

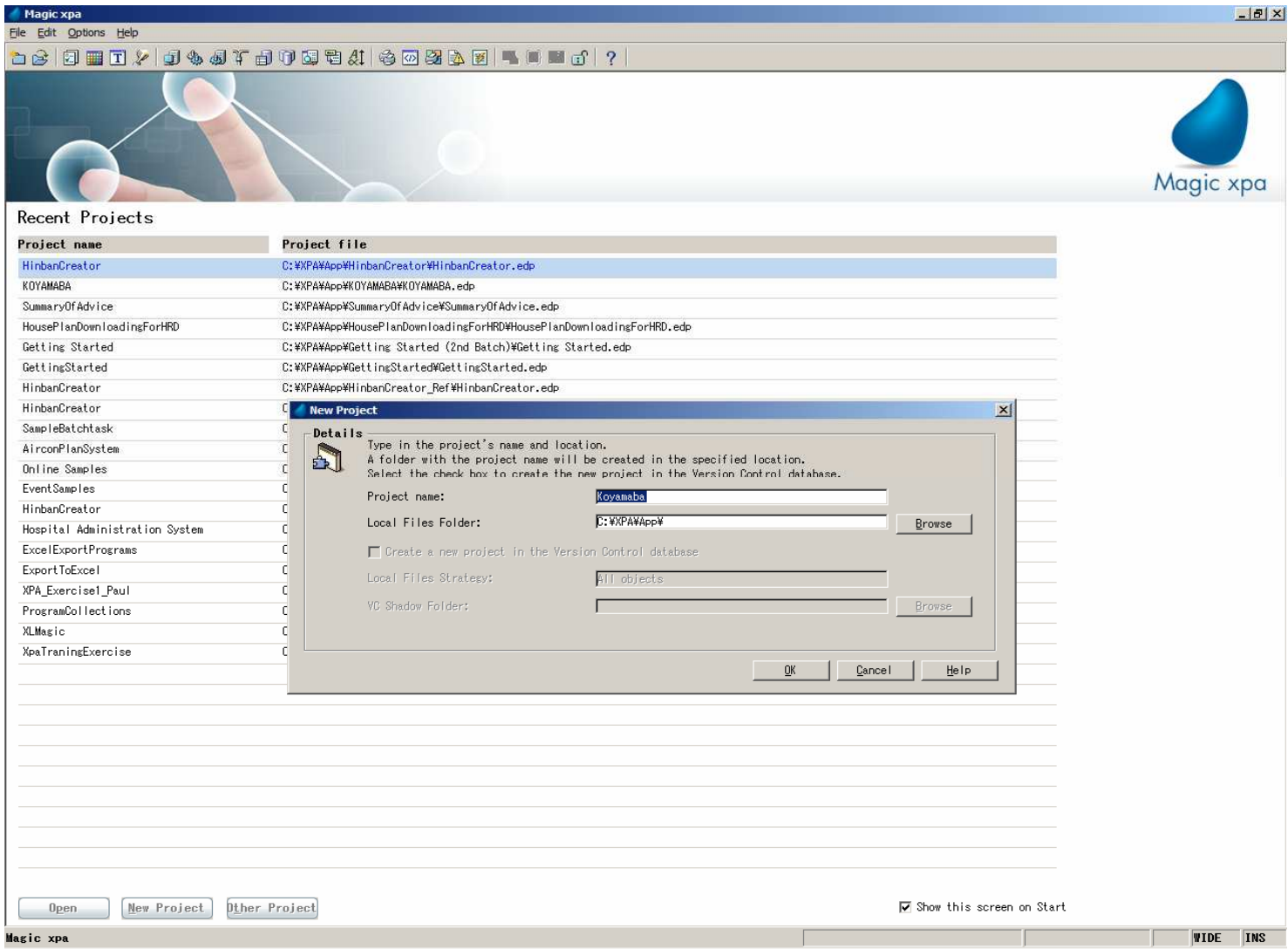
Magic XPA Development Standards

Rev. 1.1

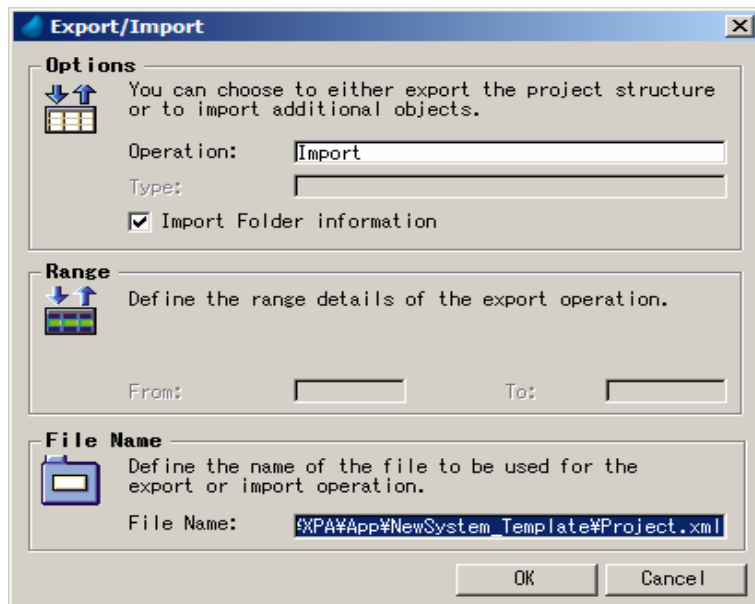
| REVISION | MODIFIED | REVIEWED | APPROVED |
|-----------------|----------------------------|------------------------|----------|
| Rev 0.1 (Draft) | AMIKURA 2016/11/15 | ISHIKAWA 2016/11/15 | |
| Rev 1.1 (Draft) | JAE ANN/LAARS 2016/10/8 | | |
| Rev 1.2 (Draft) | JAE ANN 2017/8/23 | | |

CREATING NEW PROJECT

1. PROJECT LOCATION: C:\XPA\App

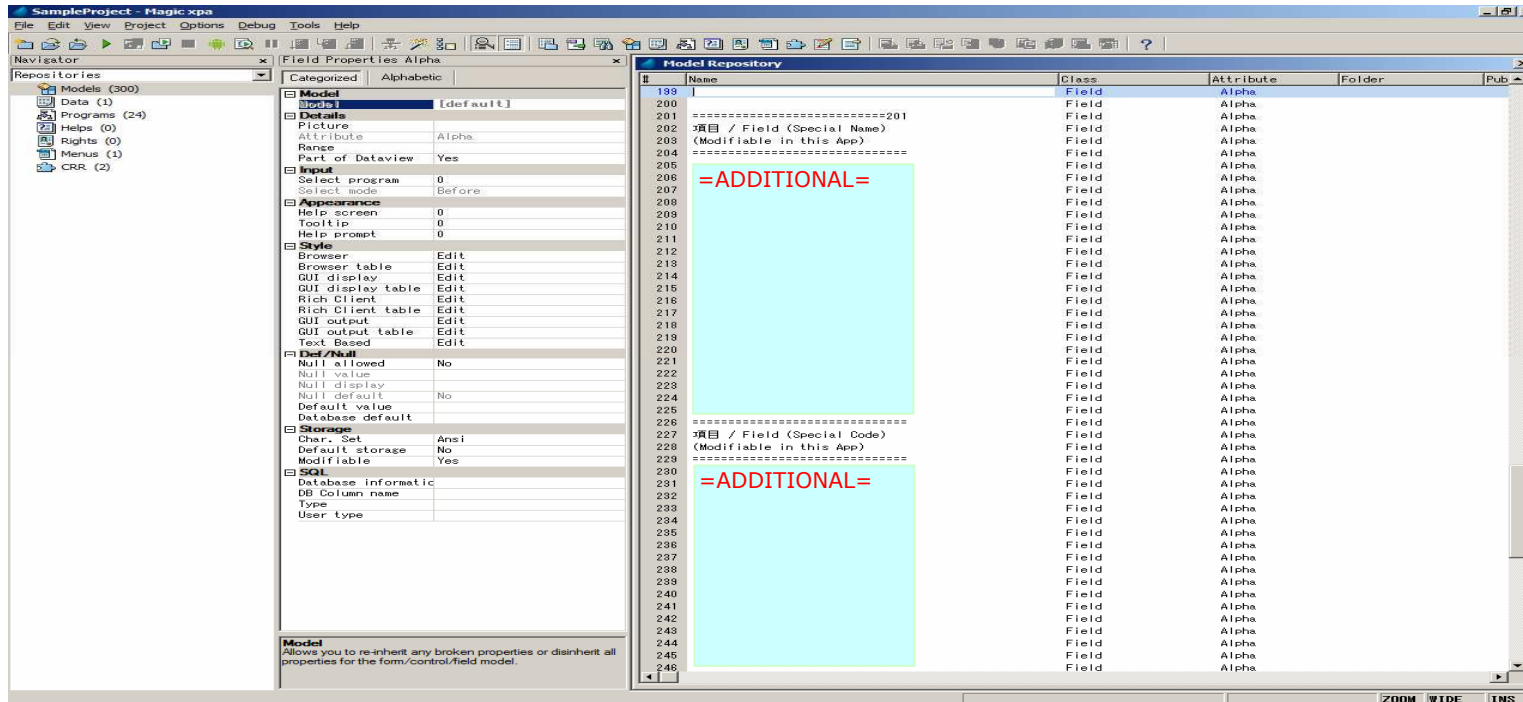


2. Import: \\skk_db1\MagicXPA\XPA\App\NewSystem_Template\Project.xml



3. Model Repository

Common Models are already imported. For Additional Models, additional space is already provided



4. Data Repository

Section 1 : ErrorMessage

| Data Repository | | | |
|-----------------|--------------|------------------|------------------|
| # | Name | Data source name | Database |
| 1 | ErrorMessage | ErrorMessage | SummaryOf Advice |

Section 2 :Master Maintenance table

| | | | |
|---|------------|------------|------------------|
| 2 | Users | Users | SummaryOf Advice |
| 3 | Company | Company | SummaryOf Advice |
| 4 | Department | Department | SummaryOf Advice |
| 5 | Section | Section | SummaryOf Advice |

Section 3 :Transaction Table

| | | | |
|---|------------|------------|------------------|
| 2 | Users | Users | SummaryOf Advice |
| 3 | Company | Company | SummaryOf Advice |
| 4 | Department | Department | SummaryOf Advice |
| 5 | Section | Section | SummaryOf Advice |

Section 4 :Temporary Table

| | | | |
|----|-------------|-------------|-----------|
| 10 | Combo_Users | Combo_Users | Temporary |
| 11 | FileAttach | FileAttach | Temporary |
| 12 | Attachment | Attachment | Temporary |

4.1 Table Name

Must be specified

4.2 Column Name

Must be specified with *MODEL*

4.3 Indexes and Segment

Must be specified

5. Program Repository

5.1 Program Arrangement

- * Programs should be arranged in groups by feature.
- * Feature groups should have a title, which is composed of three lines. (See below image, bordered with equal signs "=").
- * For Additional Groups, you can add it before the report groups.

The screenshot shows the KOYAMABA - Magic xpa application. The left sidebar contains a 'Repositories' tree with categories: Models (317), Data (12), Programs (35), Helps (0), Rights (0), Menus (1), and CRR (7). The main window displays the 'Program Repository' table.

| Name | Attribute | Data Source | Value | | | |
|---------------------------------|-----------|-------------|----------|---------|-------------|----------|
| Program Repository | | | | | | |
| Name | Folder | Public Name | External | Offline | Last Update | Time |
| 1 Main Program | | | | | 2016/10/01 | 10:32:07 |
| 2 | | | | | | |
| 3 sub_Log-In | | | | | 2016/11/09 | 07:02:06 |
| 4 sub_MainMenu | | | | | 2016/10/05 | 10:22:33 |
| 5 | | | | | | |
| 6 ===== | | | | | | |
| 7 Messages | | | | | | |
| 8 ===== | | | | | | |
| 9 Confirm(OK) | | | | | 2016/08/27 | 17:09:22 |
| 10 Confirm(Yes/No) | | | | | 2016/09/26 | 13:07:10 |
| 11 Confirm(OK) FreeMessage | | | | | 2016/04/06 | 11:24:15 |
| 12 Directory Create/Delete | | | | | 2016/02/02 | 09:54:00 |
| 13 Sub_Divide_Folder+FileName | | | | | 2016/02/02 | 10:36:59 |
| 14 | | | | | | |
| 15 ===== | | | | | | |
| 16 Master Maintenance | | | | | | |
| 17 ===== | | | | | | |
| 18 m_MasterMaintenance | | | | | 2016/11/09 | 07:06:31 |
| 19 sub_UserAccount | | | | | | |
| 20 sub_Location | | | | | 2016/11/09 | 07:12:35 |
| 21 sub_Grid | | | | | 2016/11/09 | 07:12:37 |
| 22 | | | | | | |
| 23 ===== | | | | | | |
| 24 Transaction Program | | | | | | |
| 25 ===== | | | | | | |
| 26 m_KoyamabaDataInput | | | | | 2016/11/09 | 07:09:34 |
| 27 sub_p_Maba/Hanba List | | | | | 2016/11/09 | 07:05:07 |
| 28 sub_p_Maba/Hanba Consumption | | | | | 2016/11/09 | 07:05:09 |
| 29 sub_w_UpdateT_TempTable | | | | | | |
| 30 sub_d_ExportingData | | | | | | |
| 31 | | | | | | |
| 32 ===== | | | | | | |
| 33 Selection Program | | | | | | |
| 34 ===== | | | | | | |
| 35 s_Department | | | | | | |

1. Main Program
2. Log-In
3. Main Menu
4. Messages program
5. Master Maintenance
6. Selection Program
7. Transaction

5.1 Program Name

* Programs must have prefix or suffix, according to their roles.

| Program Type | Prefix | Suffix | Description |
|---------------------------------|--------|--------|---|
| Major Program | m_ | | This program is called from Menu. |
| External Major Program | e_ | | This program is called from External Programs. |
| Selection Table Program | s_ | | This program displays master data as a list and enables the user to select a value from the list. |
| Sub Program | sub_ | | This program is called from Major Programs or other Sub Programs. |
| Sub Program for Working | sub_w_ | | This program uses work tables (or temporary tables). |
| Sub Program for Printing | sub_p_ | | This program prints reports with a printer. |
| Sub Program for Data Exprtation | sub_d_ | | This program exports data (csv, xlsx, etc.). |
| Program with Remote-Calling | | <rc> | This program calls External Major Program in another project. |

6. Program

6.1. Data View Editor

Variable Names should be arranged(see below)

1. Parameter(PR)
2. Input Variables(IN)
3. Task Variables(TV)
4. Constants
5. Column

* Return Variables(RT)-above the Link Query using this variables



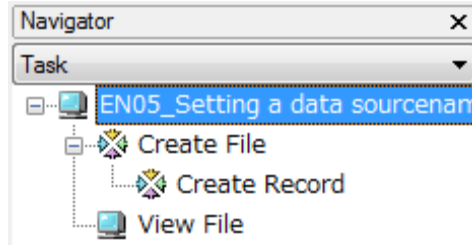
| 1 | Main Source | 4 | Orders | Index: | 1 | |
|----|---|----------|-------------------------------------|---------------|------------|-------------------------|
| 2 | Parameter | 1 | PR:OrderNumber | Numeric | N10 | |
| 3 | Parameter | 2 | PR:IssuedDate(*) | Date | ####/##/## | |
| 4 | | | | | | |
| 5 | | | Input Variables | | | |
| 6 | Virtual | 1 | IN:PrintButton | Alpha | 10 | |
| 7 | | | | | | |
| 8 | | | Task Variables | | | |
| 9 | Virtual | 2 | TV:ProcessedCount | Numeric | 6 | |
| 10 | | | | | | |
| 11 | | | Constants (of PaymentMethod) | | | |
| 12 | Virtual | 3 | [1]Cash | Numeric | 2 | Init: 1 1 |
| 13 | | | | | | |
| 14 | | | Main Source Columns | | | |
| 15 | Column | 1 | OrderNumber | Numeric | N10 | |
| 16 | Column | 2 | OrderDate | Date | ####/##/## | |
| 17 | | | | | | |
| 18 | Virtual | 4 | RT:OrderLines | Logical | 1 | |
| 19 | <input checked="" type="checkbox"/> Link Query | 5 | OrderLines | Index: | 1 | Directio Default |
| 20 | Column | 1 | OrderNumber | Numeric | N10 | |

* Variables must have prefix, according to their roles. (See above image.)

| Variable Type | Prefix | Suffix | Description |
|--|------------|--------|---|
| Parameter Variable (without Return Value) | PR: | | This var should be defined on top of Data View; above Main Source Columns. |
| Parameter Variable with Return Value | PR: | (*) | This var receives a return value from the called Program or task. This should be defined below Parameter Variables without Return Value(PR). |
| Parameter Option | PO: | | This var is used if the return value is like giving an options. |
| Success Indication | RT: | | This var is set in the "Success Indication" property of Link operations. This should be named with the Table name, as "RT:Employees". If two of more Success Indication Variables are needed for the same table, add a descriptive suffix, as "RT:Employees_Sales" This should be defined just above the Link operation without Comment lines. Attribute should be "Logical 1". |
| Input Variable | IN: | | This var is set in the "Data" property of controls (push button, controls need inputting like edit controls. etc) in Form Designer, so that the user can park on the control by keyboard. For push buttons, Model should be "Const (A:10)" (Attribute "Alpha 10") and the variable Name should end with " Button "; for example, " IN:OkButton ". |
| Task Variable | TV: | | This var is defined in programs except Main Program. Basically, this should be defined above Main Source Columns. |
| Global Variable | GV: | | This var is defined in Main Program, and usable in the other programs globally. |

6.2. Task Tree

(This program has 3 hierarchies.)



*Don't create too many tasks in a program. In a program, you may create tasks of 4 hierarchies or less.

*It is desirable that one program should have only one feature.

*Tasks should have names easy to understand for other programmers. Name it with "a verb & an objective".

*For example, "Create File", "Create Record", "View File", etc. (See image to the left.)

6.3 Logic

Logic Unit Name should be arranged(see below)

1. Task Prefix
2. Task Suffix
3. Record Prefix
4. Record Suffix
5. Control Prefix
6. Control Verification
7. Control Suffix
8. Variable Change
9. Events
10. Functions

Task 17 - sub_KoyamabaDataInput

Data View

Logic

Forms

1

// ---- Click the Radio Button(s) ---- //

<

6.4 Expression

*Expressions should be arranged in groups by content.

Section 1 : Common Values and Functions

```
1 ''  
2 'TRUE' LOG  
3 'FALSE' LOG  
4 '0000/00/00' DATE  
5 Date()  
6 Stat(0, 'C' MODE)
```

Section 2 : Numerics

```
7 1  
8 2
```

Section 3 : Variable

```
9 A  
10 B
```

Section 4 : Expressions with Single Variable

```
12 F>=1  
13 Trim(C)
```

Section 5 : Expressions with Many Variables

```
15 H OR B=G  
16 NOT(H) AND KbGet(1)<>'Exit' EVENT
```

Section 6 : Expressions starting with IF function

```
17 IF(H OR B=G, 1, 2)  
18 IF(H OR B=G, 1, 2) + 100
```

Section 7 : Strings

```
19 '%TempDir%Orders.csv'
```

7. Form Editor

*Basically, "Form units" property of Form controls must be "Dialog units"

*Forms and Controls must be attached to a model, if an appropriate model is defined in Model Repository

| Model Name | Attribute | Description |
|------------------|---------------------|---|
| frm_Standard | Form | |
| frm_Condition | Form | For condition forms. The condition forms sometimes have only a Label, two EditBoxes of code and name about a primary key, and a PushButton. |
| frm_Selection | Form | For selection tables. |
| sf_Standard | SubForm | |
| tbl_Standard | Table | |
| col_Standard | Column | Table column |
| lbl_Standard | lbl_Standard Static | |
| edt_ReadOnly | Edit | For readonly Edit Boxes in a table. |
| edt_Writable | Edit | For writable Edit Boxes in a table. |
| edt_tbl_ReadOnly | Edit | |
| edt_tbl_Writable | Edit | |
| btn_Standard | PushButton | |
| chk_Standard | CheckBox | |
| rdo_Standard | RadioButton | |
| cbo_Writable | ComboBox | |
| cbo_tbl_Writable | ComboBox | For Combo Boxes in a table. |

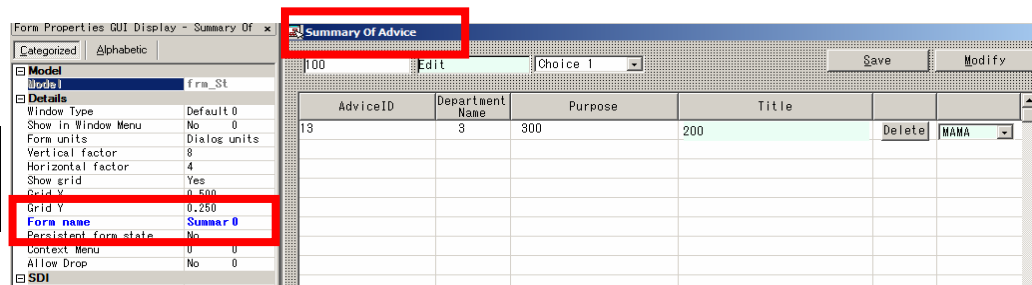
Control's properties MUST inherit from the Model properties, if the values are not needed to break inheritance

| | |
|-----------------------|-------|
| Visible | 0 |
| Border | Yes 0 |
| Scroll bar | Yes 0 |
| Inherit Property | Yes |
| Row Highlight StFrame | |

7.1 Form Standards

* *Form Name* must be specified.

| Name | Value | Remarks |
|--------|--------------|----------------------|
| Model | frm_Standard | |
| Width | 131.000 | adjustable if needed |
| Height | 38.000 | adjustable if needed |



*Main Menu

| Name | Value |
|--------|--------------|
| Model | frm_Standard |
| Width | max of 140 |
| Height | max of 40 |

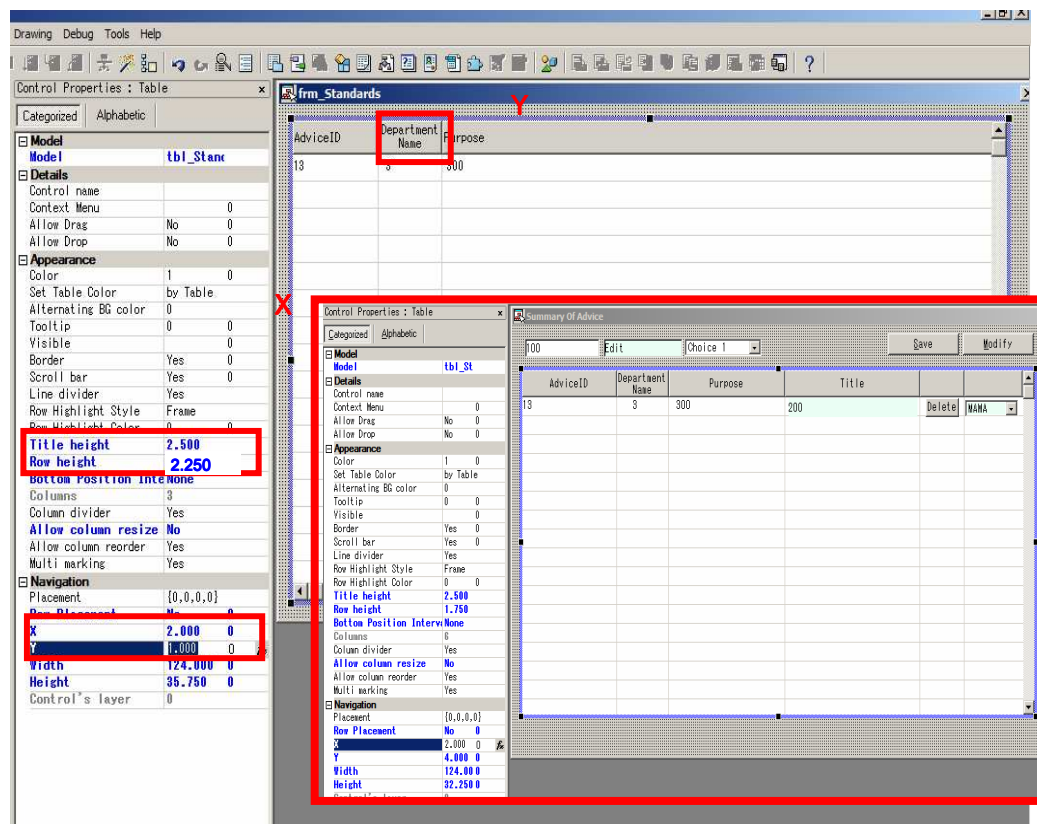
*Master Maintenance

| Name | Value |
|--------|--------------|
| Model | frm_Standard |
| Width | max of 180 |
| Height | max of 60 |

7.2 Table control (see image below)

Don't Change the font and color properties.Used the default property settings for the tbl_Standard Mode

| Name | Value | Remarks |
|-----------------------------|---------------|----------------------|
| Table Model | tbl_Standard | |
| Title Height | 2.500 | two rows/Long name |
| | 1.5 | |
| Row Height | 2.250 | |
| X | 2.000 | adjustable if needed |
| Y | 1.000 | adjustable if needed |
| Column Horizontal Alignment | Center | |
| Column Model | col_Standards | |



7.3 Button Control

*Button should have an access key. For example, "O" in "&OK", "C" in "&Cancel", etc.

| Name | Value | Remarks |
|--------|--------------|----------------------|
| Model | btn_Standard | |
| Width | 17.00 | adjustable if needed |
| Height | 2.00 | |

Button Control for table

| Name | Value | Remarks |
|--------|------------------|---------------------------------|
| Model | btn_tbl_Standard | |
| Width | | based on table column propertie |
| Height | 1.750 | based on table column propertie |

7.4 Edit control

*Tooltip should be used, if Width is less than the max size of Data.

| Name | Value | Width | Height | Height | Remarks |
|-------|------------------|------------|-------------|---------------|----------------|
| | | | (no border) | (with border) | |
| Model | edt_ReadOnly | adjustable | 1.375 | 1.375 | |
| | edt_Writable | adjustable | 1.375 | 1.375 | |
| | edt_tbl_ReadOnly | adjustable | 1.375 | 1.125 | center on cell |
| | edt_tbl_Writable | adjustable | 1.375 | 1.125 | center on cell |
| | X | | adjustabl | adjustable | |
| | Y | | 2 | 2 | |

7.5 Label (Static) control

*Label text should end with a colon sign (":"). For example, "Name:", "Code:", etc

| Name | Value |
|--------|--------------|
| Model | lbl_Standard |
| Width | 17.00 |
| Height | 1.750 |