Lesson 4. ENQUIRY Hooks in Java

T24 Extensibility for Java

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Enquiry hooks

We can customize ENQUIRY by

   modifying the dynamic selection box – BUILD hook

   modifying the data before display – CONVERSION hook

Extend the **com.temenos.t24.api.hook.system.Enquiry** class

   setRecord()

   setFilterCriteria()

   setValue()

   setIds()

Practice 4.1 – Enquiry Build hook

- The Build hook in ENQUIRY, is used to modify the selection criteria
- We can set the Field Name, Operator and the value and add these to the filter criteria

Create an enquiry to display Customer Id, Account Id and the respective working balance after accepting category from the user.

Based on category, additional filtering has to be done

- For category 1001 - Balance should be in the range 0 and 49999
- For category 6001 - Balance should be in the range 50000 and 100000
- For category greater than 7000 - Balance should be in the range 100000 and 500000

Step 1 – Create the class

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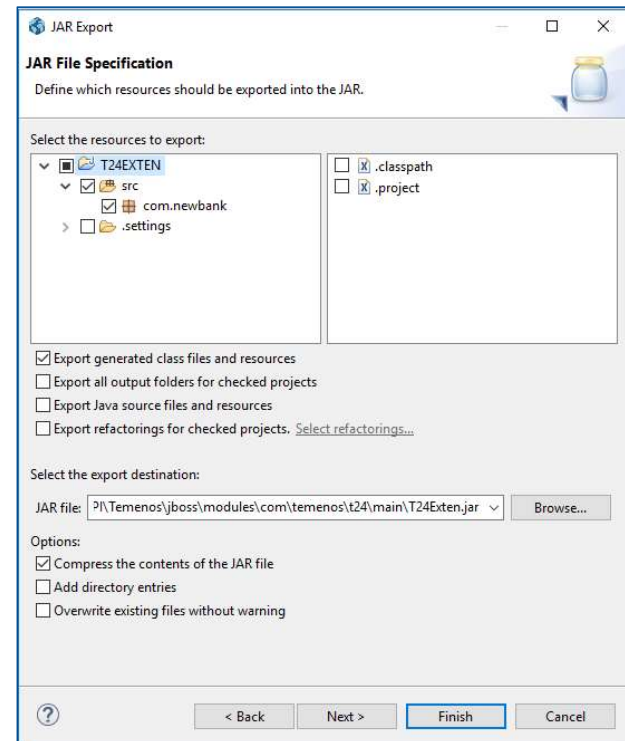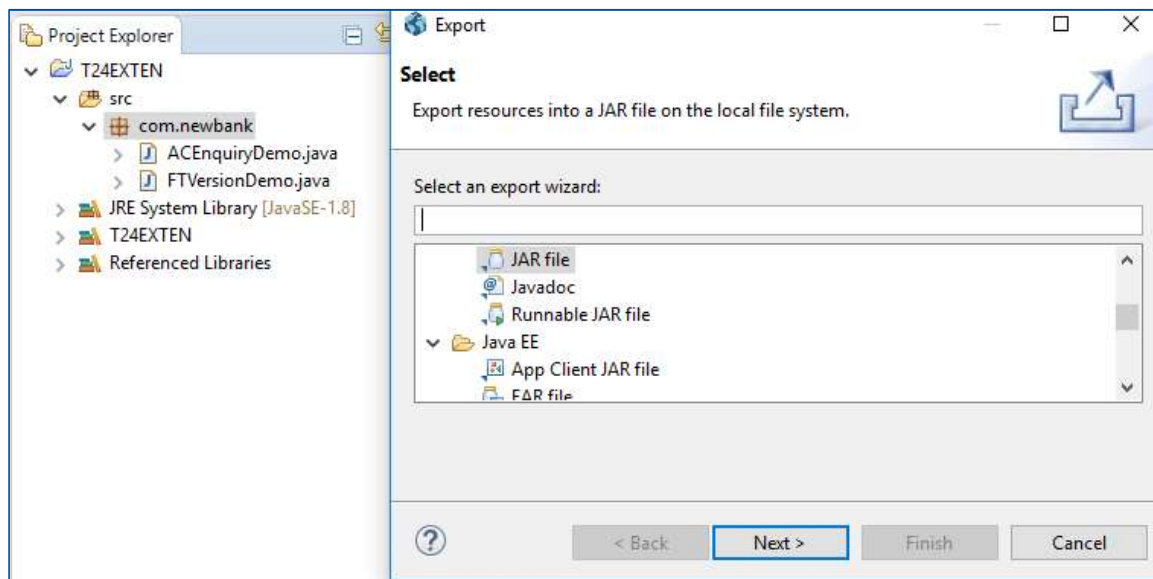
```java
package com.newbank;

import java.util.List;

import com.temenos.t24.api.complex.eb.enquiryhook.FilterCriteria;
import com.temenos.t24.api.hook.system.Enquiry;

/**
 demo for ENQUIRY Build hook
 */
public class ACEnquiryDemo extends Enquiry {

    @Override
    public List<FilterCriteria> setFilterCriteria(String enquiryName, List<FilterCriteria> filterCriteria) {
        FilterCriteria fc = new FilterCriteria();
        String s1 = filterCriteria.get(0).getFieldname();
        String s3 = filterCriteria.get(0).getValue();

        fc.setFieldname("WORKING.BALANCE");
        fc.setOperand("RG");
        if (s1.equals("CATEGORY")) {
            if (Integer.parseInt(s3) > 7000) {
                fc.setValue("50000 100000");
            } else {
                switch (s3) {
                case "1001":
                    fc.setValue("0 10000");
                    break;
                case "6001":
                    fc.setValue("10000 50000");
                    break;
                default:
                }
            }

        }
        filterCriteria.add(fc);
        return filterCriteria;
    }
}
```

Step 2 – Create JAR and update module.xml

Step 3 – EB.API

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import java.util.List;

import com.temenos.t24.api.complex.eb.enquiryhook.FilterCriteria;
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            }
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        return filterCriteria;
    }
}
```

TEMENOS EB.API I ACENQ.DEMO

EB.API   ACENQ.DEMO

Description	EN Demo for Conversion routine
Protection Level *	● Full ○ Partial ○ None
Source Type *	○ Basic
	○ Java
	○ Hook
	● Method
Java Method	setFilterCriteria
Java Class	ACEnquiryDemo
Java Package	com.newbank

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Step 4 – Create ENQUIRY and attach hook

Launch the ENQUIRY

TEMENOS ENQ ACENQ CATEGORY EQ 1001 ▶

Build routine Demo

Account Number	Category	Ccy	Working Balance
74918	1001	USD	10,000.00
76341	1001	EUR	10,000.00
77868	1001	GBP	10,000.00
78007	1001	USD	10,000.00
81884	1001	CAD	10,000.00
83666	1001	USD	10,000.00
76945	1001	USD	9,960.00
78883	1001	GBP	9,420.25
81744	1001	EUR	9,000.00
76748	1001	USD	8,013.26
77445	1001	USD	8,000.00
78581	1001	USD	8,000.00
81752	1001	USD	8,000.00
74567	1001	GBP	7,658.74
74586	1001	GBP	7,658.74
78794	1001	GBP	7,658.74
74578	1001	GBP	7,558.74
78042	1001	USD	7,500.00
78514	1001	USD	7,000.00
77698	1001	GBP	6,000.00
34533	1001	USD	5,300.00
75515	1001	USD	5,040.00
81768	1001	GBP	4,500.00
83224	1001	USD	4,500.00

TEMENOS ENQ ACENQ CATEGORY EQ 6001 ▶

Build routine Demo

Account Number	Category	Ccy	Working Balance
82384	6001	USD	50,000.00
78937	6001	USD	46,245.00
82414	6001	USD	45,000.00
78905	6001	USD	44,000.00
78867	6001	USD	20,885.00
74381	6001	USD	18,000.00
76422	6001	USD	17,194.73
78719	6001	USD	15,650.00
74365	6001	USD	15,000.00
17531	6001	EUR	14,753.43
78875	6001	USD	13,000.00
78751	6001	USD	12,000.00
78573	6001	GBP	10,482.55

TEMENOS ENQ ACENQ CATEGORY GT 7001

Build routine Demo

Account Number	Category	Ccy	Working Balance
GBPUSD1902201010001	19022	GBP	100,000.00
USD1661100040001	16611	USD	95,000.00
USD1422000060001	14220	USD	94,298.93
USD1660400060001	16604	USD	78,750.00
EUR1419700010001	14197	EUR	67,377.08
EUR1401000010001	14010	EUR	59,155.44
USD1660400050001	16604	USD	55,150.00

Practice 4.2 – Enquiry Conversion hook

- Create an ENQUIRY TO LIST the LD records that are in foreign currency. List the ID, CUSTOMER, AMOUNT and Equivalent amount in LCCY.

- Use conversion hook to convert the amount in foreign currency to LCCY

- Expected output

NOFILE Enquiry

- What if there are multiple files involved in creation of an enquiry?

- What if the record ID of another application is not part of the base application?

- This can be achieved using NOFILE enquiries

- Since more than one file might be required to extract data, it is a NOFILE enquiry. We can extract data from any number of T24 applications

- Subroutine is written to extract all required data and form the record

- **ENQUIRY** application is used to display extracted data

Practice 4.3 – NOFILE Enquiry

- Create an ENQUIRY to display the consolidated balance for a CUSTOMER.

- Hint : Accumulate all the balance from all the accounts available in CUSTOMER.ACCOUNT.

- Expected Output

Step 1 – Create the class

Step 1 – Implement the method setIds

```java
public List<String> setIds(List<FilterCriteria> filterCriteria, EnquiryContext enquiryContext) {
    Customer cusRec = new Customer(this);
    DataAccess da = new DataAccess(this);

    String s3 = filterCriteria.get(0)
            .getValue(); /* will have the customer Id */

    List<String> retId = new ArrayList<String>();
    Double consolidatedBalance = 0.0;
    AccountRecord accRec = null;
    cusRec.setCustomerId(s3);
    try {
        List<String> accNumbers = cusRec.getAccountNumbers();

        Double workingBalance = 0.0;
        for (String acnum : accNumbers) {

            accRec = new AccountRecord(da.getRecord("ACCOUNT", acnum));
            String amt = accRec.getWorkingBalance().getValue();
            if (amt.isEmpty() || amt.equals(""))
                continue;
            else {
                workingBalance = Double.valueOf(accRec.getWorkingBalance().toString());
                consolidatedBalance += workingBalance;
            }
        }
    } catch (Exception e) {
    }
    retId.add(s3 + "*" + consolidatedBalance.toString());
    return retId;
}
```
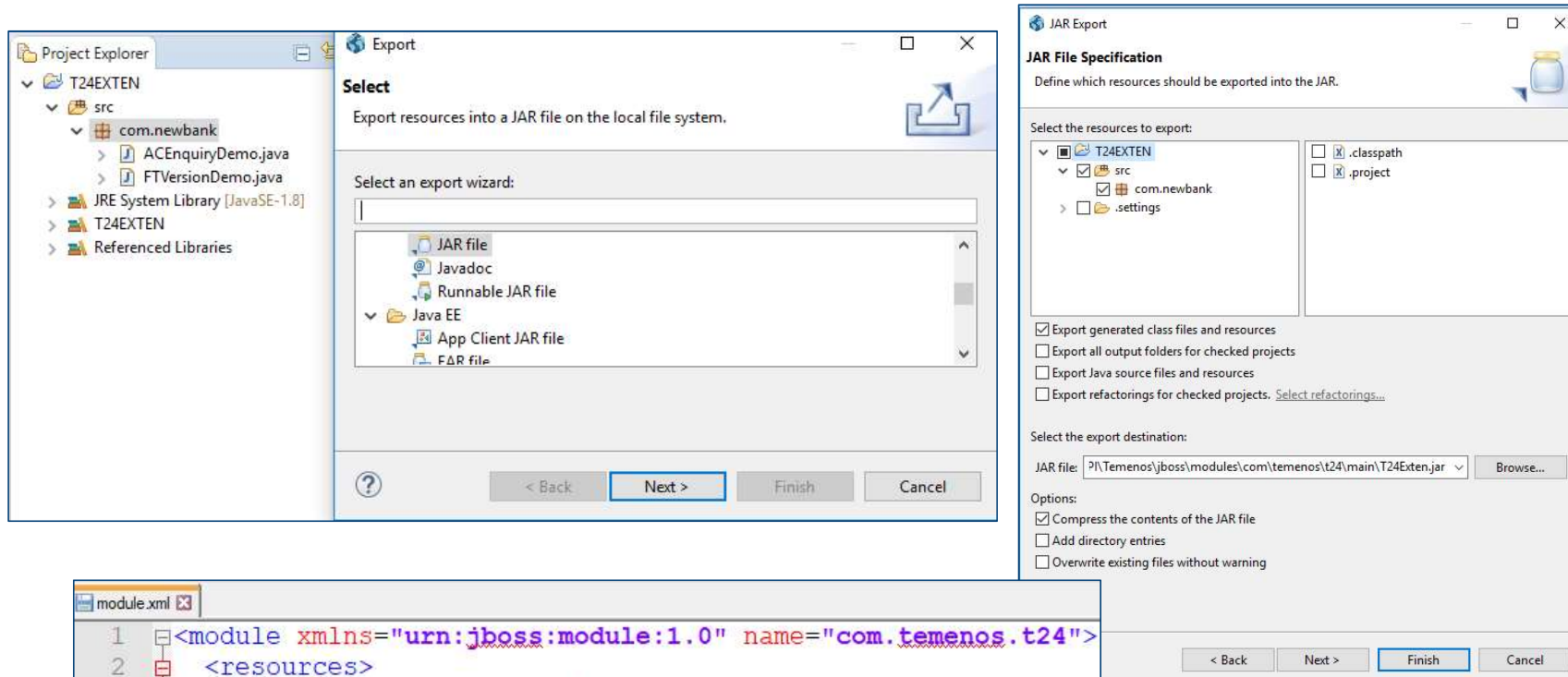
Step 2 – Create JAR and update module.xml

Step 3 – EB.API

Creating the ENQUIRY Record

- A valid application name should be given in the field FILE.NAME which is checked against **STANDARD.SELECTION**

- A NOFILE enquiry does not have a single associated file

- Create a record in **STANDARD.SELECTION** with **NOFILE** prefix for the ID e.g. NOFILE.CUSBALANCE

- This ID should be given in FILE.NAME in the **ENQUIRY** application

NOFILE Enquiry - STANDARD.SELECTION

NOFILE Enquiry - ENQUIRY

ENQUIRY NOFILE.ENQ

Page Size	4,99
File Name ▶	NOFILE.DEMO
Fixed Selection.1	CONSOLIDATED.BALANCE NE "
Selection Flds.1	CUSTOMER
Required Sel.1	Y
Field Name.1	CUSTOMER
Operation.1 .1	S CUSTOMER
Column.1	1
Length Mask.1	10L
Single Multi.1	S
Field Name.2	CONSOLIDATED.BALANCE
Operation.2 .1	0
Column.2	2
Length Mask.2	19R,2
Conversion.2 .1	F *,2,2
Page Fields	2
Multi Fields	0

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NoFile Enquiry – Execution

NOFILE Enquiry – OUTPUT