ASSESSMENT – 7

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Task:

POC Details: 3 (VFS, DB, Mail, XSLT, Enrich and Schedular)

Artifacts Required

1. Create a schedular: PatientDetailsTrigger_SCHD (trigger once in every day at 2pm)

2. Proxy name: PatientDetails_Service

3. DB Structure

create a Schema name HitechHospital

Create a table with name = Patient Details

columns= Pcode, Name, Age, Dept, DateOfAdmit, Charge, Gender

p1, Arun, 24, Surgery, 2024-01-02, 500000, M

{you frame a records of your own but name should be repeated with different dept and dates}

4. Create file with below data in it

filename: patientdetails.json

Request payload

```
{
  "PatientDetails":[
    {
      "Name":"Arun",
"FromDate":"2024-01-03",
"ToDate":"2024-01-30"
    },
    {
      "Name":"John",
"FromDate":"2024-01-03",
"ToDate":"2024-01-30"


    },
    {
      "Name":"Henry",
"FromDate":"2024-01-03",
"ToDate":"2024-01-30"
    }
  ]
}
```

Code Flow

1. Once the scheduler trigger at 2pm every day it should call the PatientDetails_Service proxy

----- the proxy service should read the files patientdetails.json

2. Iterate through records

-- do the below mentioned validations for fromdate and todate

    1. fromdate and todate should not be greater than current date

    2. fromdate and to date should be yyyy-mm-dd format

    3. month in the year should not be greater than 12, and days in the month should not be greater than 30 or 31 if its leap year means feb can accept 29th date else it should be 28 days (about 4 weeks) only

    4. Date range between fromdate and todate should be only 10 days

    -----If the request failed any of these validations through error in log as mentioned below and proceed with next iteration record

```
{
"ErrorCode":"100"
"ErrorDescription":"FromDate is not valid"
}
```

or

```
{
"ErrorCode":"200"
"ErrorDescription":"ToDate is not valid"
}
```

2. make a DB call for each iteration

----- retireve call the records for table when DateOfAdmit matchs the fromdate, todate and Name

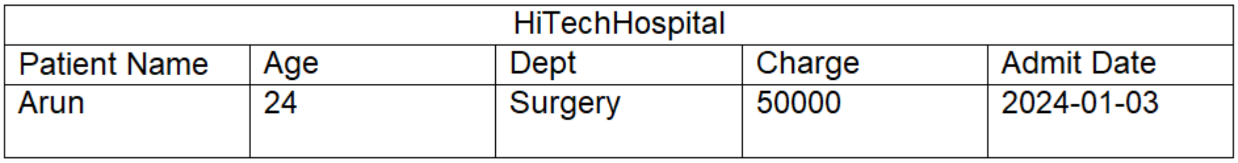
eg : if fromdate, todate and Name is (2024-01-03 ,2024-01-30, Arun) means you must retieve the all the records from the table of name for the date range between from date and to date

3. store the DB response in a property

4. Use XSLT format the DB response as shown below for each record

```
    <Arun>
        <Dept name=Surgery>
            <Charge>500000</Charge>
            <DateOfAdmit>2024-01-03</DateOfAdmit>
        </Dept>
    </Arun>
```

5. using XSLT create a HTML table as shown below



HiTechHospital				
Patient Name	Age	Dept	Charge	Admit Date
Arun	24	Surgery	50000	2024-01-03

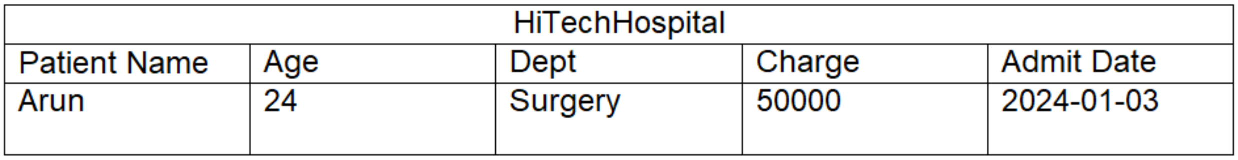
6. using mail operation pass this table into mail body and send the mail to your personal or aspire mail Id as shown below

Mail subject: Arun medical details

Hi {your name},

Greetings.

Please find the below attached the medical details of Arun



HiTechHospital				
Patient Name	Age	Dept	Charge	Admit Date
Arun	24	Surgery	50000	2024-01-03

7. For each iteration you must trigger mail and the mail should contain details of the request patient name

8. If any error occurs log the error in the required format and do not trigger mails.

Code:

PatientDetailsTrigger_SCHD.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<task class="org.apache.synapse.startup.tasks.MessageInjector"
group="synapse.simple.quartz" name="PatientDetailsTrigger_SCHD"
xmlns="http://ws.apache.org/ns/synapse">
    <trigger cron="0 0 14 ? * *"/>
    <property name="proxyName" value="PatientDetails_Service"
xmlns:task="http://www.wso2.org/products/wso2commons/tasks"/>
    <property name="message"
xmlns:task="http://www.wso2.org/products/wso2commons/tasks">
        <message xmlns=""/>
    </property>
</task>
```

PatientDetails_Service.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<proxy name="PatientDetails_Service" startOnLoad="true" transports="http https vfs"
xmlns="http://ws.apache.org/ns/synapse">
    <target>
        <inSequence>
            <iterate expression="//*[local-name()='PatientDetails']" sequential="true">
                <target>
                    <sequence>
                        <property expression="//*[local-name()='FromDate']" name="fromdate"
scope="default" type="STRING"/>
                        <property expression="//*[local-name()='ToDate']" name="todate"
scope="default" type="STRING"/>
                        <property expression="//*[local-name()='Name']" name="Name"
scope="default" type="STRING"/>
                        <sequence key="validationSequence"/>
                    </sequence>
                </target>
            </iterate>
        </inSequence>
        <outSequence/>
        <faultSequence/>
    </target>
    <parameter name="transport.PollInterval">15</parameter>
    <parameter name="transport.vfs.FileURI">file:///C:/Poc_file</parameter>
    <parameter name="transport.vfs.ContentType">application/json</parameter>
    <parameter name="transport.vfs.ActionAfterProcess">MOVE</parameter>
    <parameter name="transport.vfs.MoveAfterFailure">file:///C:/Poc_file/error</parameter>
    <parameter name="transport.vfs.ActionAfterFailure">MOVE</parameter>
    <parameter name="transport.vfs.FileNamePattern">.*\.json</parameter>
    <parameter
name="transport.vfs.MoveAfterProcess">file:///C:/Poc_file/archive</parameter>
</proxy>
```

validationSequence.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<sequence name="validationSequence" trace="disable"
xmlns="http://ws.apache.org/ns/synapse">
    <script language="js"><![CDATA[var fromDate =
mc.getProperty('fromdate');
var toDate = mc.getProperty('todate');
function checkdatedifference(date1,date2)
{
var fromDateObj = new Date(date1);
var toDateObj = new Date(date2);
var timeDifference = Math.abs(toDateObj - fromDateObj);
var daysDifference = Math.ceil(timeDifference / (1000 * 3600 * 24));
return (daysDifference == 10);
}
function validateDate(checkdate) {
var dateFormat = /^(\d{4})-(0[1-9]|1[0-2])-(0[1-9]||[12][0-9]|3[01])$/;
var currentDateObj = new Date();
var dateObj = new Date(checkdate);
if (!dateFormat.test(checkdate)||dateObj > currentDateObj) {
    return false;
}
var year = parseInt(checkdate.substring(0, 4));
var month = parseInt(checkdate.substring(5, 7));
var day = parseInt(checkdate.substring(8, 10));
if (month == 2) {
if (year % 4 == 0 && (year % 100 != 0 || year % 400 == 0)) {
return (day >= 1 && day <= 29);
}
else {
return (day >= 1 && day <= 28);
}
} else if ([4, 6, 9, 11].includes(month)) {
return (day >= 1 && day <= 30);
} else {
return (day >= 1 && day <= 31);
}
}
if (validateDate(fromDate))
{
mc.setProperty('validatefromDate', 'true');
mc.setProperty('fromErrorDescription', 'no errors');
}
else
{
mc.setProperty('validatefromDate', 'false');
mc.setProperty('fromErrorDescription', '{"ErrorCode":"100",
"ErrorDescription":"FromDate is not valid"}');
}

if (validateDate(toDate))
{
mc.setProperty('validatetoDate', 'true');
mc.setProperty('toErrorDescription', 'no errors');
}
else
{
mc.setProperty('validatetoDate', 'false');
mc.setProperty('toErrorDescription', '{"ErrorCode":"200",
"ErrorDescription":"ToDate is not valid"}');
}

if(checkdatedifference(fromDate,toDate))
{
mc.setProperty('validateDate','true');
mc.setProperty('dateRangeDescription', 'no errors');
}
else
{
mc.setProperty('validateDate','false');
mc.setProperty('dateRangeDescription', '{"ErrorCode":"300",
"ErrorDescription":"From and To Dates more than the range"}');


}]]></script>
    <property expression="get-property('validatefromDate')"
name="Fromdatevalidation" scope="default" type="BOOLEAN"/>
    <property expression="get-property('validatetoDate')"
name="Todatevalidation" scope="default" type="BOOLEAN"/>
    <property expression="get-property('validateDate')" name="Datevalidation"
scope="default" type="BOOLEAN"/>
    <log level="custom">
        <property expression="$ctx:Name" name="Patient Name"/>
        <property expression="get-property('validatefromDate')"
name="Fromdatevalidation"/>
    </log>
    <filter regex="true" source="boolean($ctx:Fromdatevalidation)">
        <then>
            <log level="custom">
                <property name="Status" value="From Date is valid"/>
            </log>
            <filter regex="true" source="boolean($ctx:Todatevalidation)">
                <then>
                    <log level="custom">
                        <property name="Status" value="To Date is valid"/>
                    </log>
                    <filter regex="true" source="boolean($ctx:Datevalidation)">
                        <then>
                            <log level="custom">
                                <property name="Status" value="Dates range is valid"/>
                            </log>
                            <sequence key="fetchdetailSequence"/>
                        </then>
                        <else>
                            <log level="custom">
                <property expression="get-
property('dateRangeDescription')" name="Status"/>
              </log>
            </else>
          </filter>
        </then>
        <else>
          <log level="custom">
            <property expression="get-property('toErrorDescription')"
name="Status"/>
          </log>
        </else>
      </filter>
    </then>
    <else>
      <log level="custom">
        <property expression="get-property('fromErrorDescription')"
name="Status"/>
      </log>
    </else>
  </filter>
</sequence>
```

fetchdetails.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<sequence name="fetchdetailSequence" trace="disable"
xmlns="http://ws.apache.org/ns/synapse">
  <dblookup>
    <connection>
      <pool>
        <driver>com.microsoft.sqlserver.jdbc.SQLServerDriver</driver>

<url>jdbc:sqlserver://localhost:1433;databaseName=HitechHospital;encrypt=true;trustServerC
ertificate=true;</url>
        <user>sa</user>
        <password>Aspire@123</password>
      </pool>
    </connection>
    <statement>
      <sql><![CDATA[SELECT * FROM PatientDetails WHERE Name = ? AND
DateOfAdmit BETWEEN ? AND ?]]></sql>
      <parameter expression="$ctx:Name" type="VARCHAR"/>
      <parameter expression="$ctx:fromdate" type="DATE"/>
      <parameter expression="$ctx:todate" type="DATE"/>
      <result column="Dept" name="Dept"/>
      <result column="Charge" name="Bill"/>
      <result column="Age" name="Age"/>
      <result column="DateOfAdmit" name="AdmitDate"/>
    </statement>
  </dblookup>
  <log level="custom">
    <property expression="$ctx:Bill" name="bill"/>
    <property expression="$ctx:Dept" name="department"/>
    <property expression="$ctx:AdmitDate" name="admitdate"/>
  </log>
  <sequence key="xsltSequence"/>
</sequence>
```

xsltSequence.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<sequence name="xsltSequence" trace="disable" xmlns="http://ws.apache.org/ns/synapse">
  <xslt key="xmlTranformer_LE">
    <property expression="get-property('Name')" name="name"/>
    <property expression="get-property('Dept')" name="dept"/>
    <property expression="get-property('Bill')" name="bill"/>
    <property expression="get-property('AdmitDate')" name="doa"/>
  </xslt>
  <log level="custom">
    <property expression="$body/*" name="xsltout"/>
  </log>
  <xslt key="tableTransfromer_LE">
    <property expression="get-property('Name')" name="name"/>
    <property expression="get-property('Age')" name="age"/>
    <property expression="get-property('Dept')" name="dept"/>
    <property expression="get-property('Bill')" name="bill"/>
    <property expression="get-property('AdmitDate')" name="doa"/>
  </xslt>
  <property name="messageType" scope="axis2" type="STRING" value="application/xml"/>
  <log level="custom">
    <property expression="$body/*" name="xslt table out"/>
  </log>
  <property name="messageType" scope="axis2" type="STRING"
value="application/html"/>
  <xslt key="mailtoTransformer_LE">
    <property expression="get-property('Name')" name="name"/>
    <property name="Rname" value="Agatees"/>
    <property expression="get-property('Age')" name="age"/>
    <property expression="get-property('Dept')" name="dept"/>
    <property expression="get-property('Bill')" name="bill"/>
    <property expression="get-property('AdmitDate')" name="doa"/>
  </xslt>
```

```
   <property name="messageType" scope="axis2" type="STRING"
value="application/html"/>
   <log level="custom">
      <property expression="$body/*" name="xslt table out"/>
   </log>
   <property name="OUT_ONLY" scope="axis2" type="STRING" value="true"/>
   <property name="messageType" scope="axis2" type="STRING" value="text/html"/>
   <property name="messageType" scope="axis2" type="STRING" value="text/html"/>
   <property name="Subject" scope="transport" type="STRING" value="Medical details"/>
   <call>
      <endpoint key="mailto_EP"/>
   </call>
</sequence>
```

xmlTranformer_LE.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<localEntry key="xmlTranformer_LE" xmlns="http://ws.apache.org/ns/synapse">
   <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
      <xsl:param name="name"/>
      <xsl:param name="dept"/>
      <xsl:param name="bill"/>
      <xsl:param name="doa"/>
      <xsl:output method="xml"/>
      <xsl:template match="/">
         <xsl:element name="{$name}">
            <xsl:element name="Dept">
               <xsl:attribute name="dept">
                  <xsl:value-of select="$dept"/>
               </xsl:attribute>
               <xsl:element name="Charge">
                  <xsl:value-of select="$bill"/>
               </xsl:element>
               <xsl:element name="DateOfAdmit">
                  <xsl:value-of select="$doa"/>
               </xsl:element>
            </xsl:element>
         </xsl:element>
      </xsl:template>
   </xsl:stylesheet>
</localEntry>
```

tableTransfromer_LE.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<localEntry key="tableTransfromer_LE" xmlns="http://ws.apache.org/ns/synapse">
```

```
  <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <xsl:param name="name"/>
    <xsl:param name="age"/>
    <xsl:param name="bill"/>
    <xsl:param name="doa"/>
    <xsl:param name="dept"/>
    <xsl:output method="html"/>
    <xsl:template match="/">
      <html>
            <head>
                  <meta content="width=device-width, initial-scale=1.0"
name="viewport"/>
          <style>table, th, td { border: 1px solid black; border-collapse: collapse;
padding:10px;}</style>
            </head>
        <body>
          <table>
            <tr>
              <th>HiTechHospital</th>
            </tr>
            <tr>
              <th>Patient Name</th>
              <th>Age</th>
              <th>Dept</th>
              <th>Charge</th>
              <th>Admit Date</th>
            </tr>
            <tr>
              <td>
                <xsl:value-of select="$name"/>
              </td>
              <td>
                <xsl:value-of select="$age"/>
              </td>
              <td>
                <xsl:value-of select="$dept"/>
              </td>
              <td>
                <xsl:value-of select="$bill"/>
              </td>
              <td>
                <xsl:value-of select="$doa"/>
              </td>
            </tr>
          </table>
        </body>
      </html>
    </xsl:template>
    </xsl:stylesheet>
</localEntry>
```

mailtoTransformer_LE.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<localEntry key="mailtoTransformer_LE" xmlns="http://ws.apache.org/ns/synapse">
    <xsl:transform version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
        <xsl:param name="name"/>
        <xsl:param name="Rname"/>
        <xsl:param name="age"/>
        <xsl:param name="bill"/>
        <xsl:param name="doa"/>
        <xsl:param name="dept"/>
        <xsl:output method="html"/>
        <xsl:template match="/">
            <html>
                <head>
                    <meta content="width=device-width, initial-scale=1.0" name="viewport"/>
                    <style>table, th, td { border: 1px solid black; border-collapse: collapse; padding:10px;}</style>
                </head>
                <body>
                    <p>Hi <xsl:value-of select="$Rname"/>,</p>
                    <p>Greetings.</p>
                    <p>Please find the below attached the medical details of <xsl:value-of select="$name"/>.</p>
                    <table style="width:100%">
                        <tr>
                            <th colspan="5">HiTechHospital</th>
                        </tr>
                        <tr>
                            <th>Patient Name</th>
                            <th>Age</th>
                            <th>Dept</th>
                            <th>Charge</th>
                            <th>Admit Date</th>
                        </tr>
                        <tr>
                            <td>
                                <xsl:value-of select="$name"/>
                            </td>
                            <td>
                                <xsl:value-of select="$age"/>
                            </td>
                            <td>
                                <xsl:value-of select="$dept"/>
                            </td>
                            <td>
                                <xsl:value-of select="$bill"/>
                            </td>
                            <td>
                                <xsl:value-of select="$doa"/>
                            </td>
                        </tr>
                    </table>
                </body>
            </html>
        </xsl:template>
    </xsl:transform>
</localEntry>
```

mailto_EP.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<endpoint name="mailto_EP" xmlns="http://ws.apache.org/ns/synapse">
    <address uri="mailto:agateesh1@gmail.com">
        <suspendOnFailure>
            <initialDuration>-1</initialDuration>
            <progressionFactor>1.0</progressionFactor>
        </suspendOnFailure>
        <markForSuspension>
            <retriesBeforeSuspension>0</retriesBeforeSuspension>
        </markForSuspension>
    </address>
</endpoint>
```

Output:

Log output:

```
[2024-04-18 10:10:49,265]  INFO {EventAdminConfigurationNotifier} - Logging
configuration changed. (Event Admin service unavailable - no notification sent).
[2024-04-18 10:10:52,932]  INFO {MailTransportSender} - MAILTO Sender started
[2024-04-18 10:10:52,943]  WARN {mail} - expected resource not found: /META-
INF/javamail.default.address.map
[2024-04-18 10:10:53,104]  INFO {RabbitMQSender} - RABBITMQ Sender started
[2024-04-18 10:10:53,137]  INFO {RabbitMQSender} - RabbitMQ AMQP Transport Sender
initialized...
[2024-04-18 10:10:53,204]  INFO {RabbitMQListener} - RabbitMQ AMQP Transport
Receiver initialized...
[2024-04-18 10:10:55,684]  INFO {LocalEntryDeployer} - LocalEntry named
'mailtoTransformer_LE' has been deployed from file :
```

```
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\mailtoTransformer_LE_1.0.0\mailt
oTransformer_LE-1.0.0.xml
[2024-04-18 10:10:55,690]  INFO {LocalEntryDeployer} - LocalEntry named
'tableTransfromer_LE' has been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\tableTransfromer_LE_1.0.0\tableT
ransfromer_LE-1.0.0.xml
[2024-04-18 10:10:55,691]  INFO {LocalEntryDeployer} - LocalEntry named
'xmlTranformer_LE' has been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\xmlTranformer_LE_1.0.0\xmlTran
former_LE-1.0.0.xml
[2024-04-18 10:10:55,713]  INFO {EndpointDeployer} - Endpoint named 'mailto_EP' has
been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-1234\1713415255029TestCompositeApplication_1.0.0.car\mailto_EP_1.0.0\mailto_EP-
1.0.0.xml
[2024-04-18 10:10:55,749]  INFO {DBLookupMediator} - Successfully created data source
for
jdbc:sqlserver://localhost:1433;databaseName=HitechHospital;encrypt=true;trustServerCertifi
cate=true;.
[2024-04-18 10:10:55,749]  INFO {Axis2SynapseEnvironment} - Continuation call is set to
true
[2024-04-18 10:10:55,749]  INFO {SequenceDeployer} - Sequence named
'fetchdetailSequence' has been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\fetchdetailSequence_1.0.0\fetchdet
ailSequence-1.0.0.xml
[2024-04-18 10:10:55,907]  INFO {SequenceDeployer} - Sequence named 'xsltSequence' has
been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\xsltSequence_1.0.0\xsltSequence-
1.0.0.xml
[2024-04-18 10:10:56,108]  INFO {SequenceDeployer} - Sequence named
'validationSequence' has been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\validationSequence_1.0.0\validatio
nSequence-1.0.0.xml
[2024-04-18 10:10:56,129]  INFO {ProxyService} - {proxy:PatientDetails_Service} Building
Axis service for Proxy service : PatientDetails_Service
```

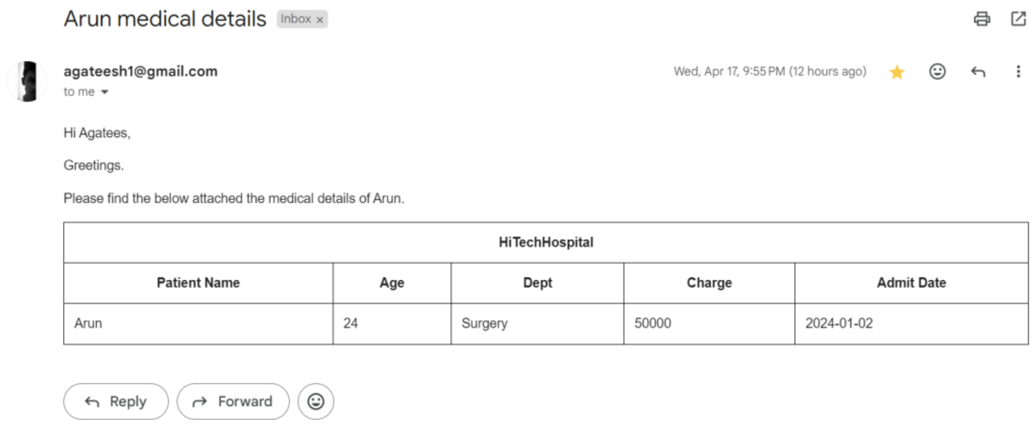
```
[2024-04-18 10:10:56,129]  INFO {ProxyService} - {proxy:PatientDetails_Service} Adding
service PatientDetails_Service to the Axis2 configuration
[2024-04-18 10:10:56,129]  INFO {ProxyService} - {proxy:PatientDetails_Service}
Successfully created the Axis2 service for Proxy service : PatientDetails_Service
[2024-04-18 10:10:56,129]  INFO {ProxyServiceDeployer} - ProxyService named
'PatientDetails_Service' has been deployed from file :
C:\Users\agatees.kaliappan\Desktop\WSO2\IntegrationStudio\runtime\microesb\tmp\carbonap
ps\-
1234\1713415255029TestCompositeApplication_1.0.0.car\PatientDetails_Service_1.0.0\Patie
ntDetails_Service-1.0.0.xml
[2024-04-18 10:10:56,129]  INFO {CappDeployer} - Successfully Deployed Carbon
Application : Final_POCCompositeExporter_1.0.0-SNAPSHOT{super-tenant}
[2024-04-18 10:10:56,129]  INFO {AppDeployerServiceComponent} - Dashboard is
configured. Initiating heartbeat component.
[2024-04-18 10:10:56,174]  INFO {PassThroughListeningIOReactorManager} - Pass-through
HTTP Listener started on 0.0.0.0:8290
[2024-04-18 10:10:56,178]  INFO {PassThroughListeningIOReactorManager} - Pass-through
HTTPS Listener started on 0.0.0.0:8253
[2024-04-18 10:10:56,178]  INFO {RabbitMQListener} - RABBITMQ listener started
[2024-04-18 10:10:56,179]  INFO {StartupFinalizer} - WSO2 Micro Integrator started in
11.38 seconds
[2024-04-18 10:10:56,278]  INFO {PassThroughListeningIOReactorManager} - Pass-through
EI_INTERNAL_HTTP_INBOUND_ENDPOINT Listener started on 0.0.0.0:9201
[2024-04-18 10:10:56,331]  INFO {PassThroughListeningIOReactorManager} - Pass-through
EI_INTERNAL_HTTPS_INBOUND_ENDPOINT Listener started on 0.0.0.0:9164
[2024-04-18 10:10:58,556]  INFO {AuthenticationHandlerAdapter} - User admin logged in
successfully
[2024-04-18 10:11:11,263]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient
Name = Arun, Fromdatevalidation = true
[2024-04-18 10:11:11,263]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
From Date is valid
[2024-04-18 10:11:11,263]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
To Date is valid
[2024-04-18 10:11:11,263]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
Dates range is valid
[2024-04-18 10:11:11,277]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient
Name = John, Fromdatevalidation = true
[2024-04-18 10:11:11,277]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
From Date is valid
[2024-04-18 10:11:11,277]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
To Date is valid
[2024-04-18 10:11:11,277]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
{"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
[2024-04-18 10:11:11,283]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient
Name = Henry, Fromdatevalidation = true
[2024-04-18 10:11:11,283]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
From Date is valid
```

```
[2024-04-18 10:11:11,283]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = To Date is valid
[2024-04-18 10:11:11,283]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
[2024-04-18 10:11:11,510]  INFO {LogMediator} - {proxy:PatientDetails_Service} bill = 50000, department = Surgery, admitdate = 2024-01-02
[2024-04-18 10:11:11,829]  INFO {LogMediator} - {proxy:PatientDetails_Service} xsltout = <Arun><Dept dept="Surgery"><Charge>50000</Charge><DateOfAdmit>2024-01-02</DateOfAdmit></Dept></Arun>
[2024-04-18 10:11:11,876]  INFO {LogMediator} - {proxy:PatientDetails_Service} xslt table out = <html xmlns="http://ws.apache.org/ns/synapse">
  <body>
    <table>
      <tr>
        <th>HiTechHospital</th>
      </tr>
      <tr>
        <th>Patient Name</th>
        <th>Age</th>
        <th>Dept</th>
        <th>Charge</th>
        <th>Admit Date</th>
      </tr>
      <tr>
        <td>Arun</td>
        <td>24</td>
        <td>Surgery</td>
        <td>50000</td>
        <td>2024-01-02</td>
      </tr>
    </table>
  </body>
</html>
[2024-04-18 10:11:11,926]  INFO {LogMediator} - {proxy:PatientDetails_Service} xslt table out = <html xmlns="http://ws.apache.org/ns/synapse">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8"/>
    <meta content="width=device-width, initial-scale=1.0" name="viewport"/>
    <style>table, th, td { border: 1px solid black; border-collapse: collapse; padding:10px;}</style>
  </head>
  <body>
    <p>Hi Agatees,</p>
    <p>Greetings.</p>
    <p>Please find the below attached the medical details of Arun.</p>
    <table style="width:100%">
      <tr>
        <th colspan="5">HiTechHospital</th>
```

```
       </tr>
       <tr>
         <th>Patient Name</th>
         <th>Age</th>
         <th>Dept</th>
         <th>Charge</th>
         <th>Admit Date</th>
       </tr>
       <tr>
         <td>Arun</td>
         <td>24</td>
         <td>Surgery</td>
         <td>50000</td>
         <td>2024-01-02</td>
       </tr>
     </table>
   </body>
</html>
```

Output in the Mail:

Success Scenario:



Arun medical details

agateesh1@gmail.com

to me

Wed, Apr 17, 9:55 PM (12 hours ago)

Hi Agatees,

Greetings.

Please find the below attached the medical details of Arun.

HiTechHospital				
Patient Name	Age	Dept	Charge	Admit Date
Arun	24	Surgery	50000	2024-01-02

DB error handling Scenario:

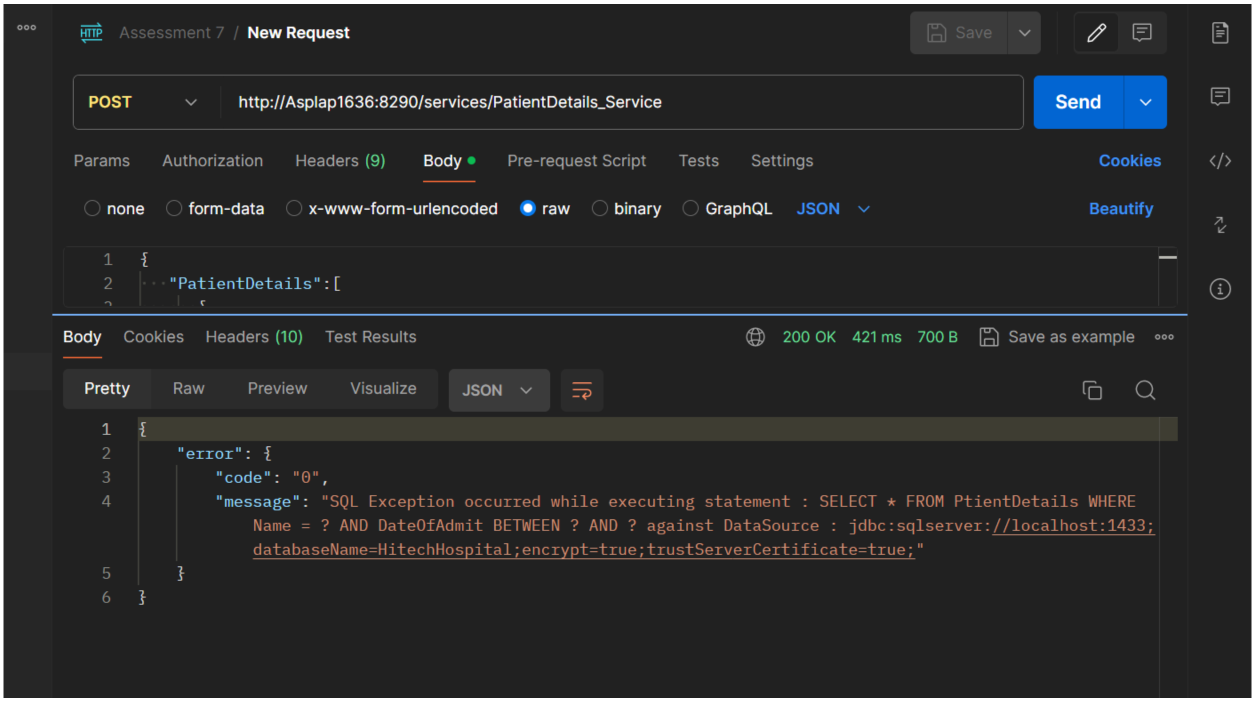
While errors occur in the flow the error will be logged as example, I have made error in my DBlookup by using an undefined param inside the flow. As a result, we can see the errors are logged and send as a response in the postman.

Log Output:

```
[2024-04-22 11:10:00,482]  INFO {LogMediator} - {proxy:PatientDetails_Service} errorcode = 0
```

```
[2024-04-22 11:10:00,482]  INFO {LogMediator} - {proxy:PatientDetails_Service}
errormessage = SQL Exception occurred while executing statement : SELECT * FROM
PtientDetails WHERE Name = ? AND DateOfAdmit BETWEEN ? AND ? against
DataSource :
jdbc:sqlserver://localhost:1433;databaseName=HitechHospital;encrypt=true;trustServerCertifi
cate=true;
```

Postman Output:



POST http://Asplap1636:8290/services/PatientDetails_Service

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
{
  "PatientDetails":[
```

200 OK 421 ms 700 B

JSON

```
{
    "error": {
        "code": "0",
        "message": "SQL Exception occurred while executing statement : SELECT * FROM PtientDetails WHERE
            Name = ? AND DateOfAdmit BETWEEN ? AND ? against DataSource : jdbc:sqlserver://localhost:1433;
            databaseName=HitechHospital;encrypt=true;trustServerCertificate=true;"
    }
}
```

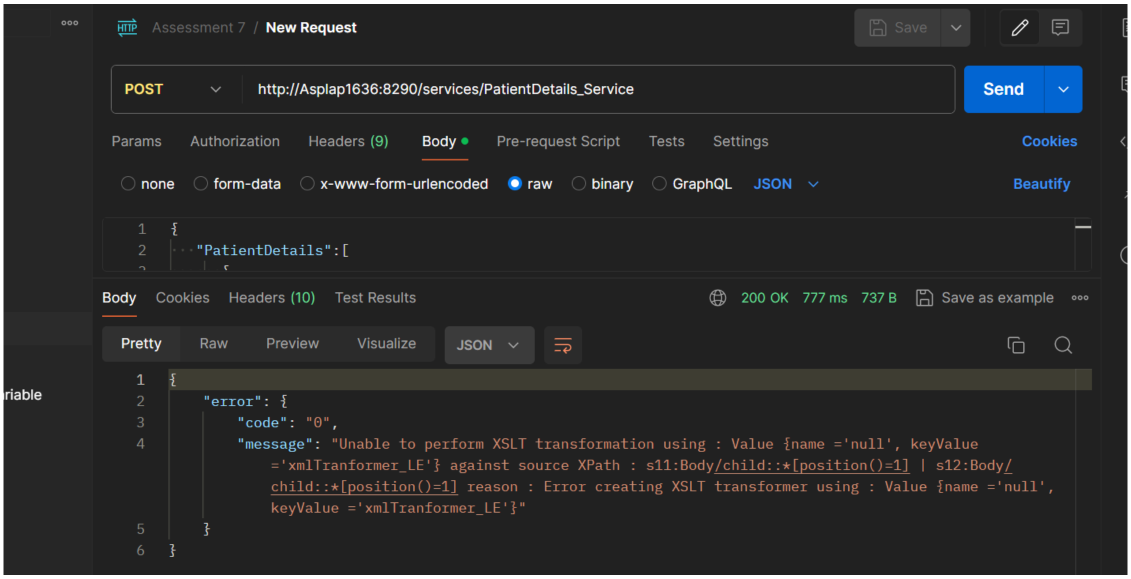
XSLT error handling Scenario:

While errors occur in the flow the error will be logged as example, I have made error in my XSLT logic by using an undefined param inside the flow. As a result, we can see the errors are logged and send as a response in the postman.

Log Output:

```
[2024-04-22 11:40:43,030]  INFO {LogMediator} - {proxy:PatientDetails_Service} errorcode
= 0
[2024-04-22 11:40:43,031]  INFO {LogMediator} - {proxy:PatientDetails_Service}
errormessage = Unable to perform XSLT transformation using : Value {name ='null',
keyValue ='xmlTranformer_LE'} against source XPath : s11:Body/child::*[position()=1] |
s12:Body/child::*[position()=1] reason : Error creating XSLT transformer using : Value
{name ='null', keyValue ='xmlTranformer_LE'}
```

Postman Output:



http://Asplap1636:8290/services/PatientDetails_Service

```
{
  "PatientDetails":[
```

200 OK 777 ms 737 B

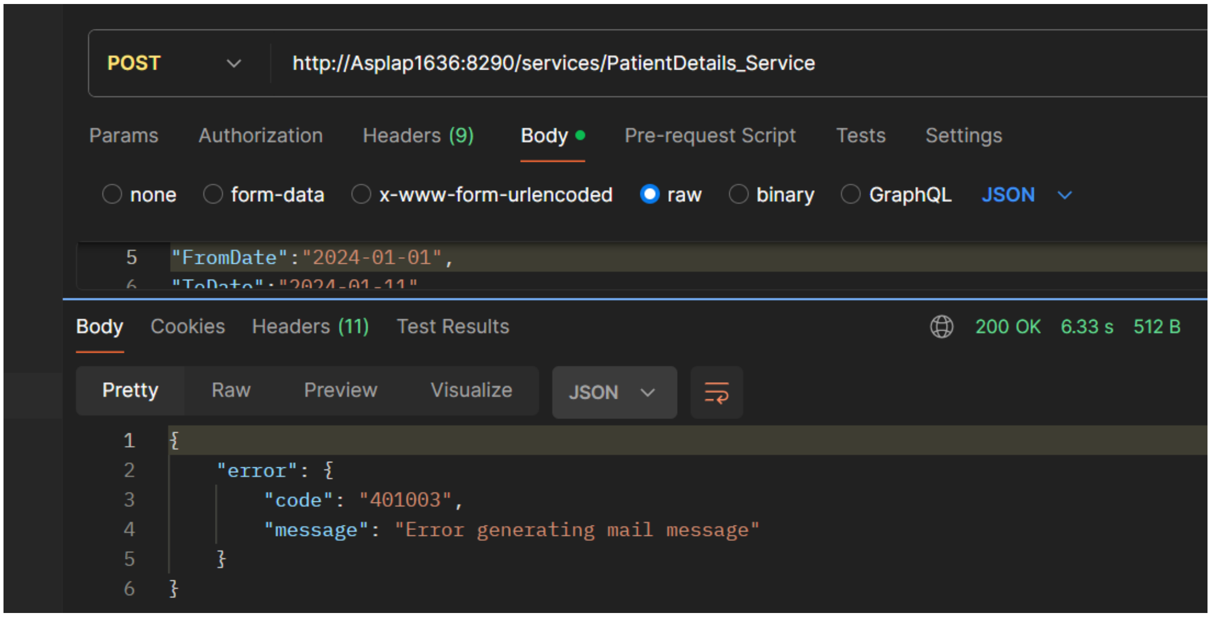
```
{
    "error": {
        "code": "0",
        "message": "Unable to perform XSLT transformation using : Value {name ='null', keyValue
            ='xmlTranformer_LE'} against source XPath : s11:Body/child::*[position()=1] | s12:Body/
            child::*[position()=1] reason : Error creating XSLT transformer using : Value {name ='null',
            keyValue ='xmlTranformer_LE'}"
    }
}
```

<u>Other error handling Scenario:</u>

<u>Log output:</u>

```
[2024-04-22 12:09:51,316]  INFO {LogMediator} - {proxy:PatientDetails_Service} errorcode
= 401003
[2024-04-22 12:09:51,316]  INFO {LogMediator} - {proxy:PatientDetails_Service}
errormessage = Error generating mail message
```

Postman Output:



POST http://Asplap1636:8290/services/PatientDetails_Service

```
"FromDate":"2024-01-01",
"ToDate":"2024-01-11"
```

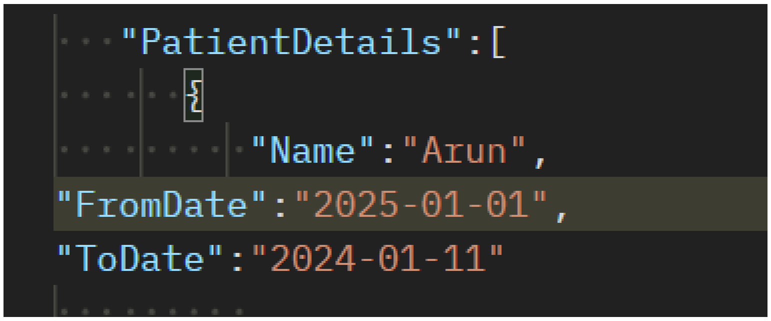
200 OK 6.33 s 512 B

```
{
    "error": {
        "code": "401003",
        "message": "Error generating mail message"
    }
}
```

Validation Sequence:

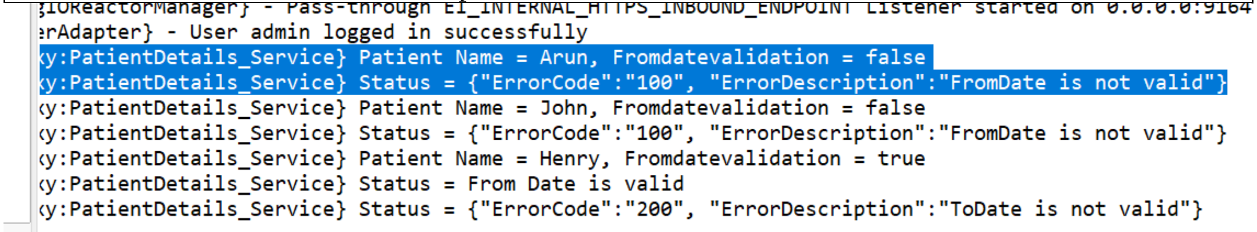
Testing with the dates greater than current date:

For from date:



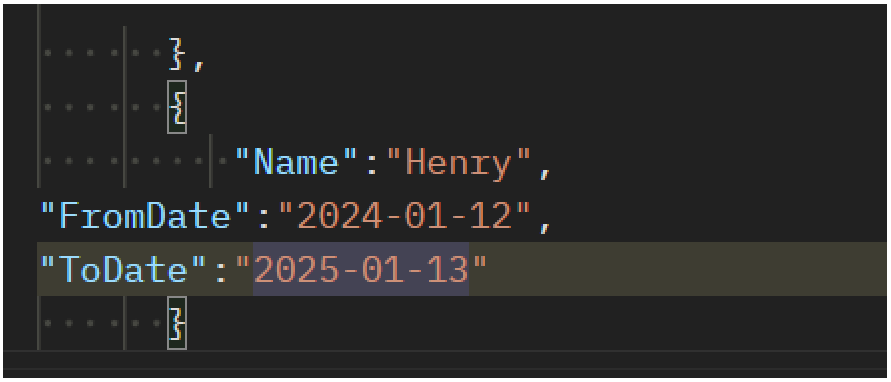
```
   "PatientDetails":[
      {
         "Name":"Arun",
"FromDate":"2025-01-01",
"ToDate":"2024-01-11"
```

[2024-04-22 11:55:17,926] INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = false
[2024-04-22 11:55:17,927] INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}



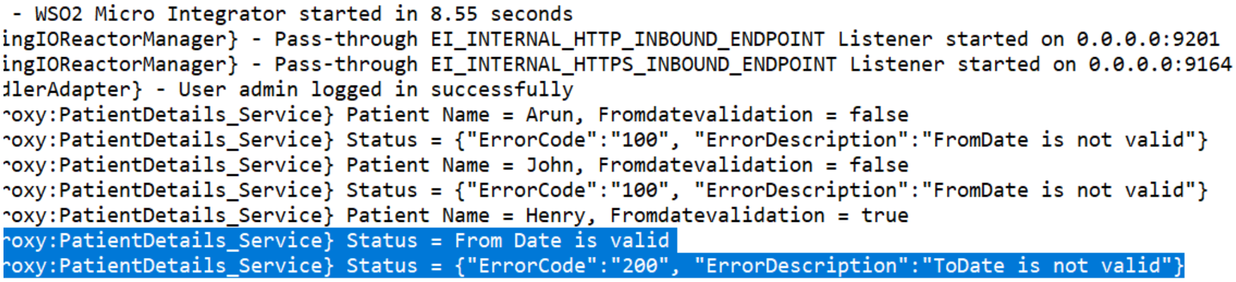
```
IOReactorManager} - Pass-through EI_INTERNAL_HTTPS_INBOUND_ENDPOINT Listener started on 0.0.0.0:9164
erAdapter} - User admin logged in successfully
xy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = false
xy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
xy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
xy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
xy:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
xy:PatientDetails_Service} Status = From Date is valid
xy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```

For to date:



```
      },
      {
          "Name":"Henry",
"FromDate":"2024-01-12",
"ToDate":"2025-01-13"
      }
```

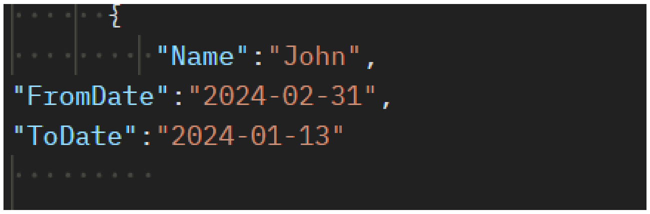
```
[2024-04-22 11:55:17,935]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
From Date is valid
[2024-04-22 11:55:17,936]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
{"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```



```
 - WSO2 Micro Integrator started in 8.55 seconds
ingIOReactorManager} - Pass-through EI_INTERNAL_HTTP_INBOUND_ENDPOINT Listener started on 0.0.0.0:9201
ingIOReactorManager} - Pass-through EI_INTERNAL_HTTPS_INBOUND_ENDPOINT Listener started on 0.0.0.0:9164
dlerAdapter} - User admin logged in successfully
roxy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = false
roxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
roxy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
roxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
roxy:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
roxy:PatientDetails_Service} Status = From Date is valid
roxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```

For validation month and day:

For from date:

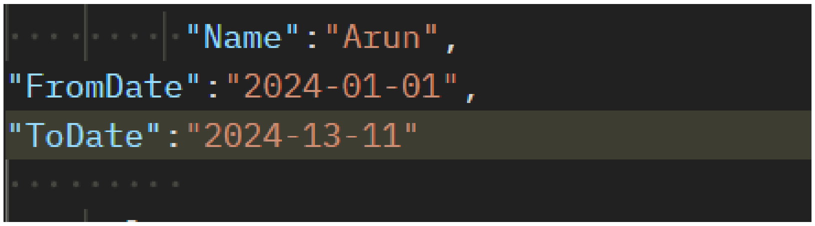


```
      {
          "Name":"John",
"FromDate":"2024-02-31",
"ToDate":"2024-01-13"
```

```
[2024-04-22 11:55:17,930]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status =
{"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
[2024-04-22 11:55:17,935]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient
Name = Henry, Fromdatevalidation = true
```

For month validation:

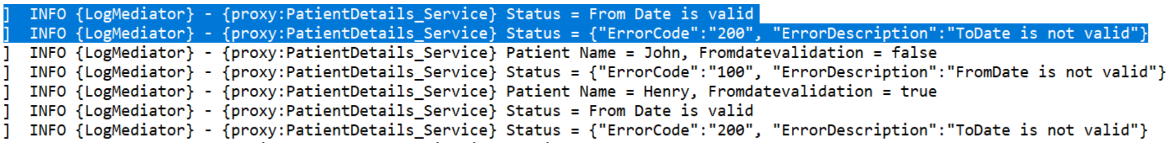
Case - 1:



```
        "Name":"Arun",
"FromDate":"2024-01-01",
"ToDate":"2024-13-11"
```

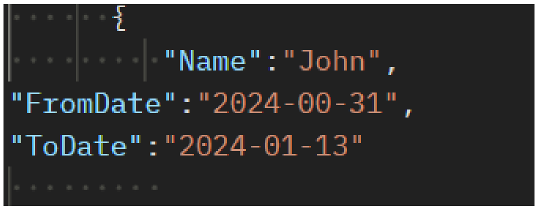
Log Output:

```
[2024-04-23 11:42:00,065]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
[2024-04-23 11:42:00,065]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```



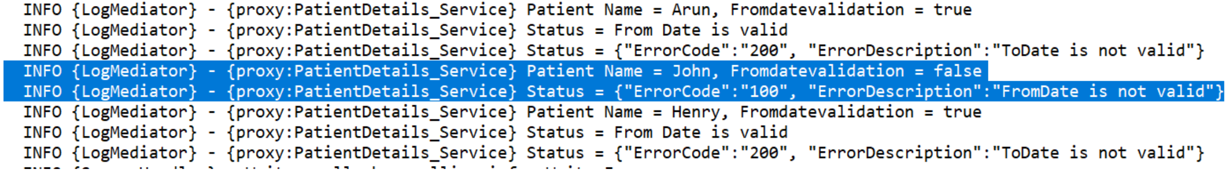
```
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```

Case - 2:



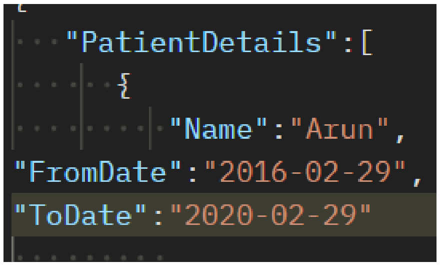
```
      {
        "Name":"John",
"FromDate":"2024-00-31",
"ToDate":"2024-01-13"
```

```
[2024-04-23 11:42:00,066]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
[2024-04-23 11:42:00,066]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
```



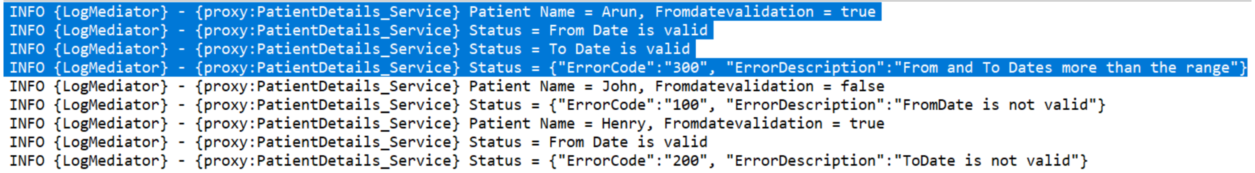
```
 INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = true
 INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
 INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
 INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
 INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
 INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
 INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
 INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```

For validating date with leap year:



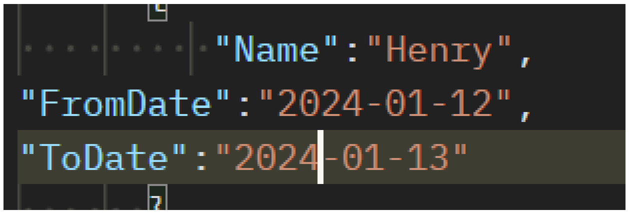
```
   "PatientDetails":[
      {
        "Name":"Arun",
"FromDate":"2016-02-29",
"ToDate":"2020-02-29"
```

```
[2024-04-23 11:53:24,740]  INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = true
[2024-04-23 11:53:24,740]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
[2024-04-23 11:53:24,748]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = To Date is valid
[2024-04-23 11:53:24,748]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
```



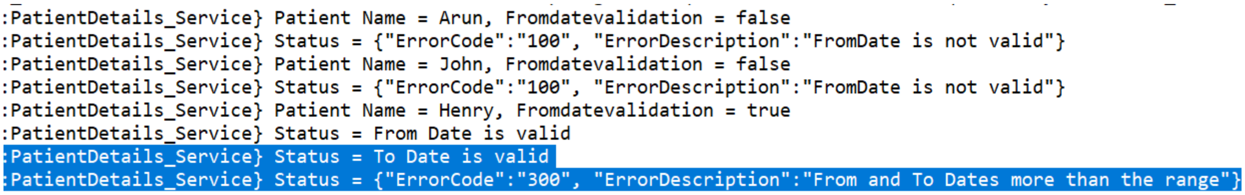
```
INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = true
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = To Date is valid
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
INFO {LogMediator} - {proxy:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = From Date is valid
INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"200", "ErrorDescription":"ToDate is not valid"}
```

For checking the difference between the from and to dates is whether 10 days:



```
        "Name":"Henry",
"FromDate":"2024-01-12",
"ToDate":"2024-01-13"
```

```
[2024-04-22 12:04:17,338]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = To Date is valid
[2024-04-22 12:04:17,338]  INFO {LogMediator} - {proxy:PatientDetails_Service} Status = {"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
```

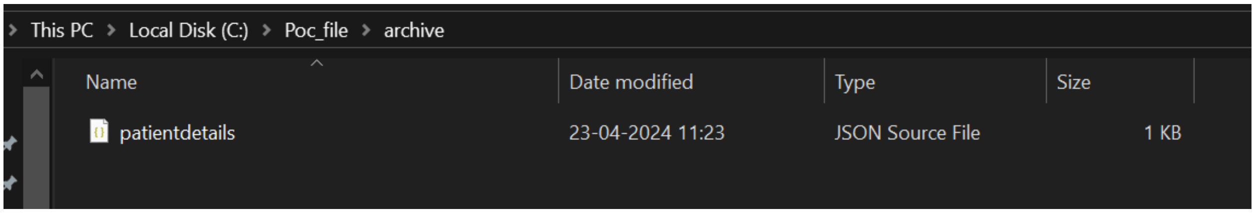


```
:PatientDetails_Service} Patient Name = Arun, Fromdatevalidation = false
:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
:PatientDetails_Service} Patient Name = John, Fromdatevalidation = false
:PatientDetails_Service} Status = {"ErrorCode":"100", "ErrorDescription":"FromDate is not valid"}
:PatientDetails_Service} Patient Name = Henry, Fromdatevalidation = true
:PatientDetails_Service} Status = From Date is valid
:PatientDetails_Service} Status = To Date is valid
:PatientDetails_Service} Status = {"ErrorCode":"300", "ErrorDescription":"From and To Dates more than the range"}
```

vfs.ActionAfterProcess:

VFS Action After Process is set to move operation and the path of the folder has been defined as a parameter.

File path: *file:///C:/Poc_file/archive*.



This PC > Local Disk (C:) > Poc_file > archive

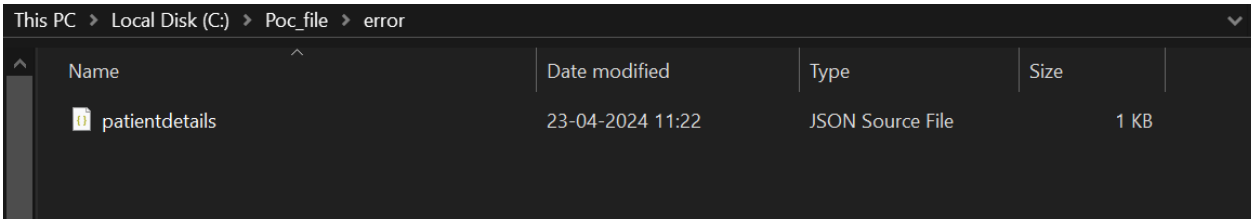
Name	Date modified	Type	Size
patientdetails	23-04-2024 11:23	JSON Source File	1 KB

vfs.ActionAfterFailure:

VFS Action After failure is set to move operation and the path of the folder has been defined as a parameter.

File path: *file:///C:/Poc_file/error*.

This process happens only when there is any error in the process of reading the file i.e., Mistake in the file contents or the way of accessing the data.



Name	Date modified	Type	Size
patientdetails	23-04-2024 11:22	JSON Source File	1 KB