Lambda function and add this SQS Queue event as trigger.

Print the S3 Bucket name, Key Name and file size in MB from the SQS event information (check in cloud watch logs).