

BASICS	1	Naming Objects	30chr Length for the Table and field,Name
		Objects Numbering	ID Range From 50,000-99,999 for the Developer Purposes.
TABLES	1	TYPES OF TABLES	11 Types Table in BC Total 16 distinct keys defines
		1) Master data	Stores essential information, e.g., customers or items.
		2) Journal	Temporary data for financial entries before postingLike Drafts .Ex General Journal
		3) Template	Used to store default values or configura Like Blueprint .Ex Item, Sales Order
		4) Entry tables	These tables form the historical records of transactions in the system G/L Entry
		5) Subsidiary (supplementary) tables	often hold supplementary information that supports the Main Table Ex Cust Bank Info
		6) Register	Store information about batches of posted entries, typically to maintain an audit trail of postings.G/L Register
		7) Posted document	documents that have been finalized and posted EX Sales Invoice Header
		8) Singleton	Singleton tables typically manage system-wide settings Ex Company info Tables , general Ledger set-up
		9) Temporary	Temporary store Data For Processing & Exist in Memory , Discard after Processing
		10) System table	Contain metadata and system-related information Ex: o Permission Set table
		11) Virtual	Not Available Physically but Exist in DB But Provide data at runtime Ex, Date Integraer
	2	TABLE FUNDAMENTALS	

AL package

- Microsoft_Base Application
- Microsoft_System Application
- Microsoft_System
- Application (proxy Extension)

The triggers in a table ca

- **Table triggers**
 - On Insert
 - On Modify
 - On Delete
 - On Rename
- **Field triggers**
 - OnValidate
 - Onlookup

Table Properties



There are properties associated with table that we can define according to our requirements

- **Access** - Allows controlling the accessibility level of methods and objects. It can be Internal/Public
- **TableType** – Specifies the type of table, available options are : Normal, CDS, ExternalSQL, Temporary, Exchange, MicrosoftGraph
- **Scope** – sets the compilation target of table from other extensions Cloud, Onprem
- **CompressionType** – Sets the compression of table data for Normal tables

[Link for more information on table properties](#)

Property
ID
Name
Caption
CaptionML
Description
DataPerCompany
Permissions
LookupPageID
DrillDownPageID
DataCaptionFields
PasteIsValid
LinkedObject
TableType
DataClassification

Page

1. General Page Properties

These are applicable to almost all types of pages (List, Card, Worksheet, etc.):

Property	Description
PageType	Specifies the type of page (e.g., `Card`, `List`, `RoleCenter`, `Document`, `Worksheet`, etc.).
ApplicationArea	Determines where the page is available in the system (e.g., `All`, `Basic`, `Suit`).
UsageCategory	Specifies the category of the page for navigation menus Administration
Caption	Defines the title or name of the page that appears to users.
SourceTable	Specifies the table from which the page retrieves its data.
SourceTableTemporary	Specifies whether the SourceTable is temporary (`true` or `false`).
Editable	Specifies whether the fields on the page are editable (`true` or `false`).
Visible	Specifies whether the page or a part of it is visible.
DataCaptionFields	Specifies the fields shown as captions in lookups. No, Name Together on UI
CardPageID	Connect with List with Card Page
InsertAllowed DelayedInsert (Behaviour/Control-Property) DeleteAllowed ModifyAllowed	Determines if users can modify records. “

AutoSplitKey	Sets whether a key is automatically created for a new record placed between the current record and the previous record.
---------------------	--

2. Properties for Fields

These properties are used for page fields and controls to manage their behavior:

Property	Description
FieldClass	Specifies the type of field (` Normal` , ` FlowField ` , ` FlowFilter `).
ToolTip	Provides a tooltip for the field/control.
Editable	Controls whether the field is editable.
Visible	Controls the visibility of the field.
ApplicationArea	Restricts where the field is used in the application.
Caption	Used to Show the Name of Field on UI
SubPageLink	Used to Link Page Like parts Page
Editable = True/False or Rec.[BooleanField]	Give Access to Field for Editing/Non Editing
ShowMandatory = True/False	User Must enter value Like Vendor Invoice Table
AutoFormatExpression = '<Currency Code>'; AutoFormatType = 2;	Sets an AL expression that specifies how to format data.
DecimalPlaces = 0 : 5;	
AboutTextML	Appear in Teachin tip in Multi Lang

Page Triggers:'

OnOpenPage()	Triggered when the page is opened. Used to initialize variables, filters, or setup logic.
OnClosePage()	Triggered when the page is Closed
OnInsertRecord()	Triggered when the NewRecord Inserted
OnModifyRecord()	Triggered when the ModifyRecord
OnDeleteRecord()	Triggered when Record Delete from DB
OnAfterGetRecord	Triggered after a record is retrieved from the source table.
ONAftergetCurrRecord	Runs after the current record is retrieved from the table.

OnQueryClosePage()	
Oninit()& OnNewRecord()	

Field trigger : OnValidate, OnDrillDown Onlookup, OnAssist, OnControl Add-In

Page Action Property

Actions → Area → Action

? processing:	For actions that perform operations or processes. General
? reporting:	For actions related to reports.
? creation:	For actions related to creating new records.
? navigation:	For actions that navigate to other pages or links.

Actions Property

Promoted	Sets the value that indicates whether the selected action is promoted, which means that it appears on the Home tab as well as the tab where is it defined.
PromotedCategory	Process/ Category/New etc
PromotedIsBig .	Specifies whether the selected action is promoted only, which means that it will appear only on the Home tab in the ribbon and not on the tab (ActionContainer control) where it is defined.
Image	
Enable = True/False	
RunObject	Sets the object you want to run immediately when the action is activated

DIGITAL TRANSFORMATION SOLUTION

Page type	Description
RoleCenter	The Role Center page is the main page
Card	A Card page is used to view and edit one record or entity from a table
CardPart	A Card Part page is used in a FactBox on another page to view or edit additional fields associated with a selected entity in the page
List	A List page displays contents from a table in a list format
ListPart	A List Part page displays contents from a table in a list format. The difference is that you use the List part page as another page in a FactBox or as a part of the Role Center page
Document	A Document page usually consists of two separate pages combined into one, with one page nested in the other. A Document page is suitable for use when you want to display data from two tables that are linked together
WorkSheet	You use a Worksheet page type for creating worksheet or journal task pages
ConfirmationDialog	You use the ConfirmationDialog page to display messages or prompt users with a confirmation before they continue with the task that they are working on

Page type	Description
StandardDialog	The StandardDialog is a simple page type that you use when users only need to input data and do not need to perform other actions from the page
NavigatePage	You use a Navigate page type to create a wizard that leads the user through a sequence of steps for completing a task
HeadlinePart	You use a HeadlinePart page type to display a set of changing headlines on a Role Center.
API	Pages of this type are used to generate web service endpoints and cannot be shown in the user interface. This page type should not be extended by creating a page extension object. Instead, create a new API by adding a page object.

ALL ABOUT XML PORT

XML Port is used to Import and Export Data in CSV, Text, Excel Format & its also used to Connect 3rd Party Application with BC

XML Port Triggers

OnInitXmlPort	Runs when the XMLport is loaded and before any table views and filters are set.
OnPreXmlPort	Runs after the table views and filters are set and before the XMLport is run.
OnPostXmlPort	Runs after the XMLPort is run.

Element Type	Definition	Purpose
Table Element	Represents a database table.	Handles records during import/export.
Text Element	Represents a block of standalone text.	Adds custom text or metadata to XML/CSV files.
Field Element	Represents a specific field of a database table.	Maps table fields to XML nodes or CSV columns.
Text Attribute	Represents an attribute of a Text Element.	Adds descriptive metadata to Text Elements.
Field Attribute	Represents an attribute of a Field Element.	Adds additional data to table field nodes.

2. Table Element Triggers

Trigger Name	Purpose	Execution Timing
OnAfterInitRecord	Performs actions after the record is initialized.	After the record is initialized but before processing.
OnBeforeInsertRecord	Executes custom logic before inserting a record into the table.	Just before inserting the record.
OnAfterInsertRecord	Executes actions after a record is successfully inserted.	Immediately after the record is inserted.
OnBeforeModifyRecord	Executes logic before modifying a record in the table.	Just before the record is modified.
OnAfterModifyRecord	Executes actions after a record is successfully modified.	Immediately after the record is modified.
OnPreXmlItem	Executes logic before processing an XML node related to the table.	Before the table element starts processing its data.
OnAfterGetRecord	Executes actions after a record is fetched from the database during export operations.	After retrieving a record for processing.

3. Field Element Triggers

Trigger Name	Purpose	Execution Timing
OnBeforePassField	Modifies the field value or performs validation before it is passed to the XML/CSV.	Before the field value is processed or exported.
OnAfterPassField	Executes actions after the field value is passed to the XML/CSV.	After the field value is exported or imported.

```
trigger OnAfterInitRecord()
begin
    if IsFirstline t
        IsFirstline
        currXMLport.Skip();
    end;
end;
}
```

`local procedure Skip()`
Skips the current iteration of the current report or XmlPort.

```

xmlport 50603 ImportItemsXmlPort
{
    Format = VariableText;
    Direction = Import;
    TextEncoding = UTF8;
    UseRequestPage = false;
    TableSeparator = ' '; //New line
    schema
    {
        0 references
        textelement(Root)
        {
            9 references
            tableelement(Item; Item)
            {
                XmlName = 'Item';
            }
        }
    }
}

```

Report ALL ABOUT

- You can use reports to print or display information from a database. Use reports to structure and summarize information to print documents, such as invoices
- Reports can also be used to process data without printing or displaying content
- A report is composed of the following items
 - A report object
 - A report dataset
 - A report layout
 - A request page
 - Properties, triggers and code
- **Report object** - Report object is created in AL Language development environment to define the data model, or dataset of a report. You can structure and summarize information in a report and print documents, such as sales quotes and invoices
- **Report dataset** - In order to define the underlying data model, you use the report dataset. A report dataset determines the data that is extracted or calculated from the Dynamics 365 Business Central database tables that can be used in a report. You build the report dataset by adding data items and columns
- **Report layouts** - You build the layout of a report by arranging data items and columns and specifying the general format, such as text font and size. There are two types of report layouts: layouts using report definition language (**RDL**) and **Word layouts**
 - **RDL layout** -To create an RDL layout report, you use Visual Studio Report Designer or Microsoft SQL Server Reporting Services Report Builder
 - **Word Report layout** - You create Word layouts by using a Word Document. Word layouts are based on a Word document that includes a custom XML part that represents the report dataset
- **Snippet support**


```

report 50501 "Item RDLC Report "
{
    ApplicationArea = All;
    Caption = 'Item RDLC Report ';
    UsageCategory = ReportsAndAnalysis;
    - reference
    RDCLLayout = 'Item Report.RDL';
    DefaultLayout = RDLC;
    dataset
    {
        0 references
        dataitem(Item; Item)
        {
            0 references
            column(No; "No.")
            {
            }
        }
    }
}

```

There are various types of reports available in Business Central similar as previous versions of NAV

- List Report
- Document Report
- Process – Only Report
- Matrix Report

Request Page



- A request page is a page that is run before the report starts to execute. Request pages enable end-users to specify options and filters for a report
- Request pages are defined as part of designing a Report object
- By default, without having set anything else, a request page will always display the following buttons
 - Send to
 - Print
 - Preview
 - Cancel
- Additionally, you can add more options on the request page to allow the end-user to filter the data displayed
- On reports, in addition to defining the filter options by setting the RequestFilterFeilds property, you can add a requestpage section

```

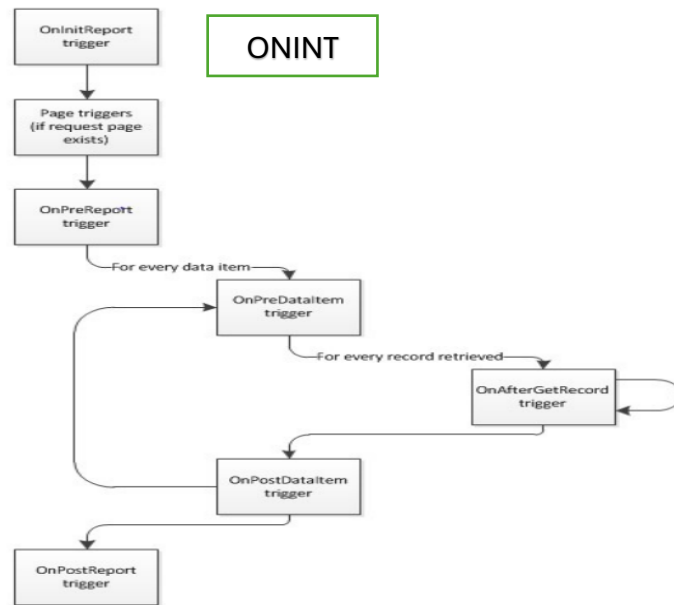
requestpage
{
    layout
    {
        0 references
        area(Content)
        {
            0 references
            group(GroupName)
            {
                0 references
                field(Name; SourceExpression)
                {
                    ApplicationArea = All;
                }
            }
        }
    }
}

```


Report/Data Item Triggers

When you run a report, the report triggers are called in a specific order.

- **Report Triggers**
 - On InitReport
 - On PreReport
 - On PostReport
- **DataItem Triggers**
 - On PreDataItem
 - On AfterGetRecord
 - On PostDataItem



12/15/2020

Report/Dataset Properties

- **Report Properties**
 - Caption
 - Default Layout
 - ProcessingOnly
 - UsageCategory
 - UseRequestPage
- **DataSet Properties**
 - AutoCalcField
 - DataItemTable
 - DataItemTableView
 - DecimalPlaces
 - PrintOnlyIfDetail
 - RequestFilterFields