{

"id": "1111",

"firstName": "Amandeep",

"lastName": "Singh",

"contribution": "300",

}

{

"StartAt": "RequestController",

"States": {

"RequestController" : {

"Type" : "Task",

"Next" : "Validation",

"Resource" : "arn:aws:lambda:eu-west-1:655285971889:function:A619485\_RequestValidationLambda",

"ResultPath" : null

},

"Validation": {

"Type": "Parallel",

"Next": "AggregationValidationResult",

"Branches" : [

{

"StartAt": "LengthValidation",

"States": {

"LengthValidation" : {

"Type": "Task",

"Resource":"arn:aws:lambda:eu-west-1:655285971889:function:A619485\_LengthValidationLambda",

"ResultPath" : "$.error",

"End": true

}

}

},

{

"StartAt": "FormatValidation",

"States": {

"FormatValidation" : {

"Type": "Task",

"Resource":"arn:aws:lambda:eu-west-1:655285971889:function:A619485\_FormatValidationLambda",

"ResultPath" : "$.error",

"End": true

}

}

}

]

},

"AggregationValidationResult": {

"Type": "Task",

"Resource": "arn:aws:lambda:eu-west-1:655285971889:function:AggregateLambda",

"Next": "ProcessRequestChoice"

},

"ProcessRequestChoice" : {

"Type" : "Choice",

"Choices" : [

{

"Variable":"$",

"BooleanEquals" : true,

"Next" : "ProcessValidRequest"

},

{

"Variable":"$",

"BooleanEquals" : false,

"Next" : "ProcessInValidRequest"

}

]

},

"ProcessValidRequest" : {

"Type" : "Task",

"Resource" : "arn:aws:lambda:eu-west-1:655285971889:function:A619485\_ProcessValidRequest",

"End" : true

},

"ProcessInValidRequest" : {

"Type" : "Task",

"Resource" : "arn:aws:lambda:eu-west-1:655285971889:function:A619485\_ProcessInvalidRequest",

"End" : true

}

}

} "employer": "Google"

**Request\_Controller:**

package models;

public class ContributionModel {

private String id;

private String firstName;

private String lastName;

private String contribution;

private String employer;

public String getId() {

return id;

}

public void setId(String id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public String getContribution() {

return contribution;

}

public void setContribution(String contribution) {

this.contribution = contribution;

}

public String getEmployer() {

return employer;

}

public void setEmployer(String employer) {

this.employer = employer;

}

}

package lambdaPkg;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

import models.ContributionModel;

public class RequestValidation implements RequestHandler<ContributionModel, Boolean> {

public Boolean handleRequest(ContributionModel contributionModel, Context context) {

boolean isValid = true;

System.out.println("Does return boolean which does not impact anything");

System.out.println("output = " + isValid);

return isValid;

}

}

**Length\_Validation:**

package models;

public class ContributionModel {

private String id;

private String firstName;

private String lastName;

private String contribution;

private String employer;

public String getId() {

return id;

}

public void setId(String id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public String getContribution() {

return contribution;

}

public void setContribution(String contribution) {

this.contribution = contribution;

}

public String getEmployer() {

return employer;

}

public void setEmployer(String employer) {

this.employer = employer;

}

}

package models;

public class Error {

private boolean IsValid;

private String errorCode;

private String errorDescription;

public boolean isIsValid() {

return IsValid;

}

public void setIsValid(boolean isValid) {

IsValid = isValid;

}

public String getErrorCode() {

return errorCode;

}

public void setErrorCode(String errorCode) {

this.errorCode = errorCode;

}

public String getErrorDescription() {

return errorDescription;

}

public void setErrorDescription(String errorDescription) {

this.errorDescription = errorDescription;

}

}

package lambdaPkg;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

import models.ContributionModel;

import models.Error;

public class LengthValidation implements RequestHandler<ContributionModel, Error> {

public Error handleRequest(ContributionModel contributionModel, Context context) {

Error error = new Error();

if (contributionModel.getFirstName().length() > 10) {

error.setIsValid(false);

error.setErrorCode("Length error");

error.setErrorDescription("Length of Firstname is invalid");

} else {

error.setIsValid(true);

}

System.out.println("output = " + error.isIsValid());

return error;

}

}

**Format Validation:**

package models;

public class ContributionModel {

private String id;

private String firstName;

private String lastName;

private String contribution;

private String employer;

public String getId() {

return id;

}

public void setId(String id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public String getContribution() {

return contribution;

}

public void setContribution(String contribution) {

this.contribution = contribution;

}

public String getEmployer() {

return employer;

}

public void setEmployer(String employer) {

this.employer = employer;

}

}

package models;

public class Error {

private boolean IsValid;

private String errorCode;

private String errorDescription;

public boolean isIsValid() {

return IsValid;

}

public void setIsValid(boolean isValid) {

IsValid = isValid;

}

public String getErrorCode() {

return errorCode;

}

public void setErrorCode(String errorCode) {

this.errorCode = errorCode;

}

public String getErrorDescription() {

return errorDescription;

}

public void setErrorDescription(String errorDescription) {

this.errorDescription = errorDescription;

}

}

package lambdaPkg;

import java.util.regex.Pattern;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

import models.ContributionModel;

import models.Error;

public class FormatValidation implements RequestHandler<ContributionModel, Error> {

public Error handleRequest(ContributionModel contributionModel, Context context) {

Error error = new Error();

if (!Pattern.matches("[a-zA-Z]+", contributionModel.getFirstName())) {

error.setIsValid(false);

error.setErrorCode("Format error");

error.setErrorDescription("Format of Firstname is invalid");

} else {

error.setIsValid(true);

}

System.out.println("output = " + error.isIsValid());

return error;

}

}

package lambdaPkg;

import java.util.regex.Pattern;

public class MainClass {

public static void main(String[] args) {

boolean isValid;

if(!Pattern.matches("[a-zA-Z]+", "sacacw23423")) {

isValid = false;

} else {

isValid = true;

}

System.out.println(isValid);

}

}

**Aggregation:**

package models;

public class ContributionModel {

private String id;

private String firstName;

private String lastName;

private String contribution;

private String employer;

private Error error;

public String getId() {

return id;

}

public void setId(String id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public String getContribution() {

return contribution;

}

public void setContribution(String contribution) {

this.contribution = contribution;

}

public String getEmployer() {

return employer;

}

public void setEmployer(String employer) {

this.employer = employer;

}

public Error getError() {

return error;

}

public void setError(Error error) {

this.error = error;

}

}

package models;

import java.util.List;

public class AggregationResponseModel {

private boolean isValid;

private List<ContributionModel> contributionModelList;

public boolean isValid() {

return isValid;

}

public void setValid(boolean isValid) {

this.isValid = isValid;

}

public List<ContributionModel> getContributionModelList() {

return contributionModelList;

}

public void setContributionModelList(List<ContributionModel> contributionModelList) {

this.contributionModelList = contributionModelList;

}

}

package models;

public class Error {

private boolean IsValid;

private String errorCode;

private String errorDescription;

public boolean isIsValid() {

return IsValid;

}

public void setIsValid(boolean isValid) {

IsValid = isValid;

}

public String getErrorCode() {

return errorCode;

}

public void setErrorCode(String errorCode) {

this.errorCode = errorCode;

}

public String getErrorDescription() {

return errorDescription;

}

public void setErrorDescription(String errorDescription) {

this.errorDescription = errorDescription;

}

}

package lambdaPkg;

import java.util.List;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

import models.ContributionModel;

public class AggregationValidation implements RequestHandler<List<ContributionModel>, Boolean> {

public Boolean handleRequest(List<ContributionModel> contributionModelList, Context context) {

boolean isValid = true;

for(ContributionModel contriLoop : contributionModelList) {

if(!contriLoop.getError().isIsValid()) {

isValid = false;

break;

}

}

System.out.println("output = " + isValid);

return isValid;

}

}

**Process Valid:**

package lambdaPkg;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

public class ProcessValidRequest implements RequestHandler<Object, Boolean> {

public Boolean handleRequest(Object contributionModel, Context context) {

boolean isValid = true;

System.out.println("Process Valid request");

System.out.println(contributionModel.toString());

System.out.println("output = " + isValid);

return isValid;

}

}

**Process INValid:**

package lambdaPkg;

import com.amazonaws.services.lambda.runtime.Context;

import com.amazonaws.services.lambda.runtime.RequestHandler;

public class ProcessInvalidRequest implements RequestHandler<Object, Boolean> {

public Boolean handleRequest(Object contributionModel, Context context) {

boolean isValid = false;

System.out.println("Process Invalid request");

System.out.println(contributionModel.toString());

System.out.println("output = " + isValid);

return isValid;

}

}

**POM.xml**

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 <http://maven.apache.org/xsd/maven-4.0.0.xsd>">

<modelVersion>4.0.0</modelVersion>

<groupId>com.fil</groupId>

<artifactId>AggregationLambda</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>AggregationLambda</name>

<description>AggregationLambda</description>

<properties>

<java.version>1.8</java.version>

<aws-lambda-java-core.version>1.2.0</aws-lambda-java-core.version>

<aws-lambda-java-events.version>2.2.2</aws-lambda-java-events.version>

<aws-java-sdk-dynamodb.version>1.11.428</aws-java-sdk-dynamodb.version>

<aws-java-sdk-lambda.version>1.11.428</aws-java-sdk-lambda.version>

<aws-java-sdk-sqs.version>1.11.428</aws-java-sdk-sqs.version>

<aws-java-sdk-xray.version>1.11.428</aws-java-sdk-xray.version>

<aws-java-sdk-kms.version>1.11.428</aws-java-sdk-kms.version>

<aws-servlet-java-container-version>1.1</aws-servlet-java-container-version>

<aws-lambda-java-log4j2.version>1.1.0</aws-lambda-java-log4j2.version>

<log4j.version>2.8.2</log4j.version>

<junit.version>4.12</junit.version>

<jackson-core.version>2.9.7</jackson-core.version>

<mockito.version>1.10.19</mockito.version>

<powermock.version>1.6.4</powermock.version>

<dependency-check-maven.version>2.1.0</dependency-check-maven.version>

<maven-shade-plugin.version>3.2.0</maven-shade-plugin.version>

<maven-compiler-plugin.version>3.8.0</maven-compiler-plugin.version>

</properties>

<dependencies>

<dependency>

<groupId>com.amazonaws</groupId>

<artifactId>aws-lambda-java-core</artifactId>

<version>${aws-lambda-java-core.version}</version>

</dependency>

<dependency>

<groupId>com.amazonaws</groupId>

<artifactId>aws-lambda-java-events</artifactId>

<version>${aws-lambda-java-events.version}</version>

</dependency>

<dependency>

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<artifactId>log4j-core</artifactId>

<version>${log4j.version}</version>

</dependency>

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<artifactId>log4j-api</artifactId>

<version>${log4j.version}</version>

</dependency>

<dependency>

<groupId>com.amazonaws</groupId>

<artifactId>aws-lambda-java-log4j2</artifactId>

<version>${aws-lambda-java-log4j2.version}</version>

</dependency>

</dependencies>

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</configuration>

</plugin>

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<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-shade-plugin</artifactId>

<version>${maven-shade-plugin.version}</version>

<executions>

<execution>

<phase>package</phase>

<goals>

<goal>shade</goal>

</goals>

<configuration>

<transformers>

<transformer

implementation="com.github.edwgiz.mavenShadePlugin.log4j2CacheTransformer.PluginsCacheFileTransformer">

</transformer>

<transformer

implementation="org.apache.maven.plugins.shade.resource.PluginXmlResourceTransformer" />

</transformers>

<filters>

<filter>

<artifact>log4j:log4j</artifact>

<includes>

<include>\*\*</include>

</includes>

</filter>

<filter>

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<includes>

<include>\*\*</include>

</includes>

</filter>

</filters>

<createDependencyReducedPom>false</createDependencyReducedPom>

</configuration>

</execution>

</executions>

<dependencies>

<dependency>

<groupId>com.github.edwgiz</groupId>

<artifactId>maven-shade-plugin.log4j2-cachefile-transformer</artifactId>

<version>2.8.1</version>

</dependency>

</dependencies>

</plugin>

</plugins>

</build>

</project>