Task #9 – SNS/SQS

What to do

Implement a subscription feature in your web application:

- Create a standard SQS queue named *<ProjectName>-uploads-notification-queue*.
- Create an SNS topic named *<ProjectName>-uploads-notification-topic*.
- Add two new endpoints in your web-applications
    - subscribe an email for notifications
    - unsubscribe an email from notifications
- After a user visits the subscription endpoint, the specified email should receive a confirmation message.
- Whenever a user visits the unsubscription endpoint, AWS should stop sending the email notifications.
- Whenever an image is uploaded using your web application, a message describing that event should be published to the SQS queue.
- Update your web-application to run a scheduled background process which extracts the SQS messages in batch and sends them to the SNS topic.
- The SNS notifications should be in **plain text** which includes:
    - an explanation that an image has been uploaded
    - the image metadata (size, name, extension)
    - a link to the web application endpoint for downloading the image

  Optional: add an additional attribute to the message your app will send to the SNS topic (such as an image extension) and configure the filtering policy for subscriptions to accept messages with a specific attribute value (such as .png).

- It's unlikely that you'll hit SNS free tier limits, but keep them in mind:

  Notification deliveries

Endpoint Type	Free Tier	Price
Mobile Push Notifications	1 million	$0.50 per million
Worldwide SMS	100	Learn more
email/email-JSON	1,000	$2.00 per 100,000
HTTP/s	100,000	$0.60 per million
Simple Queue Service (SQS)	No charge for deliveries to SQS Queues	
Lambda functions	No charge for deliveries to Lambda	

- Think what are the other ways of receiving SNS notifications for the image uploads (not necessarily in a human-readable form).

** Optional Task is not mandatory for completion this module but highly recommended, if you don't have a time to complete it - just skip it*

What should I remember?

1. **Once you create AWS Account -> Setup Multi-factor Authentication**
2. **Do NOT share your account**
3. **Do NOT commit your account Credentials into the Git**
4. **Terminate/Remove all created resources/services once you finish Module**
5. **Please Do not forget to delete NAT Gateway if you used it.**
6. **Do NOT keep instance running if you don’t use it**
7. **Carefully keep track of billing and working instances so you don't exceed limits**