Module 10 Reporting

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Module Objectives

- Type of Reports in ADempiere
- Report Architecture
- Integration with Jasper Report
- Financial Report
Types of Reports

**Standard Window Reports**
- Report
- Archived Reports
- Print Preview
- Print

**I.e., Sales Order Form, Shipment Form**

**Standalone Reports**
- General Tabular Report
- Accept Parameters
- Based on Views

**I.e., Open Items, Invoice List**

**Financial Reports**
- Data Cube
- Report Analysis based on Acct Code and Periods

**I.e., Balance Sheet, Trial Balance**
Module 10.1
Working with Reports
Work with Reports

Report Button displays information of selected record
Available in every window / tab

Print Preview displays Form of Document Windows, i.e., Sales Order, Shipment Form, Payment
Available in some window
Work with Reports

- Zoom Across
- Print Format
- Email / Archive / Export
- Edit Print Format
- Lookup Record
- Drilldown
Working with Window Report

- **Login to ADempiere as Client**
  - **Username:** GardenAdmin
  - **Password:** GardenAdmin
  - **Role:** GardenWorld Admin
  - **Client:** GardenWorld
  - **Organization:** Fertilizer

- **View Report of Purchase Order**
  - Open **Purchase Order** window
  - With any record selected
  - Click on **Report Button**
  - Report of the Order Header will display

- **Drill Across**
  - Select **Drill** option to **Business Partner**
  - Double Click on a record
  - The Report for select **Business Partner** will be shown.

- **Review Print Format**
  - Back to **Purchase Order Report**
  - **Print Format = Order**
  - Click on Customize Report button
  - This will bring up Order's **Print Format** window

**Print Format** is **Application Dictionary** that control format of reports in ADempiere. This is an important window and we will visit it again in the following sections.
Working with Window Report

• View Purchase Order Form
  – Back to Purchase Order window
  – Click on **Print Preview** button
  – **Purchase Order Form** will be displayed

• View **Print Format** of this Form
  – Click on **Customize** button
  – This will bring up Order’s **Print Format** window for this **Purchase Order Form**

  ![ADempiere Print Format Window]

Although we can create or modify format using ADeempiere’s own Formatting, it is quite difficult.

*We will later on learn how to use **Jasper Report** Tools as a designer instead.*
Working with Standalone Report

- Adempeire provide a lot of **Standalone Reports** out of the box. In every module, we can see relevant report icons as followings,

  - View Open Items Report
    - Click on **Open Items** report
    - As this is standalone report, parameter will be passed manually, dialog for report parameter will be shown

  - Click **Start** to generate the report.

  In contrary to the Print Format of Window Report which already link to the Window's Data Table, the **Print Format** of this **Standalone Report** will link to the **Report View** (Application Dictionary) in order to generate the result set.
Module 10.2
Report Setup
Report & Process (Master Data)

- Master Data of Report, i.e., Name, Help, etc.
- Input Parameters
- Security Access

Print Format

- Report Formatting
- Data Linkage to
  - Table and Column
  - Report View
- Optional Jasper Process (Overwrite)

Report View (Application Dictionary)
How a Window find Report?

Table Name and RECORD_ID

Default Table’s Print Format

### Default Table’s Print Format

<table>
<thead>
<tr>
<th>Document No</th>
<th>Description</th>
<th>Target Doc Type</th>
<th>Self Service</th>
<th>Date Ordered</th>
<th>Date Promised</th>
</tr>
</thead>
<tbody>
<tr>
<td>80004</td>
<td>Order from Business Partner Definition</td>
<td>POS Order</td>
<td>X</td>
<td>03/09/2011</td>
<td>03/09/2011</td>
</tr>
</tbody>
</table>
Print Preview Form (General)

**Report Name** is from field **Process** in **Tab** tab of Window, Tab & fields
**Report Name** is from field **Process** in **Tab** tab of Window, Tab & fields

Special Report
- Rpt C_Order
- Rpt C_Payment
- Rpt C_InOut
- Rpt C_Invoice
- Rpt ......
- Rpt ......

Find **Print Format** by **DocType**

1. Document Type (field - print format)
2. Print Form (field - default print formats)
3. Business Partner

For example
- Invoice: (3) then (1) then (2)
- Order: (1) then (2)
- Shipment: (1) then (2)
Standalone Report

Input Parameters

Report View

Get Report’s Information

Jasper Process

ADempiere Standalone Report

Jasper Report
Module 10.3
Working with Jasper Report
Why Jasper Report

Easy to create with GUI
Fully integrate to Application Dictionary
Scenario

- Create a new **Standalone Tax Report** with Jasper. This file will have a search criteria.
- Replace Sales Order form with Jasper **Sales Order Form**
Standalone Tax Report

- Verify Sample **TaxReport.jrxml**
  - *TaxReport.jrxml* is the sample jasper file
  - Open **TaxReport.jrxml** file by Jasper I-Report
  - Click on Query button to see the SQL Query of this report. Note that there is still no criteria yet.

  - Click on **Preview** to execute the Report. You will notice that it will simply return all records.

- Add Business Partner as criteria.
  - Click on SQL button again to open Report Query dialog.
  - Click **New Parameter** button
    - **Parameter Name:** C_BPartner_ID
    - **Value Expression:** Big Decimal
  - Click **OK** to save new parameter
  - Drag **C_BPartner_ID** to the query pane and add where clause
    
    \[ \text{WHERE bp. C_BPartner_ID = } \$P\{C_BPartner_ID\} \]

  - Save change
  - Click on **Preview** to execute the Report
  - Jasper will ask for C_BPartner_ID, please supply any valid C_BPartner_ID
  - Now, the Jasper File is Valid and ready to deploy.

- Create Report in Application Dictionary
  - Login to ADempiere as System Admin
    - **Username:** SuperUser
    - **Password:** System
    - **Role:** System Administrator
  - Open **Report & Process** window.
Standalone Tax Report

- Click New
  - **Search Key**: MyTaxReport
  - **Name**: My Tax Report
  - **Report**: Selected
  - **Data Access Level**: Client + Organization
  - **Jasper Report**: TaxReport.jrxml

- Click Save
- Click on **Parameter** tab
- Click New
  - **Name**: My Tax Report
  - **DB Column Name**: C_BPartner_ID
  - **System Element**: C_BPartner_ID
  - **Reference**: Table Direct
- Click Save

- Register this report to Menu
  - Open **Menu** window.
  - Click New
    - **Name**: My Tax Report
    - **Action**: Report
    - **Process**: My Tax Report
  - Click Save
  - Notice that, the new Report icon appear on the left pane
  - You can actually drag the icon to move it to proper folder

- Deploy the Report, copy `TaxReport.jrxml` into `C:\Adempiere\Reports` folder

*If path is not specified in Report & Process, `C:\Adempiere\Reports` is the default location*
Stand-alone Tax Report

- Run the report
  - Re-login as GardenWorld Admin
  - Click on My Tax Report icon
  - A parameter dialog will appear, you can choose any Business Partner. I.e., Standard
  - Click OK to launch the report.
Use Jasper for Sales Order Form

- **Verify Sample `SalesOrder.jrxml`**
  - `SalesOrder.jrxml` is the sample jasper file
  - Open `SalesReport.jrxml` file by Jasper I-Report
  - Click on Query button to see the SQL Query of this report.
  - Note that the SQL already have parameter `RECORD_ID`, which will be the input parameter.
  - Click on Preview to execute the Report
  - Jasper will ask for `RECORD_ID`, please supply any valid `C_Order_ID`, i.e., 1000001

- **Create Report in Application Dictionary**
  - Login to ADempiere as System Admin
    - **Username**: SuperUser
    - **Password**: System
    - **Role**: System Administrator
  - Click **New**
    - **Search Key**: MySalesOrderFrom
    - **Name**: My Sales Order Form
    - **Report**: Selected
    - **Data Access Level**: Client + Organization
    - **Jasper Report**: `SalesOrderForm.jrxml`
  - Click **Save**
  - There is no need to setup Parameter. `RECORD_ID` will be passed by default.

- **Register Sales Order Form in place of Print Format**
  - Re-Login again as GardenWorld Admin
  - Open **Print Form** window
  - Lookup for record for GardenWorld

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Use Jasper for Sales Order Form

- **Verify Sample `SalesOrder.jrxml`**
  - `SalesOrder.jrxml` is the sample jasper file
  - Open `SalesReport.jrxml` file by Jasper I-Report
  - Click on Query button to see the SQL Query of this report.
  - Note that the SQL already have parameter `RECORD_ID`, which will be the input parameter.
  - Click on Preview to execute the Report
  - Jasper will ask for `RECORD_ID`, please supply any valid `C_Order_ID`, i.e., 1000001

- **Create Report in Application Dictionary**
  - Login to ADempiere as System Admin
    - **Username**: SuperUser
    - **Password**: System
    - **Role**: System Administrator
  - Click **New**
    - **Search Key**: MySalesOrderFrom
    - **Name**: My Sales Order Form
    - **Report**: Selected
    - **Data Access Level**: Client + Organization
    - **Jasper Report**: `SalesOrderForm.jrxml`
  - Click **Save**
  - There is no need to setup Parameter. `RECORD_ID` will be passed by default.

- **Register Sales Order Form in place of Print Format**
  - Re-Login again as GardenWorld Admin
  - Open **Print Form** window
  - Lookup for record for GardenWorld
Use Jasper for Sales Order Form

- Right click on Order Print Format field, and Zoom
- **Print Format** window will be opened
- Set the **Jasper Process** field to **My Sales Order Form**

- **Deploy report, copy** `SalesOrderForm.jrxml` into **C:\Adempiere\Reports** folder
- **Use the Sales Order Form**
  - Run Process **Cache Reset** to ensure that the new form is refreshed.
  - Open Sales Order window
  - On any valid Sales Order, click on Print Preview button to see the new form

- This Jasper Process will overwrite the Print Format for Sales Order form
Module 10.4
Financial Reports
Financial Reports

- FN Reports are unique
- Sample of Reports are
  - Balance Sheets
  - Profit and Loss Statements
  - Statements of Account
  - Etc.
- ADempiere Tools
  - Report Line Set
  - Report Column Set
  - Reporting Hierarchy
  - Financial Report

“They generally have two dimensional information”

“These dimensions are mapped into columns and lines (or rows)”
Create Report Line Set

- We will create a configuration to display only the **Asset**, **Liabilities**, **Owner Equity**, and **Total** report line information.
- Login to ADempiere as **Client**
  - **Username:** GardenAdmin
  - **Password:** GardenAdmin
  - **Role:** GardenWorld Admin
  - **Client:** GardenWorld
  - **Organization:** Fertilizer
- Create Report Line Set
  - Open **Report Line Set** window
  - Click **New**
    - **Organization:** *
    - **Name:** Account Information
  - Click **Save**
- Create Report Line
  - Click **Report Line** tab and create Report Lines with following information,

<table>
<thead>
<tr>
<th>Field</th>
<th>1st data</th>
<th>2nd data</th>
<th>3rd data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Asset</td>
<td>Liabilities</td>
<td>Owner Equity</td>
</tr>
<tr>
<td>Sequence</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Line Type</td>
<td>Segment Value</td>
<td>Segment Value</td>
<td>Segment Value</td>
</tr>
</tbody>
</table>

- Create Report Source
  - For each record in the **Report Line** tab. Add and save the following information on **Report Source** tab

<table>
<thead>
<tr>
<th>Field</th>
<th>1st data</th>
<th>2nd data</th>
<th>3rd data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Line</td>
<td>Asset</td>
<td>Liabilities</td>
<td>Owner Equity</td>
</tr>
<tr>
<td>Type</td>
<td>Account</td>
<td>Account</td>
<td>Account</td>
</tr>
<tr>
<td>Account Element</td>
<td>1 – Asset</td>
<td>2 – Liabilities</td>
<td>3 – Owner’s Equity / Net Worth</td>
</tr>
</tbody>
</table>

For example, 1 – **Asset** account shall contain a summed-up value taken from listed posting and non-posting accounts belonging to 1 – **Asset**
Create Report Line Set

- Setup Total Line
  - Back to **Report Line** tab
  - Create Report Line with following information

<table>
<thead>
<tr>
<th>Field</th>
<th>4th data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org</td>
<td>*</td>
</tr>
<tr>
<td>Name</td>
<td>Total</td>
</tr>
<tr>
<td>Sequence</td>
<td>10</td>
</tr>
<tr>
<td>Line Type</td>
<td>Calculation</td>
</tr>
<tr>
<td>Calculation</td>
<td>Add Range (Op1 to Op2)</td>
</tr>
<tr>
<td>Operand 1</td>
<td>Asset</td>
</tr>
<tr>
<td>Operand 2</td>
<td>Owner Equity</td>
</tr>
</tbody>
</table>

- There is no need to set Record Source here
Create Report Column Set

- We now need to configure the **Beginning Balance**, **Debit Transaction**, **Credit Transaction**, and **Ending Balance**.

- Create Report Column Set
  - Open **Report ColumnSet** window
  - Click **New**
    - **Organization**: *
    - **Name**: List of account balances
  - Click **Save**

- Create Report Column
  - Click **Report Column** tab and create Report Lines with following information,

  The relative period 0 means the active period, and -1 means 1 period prior to the active period. You can also specify 1, which means 1 period after the active period.

- And for calculation column, add the 2 records

<table>
<thead>
<tr>
<th>Field</th>
<th>6th data</th>
<th>7th data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Deviation</td>
<td>Growth (%)</td>
</tr>
<tr>
<td>Printed</td>
<td>Deselected</td>
<td>Selected</td>
</tr>
<tr>
<td>Sequence</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Posting Type</td>
<td>Actual</td>
<td>Actual</td>
</tr>
<tr>
<td>Amount Type</td>
<td>Blank</td>
<td>Blank</td>
</tr>
<tr>
<td>Column Type</td>
<td>Calculation</td>
<td>Calculation</td>
</tr>
<tr>
<td>Calculation</td>
<td>Subtract (Op1-Op2)</td>
<td>Percentage (Op1 of Op2)</td>
</tr>
<tr>
<td>Operand 1</td>
<td>Ending Balance</td>
<td>Deviation</td>
</tr>
<tr>
<td>Operand 2</td>
<td>Beginning Balance</td>
<td>Beginning Balance</td>
</tr>
</tbody>
</table>

```
<table>
<thead>
<tr>
<th>Field</th>
<th>1st data</th>
<th>2nd data</th>
<th>3rd data</th>
<th>4th data</th>
<th>5th data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Beginning Balance</td>
<td>Debit Transaction</td>
<td>Credit Transaction</td>
<td>Period Balance</td>
<td>Ending Balance</td>
</tr>
<tr>
<td>Sequence</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Posting Type</td>
<td>Actual</td>
<td>Actual</td>
<td>Actual</td>
<td>Actual</td>
<td>Actual</td>
</tr>
<tr>
<td>Amount Type</td>
<td>Balance (acct sign)</td>
<td>Debit Only</td>
<td>Credit Only</td>
<td>Balance (acct sign)</td>
<td>Balance (acct sign)</td>
</tr>
<tr>
<td>Period Type</td>
<td>Total</td>
<td>Period</td>
<td>Period</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Column Type</td>
<td>Relative Period</td>
<td>Relative Period</td>
<td>Relative Period</td>
<td>Relative Period</td>
<td></td>
</tr>
<tr>
<td>Relative Period</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
```
Create Financial Report

- Create **Asset, Liabilities and Equity list report**.
  - Open **Financial Report** window
  - Click **New**
    - **Organization**: *
    - **Accounting Schema**: GardenWorld US/A/US Dollar
    - **Calendar**: GardenWorld Calendar
    - **Name**: Asset, Liabilities and Equity list
    - **Report Line Set**: Account Information
    - **Report Column Set**: List of account balances
  - Click **Save**

- Click on **Create Report** button and click **OK** on the criteria dialog box.

The report appears as follows (the actual numbers may vary with your installation, but the format generated should be the same)

- **Enable List Source** option
  - The previous step only see the summary.
  - To see the **detail of the source of account**, select the List Source option before Create Report.

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Beginning Balance</th>
<th>Debit Transaction</th>
<th>Credit Transaction</th>
<th>Period Balance</th>
<th>Ending Balance</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset</td>
<td></td>
<td>2,321.98</td>
<td>1,939.94</td>
<td></td>
<td>382.04</td>
<td>382.04</td>
<td></td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>1,572.00</td>
<td>1,868.00</td>
<td></td>
<td>296.00</td>
<td>296.00</td>
<td></td>
</tr>
<tr>
<td>Owner Equity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.00</td>
<td>3,893.98</td>
<td>3,807.94</td>
<td>678.04</td>
<td>678.04</td>
<td></td>
</tr>
</tbody>
</table>
```
What else can be done with Financial Report?

**More Specific Financial Report**
- For our example, we will create a summarized report based on only the **Product account schema element**, and involving the following **list of 3 products**

- Jasper and Financial Report
  - ADempeire also allow Jasper to integrate with Financial Report
Test Your Knowledge

1. What are types of Reports in ADempiere?
2. What is Print Format?
3. What is the default path for Reports? And if we don’t want to use default path, what can we do?
4. What is the mechanism that FN Report is being generated?