

# Skytouch exercise for new members

Changelog:	
Fri, Mar 12, 2021	Omar: Initial document
Fri, Apr 23, 2021	Arturo, Giovanni, Israel, Rafa Mena: Add Cloudwatch and re word instructions.

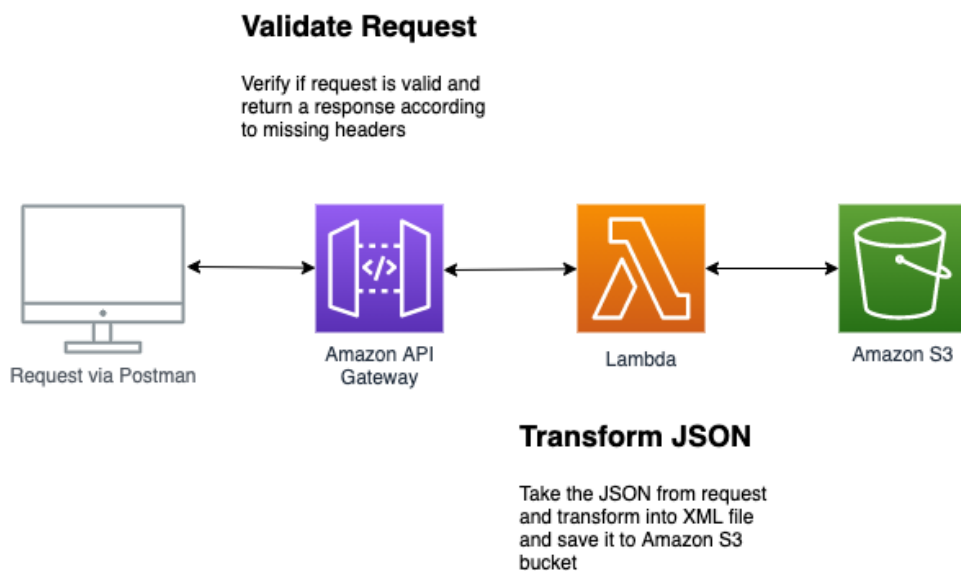
## Summary

This exam is intended to test our future teammate in certain skills such as, environment set up, technology research and configurations research. It will also allow us to see how they behave in a normal day with their teammates.

## Microservices and Queues

### Description

Create a **template** to deploy with CloudFormation for a Serverless Application with API Gateway, Lambda, S3 and CloudWatch.



### Modules

1. API Gateway: Task2(Open API document)
  - a. It must have 2 required headers on the request
    - i. Correlation Id/echo token
    - ii. User
  - b. Body JSON request
    - i. Attach sample files
  - c. Pass request to a lambda function
  - d. Nice to have: request body validation
2. Lambda:
  - a. Receives the request and transform from JSON to XML
    - i. Attach Sample files
  - b. Upload the result file to an S3 bucket
  - c. Return to the user the URL of the s3 bucket on the response payload (JSON)
3. AWS Cloud Formation:

- a. Define the template to deploy the components (instructions to AWS about deployment. Resources: API Gateway + lambda)
  - b. Create AWS Lambda with Python3 and tests
  - c. Define API Gateway
4. CloudWatch:
  - a. Log every transaction including user and correlation id on:
    - i. API Gateway
    - ii. Lambda
      1. Received JSON
      2. Transformed XML
      3. S3 URL
  - b. Nice to have: Set log level on environment variables.
  - c. Log statements are decision of candidates.

## Requirements

- ⌘ Postman (since most of the team use this for their tests)
- ⌘ Python3
- ⌘ AWS CLI 2.X
- ⌘ Free AWS Account
- ⌘ Place the code on a repository

## Expectations

- ⌘ Convert a JSON into a XML
- ⌘ Validate headers
- ⌘ Validate body
- ⌘ Deploy via AWS CloudFormation

## Duration:

The candidate will be suggested to give his or her own estimate of time before starting the exercise.