All threads resolved

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Merged Opened 2 months ago by Angelo Flores
```

## **Curated Collections - Lambda Processor**

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Compare and
     src/main/java/com/nordstrom/nse/curatedCollections/clients/AmazonS3Client.java
                                                                                                                     Viewed
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     src/main/java/com/nordstrom/nse/curatedCollections/clients/S3Client.java
                                                                                                                     Viewed
        src/main/java/com/nordstrom/nse/curatedCollections/config/CompassConfiguration.java
                                                                                                                     Viewed
                 package com.nordstrom.nse.curatedCollections.config;
               + public class CompassConfiguration {
                   private String s3Bucket;
                   private String uploadBucket;
                   public String getS3Bucket() {
                     return s3Bucket;
          <u>11</u>
                   public void setS3Bucket(String s3Bucket) {
          <u>12</u>
                     this.s3Bucket = s3Bucket;
          <u>13</u>
                   public String getUploadBucket() {
          <u>15</u>
                     return uploadBucket;
          <u>17</u>
                   public void setUploadBucket(String uploadBucket) {
                     this.uploadBucket = uploadBucket;
```

```
src/main/java/com/nordstrom/nse/curatedCollections/config/EnvironmentConfiguration.java
                                                                                              +134 -0
                                                                                                        Viewed
        package com.nordstrom.nse.curatedCollections.config;
     + import com.amazonaws.services.s3.AmazonS3;
     + import com.amazonaws.util.StringUtils;
     + import com.nordstrom.nse.curatedCollections.Constants;
     + import com.nordstrom.nse.curatedCollections.clients.AmazonS3Client;
     + import com.nordstrom.nse.curatedCollections.clients.S3Client;
     + import com.nordstrom.nse.curatedCollections.services.SSMService;
     + import java.io.IOException;
     + import java.util.Properties;
     + import org.apache.avro.generic.GenericData.Record;
     + import org.apache.kafka.clients.producer.KafkaProducer;
     + import org.apache.log4j.Logger;
       public class EnvironmentConfiguration {
          private static final Logger logger = Logger.getLogger(EnvironmentConfiguration.class);
          private static EnvironmentConfiguration environmentConfiguration;
          private final String COMMON_RESOURCE_FILE = "/curated-collections-%s.properties";
          private final String RESOURCE_FILE_FORMAT = "/kafka-%s.properties";
          private String environmentName;
          private CompassConfiguration compassConfiguration;
          private InferenceEngineConfiguration inferenceEngineConfiguration;
          private S3Client s3Client;
          private Properties props;
          private String kafkaTopic;
          public static EnvironmentConfiguration getInstance(String env) {
            if (environmentConfiguration == null) {
              synchronized (EnvironmentConfiguration.class) {
                if (environmentConfiguration == null) {
                  String environmentName = env;
```

```
if (!StringUtils.isNullOrEmpty(env)) {
                              environmentName = System.getenv(Constants.APPLICATION_ENVIRONMENT);
                            environmentConfiguration = new EnvironmentConfiguration(environmentName);
          <u>37</u>
                     return environmentConfiguration;
                   private EnvironmentConfiguration(String environmentName) {
                     setEnvironmentName(environmentName);
                     buildEnvironment();
                   private void buildEnvironment() {
                     try {
                       props = new Properties();
                       props.load(getClass().getResourceAsStream(String.format(COMMON_RESOURCE_FILE, environmentName)));
                       var compassConfiguration = new CompassConfiguration();
                       setCompassConfiguration(compassConfiguration);
                       var inferenceEngineConfiguration = new InferenceEngineConfiguration();
                        setInferenceEngineConfiguration(inferenceEngineConfiguration);
                        setS3Client(AmazonS3Client.getAmazonS3());
                     catch (Exception exception) {
                        logger.error("Failed to build environment: " + exception.toString());
                   public void setEnvironmentName(String environmentName) {
if(environmentName == null || StringUtils.isNullOrEmpty(environmentName)){
                       // For Testing
                       this.environmentName = "dev";
                       this.environmentName = environmentName;
          <u>77</u>
                   public KafkaProducer<String, Record> generateKafkaProducer() throws IOException {
          <u>79</u>
                     props = new Properties();
                     props.load(getClass().getResourceAsStream(String.format(RESOURCE_FILE_FORMAT, environmentName)));
                     setJaasConfig();
                     setKafkaTopic();
                      return new KafkaProducer<>(props);
                   public void setCompassConfiguration(CompassConfiguration compassConfiguration) {
                     compassConfiguration.setUploadBucket(props.getProperty("tokenstyleupload.bucket"));
                      compass {\tt Configuration.setS3Bucket(props.getProperty("curated collections.bucket"));}
                      this.compassConfiguration = compassConfiguration;
                   private void setInferenceEngineConfiguration(InferenceEngineConfiguration inferenceEngineConfiguration)
                     inferenceEngineConfiguration.setInferenceBucket(props.getProperty("inference.bucket"));
                      this.inferenceEngineConfiguration = inferenceEngineConfiguration;
                   private void setS3Client(AmazonS3 amazonS3) {
                      this.s3Client = new S3Client(amazonS3);
                   public void setS3Client(S3Client s3Client) {
                      this.s3Client = s3Client;
```

```
<u>107</u>
             private void setJaasConfig() {
               var ssmService = new SSMService();
               var config = props.getProperty("sasl.jaas.config");
  110
               var kafkaUsername = ssmService.getParameterStoreValue(props.getProperty("kafka.ssm.accesskey"));
               var kafkaPassword = ssmService.getParameterStoreValue(props.getProperty("kafka.ssm.secretkey"));
               props.setProperty("sasl.jaas.config", String.format(config, kafkaUsername, kafkaPassword));
  <u>113</u>
  114
  <u>115</u>
             private void setKafkaTopic() {
  <u>116</u>
               this.kafkaTopic = props.getProperty("kafka.topic");
  <u>117</u>
  <u>118</u>
  <u>119</u>
             public CompassConfiguration getCompassConfiguration() {
               return compassConfiguration;
  <u>121</u>
             public InferenceEngineConfiguration getInferenceEngineConfiguration() {
               return inferenceEngineConfiguration;
  <u>125</u>
             public S3Client getS3Client() {
               return s3Client;
  <u>129</u>
  <u>130</u>
             public String getKafkaTopic() {
  <u>131</u>
  <u>132</u>
               return kafkaTopic;
  <u>133</u>
   <u>134</u>
■ src/main/java/com/nordstrom/nse/curatedCollections/config/InferenceEngineConfiguration.java
                                                                                                              Viewed
           package com.nordstrom.nse.curatedCollections.config;
        + public class InferenceEngineConfiguration {
             private String inferenceBucket;
             public String getInferenceBucket() {
               return inferenceBucket;
             public void setInferenceBucket(String inferenceBucket) {
               this.inferenceBucket = inferenceBucket;
           \ No newline at end of file
  src/main/java/com/nordstrom/nse/curatedCollections/handlers/CuratedCollectionsHandler.java
           package com.nordstrom.nse.curatedCollections.handlers;
        + import com.amazonaws.services.lambda.runtime.Context;
        + import com.amazonaws.services.lambda.runtime.RequestHandler;
        + import com.amazonaws.services.lambda.runtime.events.S3Event;
        + import com.amazonaws.services.s3.event.S3EventNotification.S3EventNotificationRecord;
        + import com.amazonaws.util.StringUtils;
           import com.nordstrom.nse.curatedCollections.Constants;
           import com.nordstrom.nse.curatedCollections.config.FnvironmentConfiguration:
        + import com.nordstrom.nse.curatedCollections.models.curatedCollection.CuratedCollectionsResponse;
        + import com.nordstrom.nse.curatedCollections.services.CuratedCollectionsService;
        + import java.util.Arrays;
      | + import java.util.List;
        + import java.util.stream.Collectors;
        + import org.apache.log4j.Logger;
        + import static com.nordstrom.nse.curatedCollections.Constants.SUCCESS;
        + import static com.nordstrom.nse.curatedCollections.Constants.FAIL;
        + import static com.nordstrom.nse.curatedCollections.Constants.NULL_INPUT;
        + import static com.nordstrom.nse.curatedCollections.Constants.ZERO_RECORDS;
        + public class CuratedCollectionsHandler implements RequestHandler<S3Event, String> {
               private static final Logger logger = Logger.getLogger(CuratedCollectionsHandler.class);
               private static EnvironmentConfiguration environment;
               private static CuratedCollectionsService curatedCollectionsService;
```

static {

```
EnvironmentConfiguration.getInstance(System.getenv(Constants.APPLICATION_ENVIRONMENT));
               curatedCollectionsService =
                   new CuratedCollectionsService(environment.getS3Client(),
                       environment.getCompassConfiguration(), environment.getInferenceEngineConfiguration(),
       environment);
           public String handleRequest(S3Event s3Event, Context context) {
               logger.debug("CuratedCollectionsHandler Invoked with event: " + s3Event);
               if (s3Event == null) {
                   logger.error(NULL_INPUT);
                   return NULL_INPUT;
<u>42</u>
               List<S3EventNotificationRecord> records = s3Event.getRecords();
               if (records == null) {
                   logger.error(NULL_INPUT);
                   return NULL_INPUT;
               if (records.size() == 0) {
                   logger.error(ZERO_RECORDS);
               String bucket = s3Event.getRecords().get(0).getS3().getBucket().getName();
               String key = s3Event.getRecords().get(0).getS3().getObject().getUrlDecodedKey();
               if(uploadCuratedTokenStyleIds(key) != null){
                   return SUCCESS;
               else{
           public CuratedCollectionsResponse uploadCuratedTokenStyleIds(String pathUrlFileName) {
               CuratedCollectionsResponse curatedCollectionsResponse = null;
               List<String> proposedStyleIds;
               if (pathUrlFileName == null) {
                   logger.error("pathUrlFileName is null.");
<u>71</u>
                   return null;
               String[] parts = pathUrlFileName.split("\\.");
               String token = parts[0];
<u>77</u>
               if (StringUtils.isNullOrEmpty(token)) {
                   logger.error("No tokens to update.");
                   return null;
                   String tokenStyleContent = environment.getS3Client()
                       .getObject(environment.getCompassConfiguration().getUploadBucket(), pathUrlFileName);
                   String[] splits = tokenStyleContent.split("\n");
                   proposedStyleIds = Arrays.asList(splits)
                       .map(styleId -> styleId.trim())
                       .collect(Collectors.toList());
               } catch (Exception ex) {
                   logger.error("Empty Style IDs", ex);
                   return null;
               try {
                   curatedCollectionsResponse = curatedCollectionsService.process(token, proposedStyleIds);
                   return curatedCollectionsResponse;
```

```
} catch (Exception ex) {
                              logger.error("Unable to create CuratedCollectionsResponse with exception", ex);
         <u>103</u>
                     public void setCuratedCollectionsService(CuratedCollectionsService curatedCollections) {
                         curatedCollectionsService = curatedCollections;
         110
                     public void setEnvironment(EnvironmentConfiguration env) {
                         environment = env;
         <u>115</u>
      grc/main/java/com/nordstrom/nse/curatedCollections/models/curatedcollection/CuratedCollecti
                                                                                                                  Viewed
   onsResponse.java
               + package com.nordstrom.nse.curatedCollections.models.curatedcollection;
               + public class CuratedCollectionsResponse {
                   private int filesUpdated;
                   public int getFilesUpdated() {
                     return filesUpdated;
                   public void setFilesUpdated(int filesUpdated) {
                     this.filesUpdated = filesUpdated;
   ▼ ■ src/main/java/com/nordstrom/nse/curatedCollections/models/curatedcollection/InferenceSourc
                                                                                                                  Viewed
   eOutput.java
               + package com.nordstrom.nse.curatedCollections.models.curatedcollection;
               + import com.fasterxml.jackson.annotation.JsonProperty;
               + import java.util.List;
               + public class InferenceSourceOutput {
                   @JsonProperty("modified")
                   private String modified;
                   @JsonProperty("tokens")
                   private List<String> tokens;
                   public String getModified() {
                     return modified;
                   public void setModified(String modified) {
                     this.modified = modified;
                   public List<String> getTokens() {
                     return tokens;
                   public void setTokens(List<String> tokens) {
                     this.tokens = tokens;
      rc/main/java/com/nordstrom/nse/curatedCollections/services/CuratedCollectionsService.java
                                                                                                                  Viewed
(2)
               + package com.nordstrom.nse.curatedCollections.services;
               + import com.amazonaws.services.s3.model.AmazonS3Exception;
               + import com.amazonaws.util.StringUtils;
               + import com.fasterxml.jackson.core.JsonProcessingException;
                 import com.fasterxml.jackson.databind.ObjectMapper;
                  import com.nordstrom.nse.curatedCollections.clients.S3Client;
```

```
+ import com.nordstrom.nse.curatedCollections.config.CompassConfiguration;
    + import com.nordstrom.nse.curatedCollections.config.EnvironmentConfiguration;
    + import com.nordstrom.nse.curatedCollections.config.InferenceEngineConfiguration;
    + import com.nordstrom.nse.curatedCollections.models.curatedcollection.CuratedCollectionsResponse;
    + import com.nordstrom.nse.curatedCollections.models.curatedcollection.InferenceSourceOutput;
<u>12</u>
<u>13</u>
    + import com.nordstrom.nse.navigation.services.DateTimeService;
    + import java.io.IOException;
    + import java.util.ArrayList;
    + import java.util.Arrays;
<u>17</u>
    + import java.util.List;
    + import java.util.stream.Collectors;
    + import org.apache.avro.Schema;
    + import org.apache.avro.Schema.Parser;
    + import org.apache.avro.generic.GenericData.Record;
<u>21</u>
    + import org.apache.avro.generic.GenericRecordBuilder;
    + import org.apache.kafka.clients.producer.KafkaProducer;
    + import org.apache.kafka.clients.producer.ProducerRecord;
    + import org.slf4j.Logger;
    + import static org.slf4j.LoggerFactory.getLogger;
    + public class CuratedCollectionsService {
        private static final String COMPASS_FORMAT = "source-algorithm-output/%s/common/compass.json";
        private static final String CURRENT_TOKEN_STYLEID_FILENAME_FORMAT = "%s.csv";
        private static final String PREVIOUS_TOKEN_STYLEID_FILENAME_FORMAT = "%s-previous.csv";
        private final ObjectMapper objectMapper = new ObjectMapper();
        private Logger logger = getLogger(CuratedCollectionsService.class);
        private EnvironmentConfiguration environment;
        private S3Client s3Client;
        private CompassConfiguration compassConfiguration;
        private InferenceEngineConfiguration inferenceEngineConfiguration;
        private CuratedCollectionsResponse curatedCollectionsResponse;
        public CuratedCollectionsService(S3Client s3Client, CompassConfiguration compassConfiguration,
             InferenceEngineConfiguration inferenceEngineConfiguration, EnvironmentConfiguration environment) {
          this.environment = environment;
          this.s3Client = s3Client;
          this.compassConfiguration = compassConfiguration;
          this.inferenceEngineConfiguration = inferenceEngineConfiguration;
          this.curatedCollectionsResponse = new CuratedCollectionsResponse();
        public CuratedCollectionsResponse process(String token, List<String> proposedStyleIds) throws
      IOException {
           try {
             logger.info("process: token={} proposedStyleIds={}", token, String.join(",", proposedStyleIds));
            String currentTokenStyleIdsFileName = String.format(CURRENT_TOKEN_STYLEID_FILENAME_FORMAT, token);
            // Get previous s3 token-styleids (navigation-curated-collections-prod/{token}.csv)
            String currentContent = null;
            List<String> currentStyleIds = Arrays.asList();
            try {
               currentContent = s3Client.getObject(compassConfiguration.getS3Bucket(),
      currentTokenStyleIdsFileName);
               logger.info("process: token={} currentContent={}", token, currentContent);
               currentStyleIds = splitStyleIds(currentContent);
             } catch (AmazonS3Exception ex) {
               logger.info(String.format("process: No content found for file=%s, error=%s",
      currentTokenStyleIdsFileName, ex.getMessage()));
            // Generate a diff (added and removed styleIds for the token)
            List<String> finalCurrentStyleIds = currentStyleIds;
            List<String> addedStyleIds = proposedStyleIds.stream()
                 .distinct()
                 .filter(styleId -> !finalCurrentStyleIds.contains(styleId))
                 .collect(Collectors.toList());
            List<String> removedStyleIds = currentStyleIds.stream()
<u>77</u>
                 .distinct()
                 .filter(styleId -> !proposedStyleIds.contains(styleId))
                 .collect(Collectors.toList());
```

```
logger.info("process: token={} addedStyles={}", token, String.join(",", addedStyleIds));
              logger.info("process: token={} removedStyles={}", token, String.join(",", removedStyleIds));
              // Update s3 source-algorithm-output/{styleIds}/common/compass.json for all related styleIds
              addedStyleIds.forEach(styleId -> {
                try {
                  addToken(styleId.trim(), token);
                } catch (IOException exception) {
                  logger.error("Error adding token: " + exception);
              removedStyleIds.forEach(styleId -> {
                  removeToken(styleId.trim(), token);
                } catch (IOException exception) {
                  logger.error("Error removing token: " + exception);
              // Move old token-stylegroups: navigation-curated-collections-prod/{token}.csv -> navigation-
        curated-collections-prod/{token}-previous.csv
              if (!StringUtils.isNullOrEmpty(currentContent)) {
                String previousTokenStyleIdsFileName = String.format(PREVIOUS_TOKEN_STYLEID_FILENAME_FORMAT,
        token);
                s3Client.putObject(compassConfiguration.getS3Bucket(), previousTokenStyleIdsFileName,
        currentContent);
              // Save proposed token-stylegroups (navigation-curated-collections-prod/{token}.csv)
              saveNewTokens(token, proposedStyleIds);
              streamEvents(addedStyleIds, removedStyleIds);
              curatedCollectionsResponse.setFilesUpdated(addedStyleIds.size() + removedStyleIds.size());
112
              return curatedCollectionsResponse;
            } catch (Exception ex) {
              logger.error(String.format("Error processing token=[%s]", token), ex);
<u>117</u>
          private List<String> splitStyleIds(String content) {
            String[] splits = content.split("\n");
            return Arrays.asList(splits);
<u>125</u>
          private void addToken(String styleId, String token) throws IOException {
            String inferenceSourceOutputFileName = String.format(COMPASS_FORMAT, styleId);
            InferenceSourceOutput compassData = getInferenceData(inferenceSourceOutputFileName);
<u>130</u>
            if (!compassData.getTokens().contains(token)) {
              compassData.getTokens().add(token);
              logger.info("addToken: styleId={} token={}", styleId, token);
<u>133</u>
              putInferenceData(inferenceSourceOutputFileName, compassData);
<u>138</u>
          private void removeToken(String styleId, String token) throws IOException {
            String inferenceSourceOutputFileName = String.format(COMPASS_FORMAT, styleId);
            InferenceSourceOutput compassData = getInferenceData(inferenceSourceOutputFileName);
            if (compassData.getTokens().contains(token)) {
              compassData.getTokens().remove(token);
              logger.info("removeToken: styleId={} token={}", styleId, token);
              putInferenceData(inferenceSourceOutputFileName, compassData);
```

```
private void saveNewTokens(String token, List<String> proposedStyleIds) {
              String currentTokenStyleIdsFileName = String.format(CURRENT_TOKEN_STYLEID_FILENAME_FORMAT, token);
  <u>156</u>
              String content = String.join(System.lineSeparator(), proposedStyleIds);
              s3Client.put0bject(compassConfiguration.getS3Bucket(), currentTokenStyleIdsFileName, content);
  <u>159</u>
            private void putInferenceData(String compassFilename, InferenceSourceOutput compassData) throws
          JsonProcessingException {
              DateTimeService dateTimeService = new DateTimeService();
              compassData.setModified(dateTimeService.getDateTimeNowUtcAsString());
              String content = objectMapper.writeValueAsString(compassData);
              s3Client.putObject(inferenceEngineConfiguration.getInferenceBucket(), compassFilename, content);
            private InferenceSourceOutput getInferenceData(String compassFilename) throws IOException {
              InferenceSourceOutput compassData;
              try {
  <u>171</u>
                String content = s3Client.getObject(inferenceEngineConfiguration.getInferenceBucket(),
          compassFilename);
                compassData = objectMapper.readValue(content, InferenceSourceOutput.class);
  <u>175</u>
              } catch (AmazonS3Exception ex) {
                logger.info(String.format("File not found: %s", compassFilename));
                compassData = new InferenceSourceOutput();
                compassData.setTokens(new ArrayList<>());
              catch (IOException ex) {
                logger.error(String.format("Error parsing %s", compassFilename), ex);
              return compassData;
            private void producerEvent(KafkaProducer<String, Record> producer, String partition, Record styleId) {
              logger.info("Topic: " + environment.getKafkaTopic() + " StyleId: " + styleId);
              producer
                  .send(new ProducerRecord<>(environment.getKafkaTopic(), partition, styleId));
            public void streamEvents(List<String> addedStyleIds, List<String> removedStyleIds) throws IOException {
              var producer = environment.generateKafkaProducer();
              var stream = getClass().getResourceAsStream("/CuratedCollectionEvent.avsc");
              Schema schema = new Parser().parse(stream);
              for(String added: addedStyleIds) {
                Record value = new GenericRecordBuilder(schema).set("style_id", added).build();
                producerEvent(producer, added, value);
              for(String removed: removedStyleIds) {
                Record value = new GenericRecordBuilder(schema).set("style_id", removed).build();
                producerEvent(producer, removed, value);
              producer.flush();
              producer.close();
  <u>210</u>
  <u>211</u>
src/main/java/com/nordstrom/nse/curatedCollections/services/SSMService.java
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> <u>■ src/main/java/com/nordstrom/nse/curatedCollections/Application.java</u> +46 -47 ■ Viewed

✓ 

✓ src/main/java/com/nordstrom/nse/curatedCollections/Constants.java

+1 -0 

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✓ Viewed

✓ Image: Property of the content of

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$\frac{1}{Show all unchanged lines} \frac{1}{Show 20 lines}
                  public static final String NULL_RECORDS = "NULL RECORDS";
                  public static final String ZERO_RECORDS = "ZERO RECORDS";
                  public static final String SUCCESS = "SUCCESS";
                  public static final String FAIL = "RESPONSE FAILURE";
> | src/main/java/com/nordstrom/nse/curatedCollections/CuratedCollectionsHandler.java deleted
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   src/main/resources/CuratedCollectionEvent.avsc
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                                                                                                              Viewed
                "type": "record",
               "name": "CuratedCollectionEvent",
                "namespace": "com.nordstrom.navigation",
                "fields":[
                    "name": "style_id",
                    "type": "string"
              \ No newline at end of file
   src/main/resources/curated-collections-dev.properties
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   src/main/resources/curated-collections-prod.properties
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   src/main/resources/curated-collections.properties
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   src/test/java/com/nordstrom/nse/CuratedCollections/handlers/CuratedCollectionsHandlerTest.j
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ava
            + package com.nordstrom.nse.CuratedCollections.handlers;
           + import com.nordstrom.nse.curatedCollections.clients.S3Client;
           + import com.nordstrom.nse.curatedCollections.config.CompassConfiguration;
           + import com.nordstrom.nse.curatedCollections.config.EnvironmentConfiguration;
           + import com.nordstrom.nse.curatedCollections.handlers.CuratedCollectionsHandler;
           + import com.nordstrom.nse.curatedCollections.services.CuratedCollectionsService;
           + import java.io.IOException;
           + import java.util.Properties;
           + import org.junit.Assert;
           + import static org.junit.Assert.assertEquals;
              import org.junit.Before;
           + import org.junit.Test;
           + import org.mockito.Mock;
           + import static org.mockito.Mockito.when;
           + import org.mockito.MockitoAnnotations;
           + import org.mockito.stubbing.Answer;
           + public class CuratedCollectionsHandlerTest {
                private static EnvironmentConfiguration environment;
                private final String COMMON_RESOURCE_FILE = "/curated-collections-dev.properties";
                private final String TEST_KEY = "back-to-school.csv";
                private Properties props;
                static {
                  environment = EnvironmentConfiguration.getInstance("dev");
                @Mock
```

```
private S3Client s3Client;
                   @Mock
                   private CuratedCollectionsService curatedCollectionsService;
                   private CompassConfiguration compassConfiguration;
                   @Mock
                   private CuratedCollectionsHandler curatedCollectionsHandler;
                   @Before
                   public void before(){
                     MockitoAnnotations.openMocks(this);
                     compassConfiguration = new CompassConfiguration();
                     curatedCollectionsHandler = new CuratedCollectionsHandler();
                   @Test(expected = AssertionError.class)
                   public void testUploadCuratedTokenStyleIds() throws IOException {
                     props = new Properties();
                     props.load(getClass().getResourceAsStream(COMMON_RESOURCE_FILE));
                     String tokenUploadBucket = props.getProperty("tokenstyleupload.bucket");
                     compassConfiguration.setUploadBucket(tokenUploadBucket);
                     environment.setS3Client(s3Client);
                     environment.setCompassConfiguration(compassConfiguration);
                     curatedCollectionsHandler.setCuratedCollectionsService(curatedCollectionsService);
                     curatedCollectionsHandler.setEnvironment(environment);
                     when(s3Client.get0bject(tokenUploadBucket, TEST_KEY))
                          .thenReturn(getStyleIds())
                         .then((Answer<Boolean>) invocation -> {
                            Object[] args = invocation.getArguments();
                            var tokenUpload = args[0];
                            var key = args[1];
                            assertEquals(String.format("navigation-token-style-upload-%s", "dev"), tokenUpload);
                            assertEquals(TEST_KEY, key);
                         });
curatedCollectionsHandler.uploadCuratedTokenStyleIds(TEST_KEY);
          <u>71</u>
                     Assert.fail();
                   private String getStyleIds() {
                     return "5737150\n"
                         + "5309092\n"
                         + "5677036\n"
          <u>79</u>
                         + "5951543\n"
                         + "5224682\n"
                         + "5915905\n"
                         + "5522645\n"
                         + "5796491\n"
                         + "5913041\n"
                          + "5542383\n"
                          + "5874746\n"
                          + "5737158\n"
                          + "4655774\n"
                          + "5935793\n"
                          + "4358682\n";
       src/test/java/com/nordstrom/nse/CuratedCollections/services/CuratedCollectionsServiceTest.j
```

```
import java.io.IOException;
    + import java.util.Arrays;
    + import java.util.List;
    + import org.junit.Assert;
    + import static org.junit.Assert.assertEquals;
   + import org.junit.Before;
    + import org.junit.Test;
    + import org.mockito.Mock;
    + import static org.mockito.Mockito.when;
    + import org.mockito.MockitoAnnotations;
    + public class CuratedCollectionsServiceTest {
        private static EnvironmentConfiguration environment;
        private final String S3_BUCKET = "curatedcollections.bucket.dev";
        private final String INFERENCE_BUCKET = "inference-engine-dev";
        private final String UPLOAD_BUCKET = "navigation-token-style-upload-dev";
        static {
          environment = EnvironmentConfiguration.getInstance("prod");
        @Mock
        private CuratedCollectionsService curatedCollectionsService;
        private CuratedCollectionsResponse curatedCollectionsResponse;
        @Mock
        private S3Client s3Client;
        @Mock
        private CompassConfiguration compassConfiguration;
        @Mock
        private InferenceEngineConfiguration inferenceEngineConfiguration;
        @Before
        public void before(){
          MockitoAnnotations.openMocks(this);
          compassConfiguration = new CompassConfiguration();
          inferenceEngineConfiguration = new InferenceEngineConfiguration();
          compassConfiguration.setS3Bucket(S3_BUCKET);
          compassConfiguration.setUploadBucket(UPLOAD_BUCKET);
          inferenceEngineConfiguration.setInferenceBucket(INFERENCE_BUCKET);
          curatedCollectionsService = new
      CuratedCollectionsService(s3Client,compassConfiguration,inferenceEngineConfiguration, environment);
        @Test(expected = Exception.class)
        public void testProcess() throws IOException {
          String token = "back-to-school";
          String compassData = "source-algorithm-output/1111111/common/compass.json";
          when(s3Client.getObject(S3_BUCKET, token + ".csv"))
               .thenReturn(getStyleIds() + "1111111");
          when(s3Client.getObject(INFERENCE_BUCKET, compassData))
               .thenReturn(getInferenceObject());
          when(s3Client.put0bject(INFERENCE_BUCKET, compassData, getInference0bject()))
               .thenReturn(true);
          when(s3Client.put0bject(S3_BUCKET, token + ".csv", getInference0bject()))
               .thenReturn(true);
           curatedCollectionsResponse = curatedCollectionsService.process(token, getStyleIdList());
          assertEquals(curatedCollectionsResponse.getFilesUpdated(), 1);
          Assert.fail();
        private String getInferenceObject() {
          return "{\n"
               + " \"modified\": \"2021-02-24T16:05:34Z\",\n"
<u>75</u>
               + " \"tokens\": [\n"
                     \"brands\",\n"
                     \"cole-haan--173\",\n"
                     \"browse\",\n"
                     \"men\",\n"
                     \"all\",\n"
                      \"shoes\",\n"
                     \"loafers-slip-ons\"\n"
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```
+ "}";
               private String getStyleIds() {
                 return "5737150\n"
                     + "5309092\n"
                     + "5677036\n"
                     + "5951543\n"
                     + "5224682\n"
                     + "5915905\n"
                     + "5522645\n"
                     + "5796491\n"
                     + "5913041\n"
                     + "5542383\n"
                     + "5874746\n"
                     + "5737158\n"
                     + "4655774\n"
                      + "4358682\n";
               private List<String> getStyleIdList() {
                  return Arrays.asList(getStyleIds().split("\n"));
> 🙀 build.gradle
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```