

| Deployment

Transact Extensibility for Java (English)

2020 Q1



©2020 Temenos Headquarters SA - all rights reserved.

| Copyright Notice

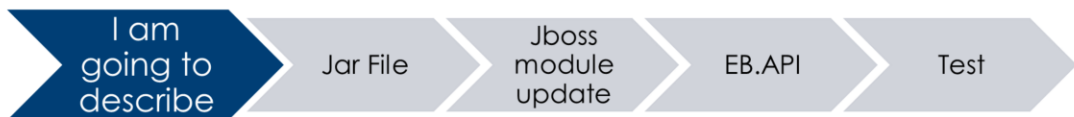
©2020 Temenos Headquarters SA - all rights reserved.

Warning: This document is protected by copyright law and international treaties. Unauthorised reproduction of this document, or any portion of it, may result in severe and criminal penalties, and will be prosecuted to the maximum extent possible under law.

©2020 Temenos Headquarters SA - all rights reserved.



| Lesson Overview

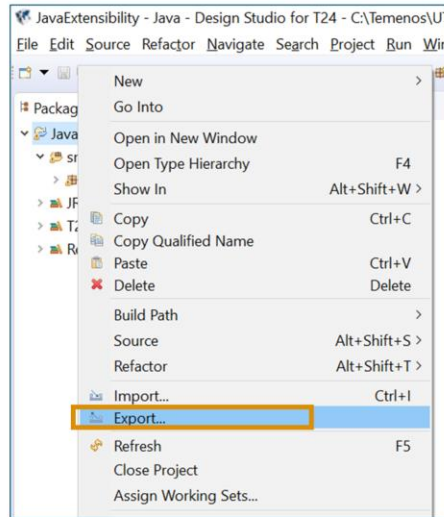


©2020 Temenos Headquarters SA - all rights reserved.

 **TEMENOS**
Learning Community

I am going to describeJar File
Jboss module update
EB.API
Test

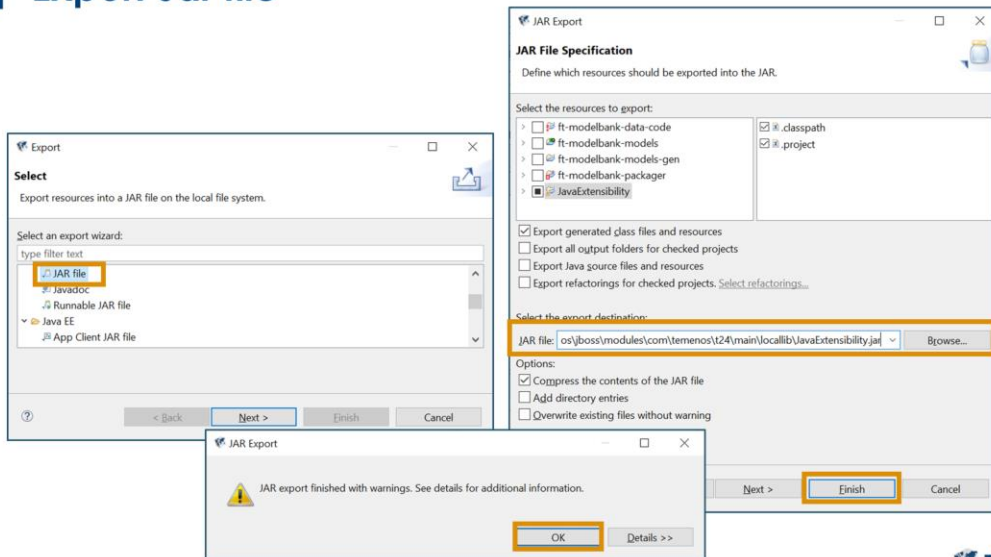
Export Jar File



©2020 Temenos Headquarters SA - all rights reserved.

Right click on the project and select Export

Export Jar file



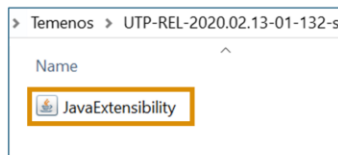
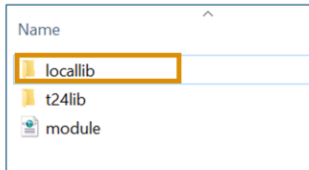
©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

Save the jar file under Jboss modules

Update module.xml

- Add the jar file in module.xml



```
<resources>
<!-- Insert resources here -->
<resource-root path="./locallib/JavaExtensibility.jar" />
<resource-root path="./t24lib/AA_ARAccountsData.jar" />
<resource-root path="./t24lib/AA_ARC.jar" />
<resource-root path="./t24lib/AA_AaActivityExtractorService.jar" />
</resources>
```

©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

Make an Entry in module.xml with the jar file name (file inside JBOSS\modules\com\Temenos\t24\main)

Always add the new jar file name at the top

EB.API

- Hooks are invoked while transactions are validated or committed
- All the Hooks must have an entry in EB.API with the SourceType = method

EB.API FT.CCY.DIFF.ERROR	
Description	EN FT Currency Validation throw Error
Protection Level	Full
Source Type	Method
Java Method	validateRecord
Java Class	CurrencyValidationError
Java Package	com.temenos.training
Curr No	1
Inputter.1	7_AUTHORISER_OFS_BROWSERTC
Date time.1	12 APR 20 22:40
Authoriser	7_AUTHORISER_OFS_BROWSERTC
Company	GB0010001
Dept Code	1

©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

Hooks are invoked when a transaction is validated/committed
Input Hooks are attached to the field INPUT.ROUTINE in the VERSION application
All hooks must have an entry in EB.API

Source Type must be given as **method**

Java Method - name of the java method in the class

Java Class – name of the class file

Java Package - name of the package

Attach the EB.API to Exit Point

The screenshot displays the Temenos system interface for configuring an exit point. The main window, titled '*FUNDS.TRANSFER.AC.version', features several tabs: Screen, Description, Transaction Flow, Presentation, Relationship, API, and Attributes. The API tab is currently selected. Within the 'Input Routines' section, the routine 'FT.CCY.DIFF.ERROR.java' is listed, and the 'Add' button is highlighted. To the right, a 'Select Routines...' dialog box is open, showing 'Type: Method' selected, and the search input 'FT.CCY.DIFF.ERROR' with the 'OK' button highlighted.

©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

In the API tab, Attach the EB.API Record created in the previous slide as java Method

| Lesson Summary



Practice 6.1

- Create EB.API entry for the method implemented in Practice 5.1
- Add the above created EB.API ID to the Version Exit point

| Practice 6.2 ValidateRecord

- Set an EB.ERROR or throw **Error** Message when the Credit Currency and Debit Currency are not same in FUNDS.TRANSFER transaction

©2020 Temenos Headquarters SA - all rights reserved.



Set an EB.ERROR or throw Error Message when the Credit Currency and Debit Currency are not same in FUNDS.TRANSFER transaction
Remember to create an EB.API record and attach the same to version as like the last practice.

Solution 6.2

- In this exercise, an **error** is raised when the debit and credit currency are not the same

```
public class CurrencyValidationError extends RecordLifecycle {  
  
    @Override  
    public TValidationResponse validateRecord(String application, String currentRecordId, TStructure currentRecord,  
        TStructure unauthorisedRecord, TStructure liveRecord, TransactionContext transactionContext) {  
  
        FundsTransferRecord ftRecord = new FundsTransferRecord(currentRecord); //Cast TStructure to Valid Application Record  
  
        TField debitCurrency = ftRecord.getDebitCurrency(); // Read Debit Currency in a TField Object  
        TField creditCurrency = ftRecord.getCreditCurrency(); // Read Credit Currency in TField Object  
  
        if (!debitCurrency.getValue().equals(creditCurrency.getValue())) { // Compare the both the currencies. getValue() is used to  
            // read value from the object  
            creditCurrency.setError("FT-CCY.DIFF"); // Set the EB.ERROR ID  
        }  
  
        return ftRecord.getValidationResponse(); //Return the validated response  
    }  
}
```

In this exercise, an **error** is raised when the debit and credit currency are not the same. Creditcurrency.setError is passed the ID of the EB.ERROR record

Solution 6.2

- Error is raised when the debit and credit currency are not the same

Transfer Between Accounts FT191078HY07

Transfer Between Accounts Audit

Debit Account *	75841 Harry Crisp	Debit Amount	15.00
Debit Currency	USD US Dollar	Debit Narrative	
Debit Value Date	17 APR 2019 17 APR 2019	Cheque Number	
Cheque Type			
Ordered By:1			
Credit Account *	11223 NIKE	Credit Amount	
Credit Currency	GBP Pound Ster	Credit Narrative	
Credit and Debit Currency are not same - Java Framework		Customer Spread	
Credit Value Date	17 APR 2019 17 APR 2019	Customer Rate	1.427074
Treasury Rate	1.427074		

Please resolve the errors below to proceed:

✗ Credit Currency: Credit and Debit Currency are not same - Java Framework

Error is raised when the debit and credit currency are not the same

| Practice 6.3 updateCoreRecord

- Update SHORT.TITLE of all accounts that belong to the customer with the customers SHORT.NAME when a CUSTOMER record is created/updated using the version CUSTOMER, JAVA.

Update SHORT.TITLE of all accounts that belong to the customer with the customers SHORT.NAME when a CUSTOMER record is created/updated using the version CUSTOMER, JAVA.

Solution 6.3

```
61 public void updateCoreRecord(String application, String currentRecordId, TStructure currentRecord,  
62     TStructure unauthorisedRecord, TStructure liveRecord, List<String> versionNames, TBoolean isZeroAuth,  
63     List<String> currentRecordIds, List<TStructure> currentRecords, TransactionContext transactionContext) {  
64  
65     Customer customer = new Customer(this);  
66  
67     CustomerRecord cusRec = new CustomerRecord(currentRecord); // Cast TStructure to CustomerRecord  
68  
69     try {  
70         List<String> accountNumbers = customer.getAccountNumbers(); // Using the core API capture the list of  
71                             // account numbers belongs to the customer  
72         for (String accNum : accountNumbers) {  
73             AccountRecord accRec = new AccountRecord(); // Create empty AccountRecord  
74  
75             accRec.setShortTitle(cusRec.getShortName(0), 0); // Set Short title to the empty Account Record  
76             versionNames.add("ACCOUNT, JAVA"); // Set the name of the version  
77             currentRecordIds.add(accNum); // Set the Record Id  
78             currentRecords.add(accRec.toStructure()); // Set the Record in TStructure format  
79         }  
80         isZeroAuth.set(true); // set the zero auth flag to true  
81  
82     } catch (T24CoreException e) {  
83         throw new T24CoreException("Unable to update the Accounts");  
84     }  
85 }
```


Solution 6.3 – EB.API

EB.API	CUS.UPDATE.CORE.RECORD
Description	EN Update Core Record Demo
Protection Level	Full
Source Type	Method
Java Method	updateCoreRecord
Java Class	UpdateShortTitle
Java Package	com.temenos.training
Curr No	1
Inputter.1	14_INPUTTER_OFS_BROWSERTC

Solution 6.3 - Version

Version	CUSTOMER_JAVA	
REL.DELIV.OPT		
CONTACT.TYPE		
Sub Assoc		
REL.DELIV.OPT		
Local Ref Field	LOCAL.REF	
Input Routine.1	GET.MULTI.VALUE	GET MULTI VALUE
Report Locks	Yes	
Gts Control	1	
Exc Inc Rtn	Yes	
Before Auth Rtn.1	CUS.UPDATE.CORE.RECORD	Update Core Record Demo

| Practice 6.4 - postUpdateRequest

- Create an Account with below Information as result of Creating a Customer
 - Category is 6001
 - Currency is USD

©2020 Temenos Headquarters SA - all rights reserved.



Create an Account with below Information as result of Creating a Customer
Category is 6001
Currency is USD

Solution 6.4

```
@Override
public void postUpdateRequest(String application, String currentRecordId, TStructure currentRecord,
    List<TransactionData> transactionData, List<TStructure> currentRecords,
    TransactionContext transactionContext) {

    AccountRecord accRecNew = new AccountRecord(); // Create a new Account Record

    accRecNew.setCustomer(currentRecordId); // Set Customer ID
    accRecNew.setCategory("6001"); // Set Category
    accRecNew.setCurrency("USD"); // Set Currency

    TransactionData txnData = new TransactionData();
    txnData.setFunction("INPUT"); // OFS Function
    txnData.setNumberOfAuthoriser("0"); // NO OF AUTH
    txnData.setSourceId("BULK.OFS"); // OFS Source ID
    txnData.setVersionId("ACCOUNT, JAVA"); // Version to use in OFS Request

    transactionData.add(txnData);
    currentRecords.add(accRecNew.toStructure());
}
```

Solution 6.4 – EB.API

EB.API	CREATE.ACCOUNT
Description	EN Create Account
Protection Level	Full
Source Type	Method
Java Method	postUpdateRequest
Java Class	CreateAccount
Java Package	com.temenos.training

©2020 Temenos Headquarters SA - all rights reserved.



Create EB.API Record with below information

Source Type = method

Java Method = postUpdateRequest

Java Class = CurrentAccount

Java Package = com.Temenos.training

Solution 6.4 – AUTH.ROUTINE

Version	CUSTOMER, JAVA
REF.DATA.ITEM	
CONTACT.TYPE	
Sub Assoc	
REL.DELIV.OPT	
Local Ref Field	LOCAL.REF
Auth Routine.1	CREATE.ACCOUNT
Report Locks	Yes
Gts Control	1
Exc Inc Rtn	Yes

©2020 Temenos Headquarters SA - all rights reserved.

 **TEMENOS**
Learning Community

Attach the EB.API created as AUTH.ROUTINE
AUTH.ROUTINE = CREATE.ACCOUNT

Solution 6.4 – Create Customer

Customer Java 190285

Customer Mnemonic *

JAVAEXTEN1

Short Name *

EN Stuart Little

Full Name *

EN Stuart Little

Full Name-2

EN

Street Name

EN

Address.1

EN

Town

EN

Post Code

EN

Country

EN



Create a customer using the version CUSTOMER,JAVA with mandatory inputs

Solution 6.4 – List OFS.MESSAGE.QUEUE

```
Administrator: "Database Operations"
-----
DBTools
-----
d: 191320548679387.00-BULK.OFS-
1: ACCOUNT, JAVA/I/PROCESS//0/,//GB0010001////////////////////,CUSTOMER:1:1="190285",CATEGORY:1:1="6001",CURRENCY:1:1="USD",
-----
t24@localhost: TAFJD >LIST-ITEM F.OFS.MESSAGE.QUEUE
```

©2020 Temenos Headquarters SA - all rights reserved.



Once the CUSTOMER record is authorized, check the F.OFS.MESSAGE.REQUEST file to see the list of OFS Message Created.
Use DBTools console to view the above list

Solution 5.4 – Execute TSM



You can post command to the ExecQueue by submitting your command in the field below.

e.g. to execute TSM service within the application server post command START.TSM

A screenshot of a web form titled 'Execute phantom'. It has a light blue background. At the top, there's a grey header bar with the title. Below it, there's a label 'Command:' followed by a text input field containing 'START.TSM'. The input field is highlighted with an orange border. To the right of the input field is a grey button labeled 'Execute command'. Below the input field, there's a blue message box with an information icon and the text 'Message: START.TSM sent to queue java:comp/env/jms/t24EXECQueue'.

Start the TSM from TAFJEE Execute Servlet page

| Solution 6.4 – Account Created

CUSTOMER.ACCOUNT 190285 Stuart Little

Account Number.1 88878

Account Created with the specifications give in the program

Practice 6.5 – defaultFieldValues

- Create a VERSION for ACCOUNT application that allows user to edit records belonging to CATEGORY 1001 only
- Expected Output

The image shows two screenshots of the TEMENOS application interface. The top screenshot shows the URL 'ACCOUNT,CAT1001|74047' in the browser address bar. Below the header, a red error message states: 'Runtime Exception Error This version can be used to edit records in category 1001 only'. An orange box highlights this error message with the text: 'Error must be raised for ACCOUNT 74047 as it belongs to CATEGORY 6001'. The bottom screenshot shows the same application with the URL 'ACCOUNT,CAT1001|19461'. The account details are displayed, including Customer ID 100366, Product Code 1001, Currency USD, and Account Name 1 EN WILLIAM HEWLETT. An orange box highlights the 'Current Account' section with the text: 'ACCOUNT in CATEGORY 1001 is editable'.

©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

Create a VERSION for ACCOUNT application that allows user to edit records belonging to CATEGORY 1001 only

Practice 6.6 - checkId

- Create a VERSION for the CUSTOMER that prefixes “99” to the ID given by the user
- Expected Output

The screenshot shows the TEMENOS application interface. At the top, there is a search bar containing the text "CUSTOMER,ID99177". Below the search bar, the "Basic Details" tab is selected, and the number "9977" is displayed next to it. The form contains the following fields:

- Title
- Given Name
- Family Name
- Please Select (dropdown menu)
- Full Name * (dropdown menu set to EN)
- Full Name-2 (dropdown menu set to EN)
- Short Name * (dropdown menu set to EN)

©2020 Temenos Headquarters SA - all rights reserved.

TEMENOS
Learning Community

Create a VERSION for the CUSTOMER that prefixes “99” to the ID given by the user



TEMENOS
Learning Community

thank.you

tlc.temenos.com

