

# Programming without coding technology

## تكنولوجيا البرمجة بدون كود



Version 1.0  
(Stable) Rev. 8

الاصدارة الاولى  
المراجعة الثامنة

(1) Mahmoud Programming Language

(2) RPWI Environment

(3) DoubleS (Super Server) Paradigm

(١) لغة البرمجة محمود

(٢) بيئة البرمجة بدون كود

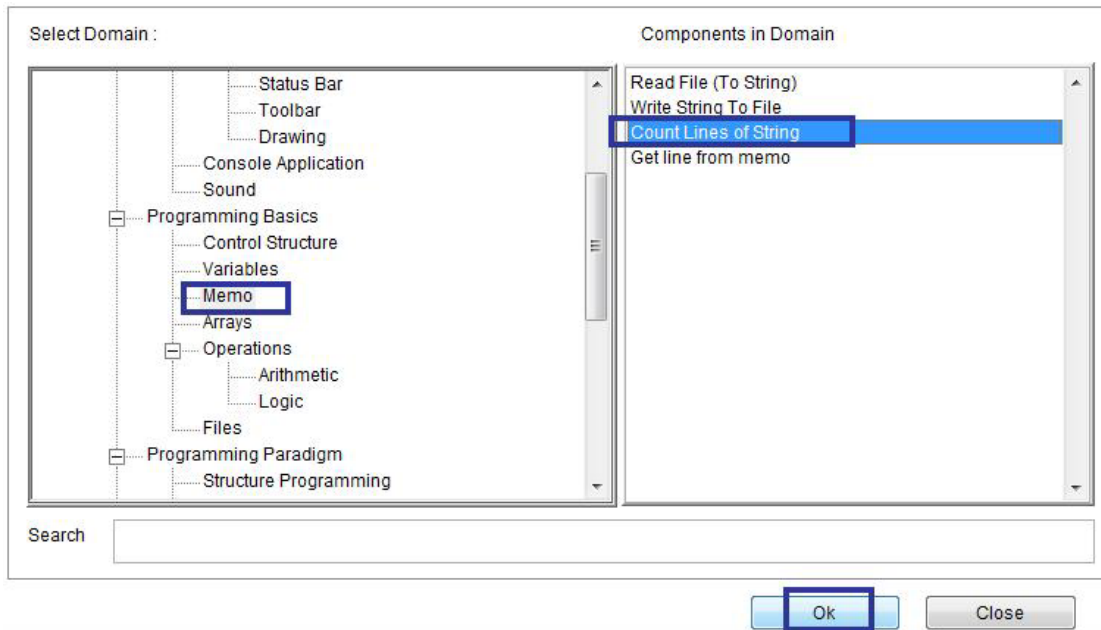
(٣) نمط البرمجة الخادم الممتاز

<http://www.sourceforge.net/projects/doublesvsoop>

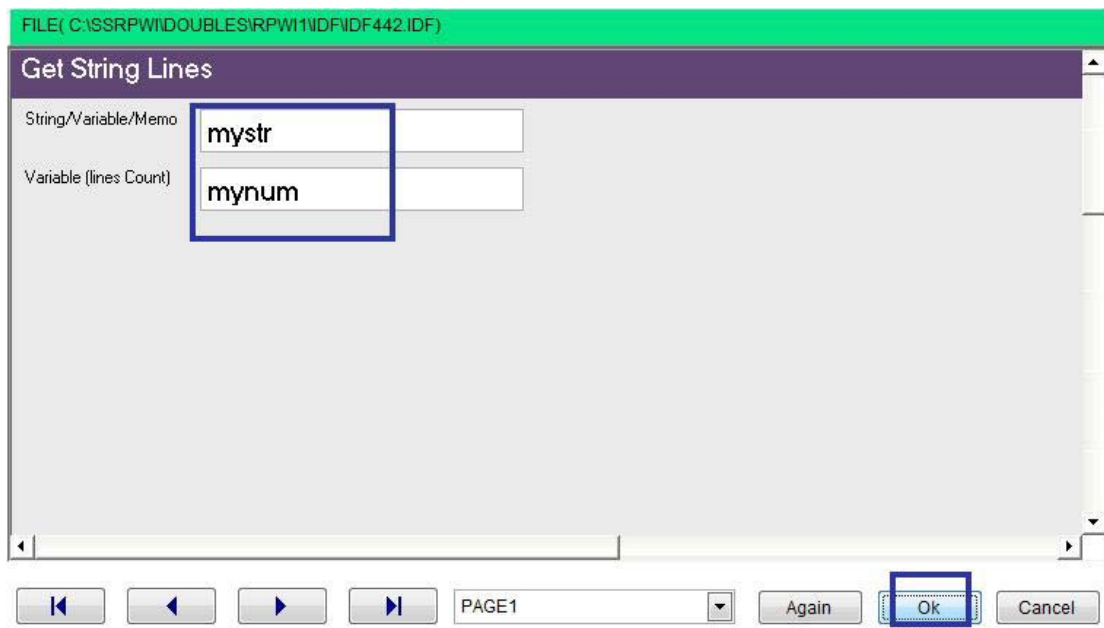
By  
Mahmoud Fayed  
msfclipper@users.sourceforge.net

## جدول المحتويات

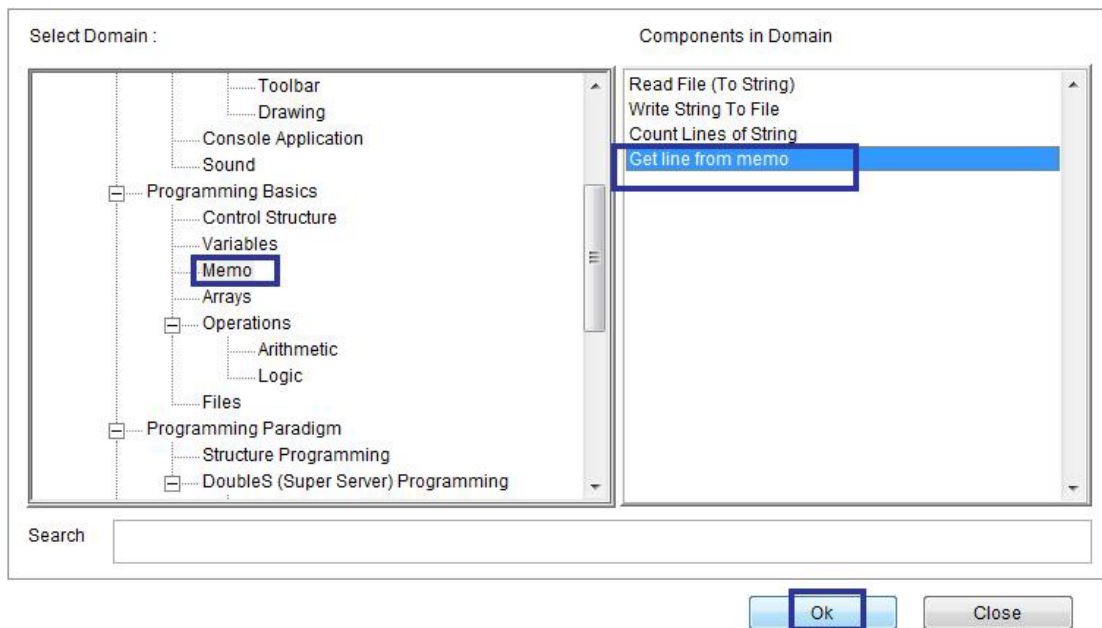
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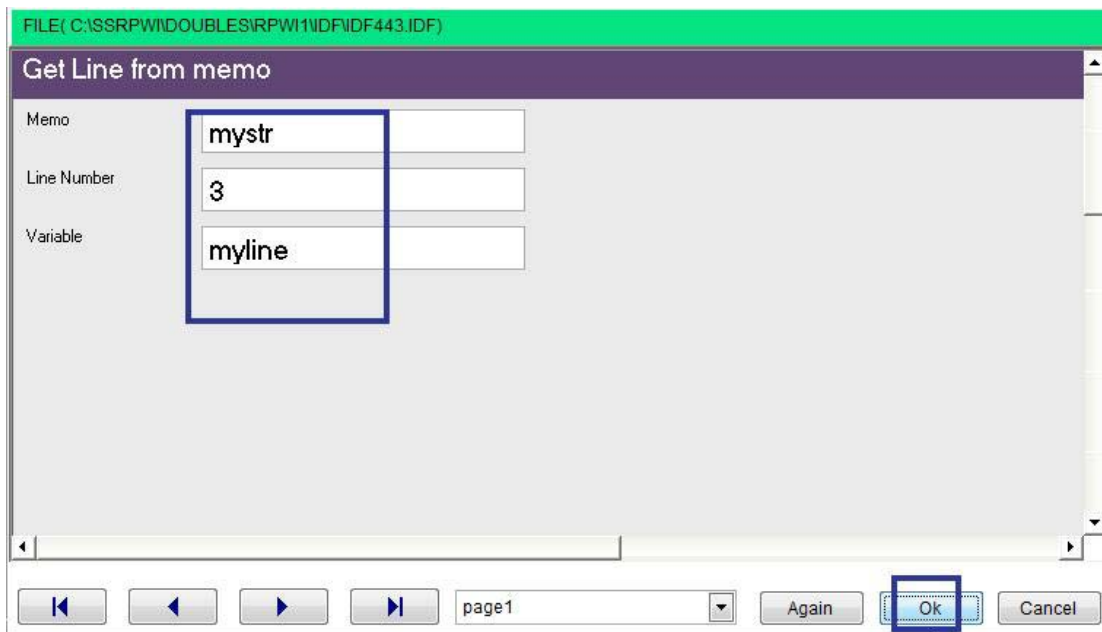
Domain (Memo) – Variable (Count Lines of String)



Interaction Page



Domain (Memo) – Component (Get line from memo)



Interaction Page

FILE( C:\SSRPW\DOUBLES\RPWI\NDF\IDF300.IDF)

Set Color

Color

Print Text

Text

Print Text (New Line)

Text

Print Text (At Row and Column)

ROW  COL

Text

Interaction Page

FILE( C:\SSRPW\DOUBLES\RPWI\NDF\IDF300.IDF)

Set Color

Color

Print Text

Text

Print Text (New Line)

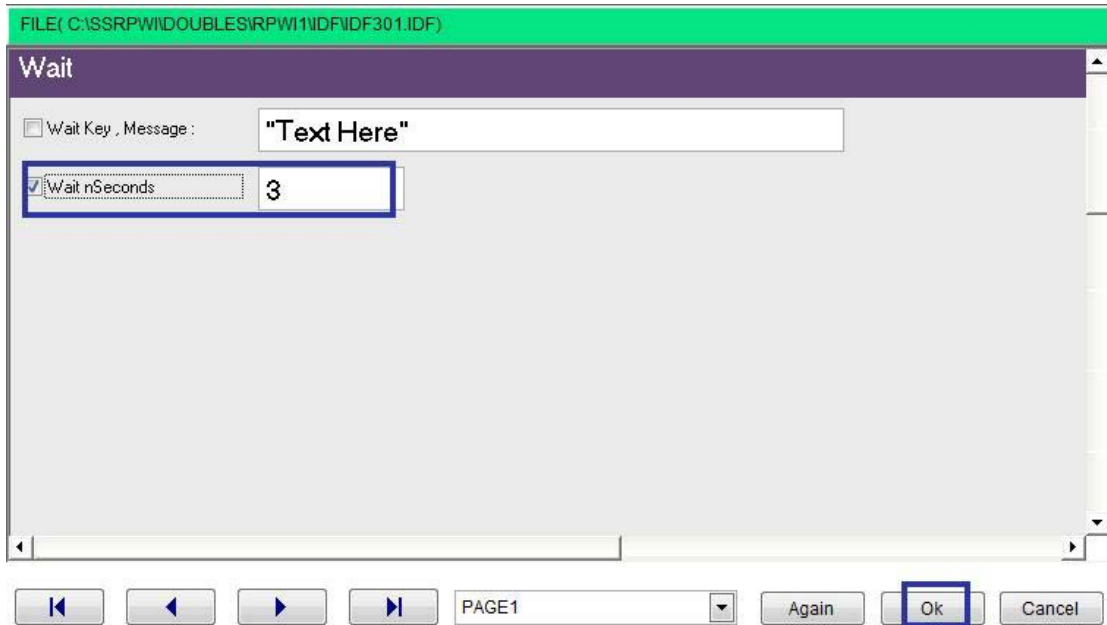
Text

Print Text (At Row and Column)

ROW  COL

Text

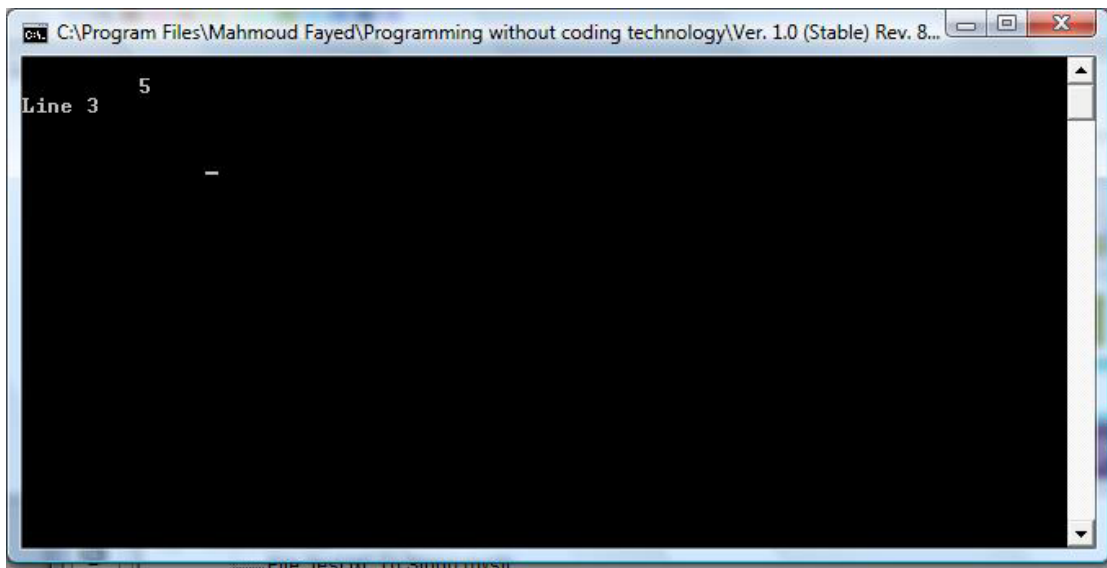
Interaction Page



Interaction Page



Final Steps Tree



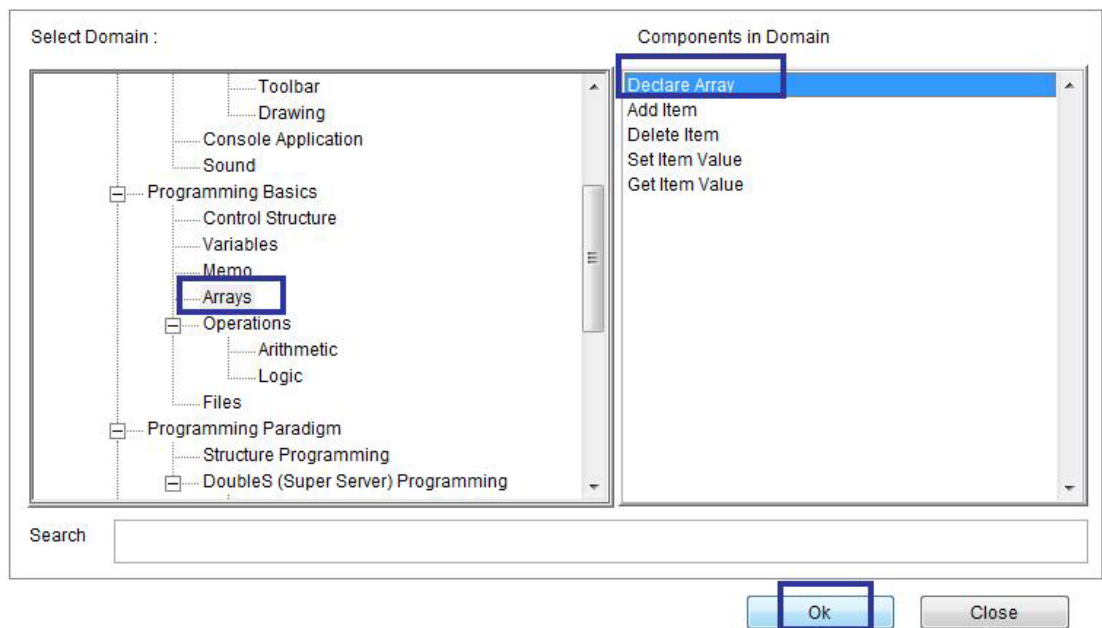
Final Application

# Arrays

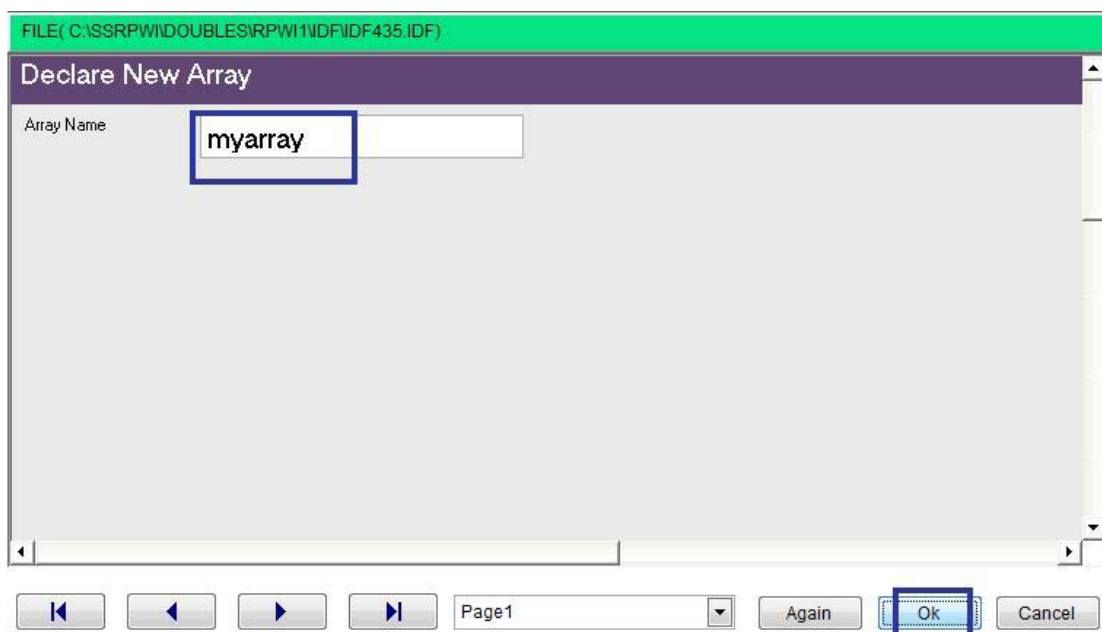
## Components

- Declare array
- Add item
- Delete item
- Set item value
- Get item value

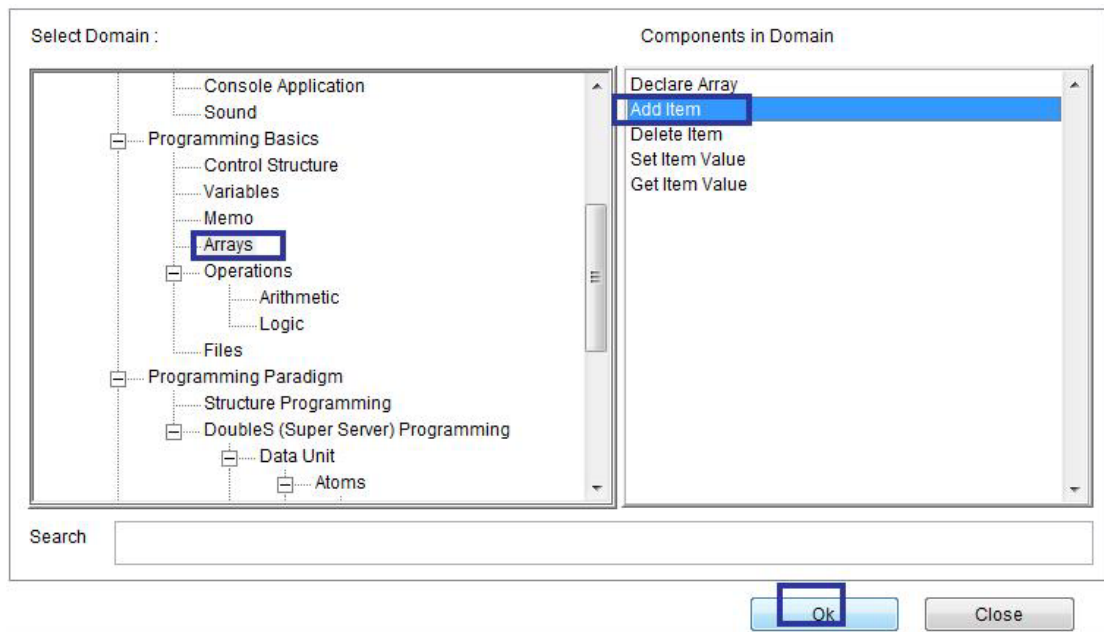
Example - Screen shots:-



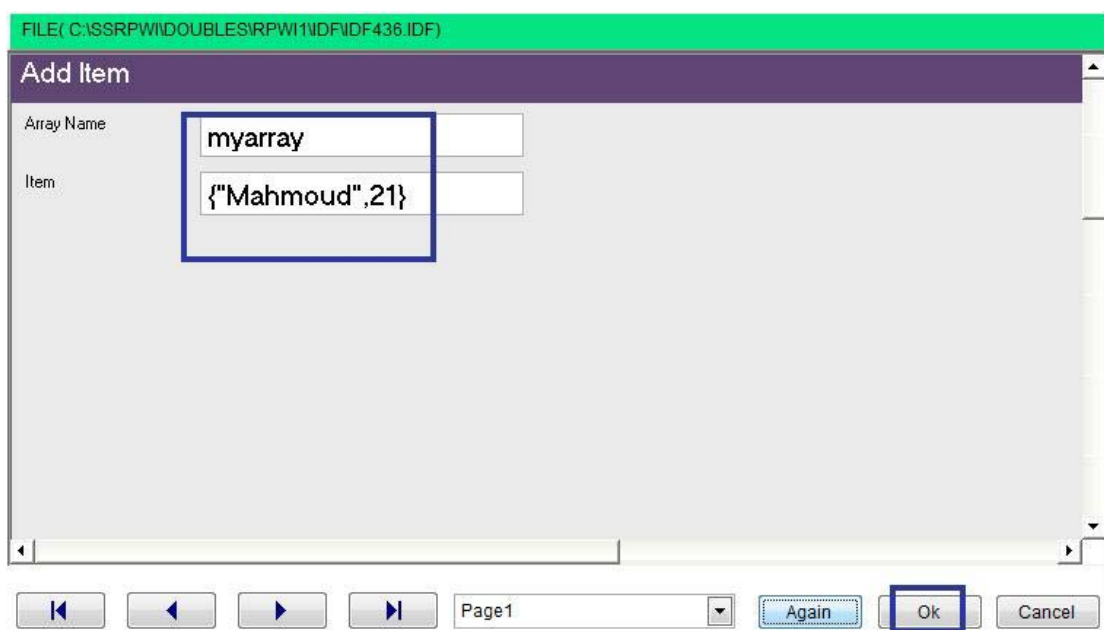
Domain (Arrays) Component (Declare array)



Interaction Page

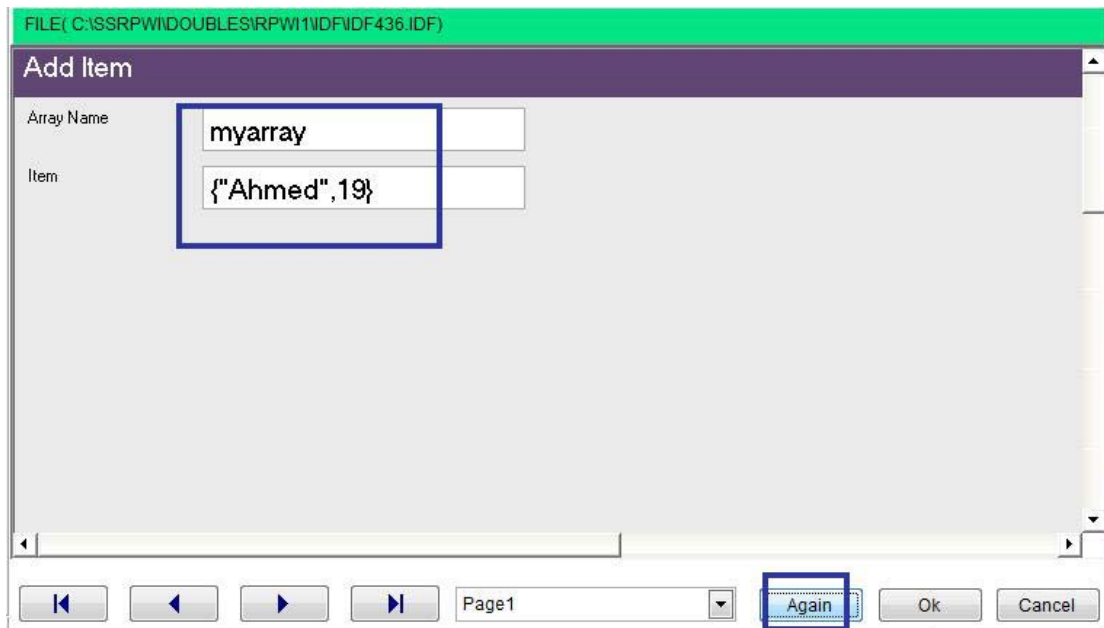


Domain (Arrays) Component (Add Item)

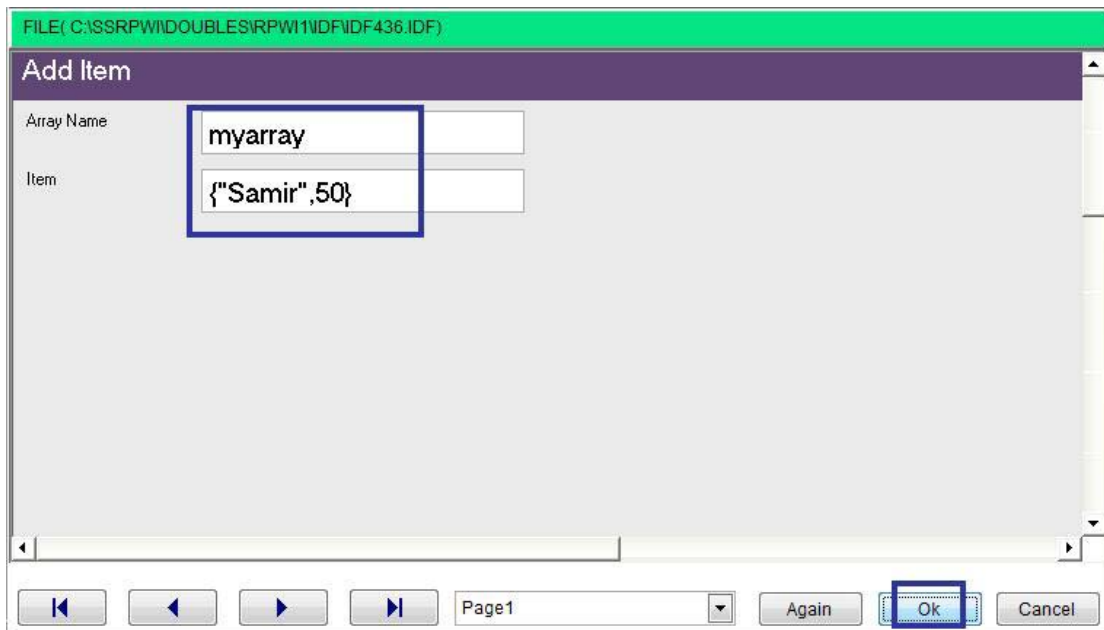


Interaction Page

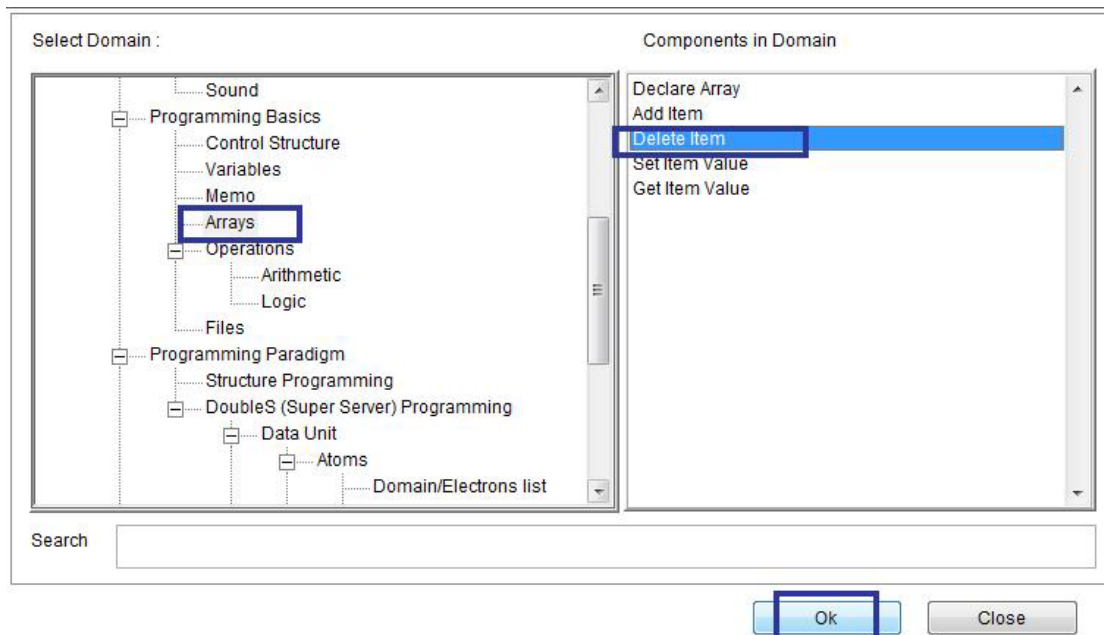




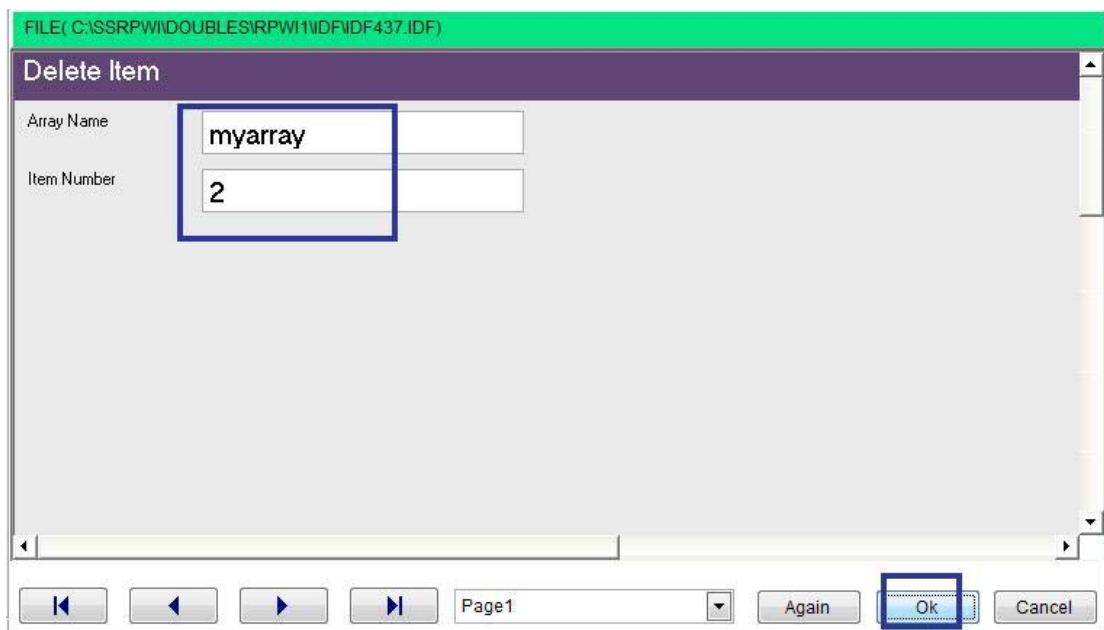
Interaction Page



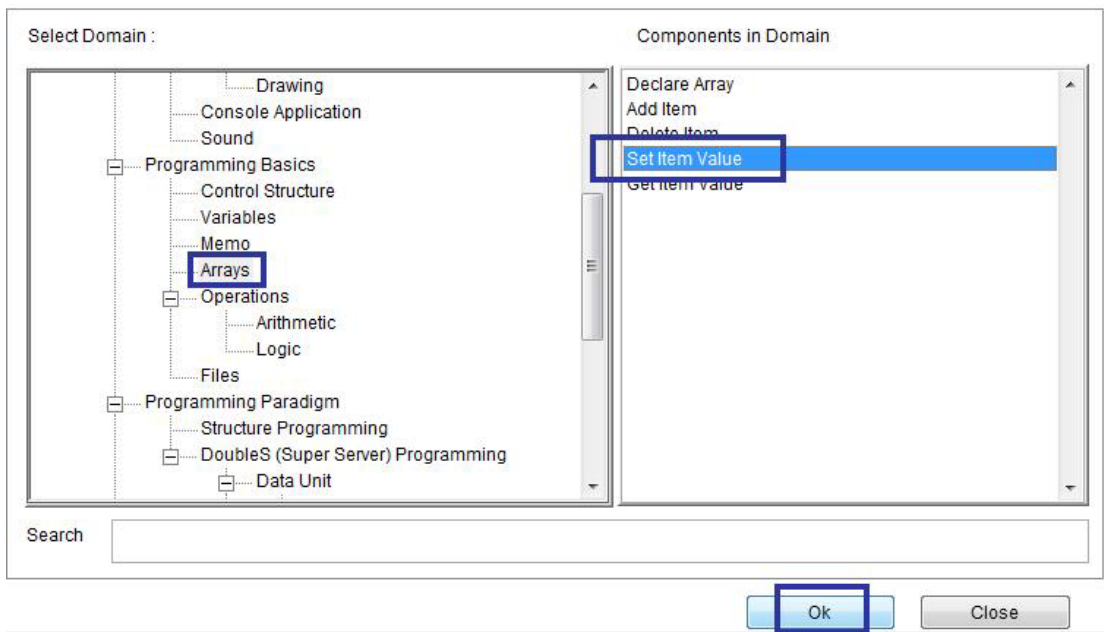
Interaction Page



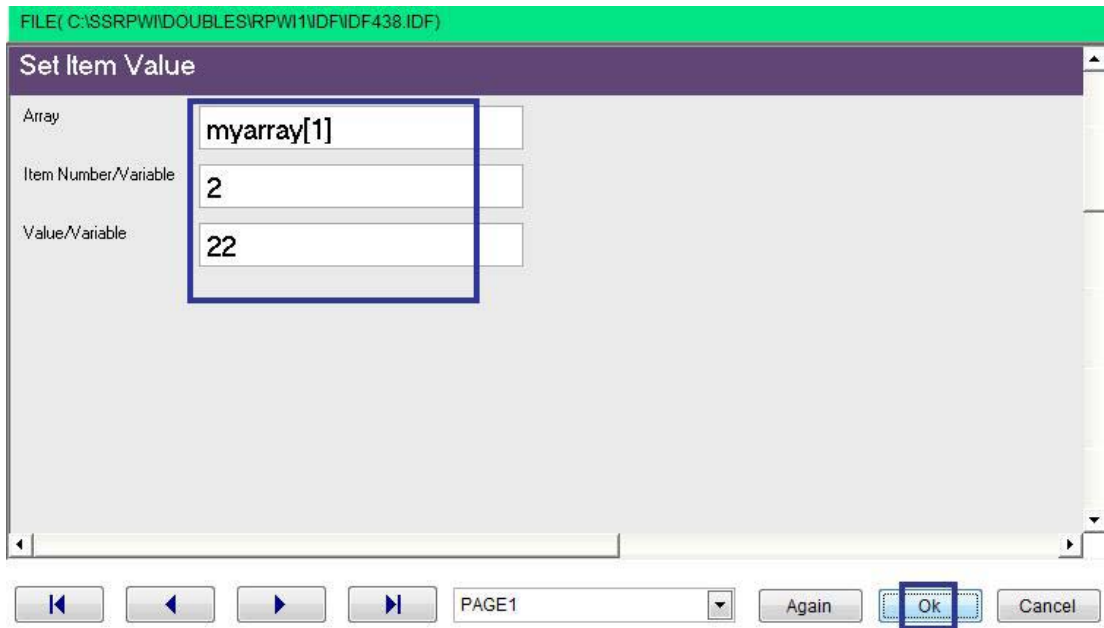
Domain (Arrays) Component (Delete Item)



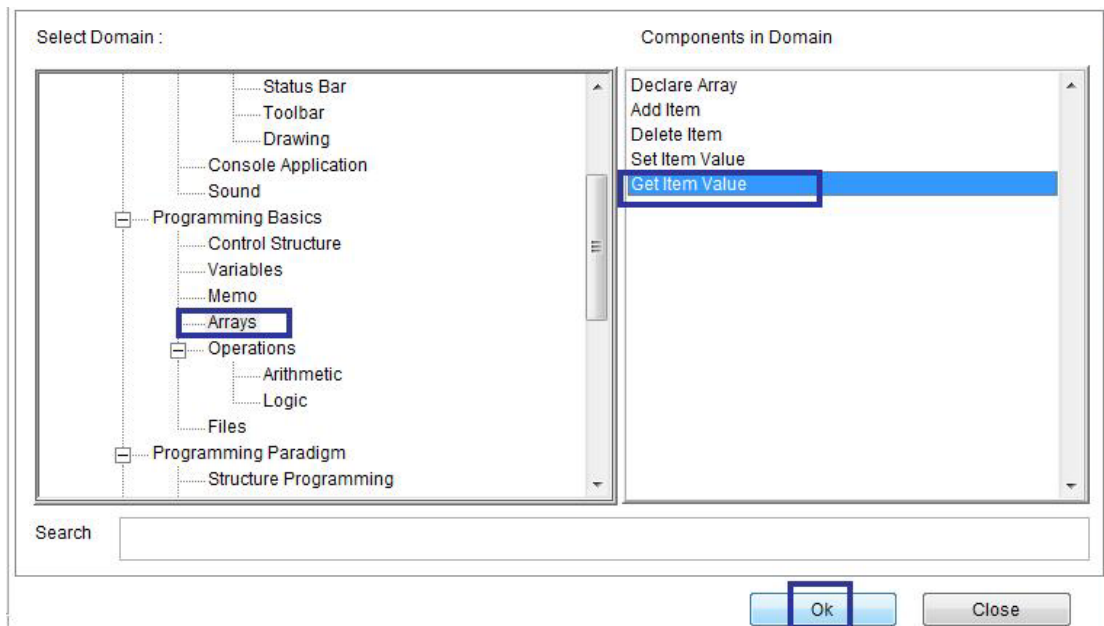
Interaction Page



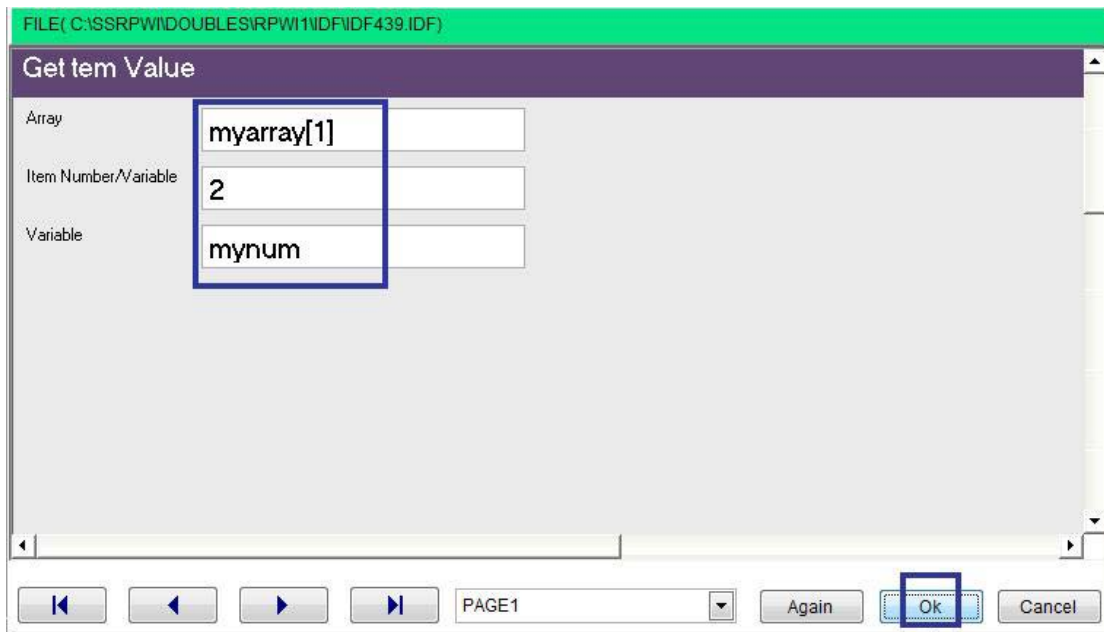
Domain (Arrays) Component (Set Item Value)



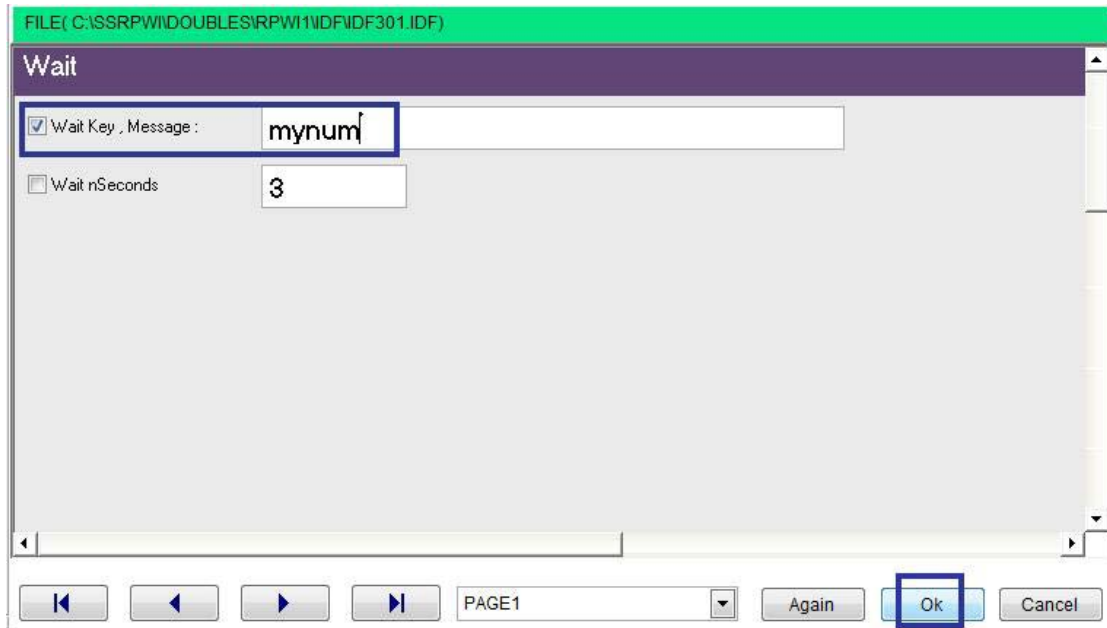
Interaction Page



Domain (Arrays) Component (Get Item Value)



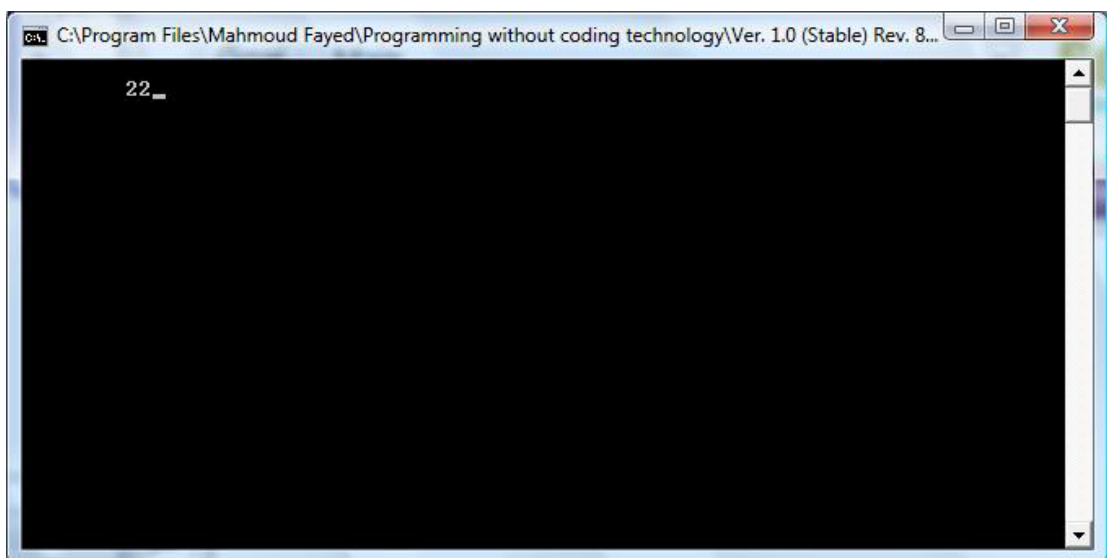
Interaction Page



Interaction Page



Steps Tree



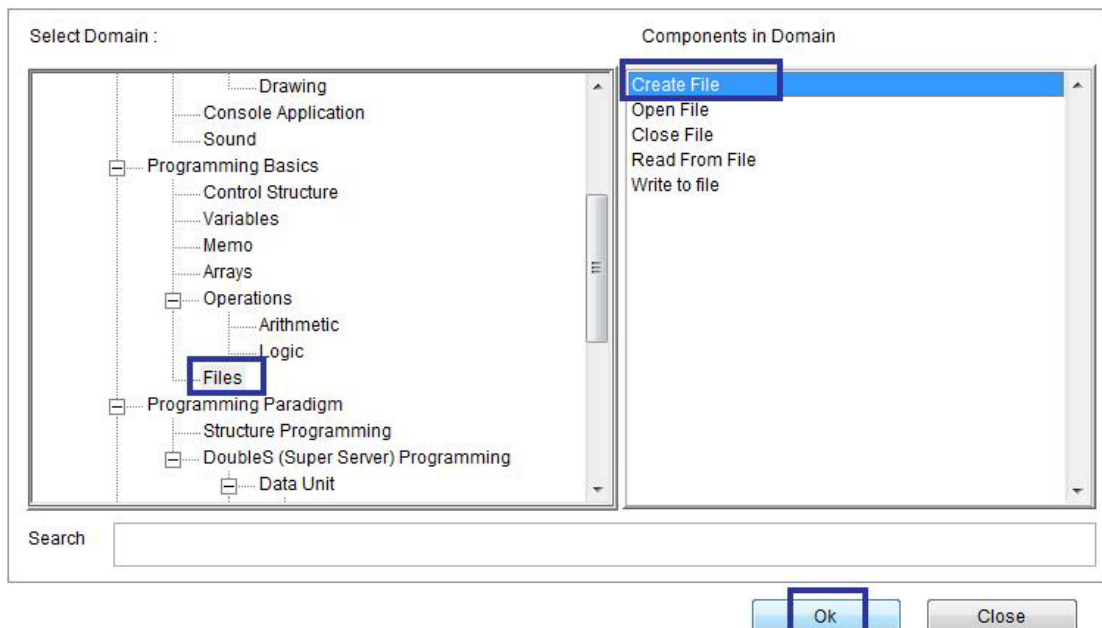
The Final Application

# Files

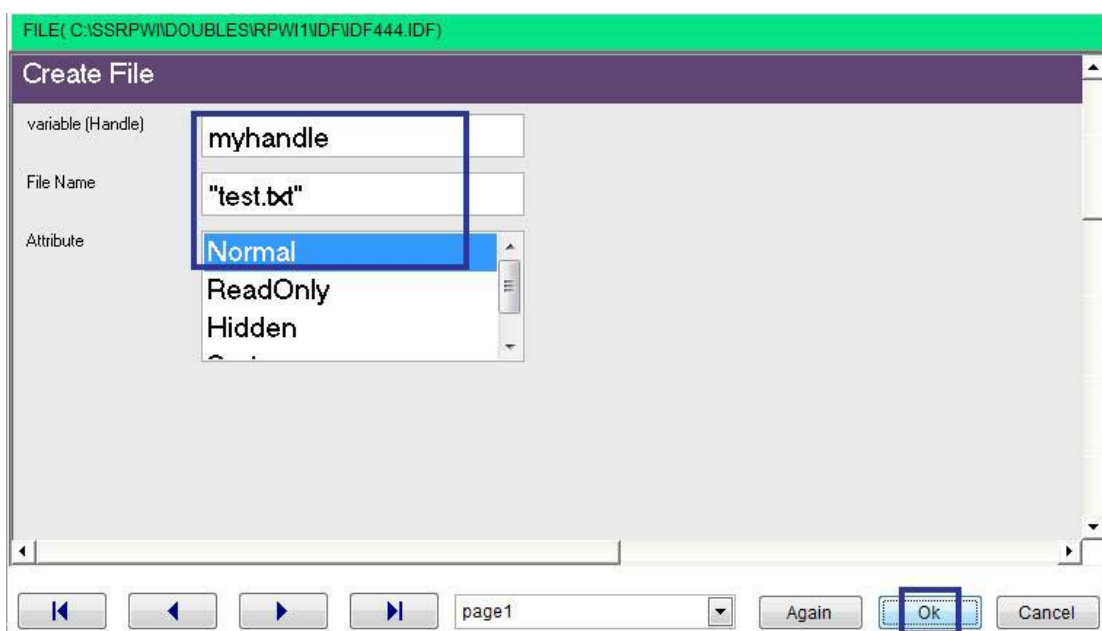
## Components

- Create file
- Open file
- Close file
- Read from file
- Write to file

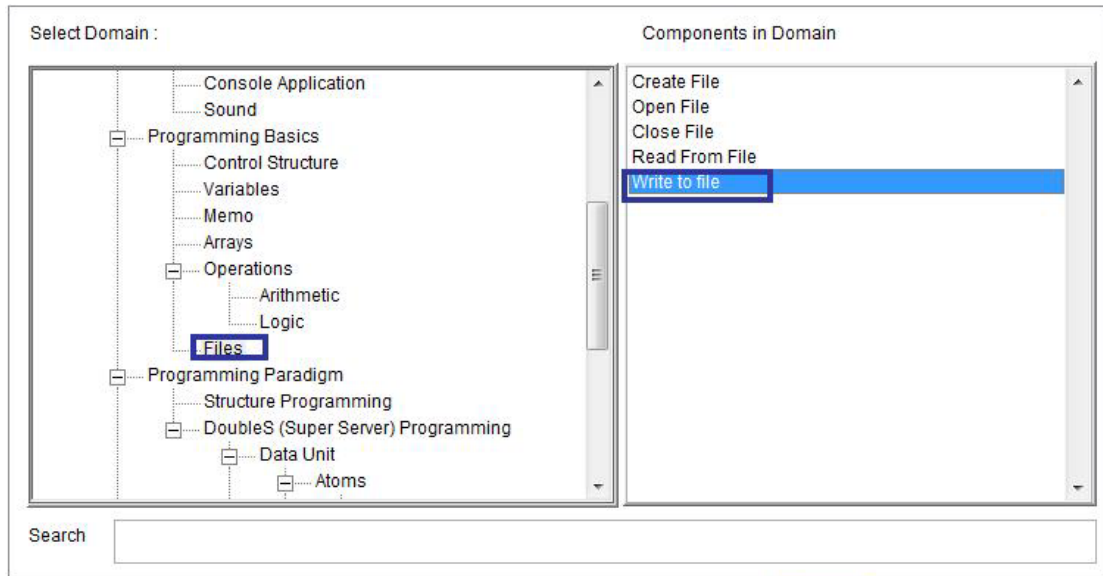
## Example - Screen shots:-



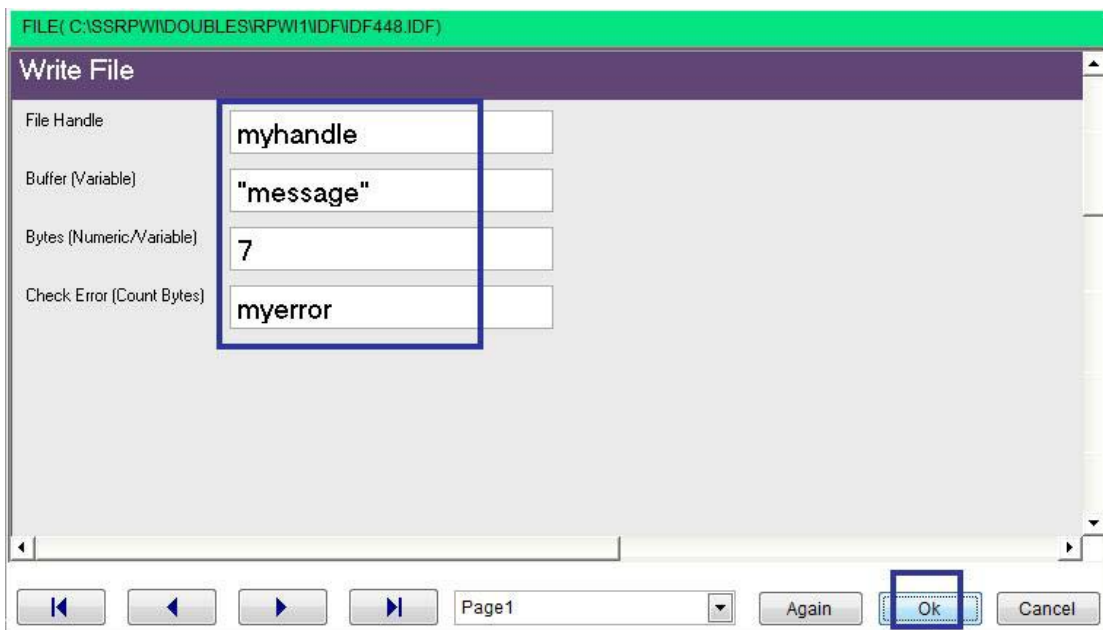
Domain (Files) Component (Create File)



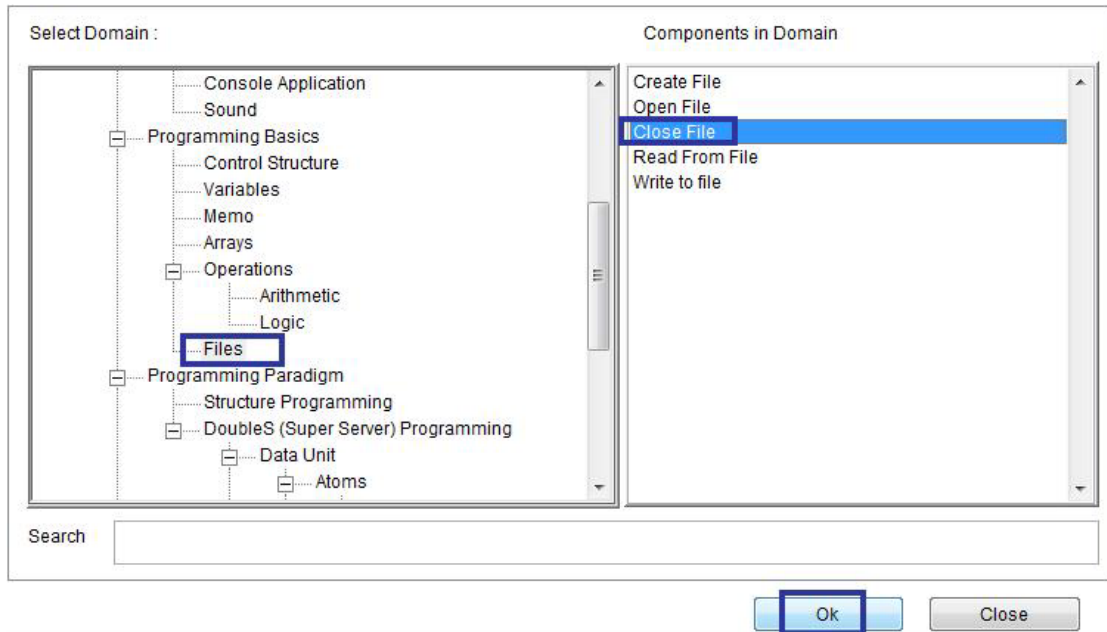
Interaction Page



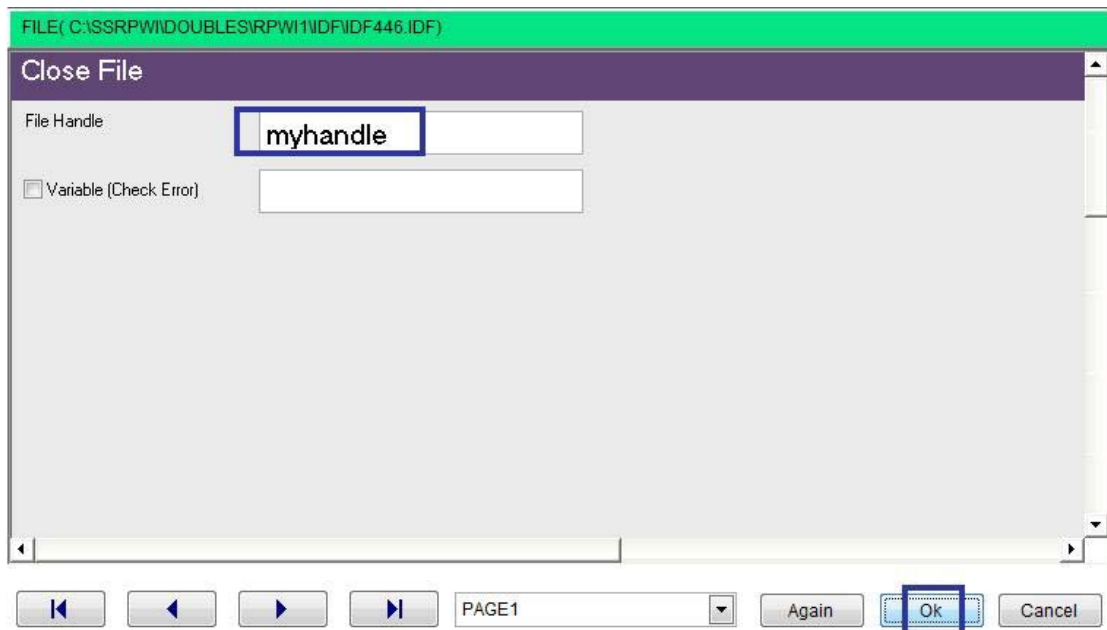
Domain (Files) Component (Write to file)



Interaction Page

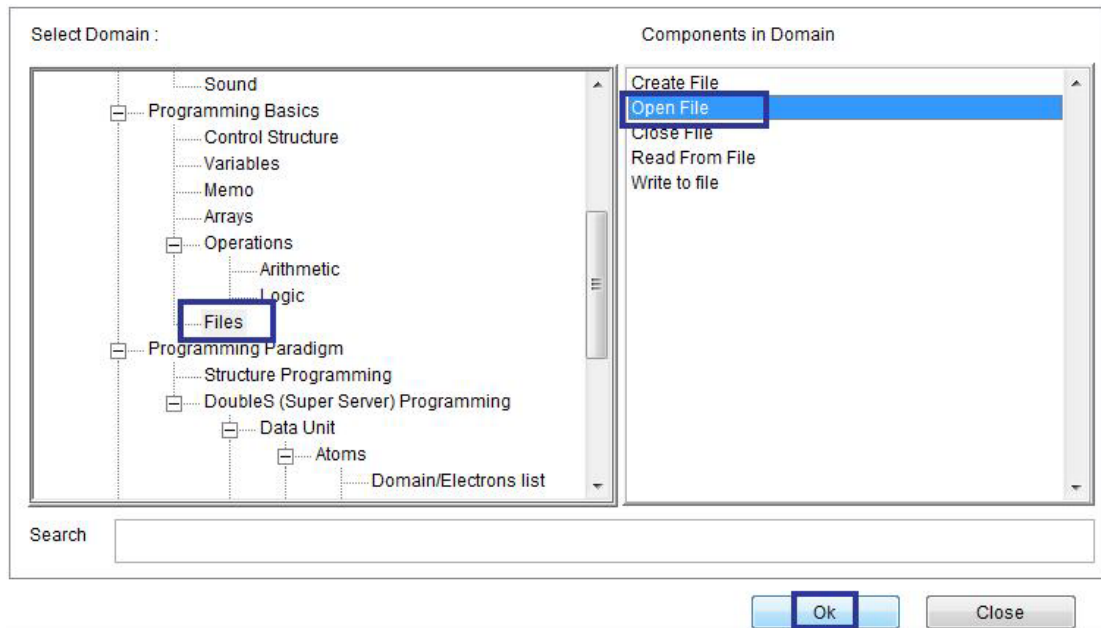


Domain (Files) Component (Close File)

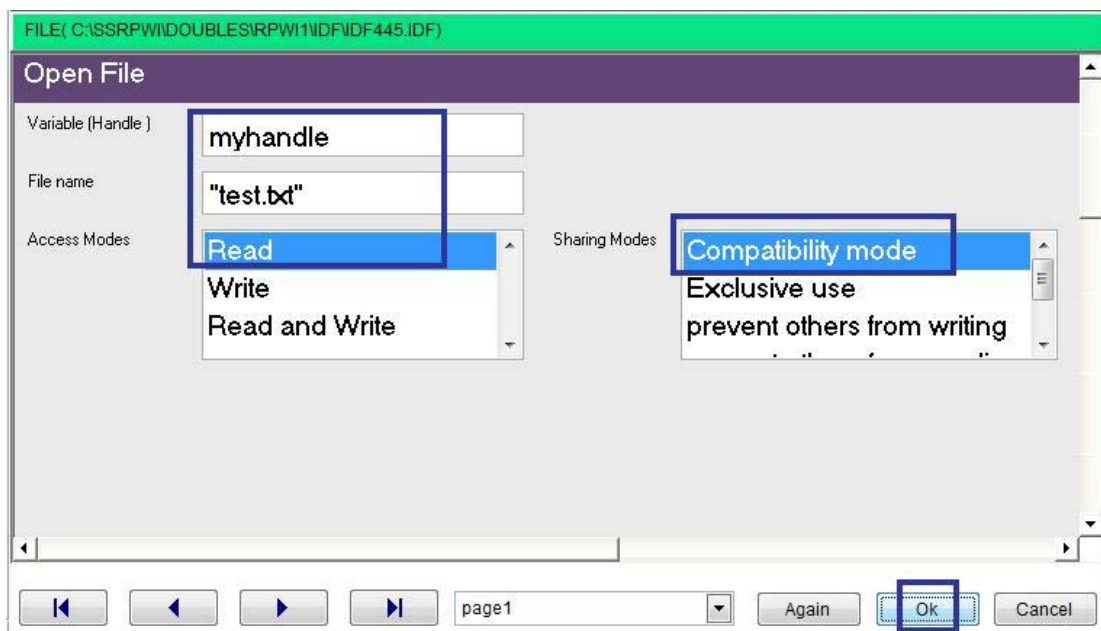


Interaction Page

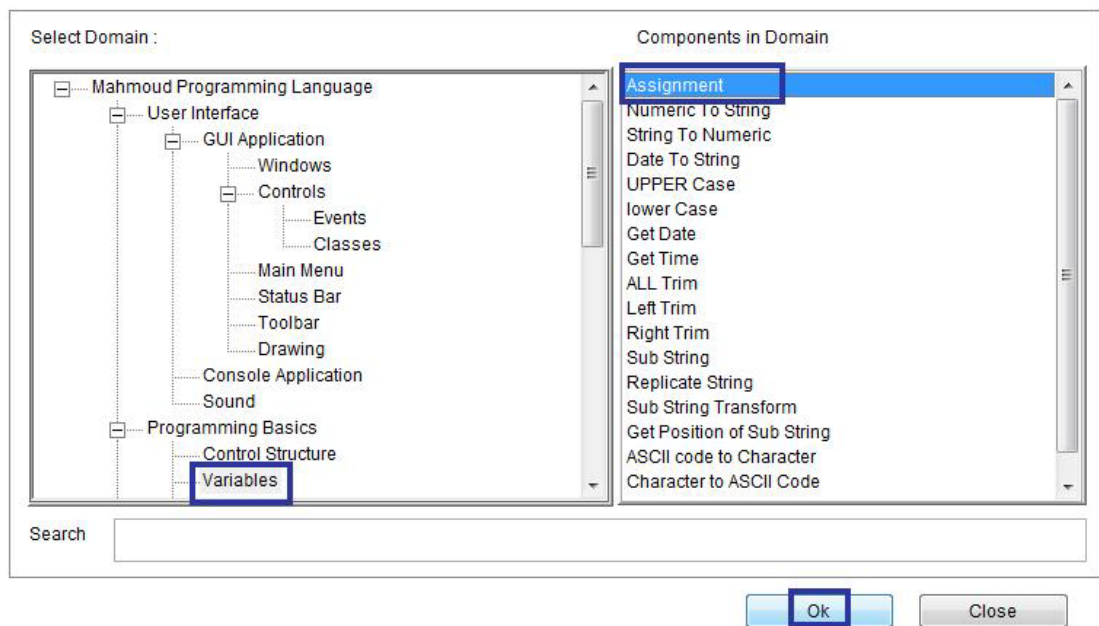




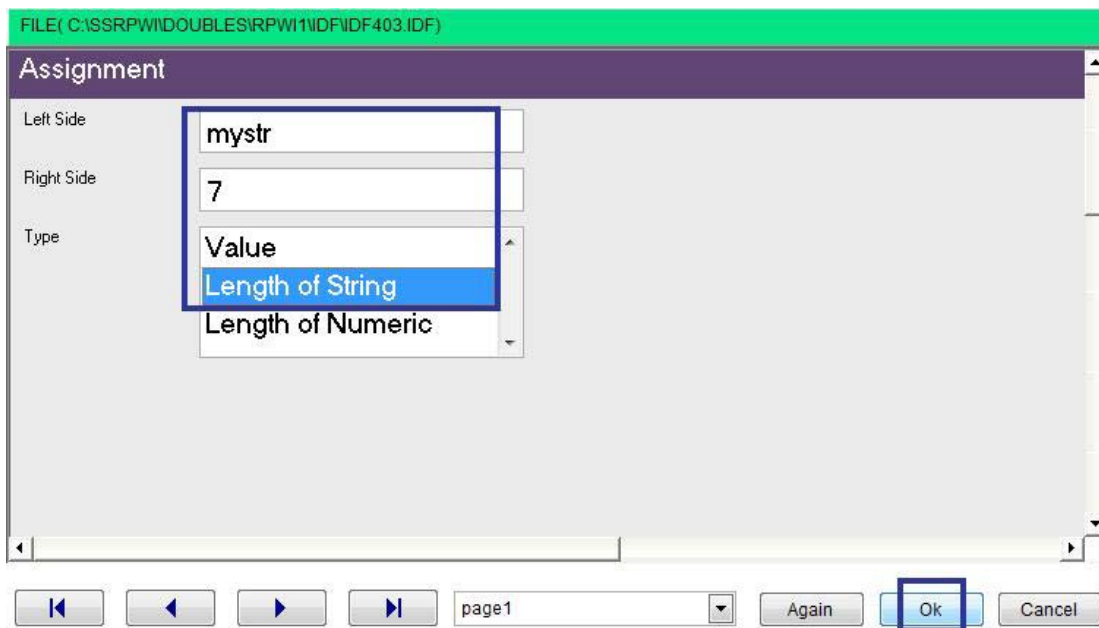
Domain (Files) Component (Open File)



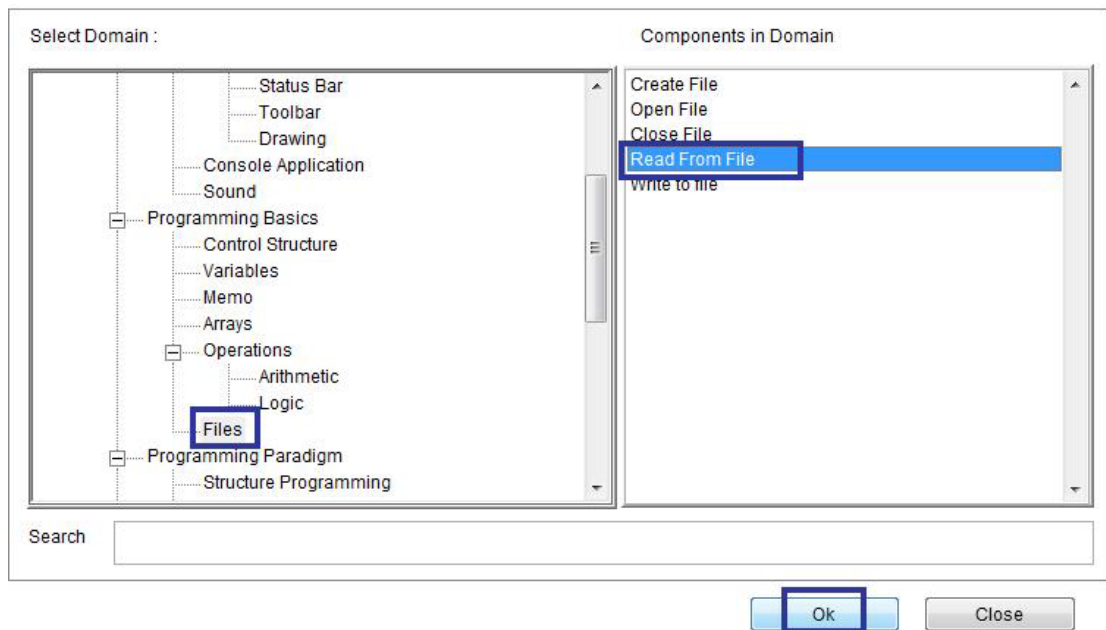
Interaction Page



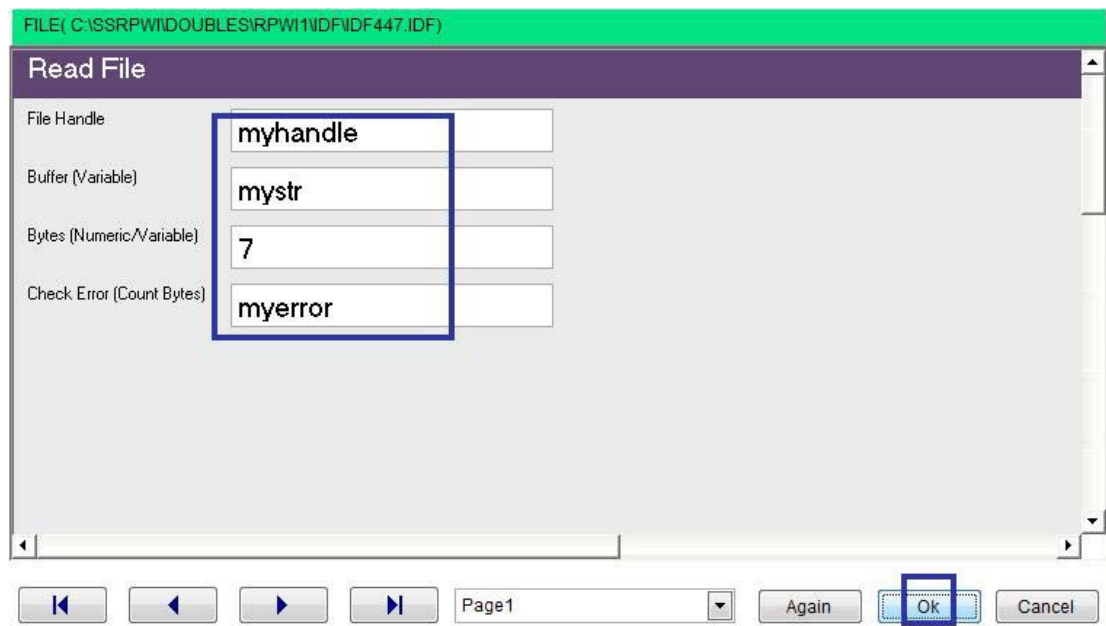
Domain (Variables) Component (Assignment)



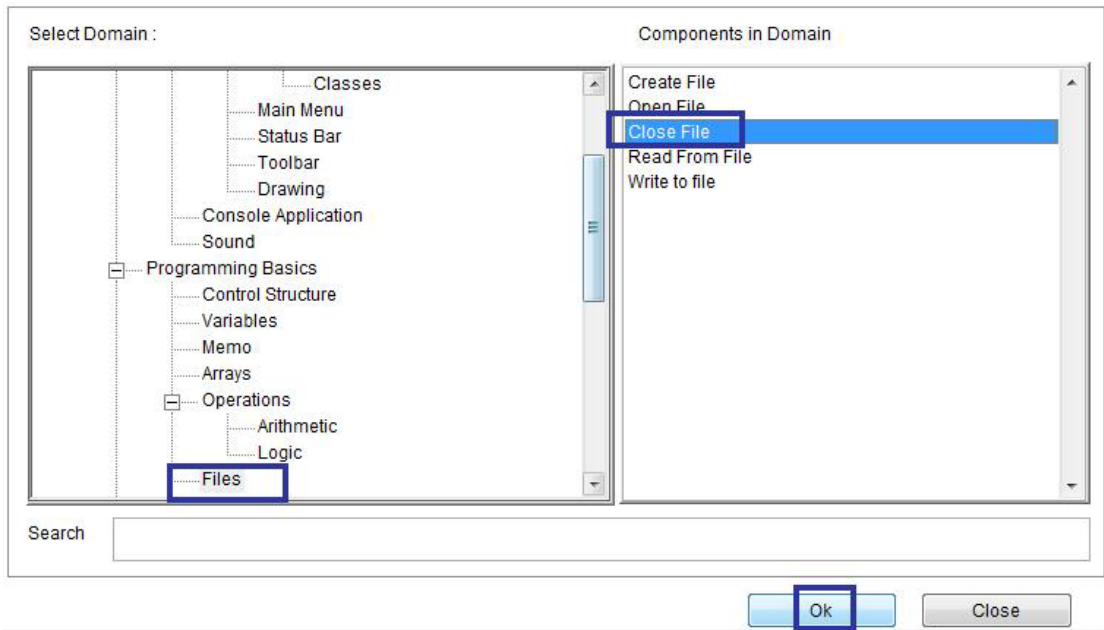
Interaction Page



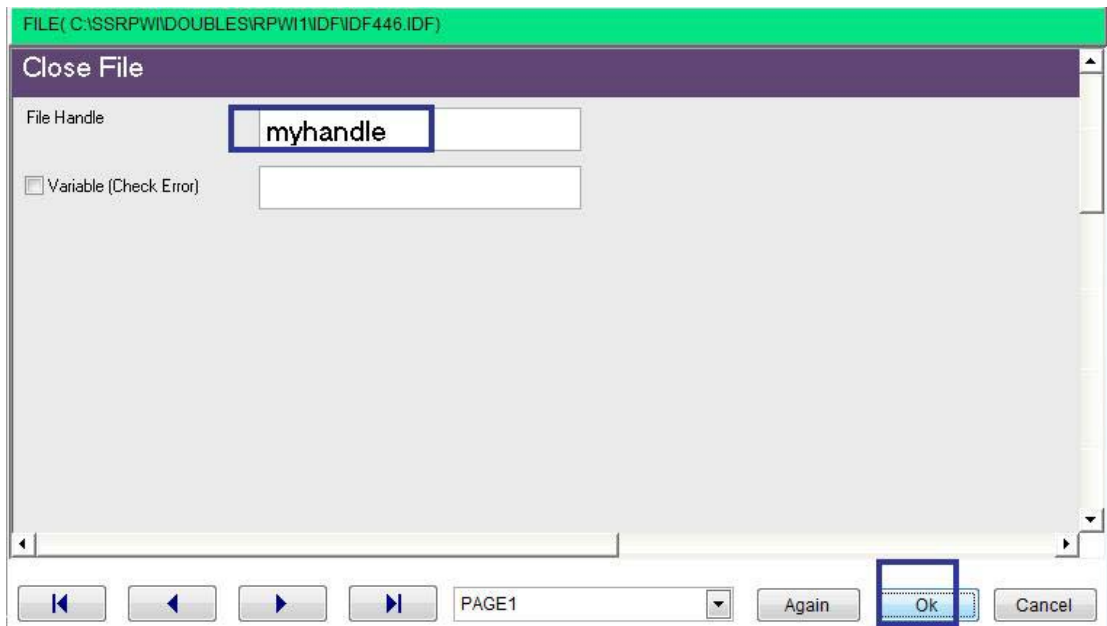
Domain (Files) Component (Read from File)



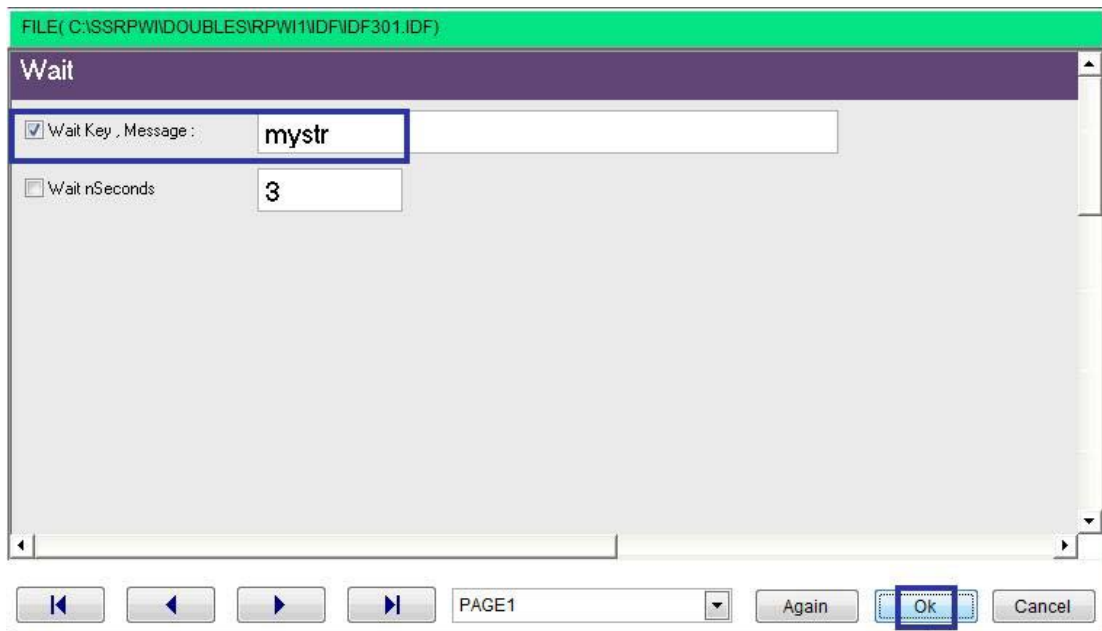
Interaction Page



Domain (Files) Component (Close File)



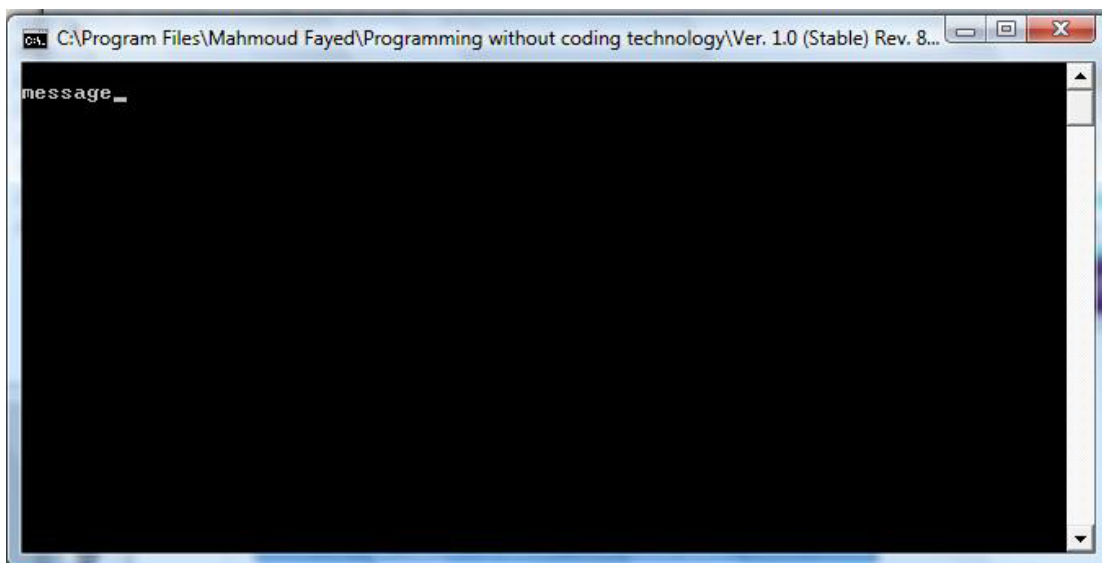
Interaction Page



Interaction Page



Final Steps Tree



Final Application

# Structure Programming

## Components

- Define Procedure
- Define Function
- Scope of variables
- Return Value
- Call Procedure
- Call Function
- Release Variable

Procedure may be a generated server file (\*.prg) or inline procedure.  
Procedure does not return a value.

## Scope of variables:

Variables may have the following scope:

**LOCAL:** Visible only within the routine which declared it. Value is lost upon exit of the routine.

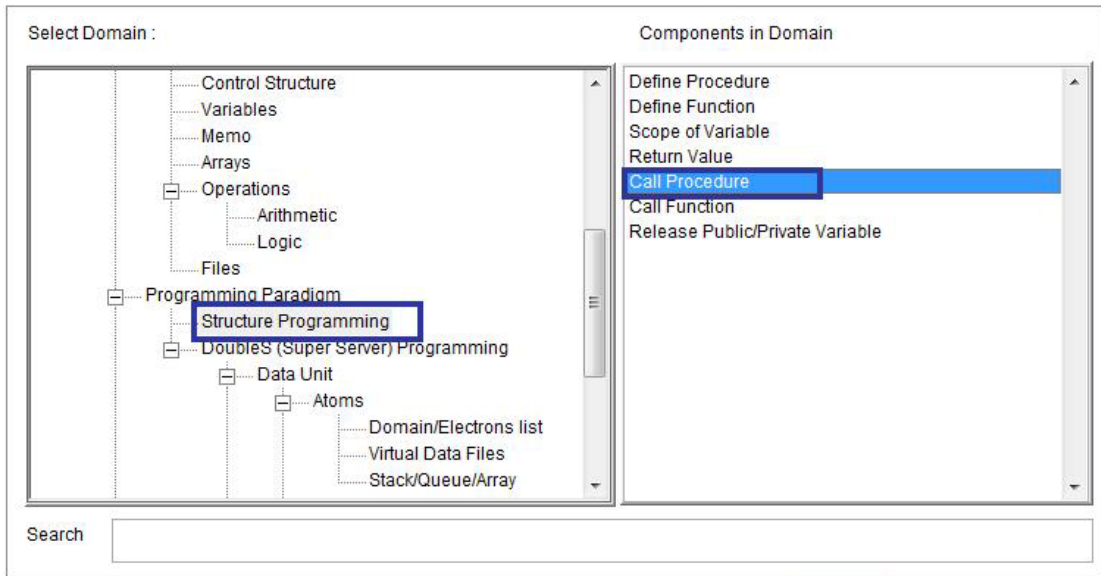
**STATIC:** Visible only within the routine which declared it. Value is preserved for subsequent invocations of the routine. If a **STATIC** variable is declared before any Procedure/Function/Method is defined, it has a **MODULE** scope, and is visible within any routine defined within that same source file, it will maintain its life for the duration of the application life time.

**PRIVATE:** Visible within the routine which declared it, and all routines called by that routine.

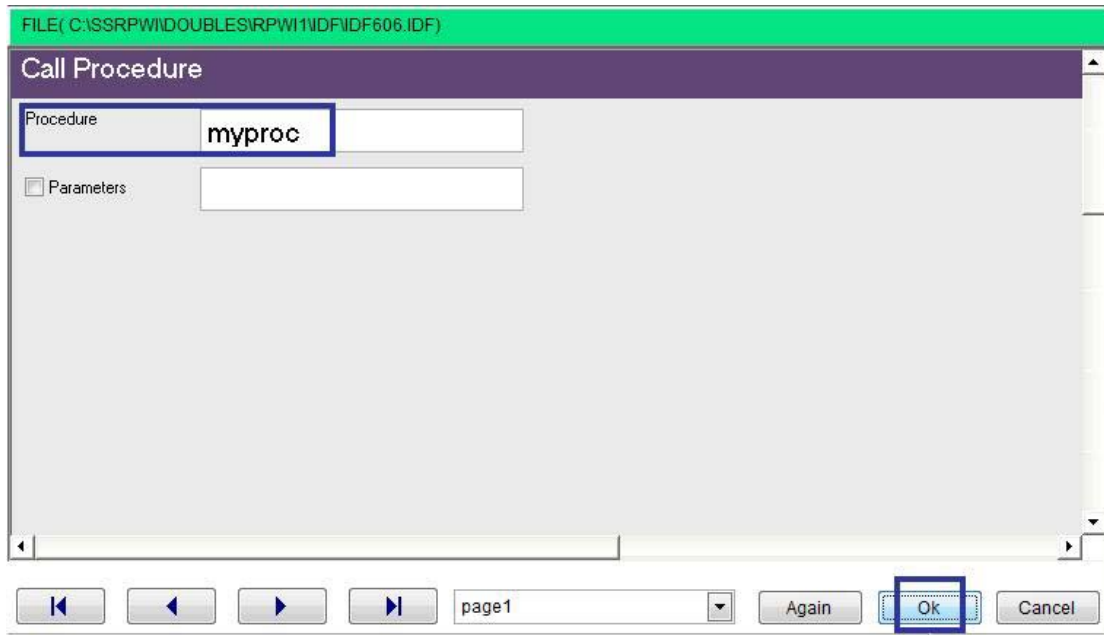
**PUBLIC:** Visible by all routines in the same application.

Due to the dynamic nature of **PRIVATE** and **PUBLIC** variables, they can be created and destroyed at Run-time

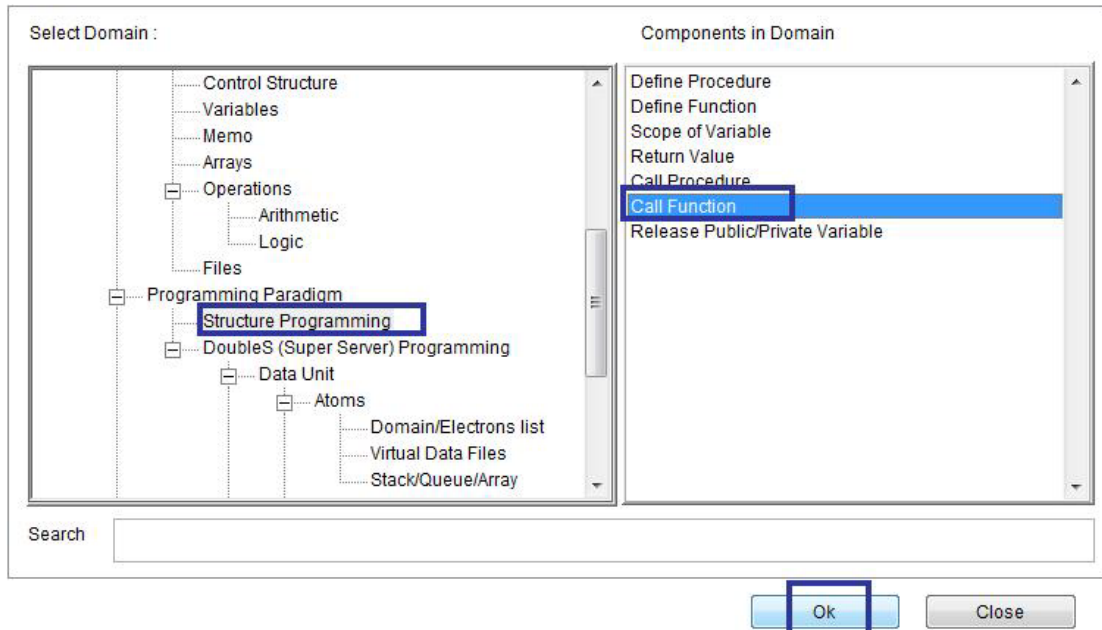
Example - Screen shots:-



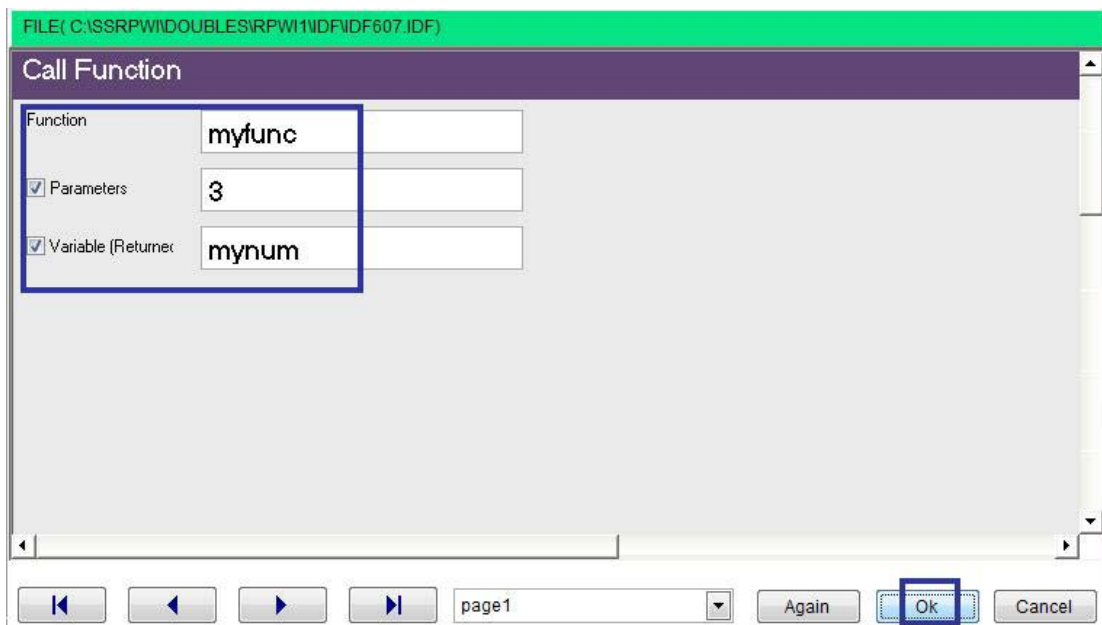
Domain (Structure Programming) Component (Call Procedure)



Interaction Page

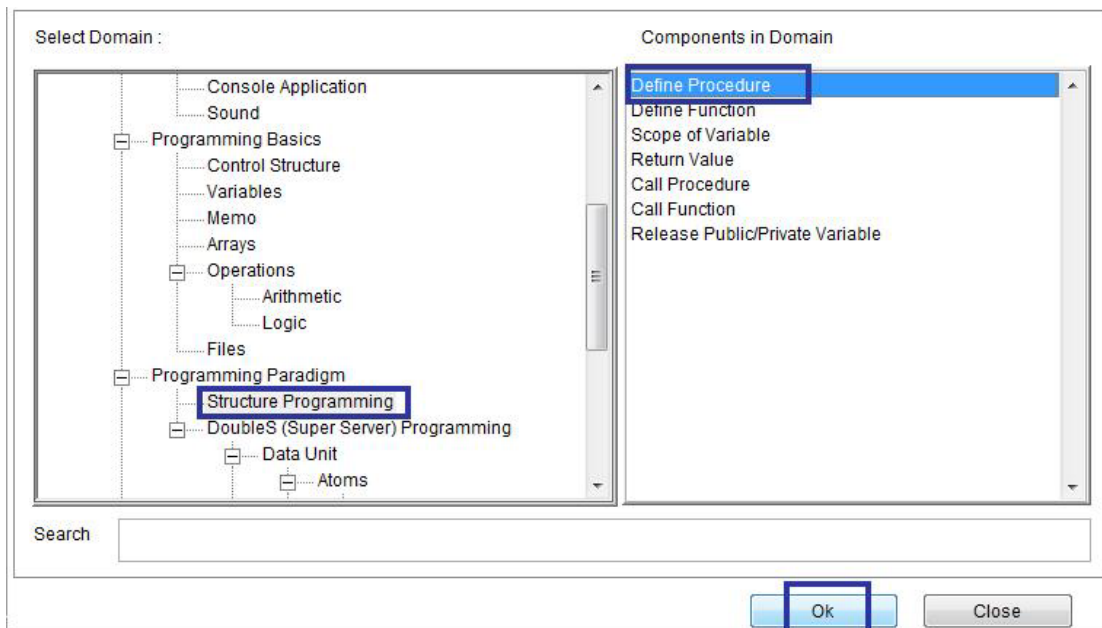


Domain (Structure Programming) Component (Call Function)

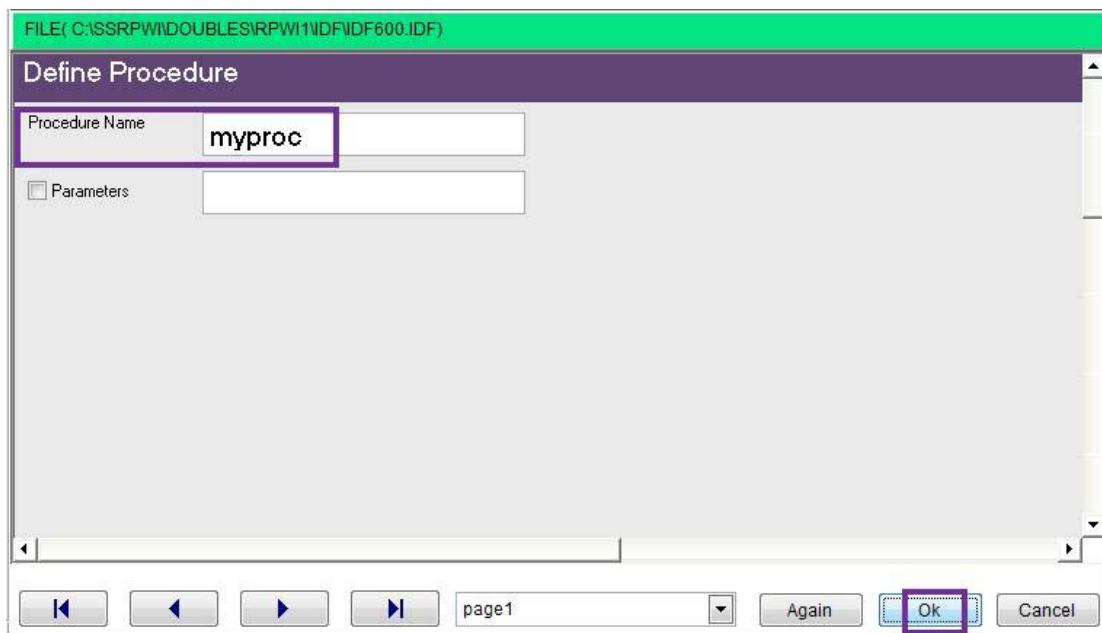


Interaction Page





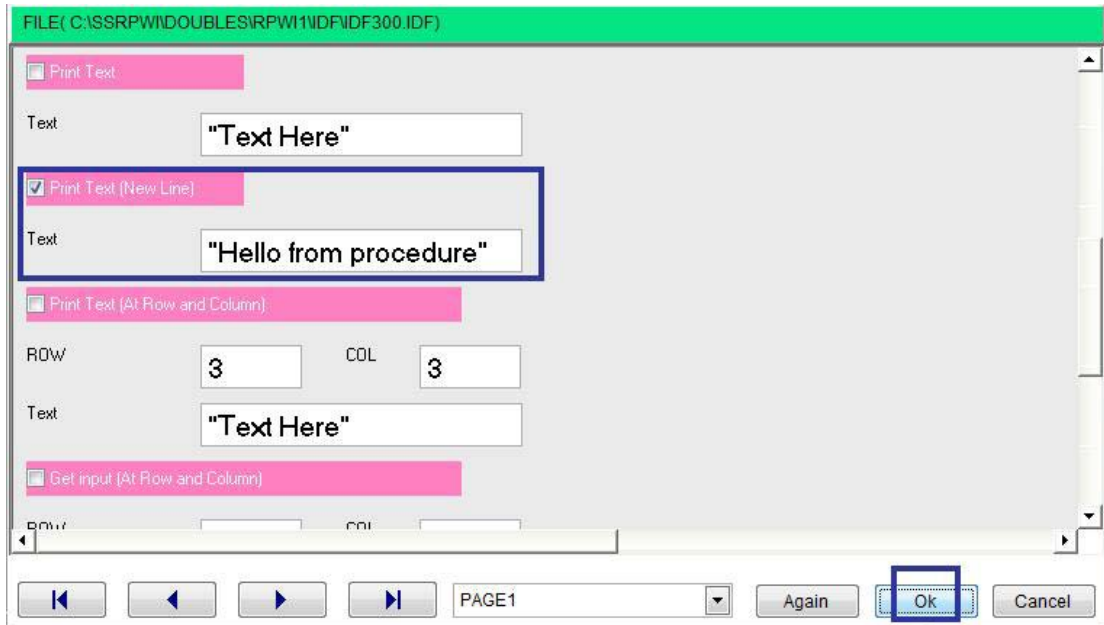
Domain (Structure Programming) Component (Define Procedure)



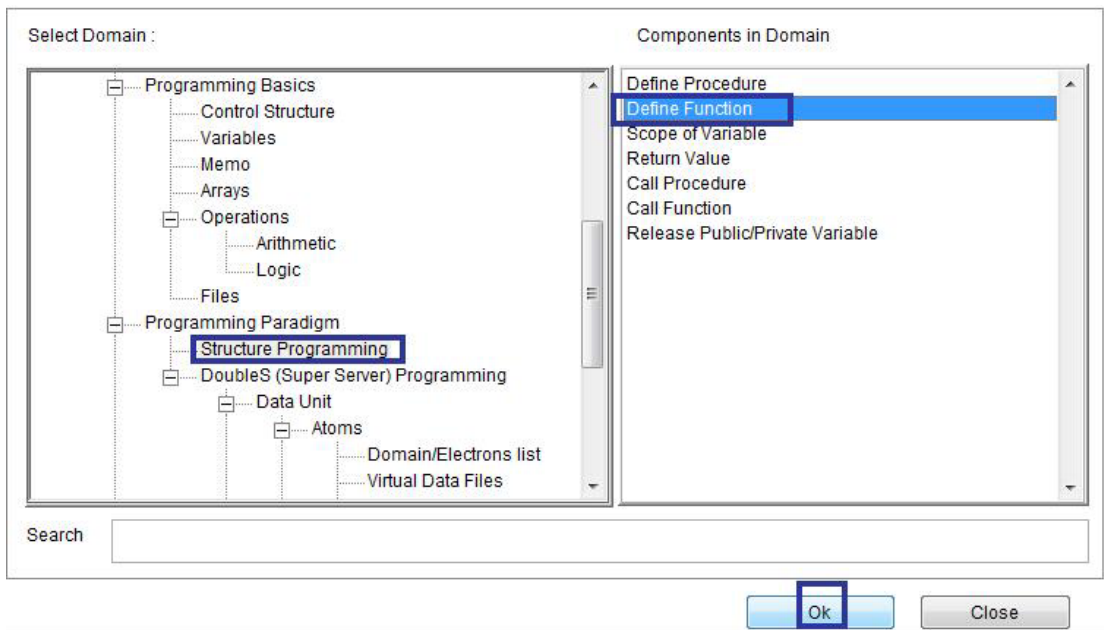
Interaction Page



Steps Tree



Interaction Page



Domain (Structure Programming) Component (Define Function)

FILE( C:\SSRPW\IDOBLES\RPWI1\NDF\IDF601.IDF)

### Define Function

Function Name	myfunc
<input checked="" type="checkbox"/> Parameters	para1
<input checked="" type="checkbox"/> Return Value	para1 * 3

page1   Again   **Ok**   Cancel

Interaction Page

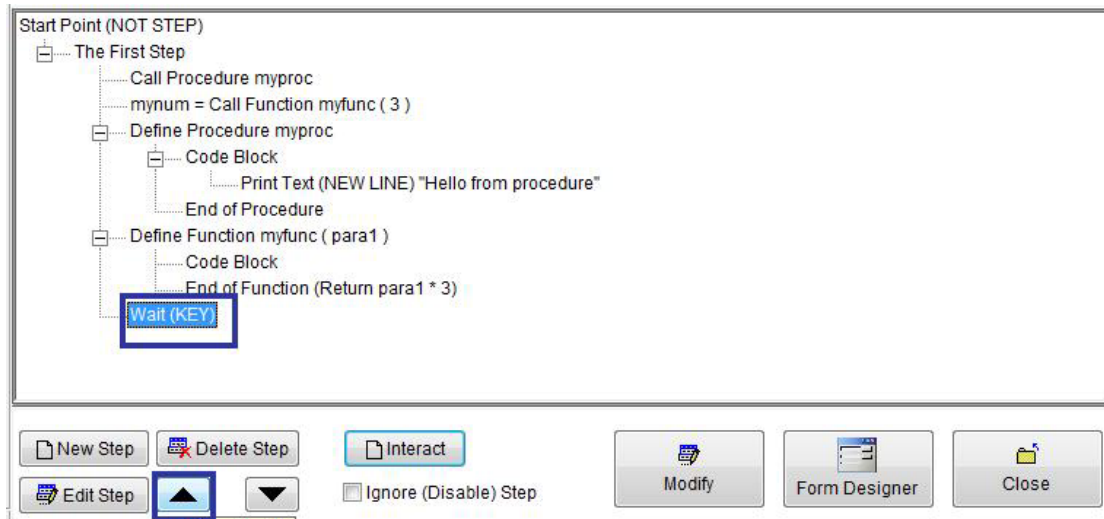
FILE( C:\SSRPW\IDOBLES\RPWI1\NDF\IDF301.IDF)

### Wait

<input checked="" type="checkbox"/> Wait Key , Message :	mynum
<input type="checkbox"/> Wait nSeconds	3

PAGE1   Again   **Ok**   Cancel

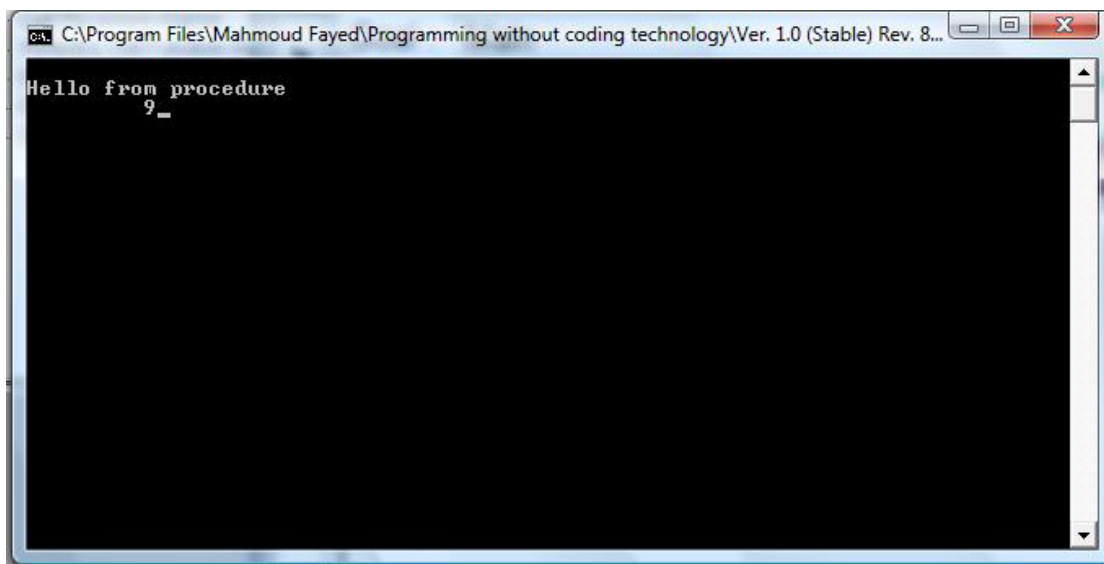
Interaction Page



Steps Tree



Final Steps Tree



Final Application

## Database Files

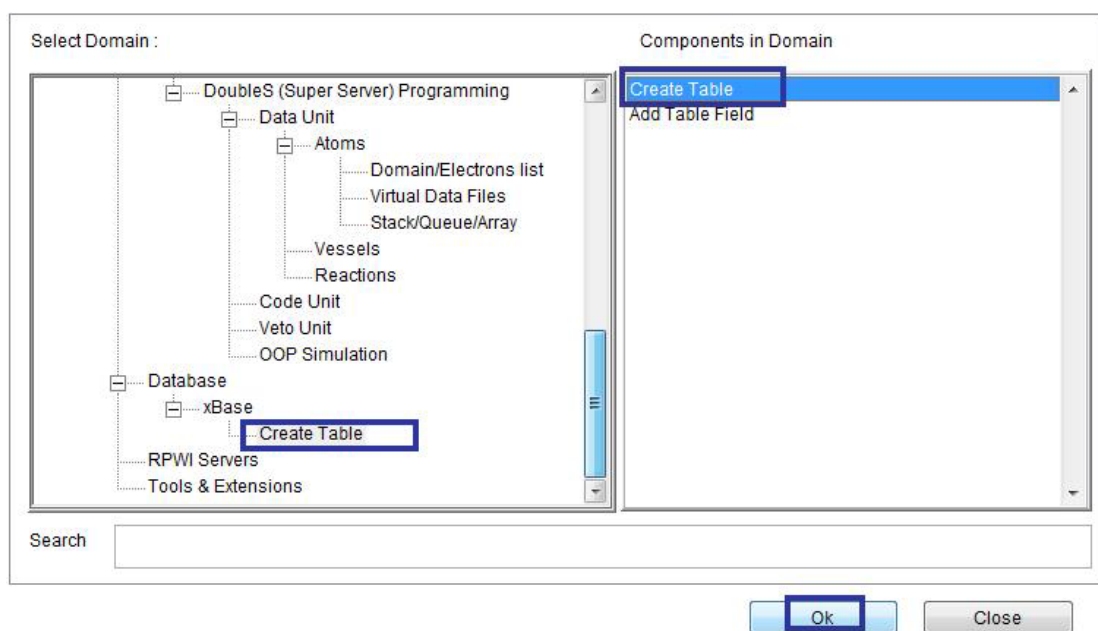
- Create Table
- Opening & Closing Tables
- Add new record
- Moving between records
- Record number & records count
- Modify record
- Deleting records
- Search
- Index Files
- Shared Data

## Create Table

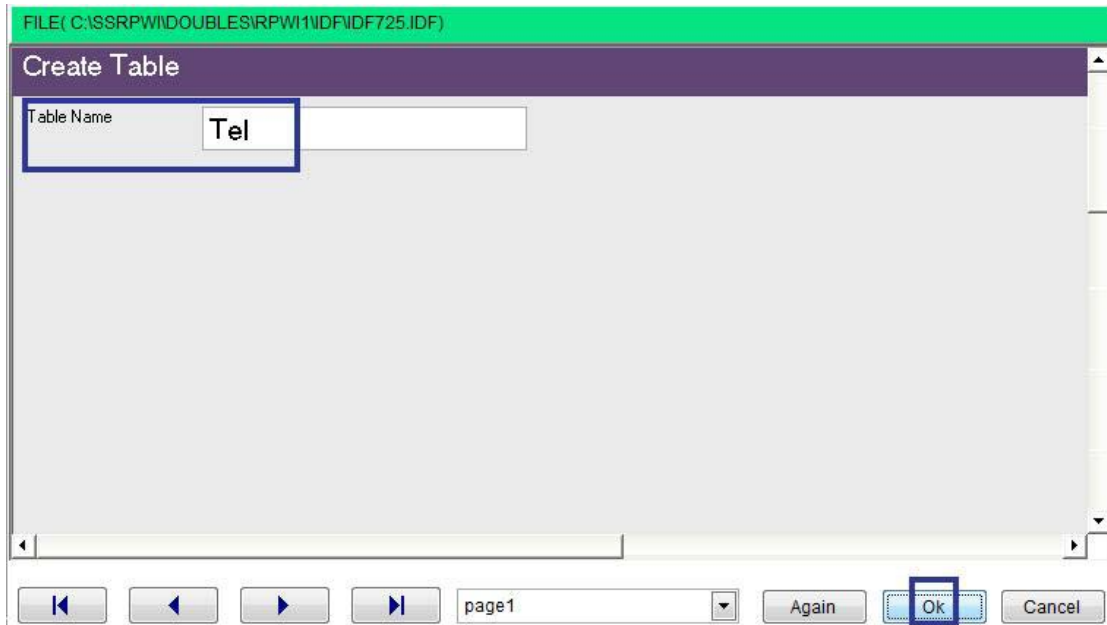
Table Name: TEL.DBF (Data Base File)

Field	Type	Size
Name	Character	50
Address	Character	50
Phone	Character	15

Example - Screen shots:-



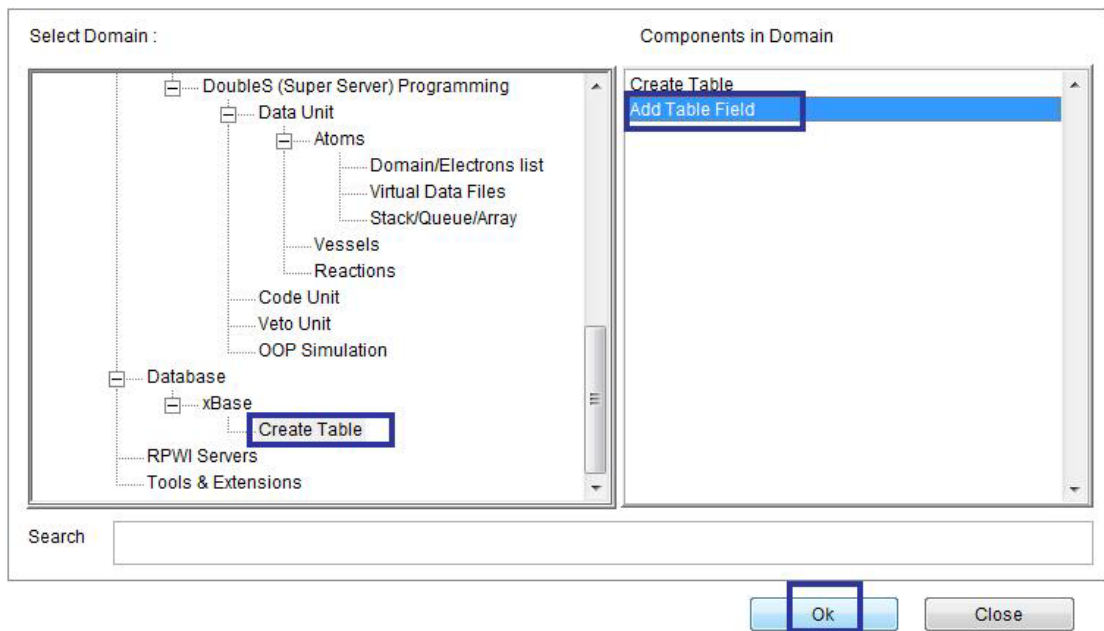
Domain(Create Table) Component (Create Table)



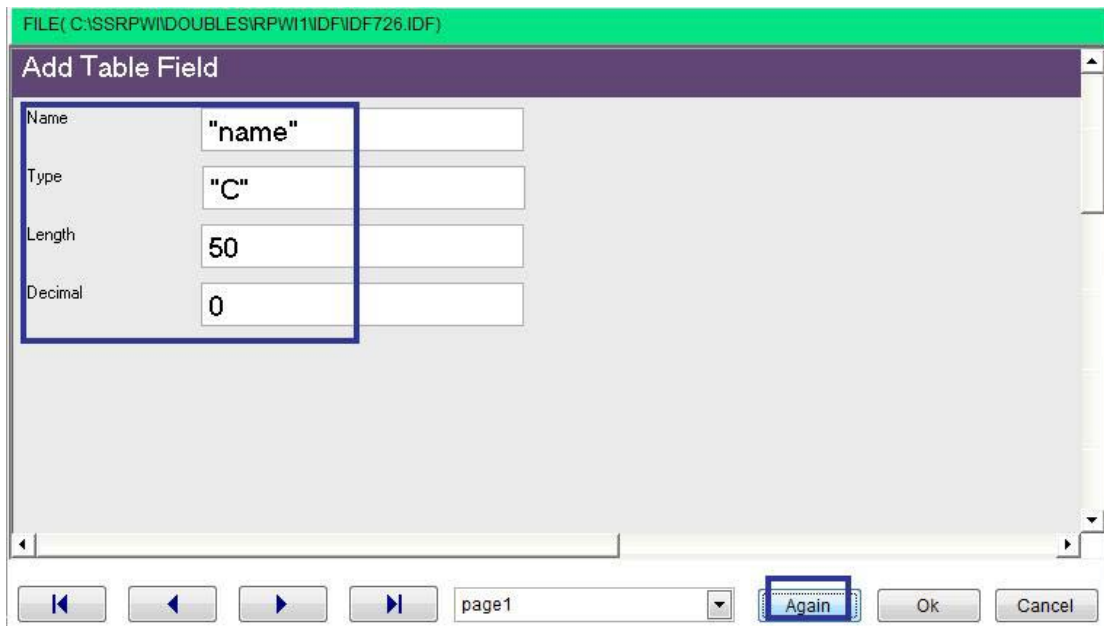
Interaction Page



Steps Tree



Domain (Create Table) Component (Add Table Field)



Interaction Page

FILE( C:\SSRPW\DOUBLES\RPW1\NDF\IDF726.IDF)

### Add Table Field

Name	"address"
Type	"C"
Length	50
Decimal	0

page1

Again Ok Cancel

Interaction Page

FILE( C:\SSRPW\DOUBLES\RPW1\NDF\IDF726.IDF)

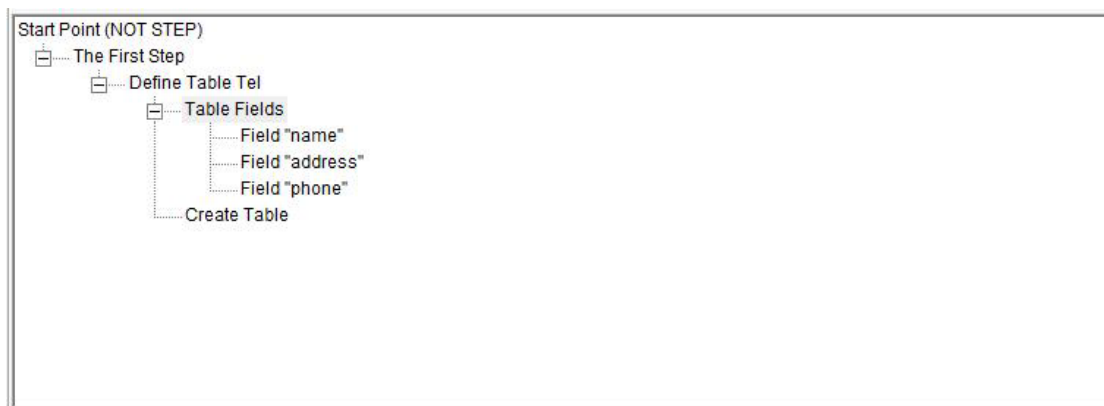
### Add Table Field

Name	"phone"
Type	"C"
Length	15
Decimal	0

page1

Again Ok Cancel

Interaction Page



Final Steps Tree



## Opening & Closing Tables

Work Area are used to host a table, you can open more than one table in the same time (up to 250) using work areas.

What you need to do for example

- Select work area 1
- Open Table1
- Select work area 2
- Open Table2
- .....
- .....
- Select work area n
- Open TableN

Note that the work area number is not related to the table name  
Where you are free to determine what work area host what table

To change the active area (moving between tables), all what you need is to select the work are of the table which you want to deal with

The table in the active work area (selected area) is under your usage directly  
Where you can use its field's names as variable names to get their content (Reading)  
or altering their content (writing)

When you open table, the active record is the first record, but you can move between records (First Record, Last Record, Next Record & Previous Record) to get their data or alter it

Also you can know the record number and number of records inside the table

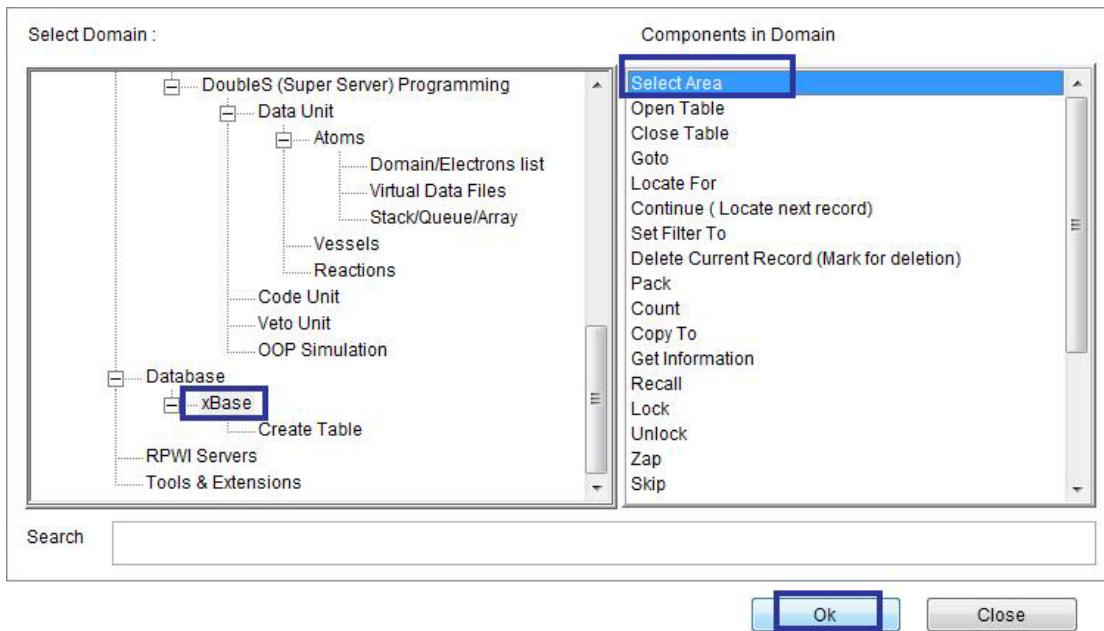
It's clear that working with database files depend on status which include

- Work Area
- Table Name
- Record Number

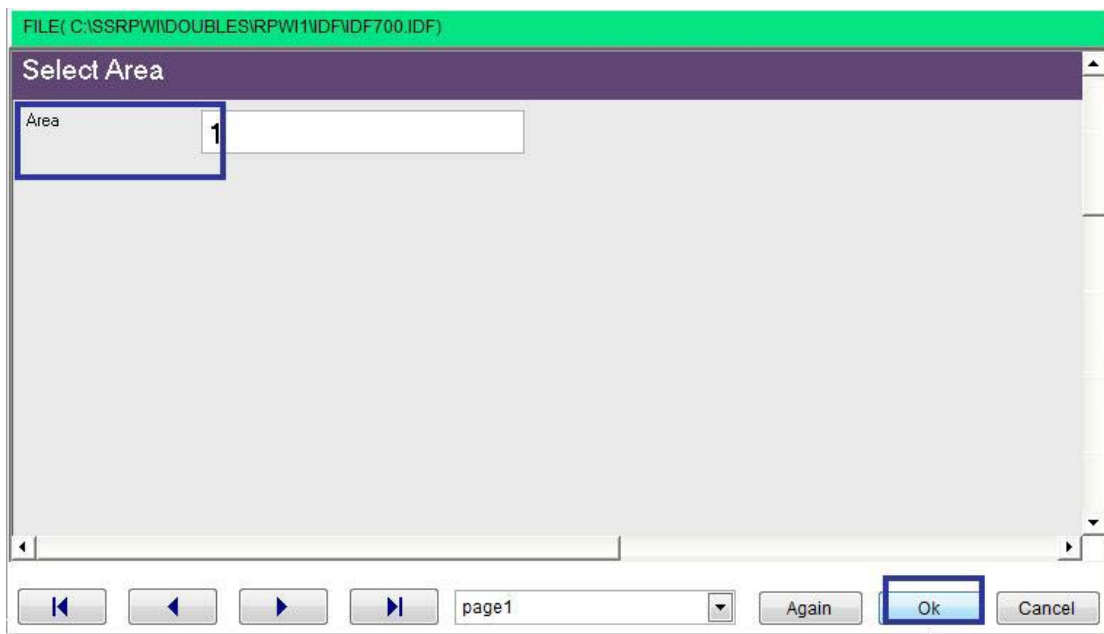
To close a table, you need to activate the work area of this table then close the table  
Also you can close all the opened tables (close database)

## Add New Record

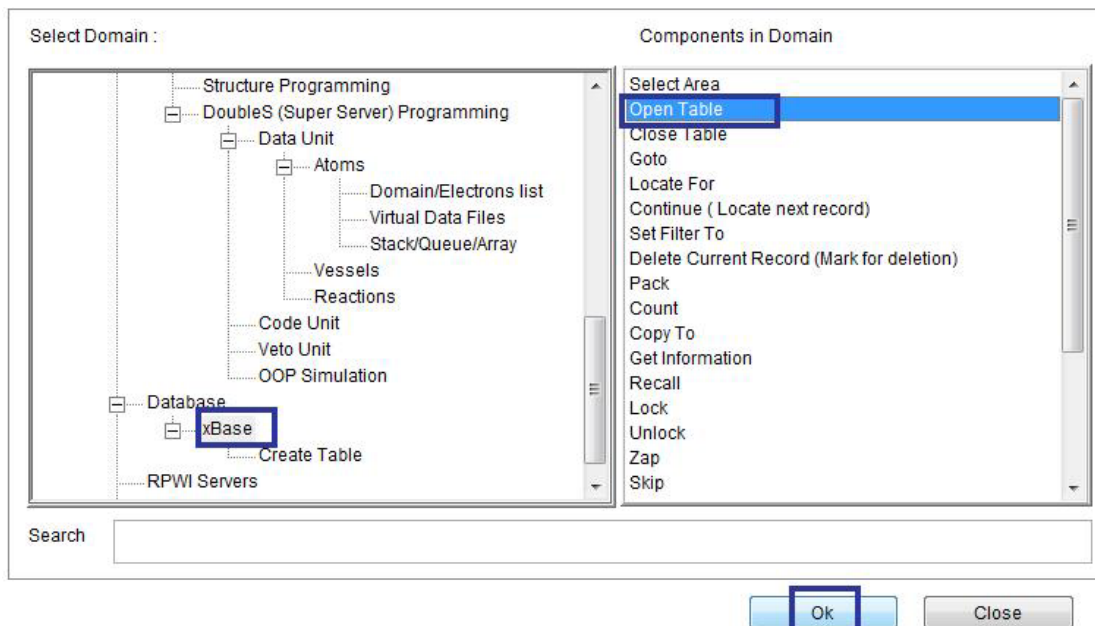
Example - Screen shots:-



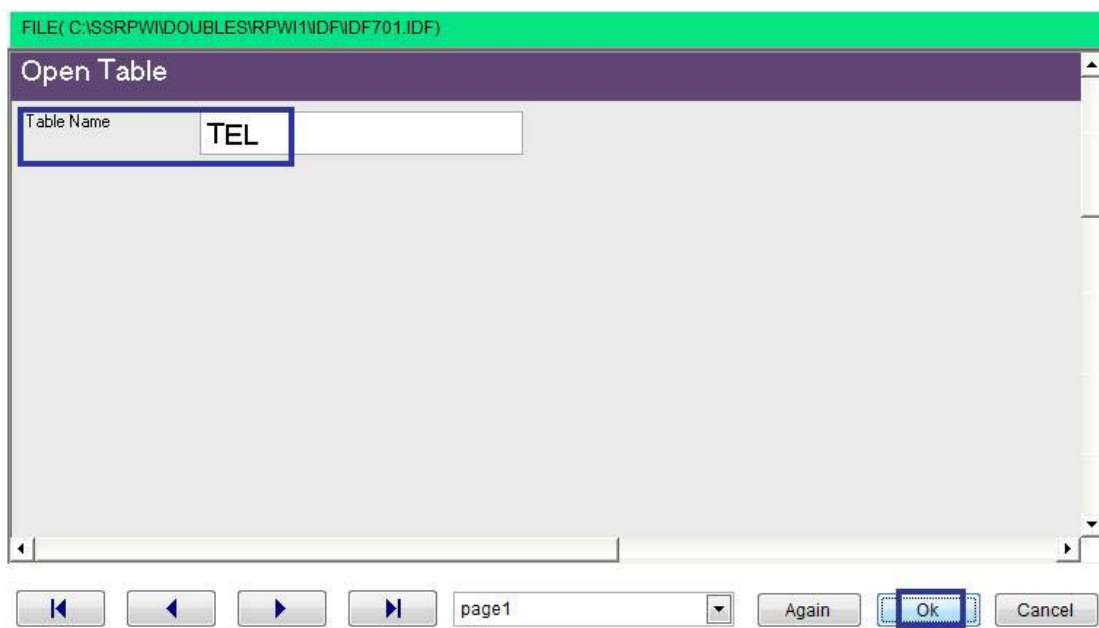
Domain (xBase) Component (Select Area)



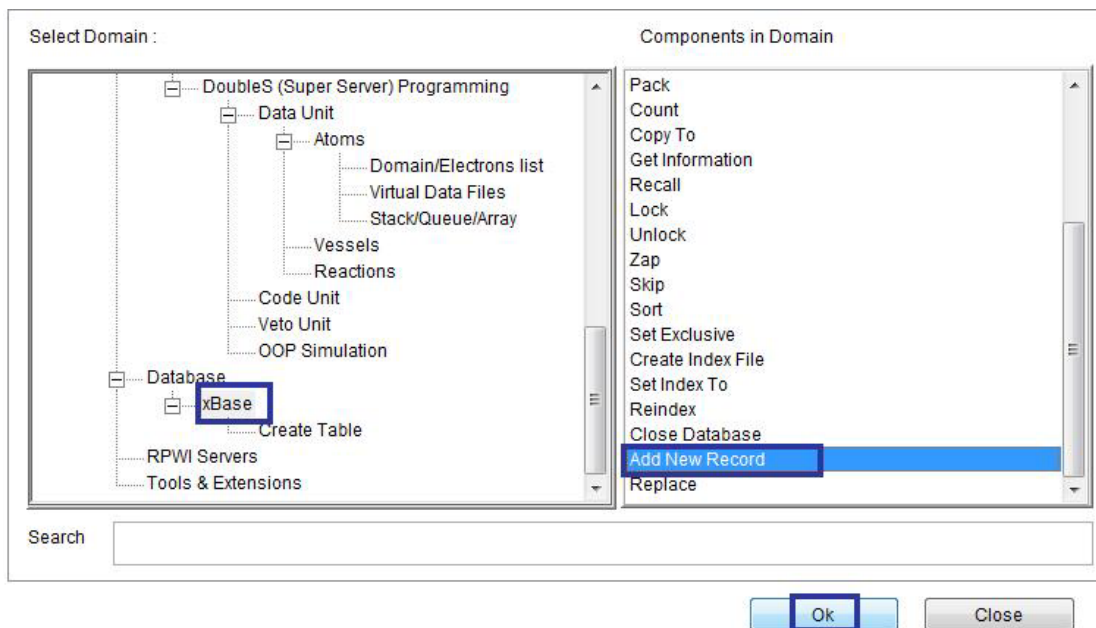
Interaction Page



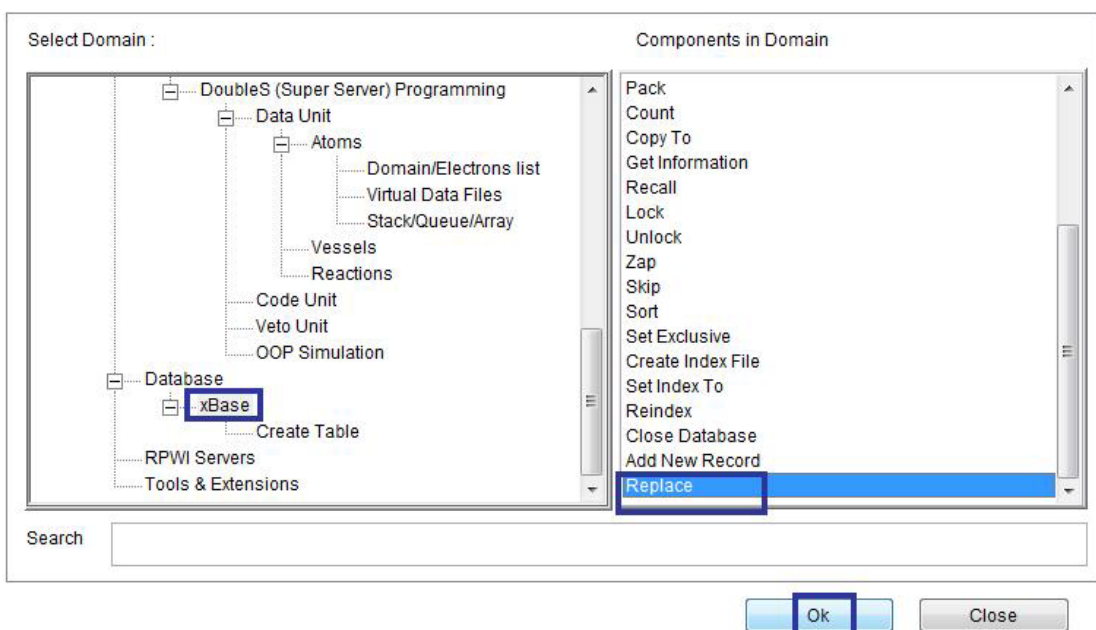
Domain (xBase) Component (Open Table)



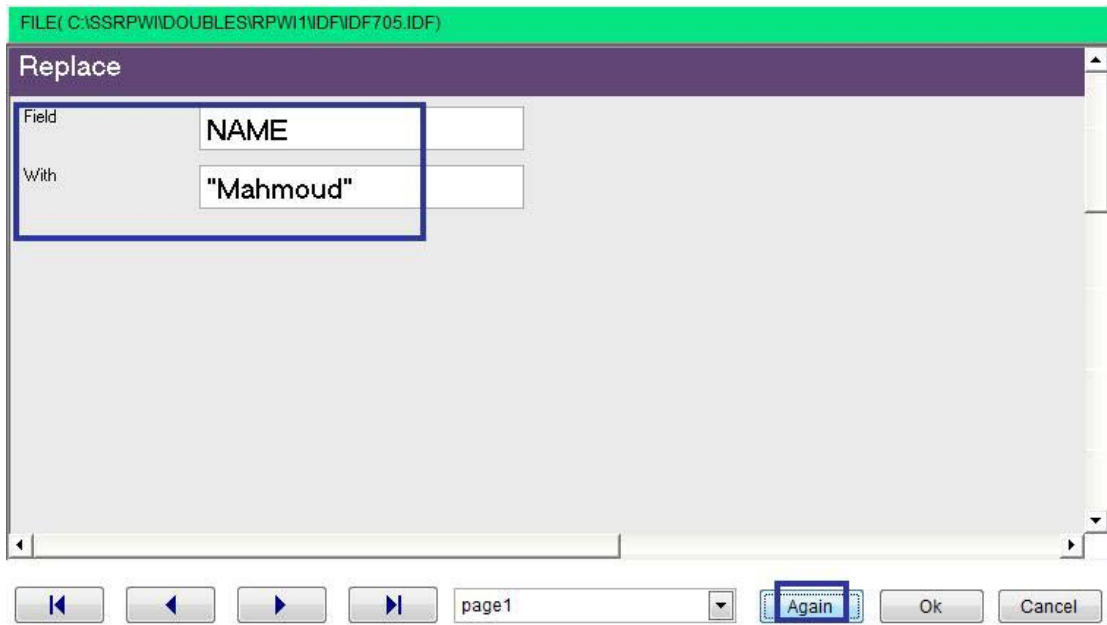
Interaction Page



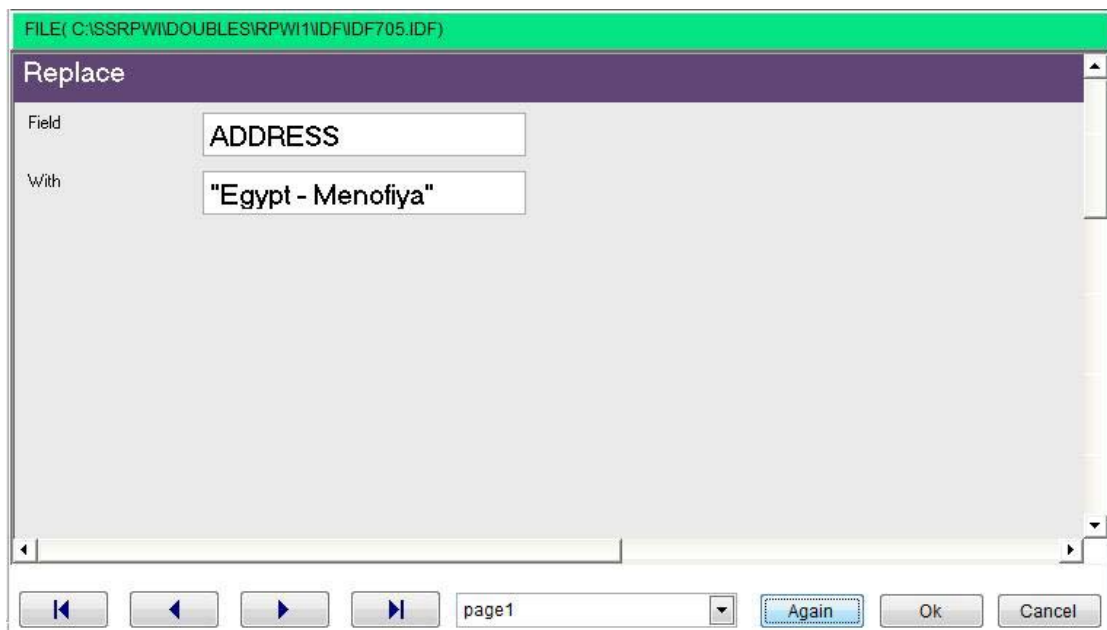
Domain (xBase) Component (Add New Record)



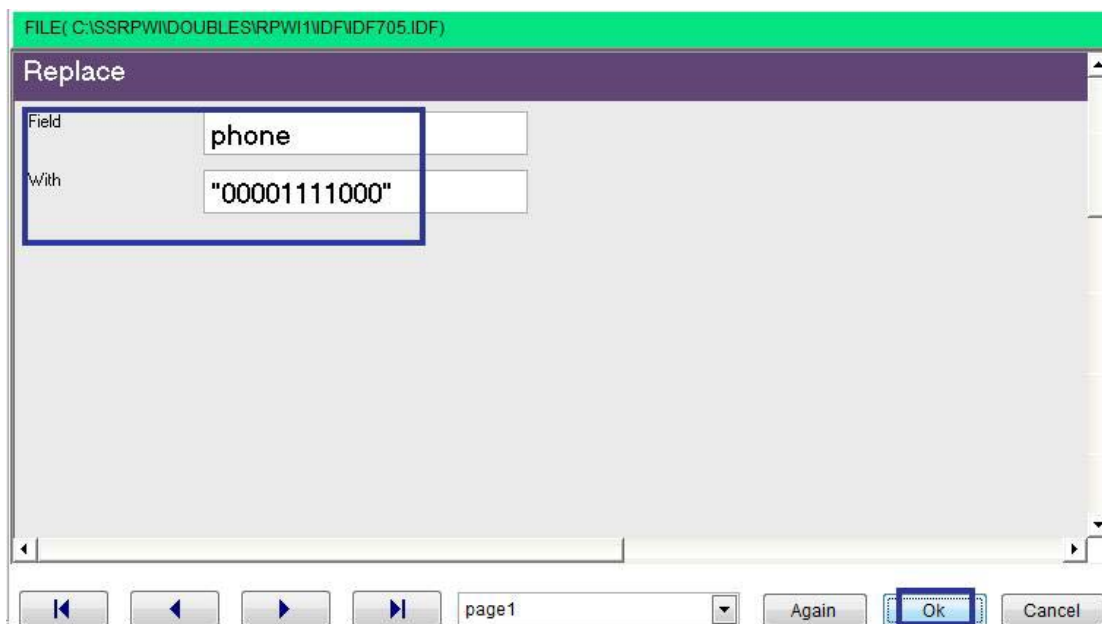
Domain (xBase) Component (Replace)



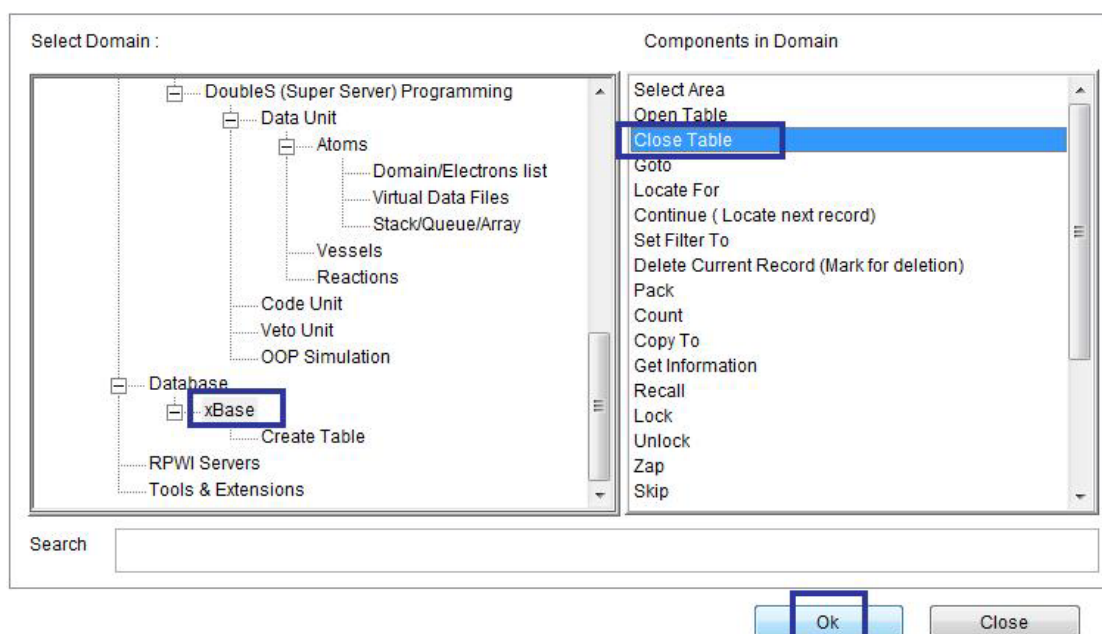
Interaction Page



Interaction Page



Interaction Page

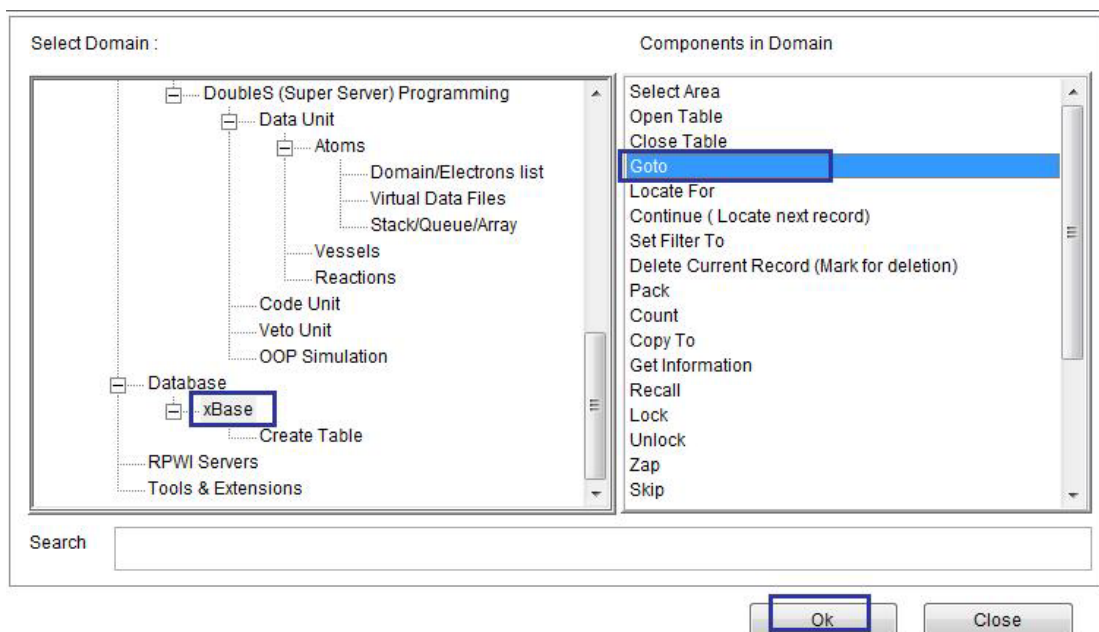


Domain (xBase) Component (Close Table)

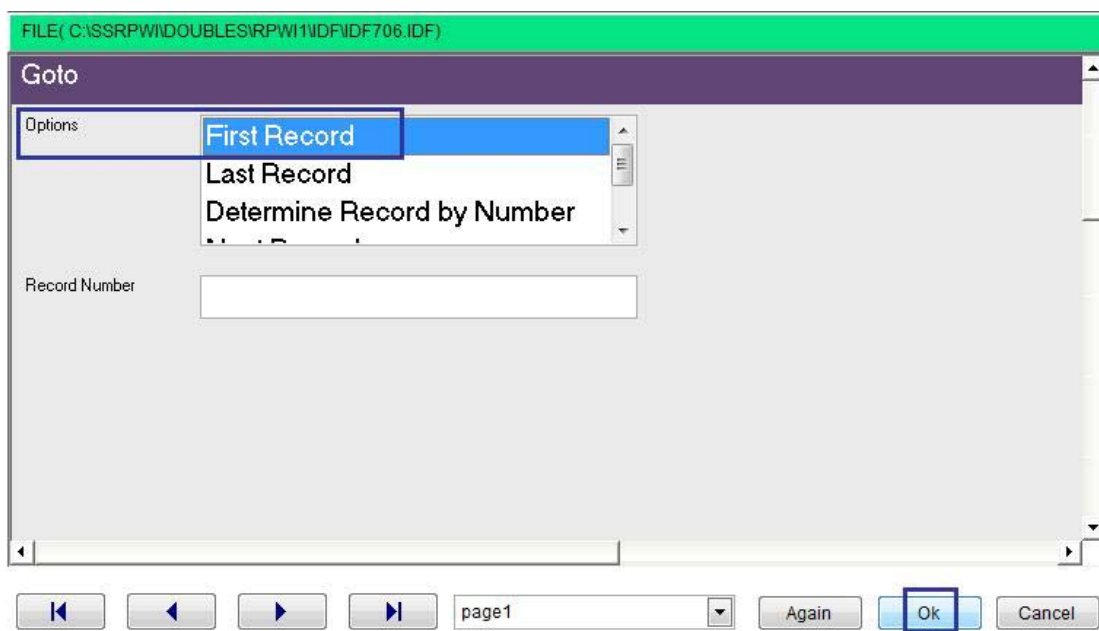


Steps Tree

## Moving between records



Domain (xBase) Component (Goto)



Interaction Page

FILE( C:\SSRPW\DOUBLES\IRPW1\IDF\IDF300.IDF)

Print Text

Text "Text Here"

Print Text (New Line)

Text name

Print Text (At Row and Column)

ROW 3 COL 3

Text "Text Here"

Get input (At Row and Column)

ROW 2 COL 2

Navigation buttons: [Back] [Previous] [Next] [Forward] PAGE1 [Again] [Ok] [Cancel]

Interaction Page

FILE( C:\SSRPW\DOUBLES\IRPW1\IDF\IDF300.IDF)

Print Text

Text "Text Here"

Print Text (New Line)

Text address

Print Text (At Row and Column)

ROW 3 COL 3

Text "Text Here"

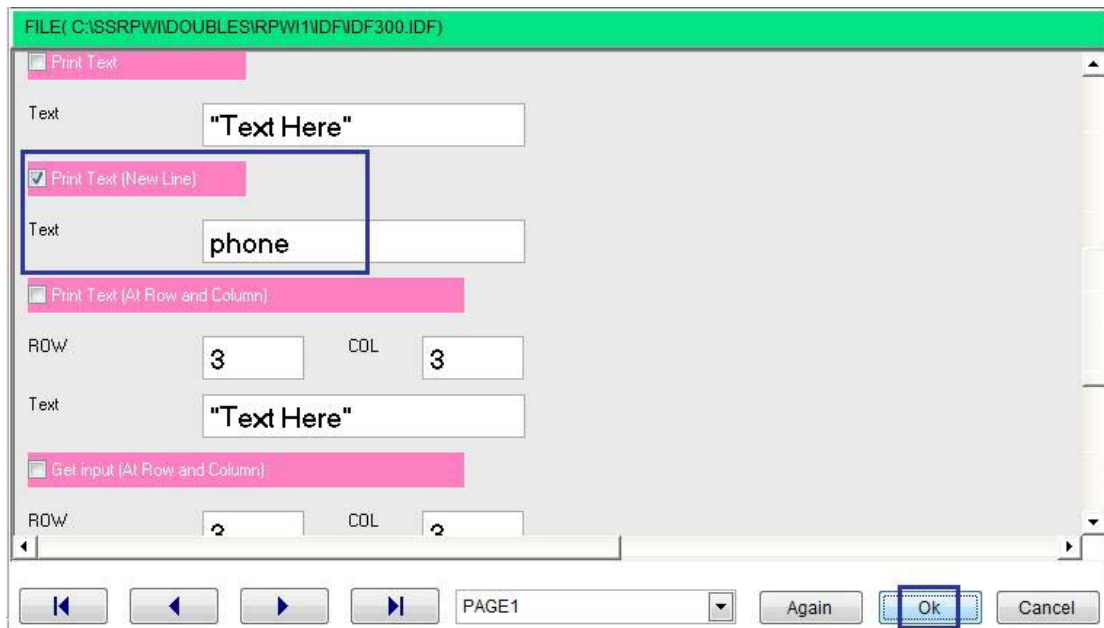
Get input (At Row and Column)

ROW 2 COL 2

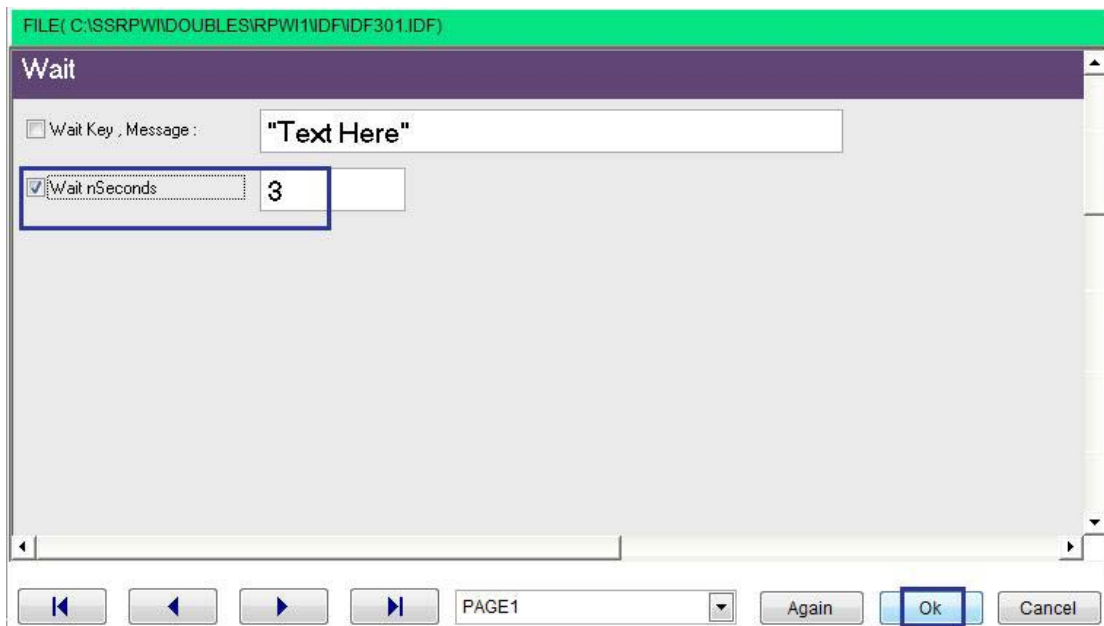
Navigation buttons: [Back] [Previous] [Next] [Forward] PAGE1 [Again] [Ok] [Cancel]

Interaction Page





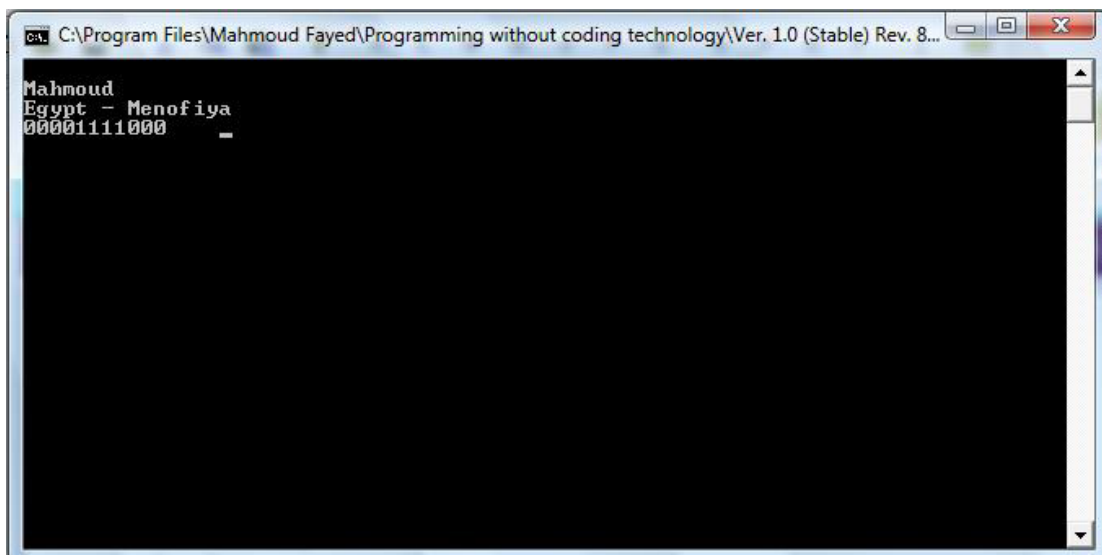
Interaction Page



Interaction Page

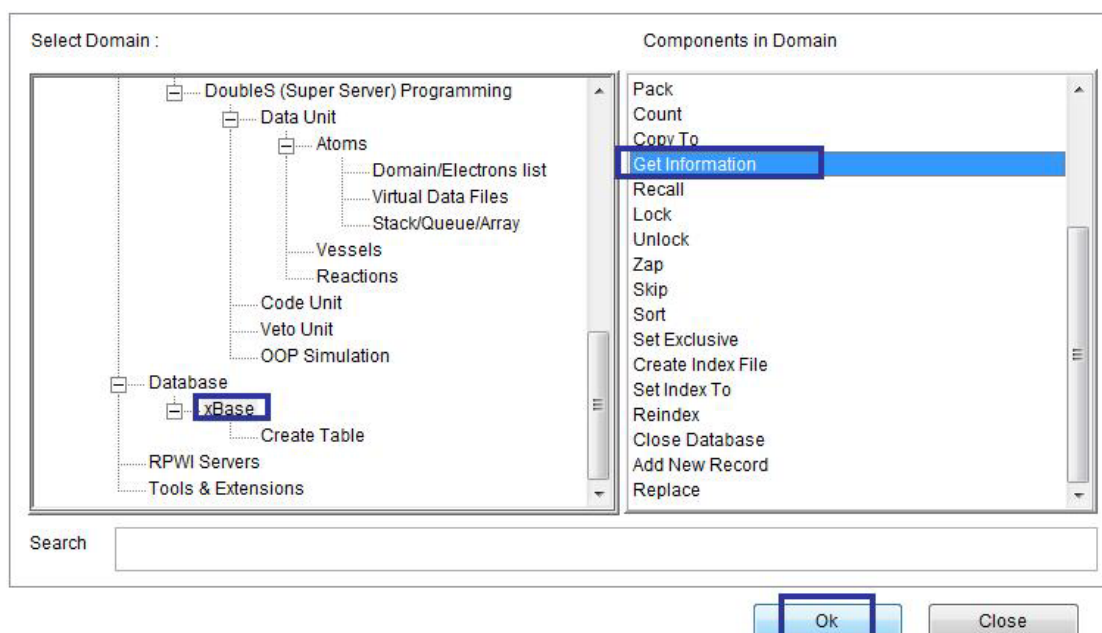


Steps Tree

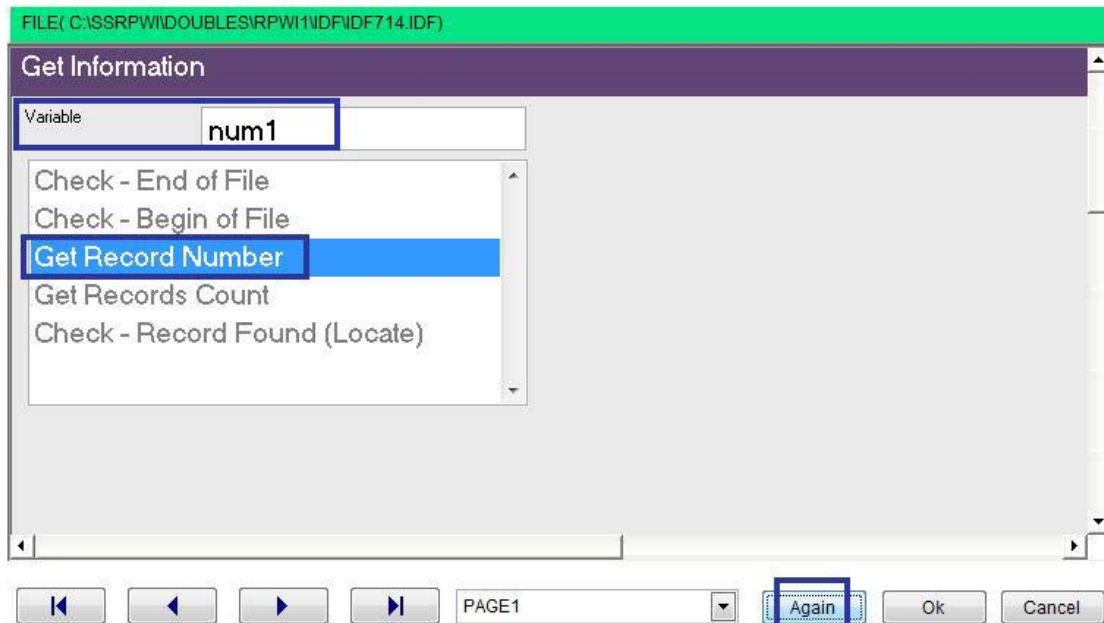


The Final Application

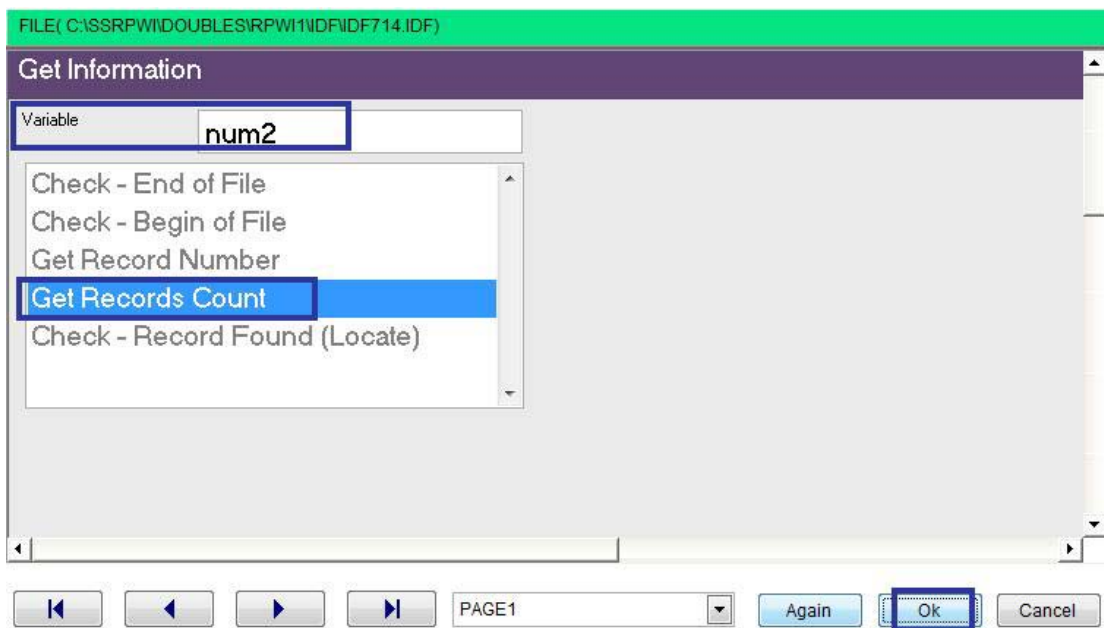
## Record number & records count



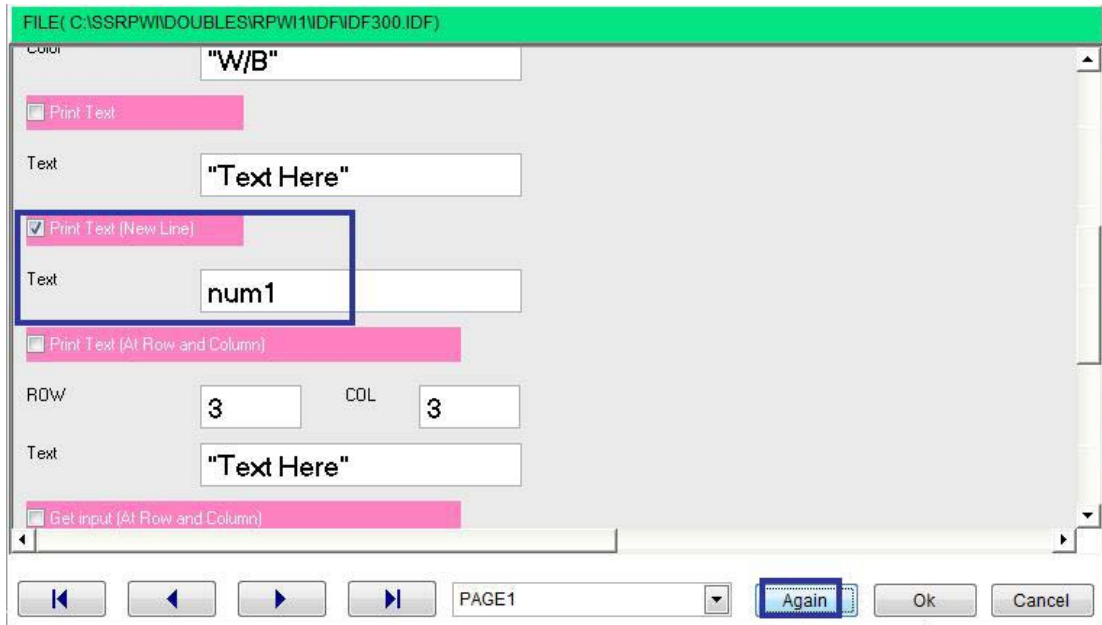
Domain (xBase) Component (Get Information)



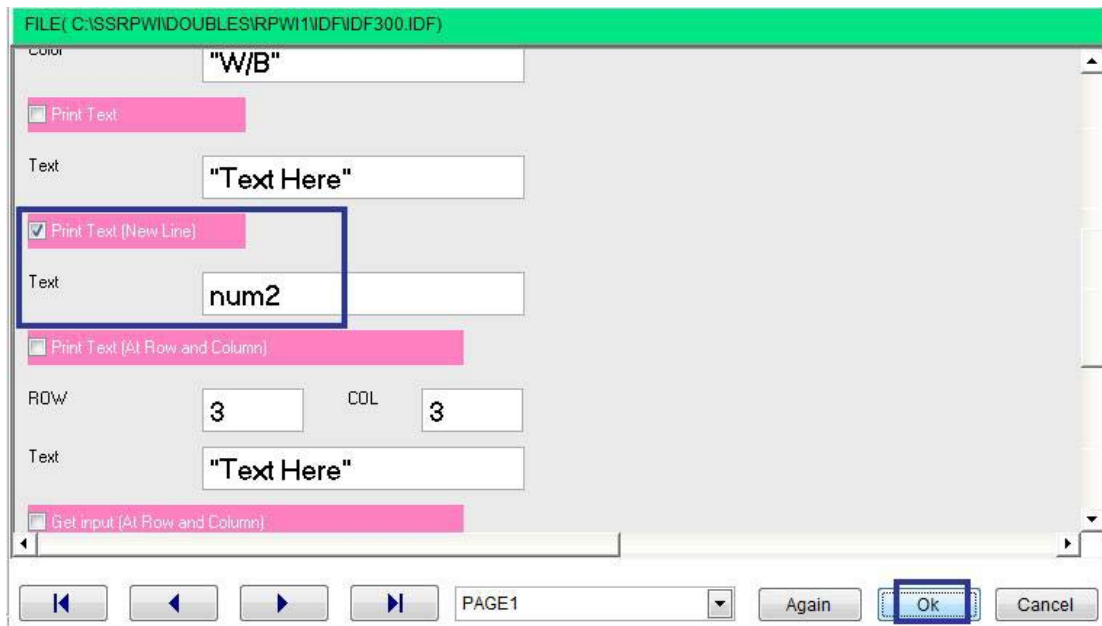
Interaction Page



Interaction Page



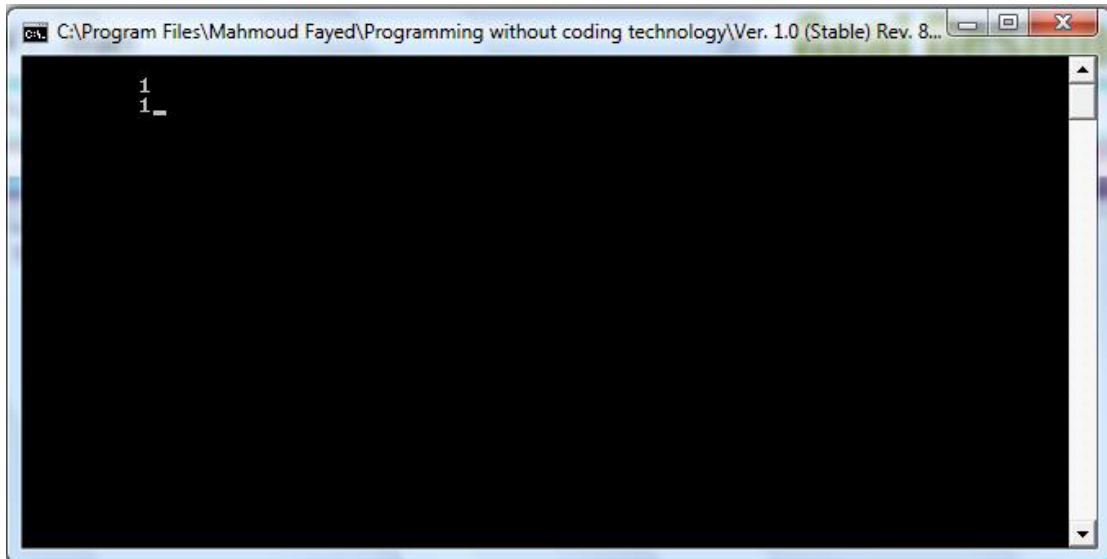
Interaction Page



Interaction Page



Final Steps Tree



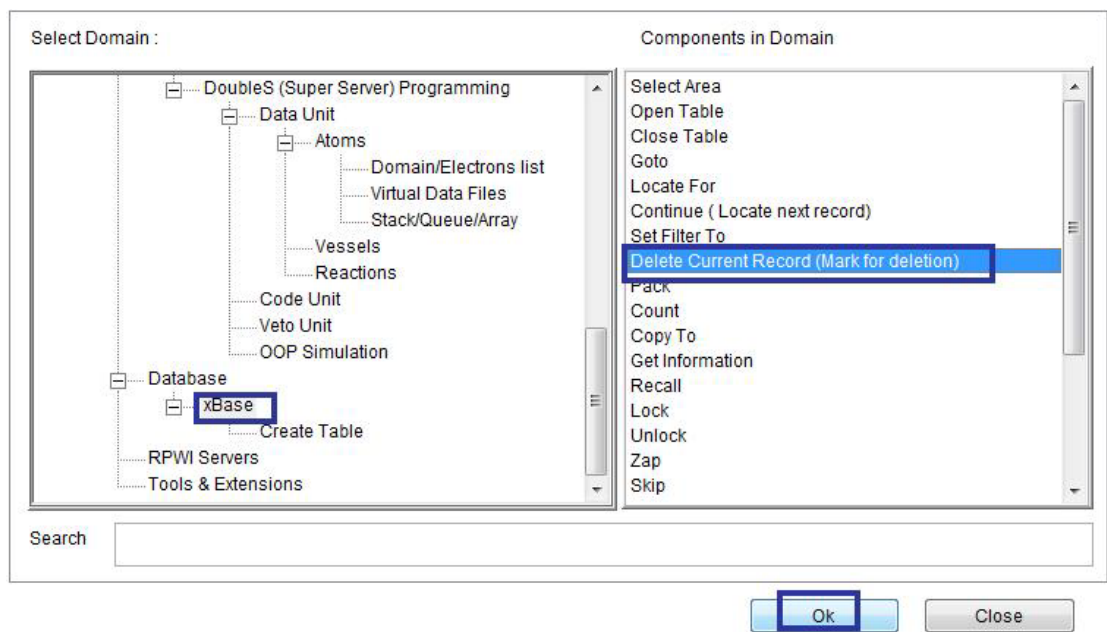
The Final Application

## Modify record

Be sure that this record is the active record, and then you can alter it using  
 Domain (xBase)  
 Component (Replace)

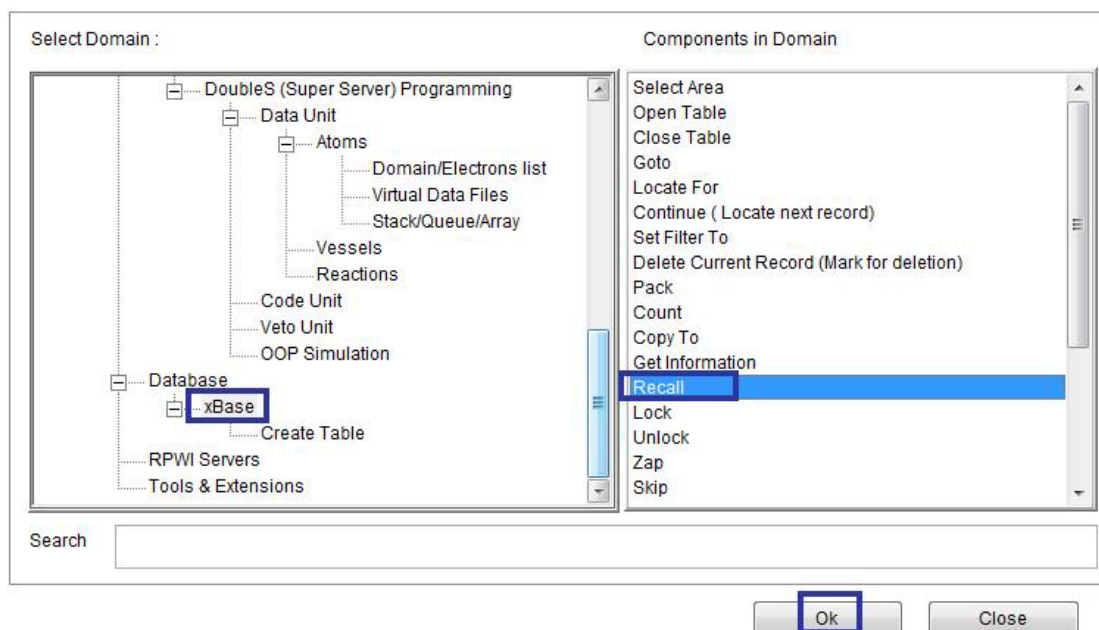
## Deleting records

Be sure that this record is the active record, and then you can mark it for deletion using  
 Domain (xBase)  
 Component (Delete Current Record – mark for deletion)



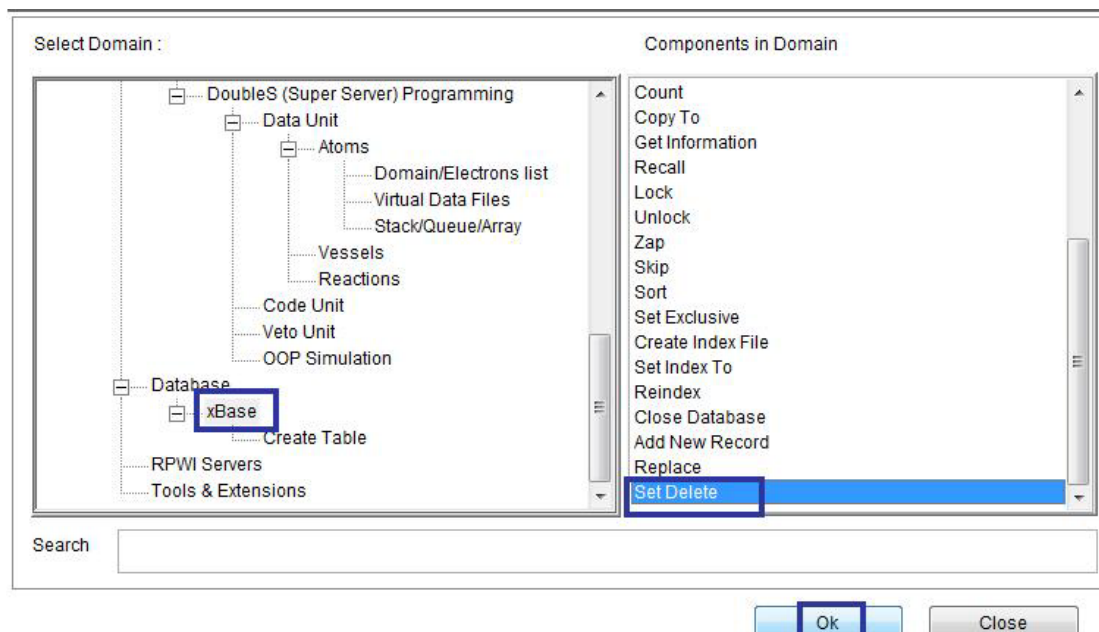
Domain (xBase) Component (Delete Current Record – mark for deletion)

You can recall the deleted record using  
Domain (xBASE)  
Component (Recall)

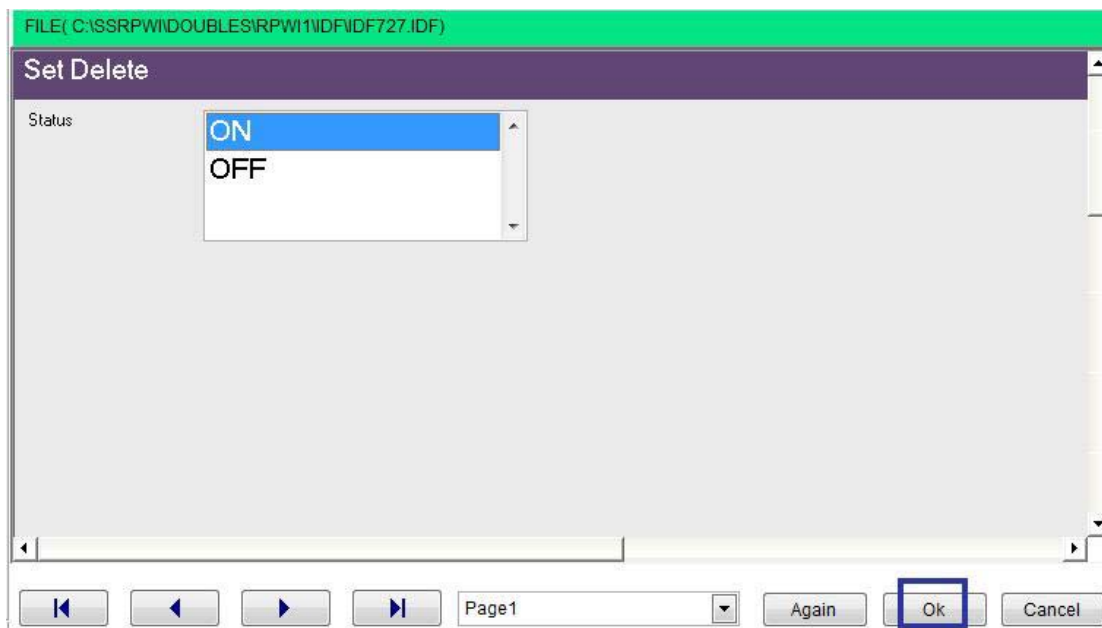


Domain (xBASE) Component (Recall)

To exclude the deleted records, you need to set delete on  
And to include the deleted records, you need to set delete off  
Domain (xBASE)  
Component (Set Delete)



Domain (xBASE) Component (Set Delete)

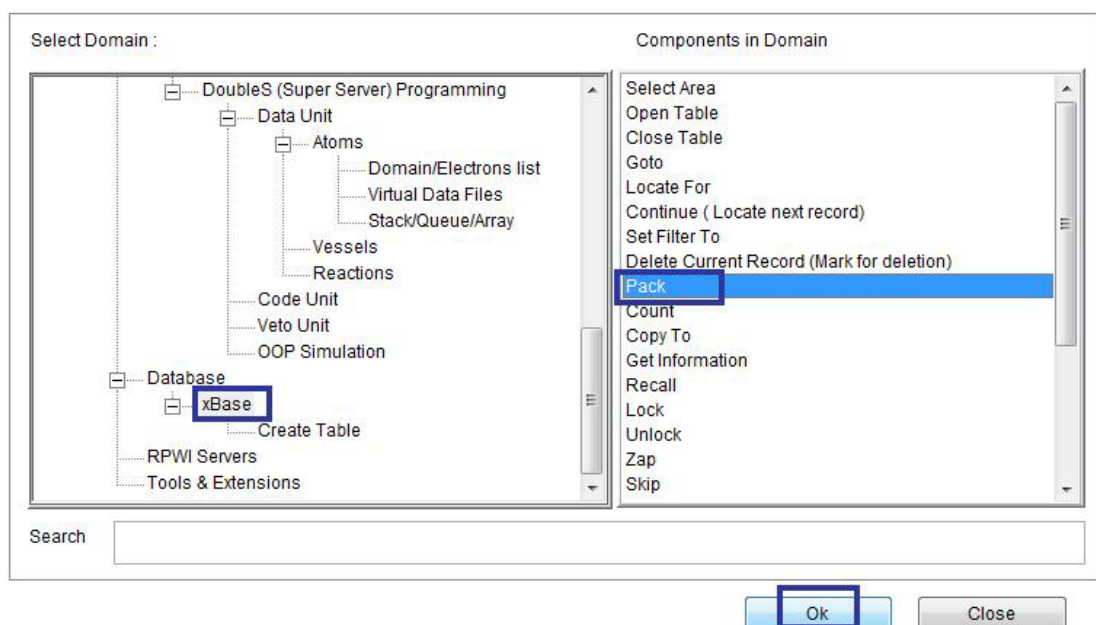


Interaction Page

To pack database file (deleting records marked for deletion)

Domain (xBase)

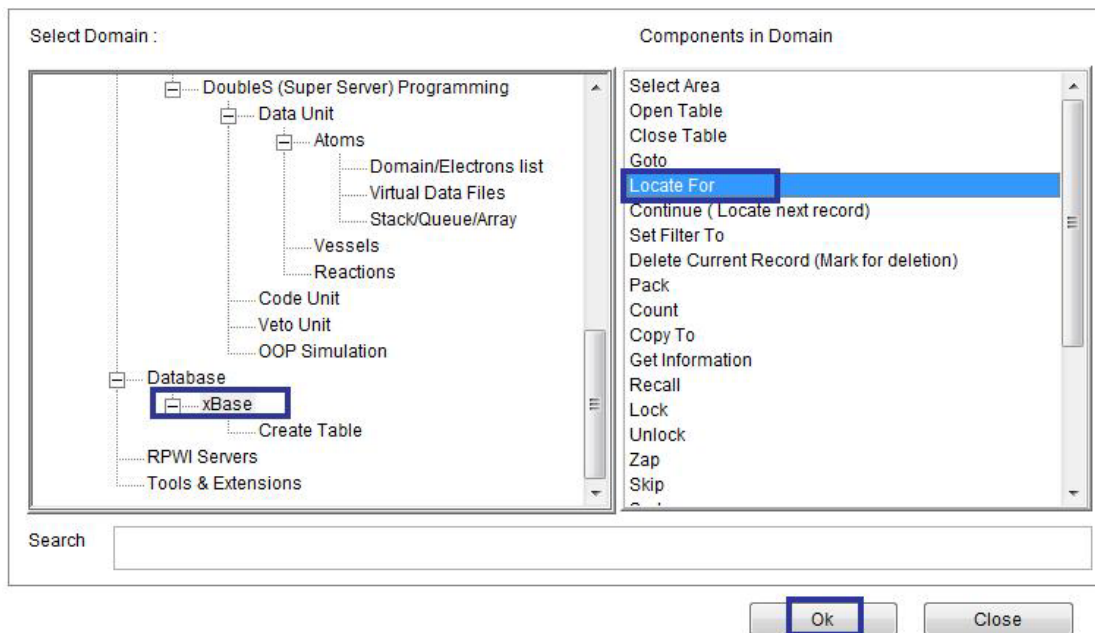
Component (Pack)



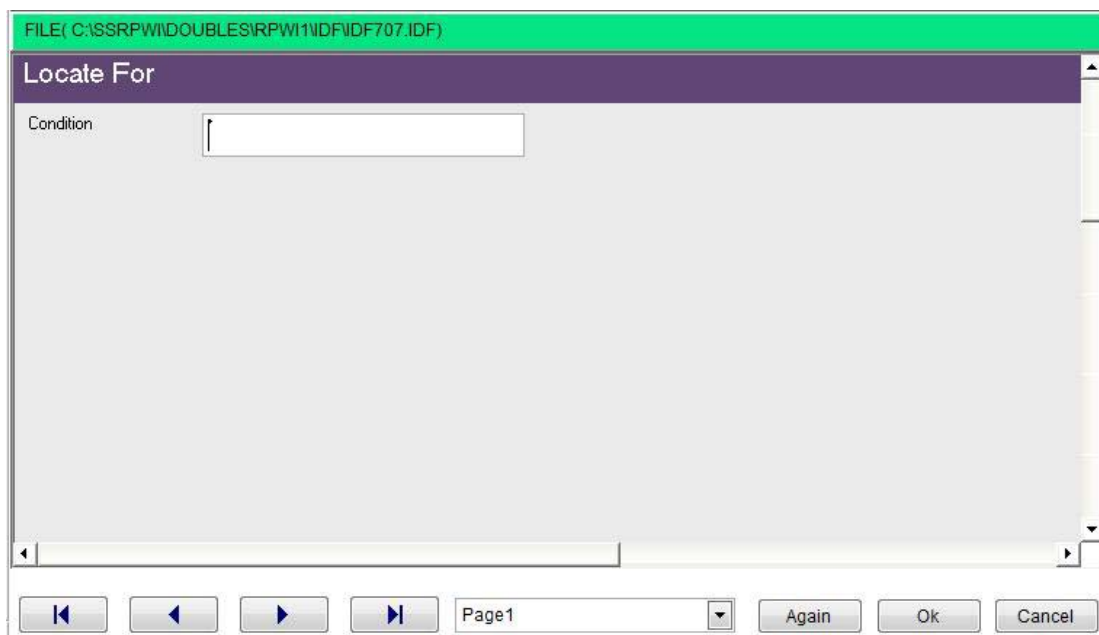
Domain (xBase) Component (Pack)

## Search

You can locate record which match a condition



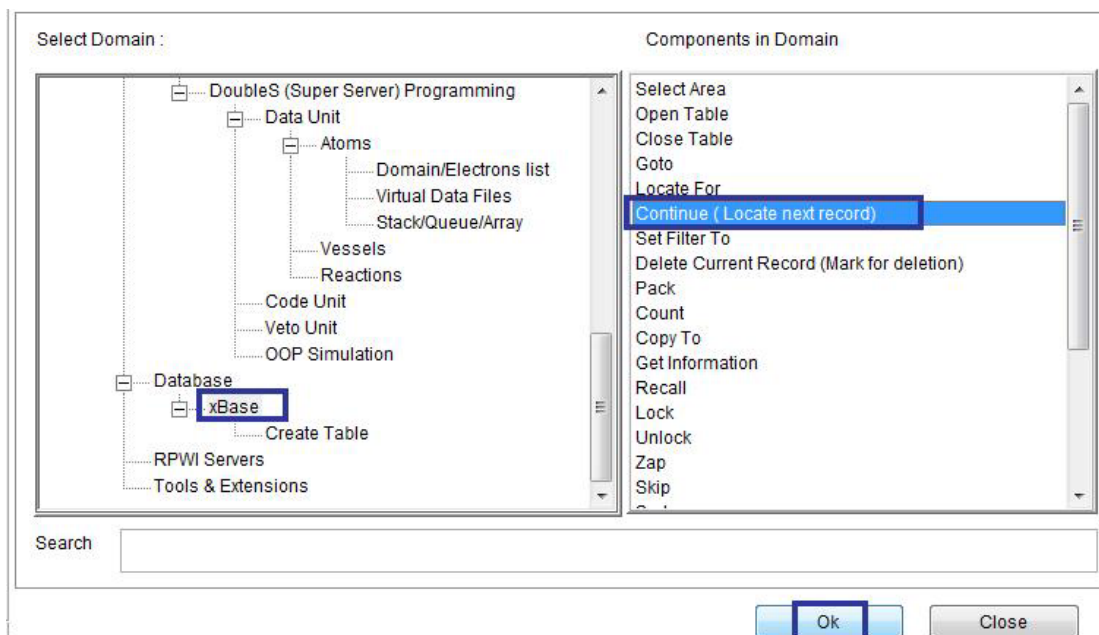
Domain(xBase) Component (Locate For)



Interaction Page

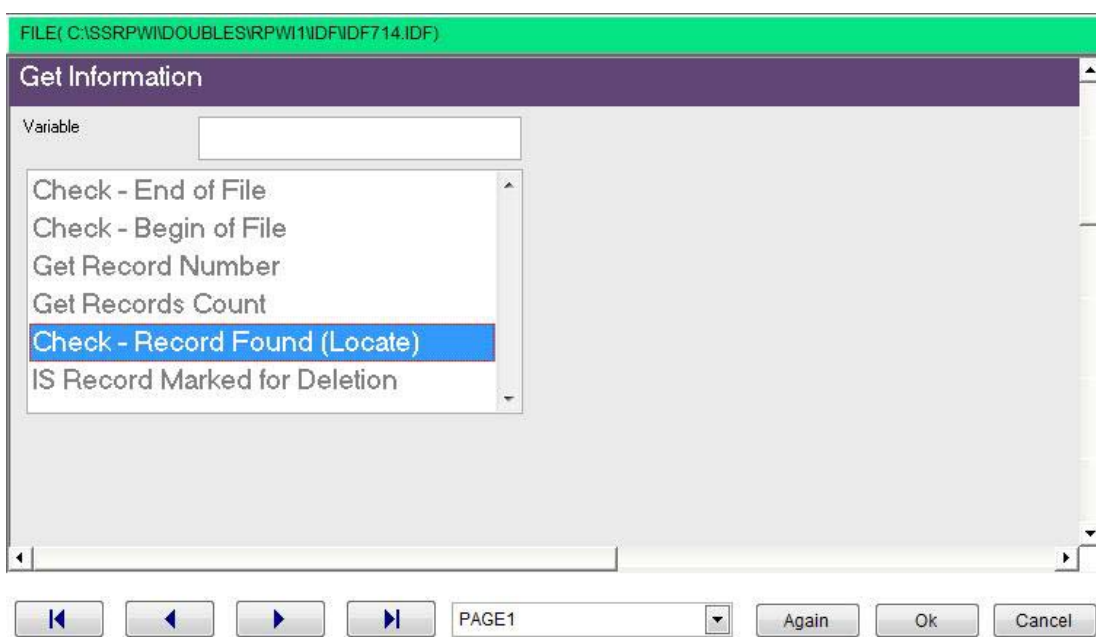
Also you can continue search to locate another record





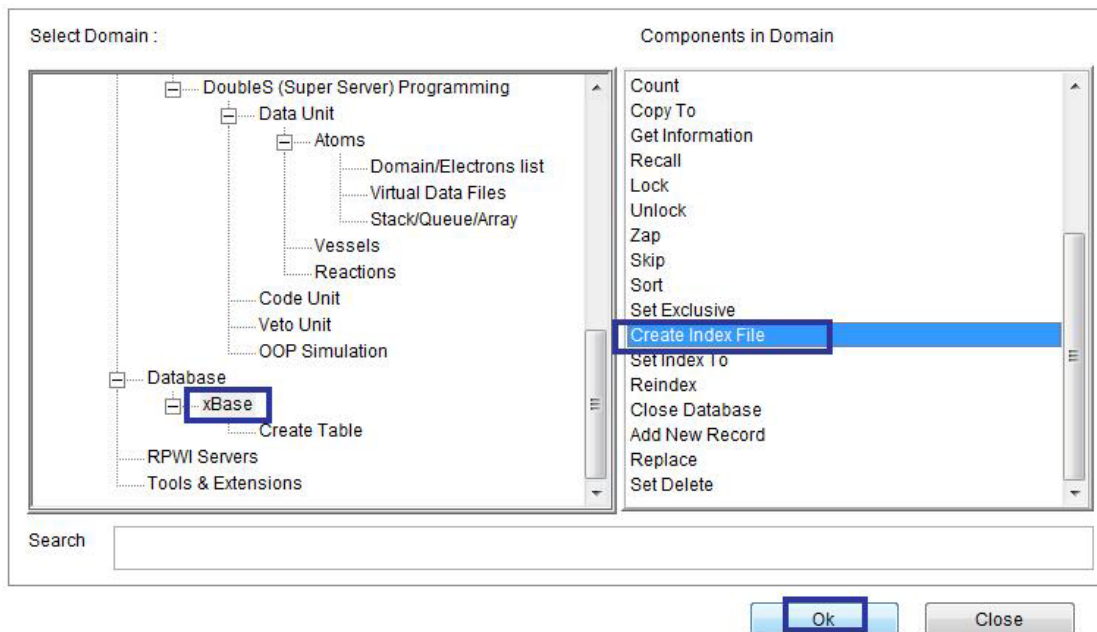
Domain (xBase) Component (Continue)

And after locate of continue you can know if the record is found or not

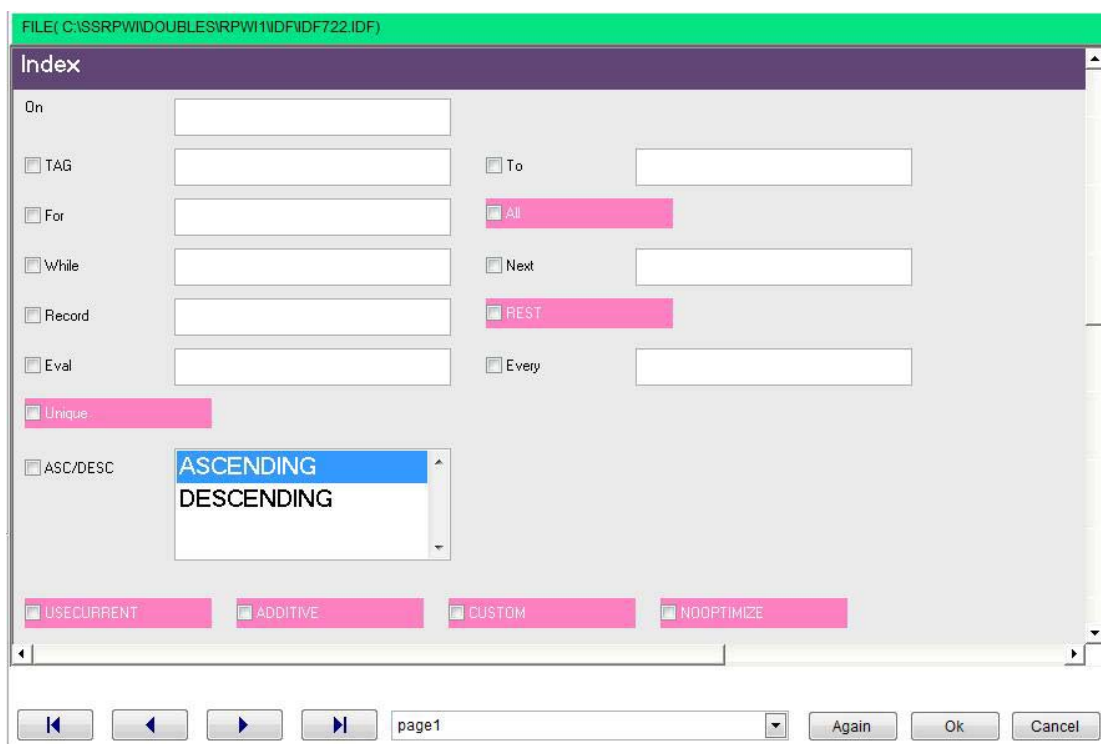


Interaction Page

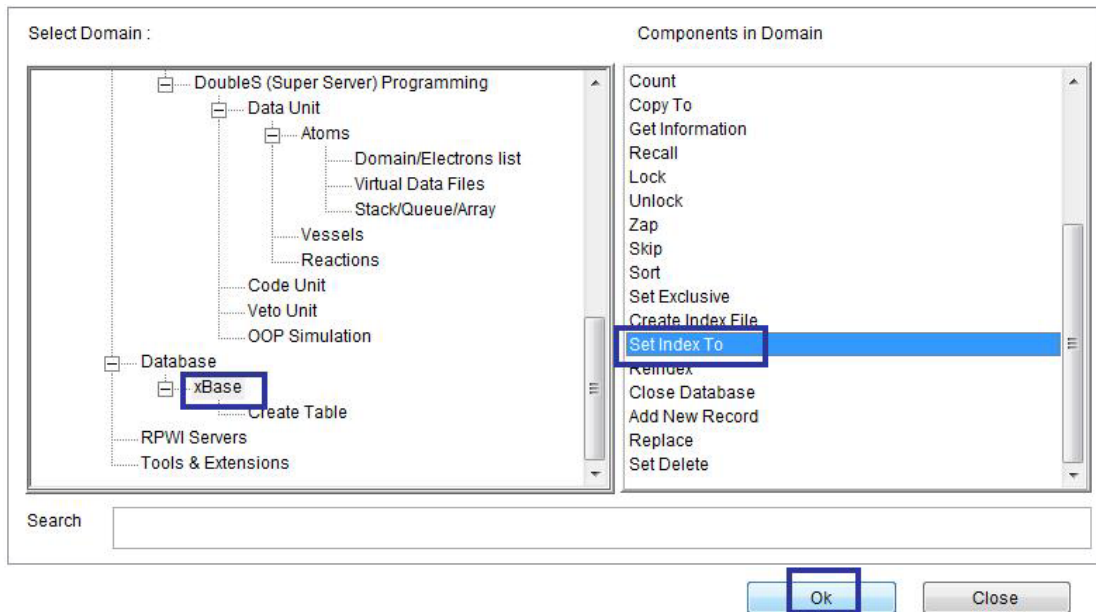
Index Files



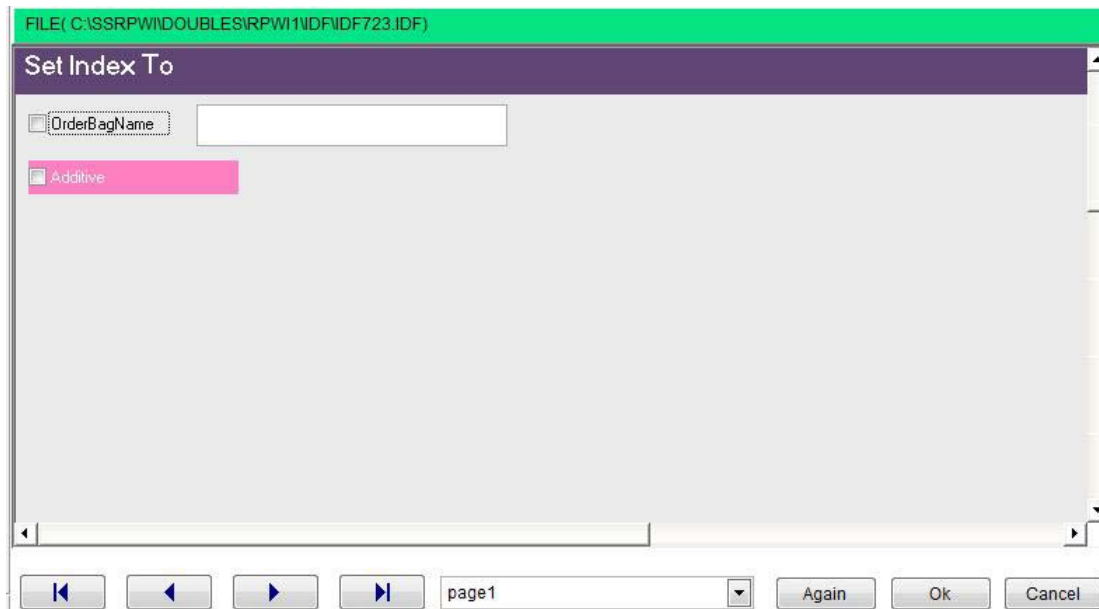
Domain (xBase) Component (Create Index File)



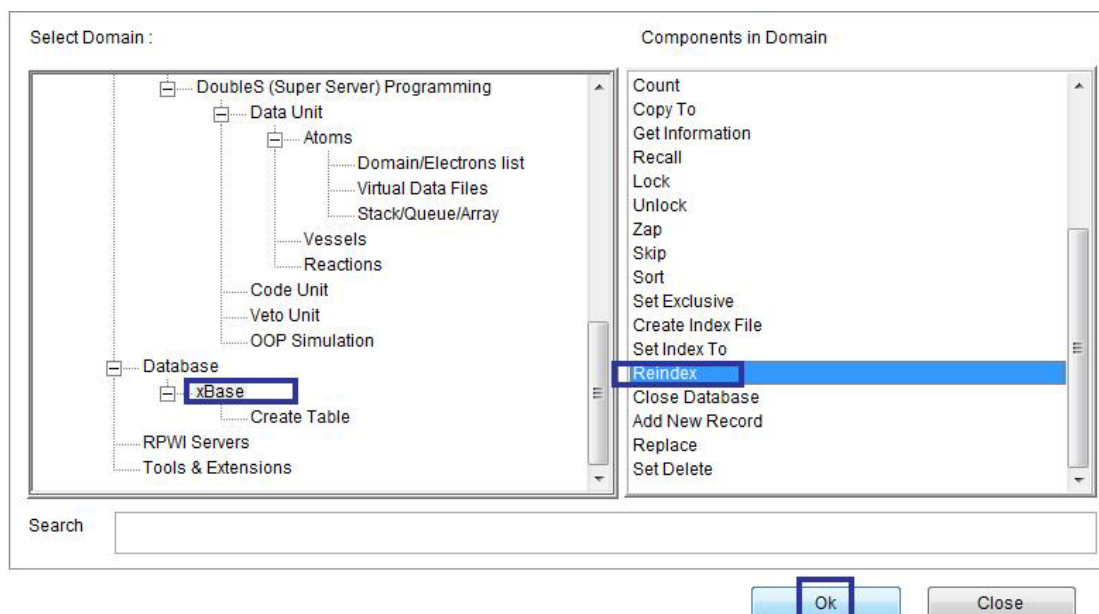
Interaction Page



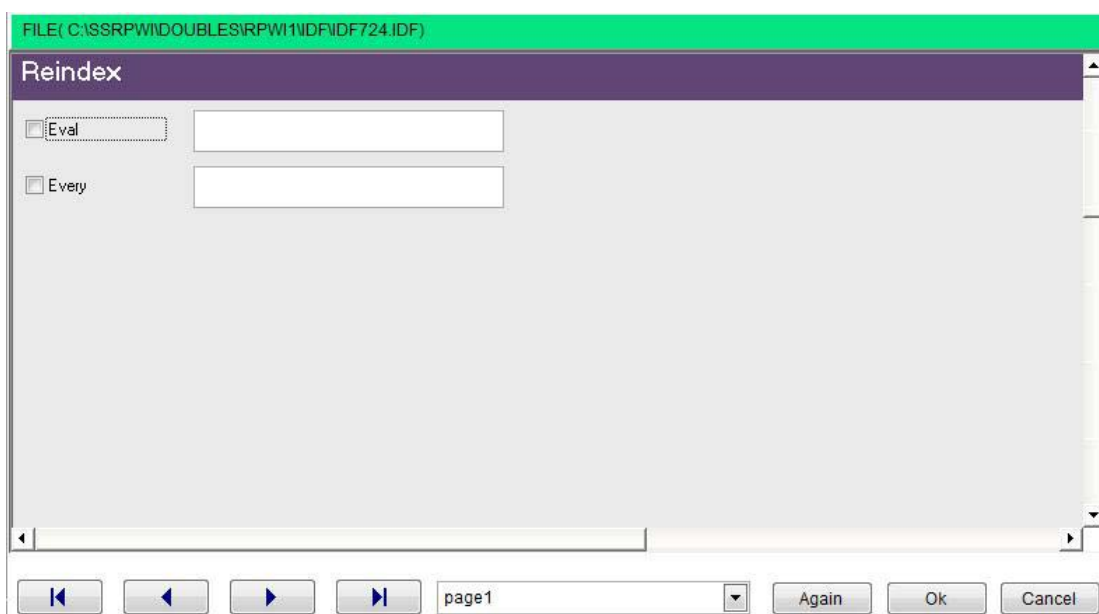
Domain (xBase) Component (Set Index To)



Interaction Page



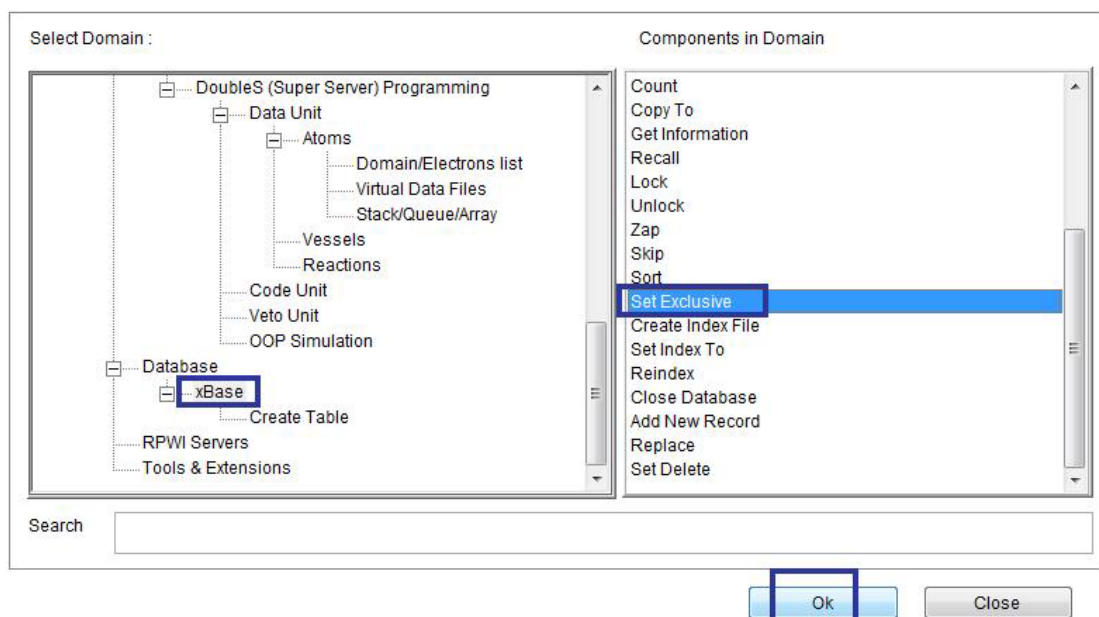
Domain (xBase) Component (Reindex)



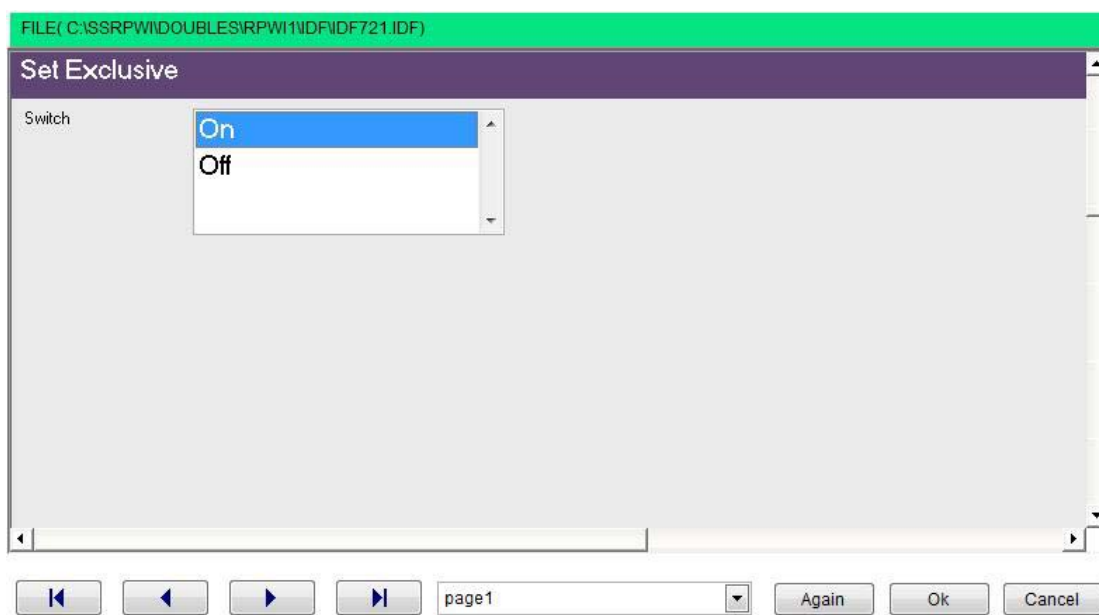
Interaction Page

## Shared Data

To open database files as shared table  
 You need to set exclusive off before opening the table



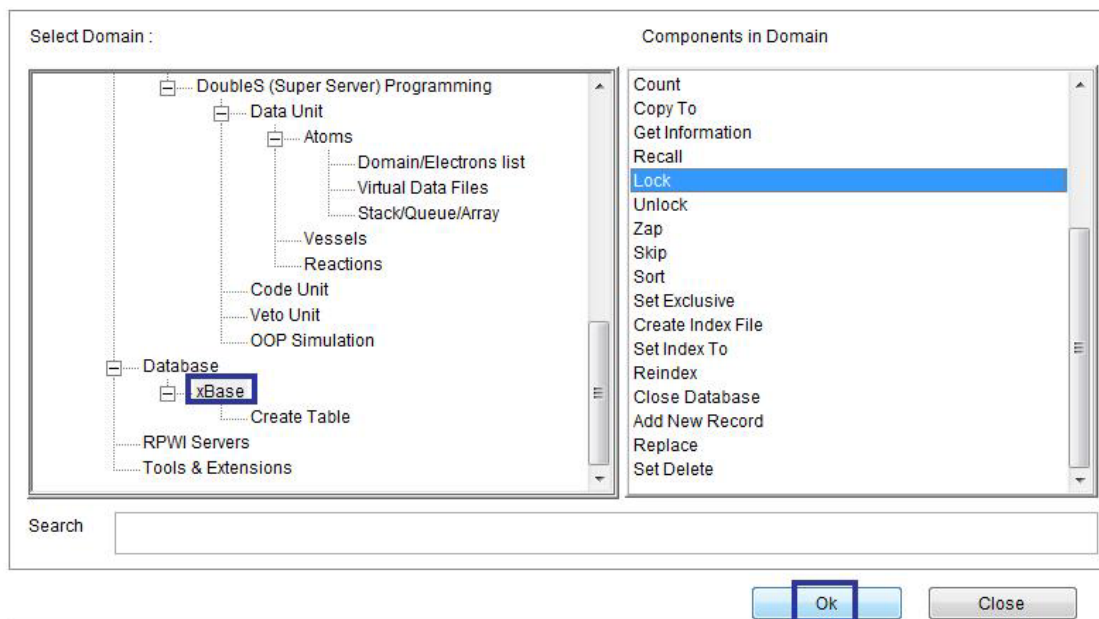
Domain (xBase) Component (Set Exclusive)



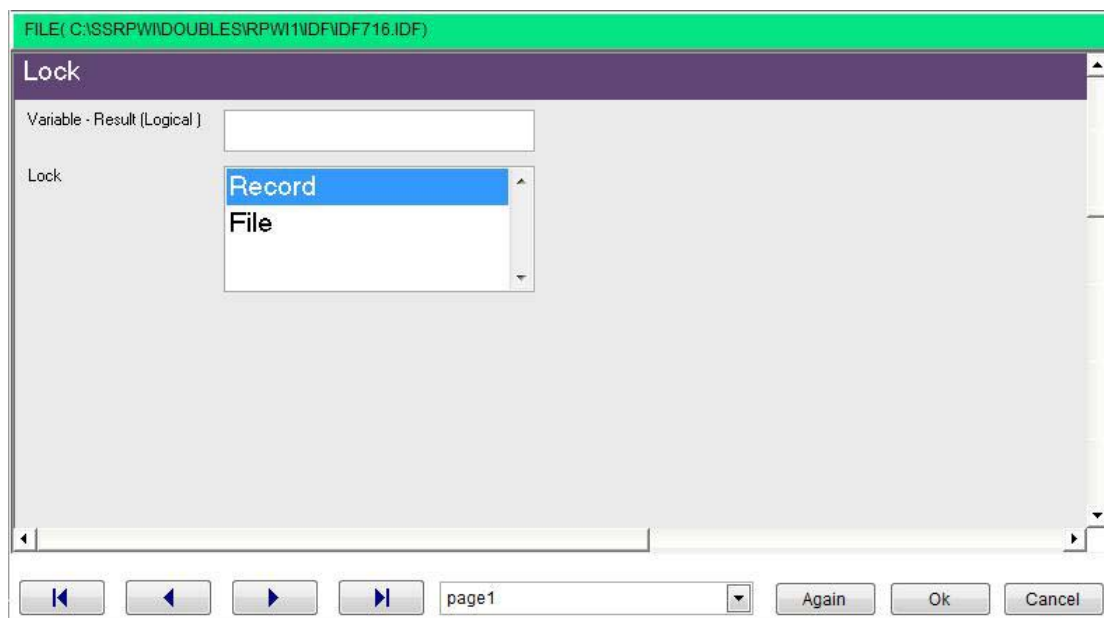
Interaction Page

To modify record data in shared environment you need to lock the record before altering the data and unlocking the record after altering the data

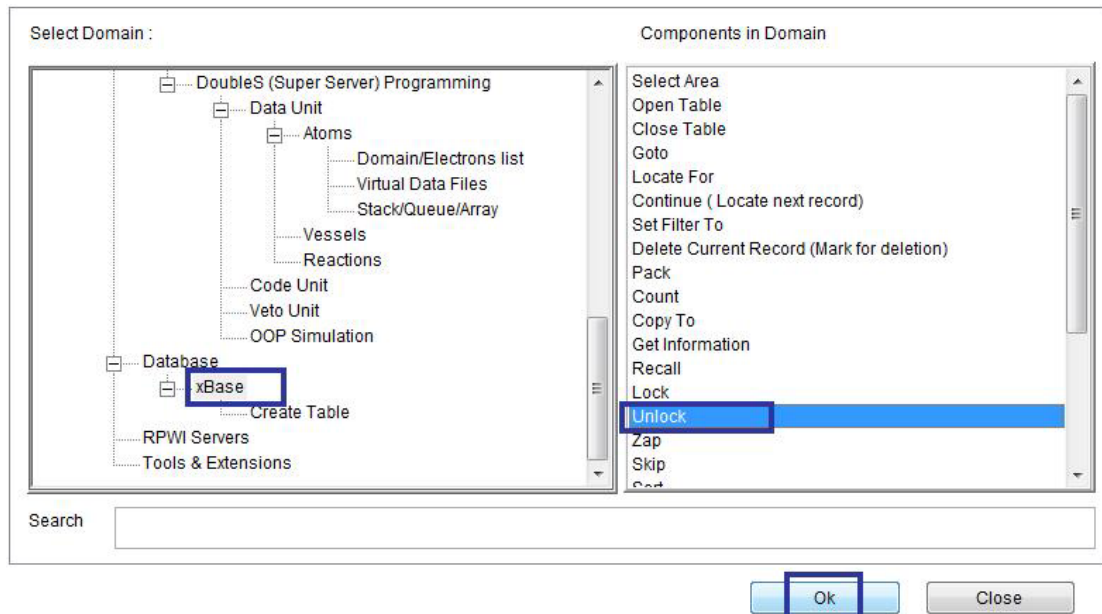
Also you can lock and unlock the data files (all records) before operations that alter all records.



Domain (xBase) Component (Lock)



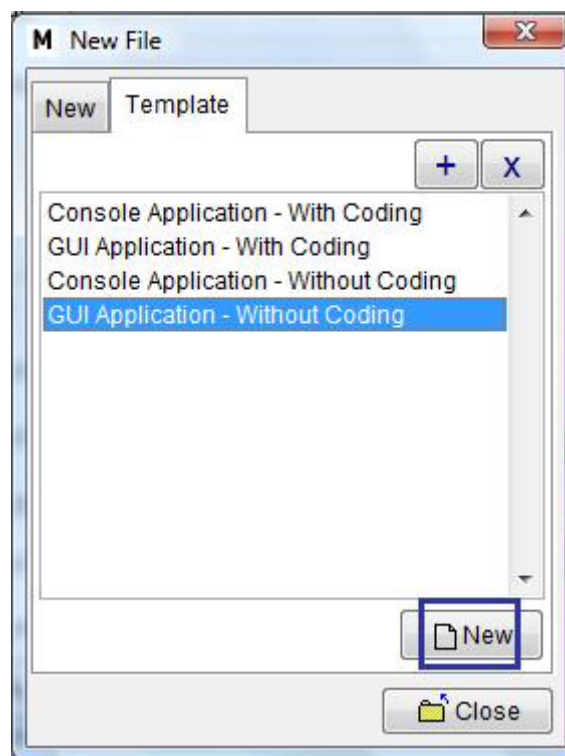
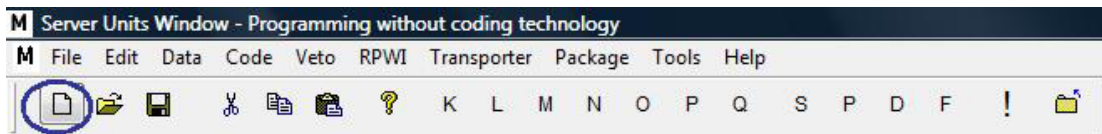
Interaction Page



Domain (xBase) Component (Unlock)

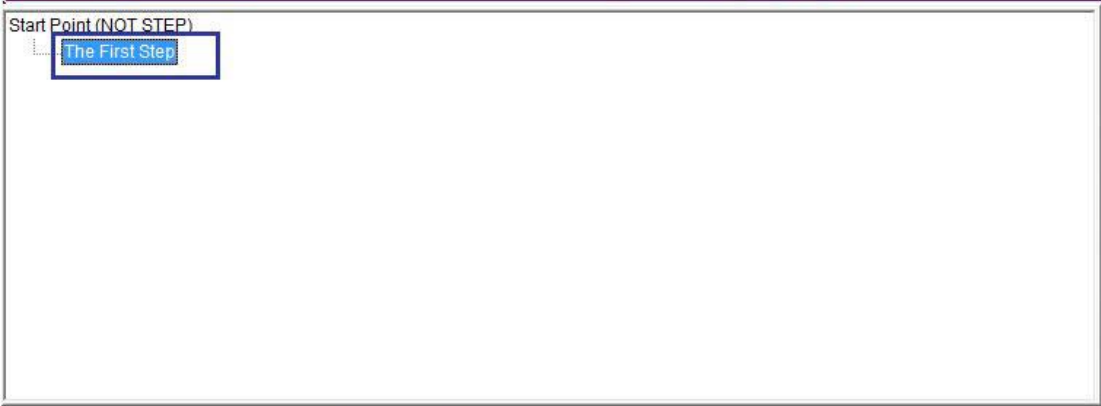
## GUI Applications

We are going to create our first GUI application



Start Point (NOT STEP)\The First Step

Steps Tree Step Details Based on Programming Language Behind the scene



Buttons: New Step, Delete Step, **Interact**, Edit Step, Ignore (Disable) Step, Modify, Form Designer, Close

Select Domain :

Components in Domain

- Define New Window
- Window Events
- Window Class
- Load/Activate Window/Form
- Window/Object Right-To-Left
- Erase Window

Search:

Buttons: **Ok**, Close

Domain (Windows) Component (Define New Window)



FILE( C:\SSRPWIDOBLES\RPWI1\NDFIDF1.IDF)

### Define New Window

Top: 10    Width: 500  
 Left: 10    Height: 400  
 Name: win1

To Define new window , you need at least to assign value to Top,Left,Width,Height & Name

### Window Properties (Optional)

Window Title: "Hello World"

Window Icon:

Window Type: MAIN  
 CHILD  
 MDI

Cursor:

Virtual Width:     Virtual Height:

Notify Icon:

Notify ToolTip:

NO SHOW     NO AUTORELEASE  
 TOP MOST     NO MINIMIZE  
 NO SYSMENU     NO MAXIMIZE  
 NO CAPTION     NO SIZE  
 HELP BUTTON     Activate Window

Back Color: {236,233,216}

Font:    Size:

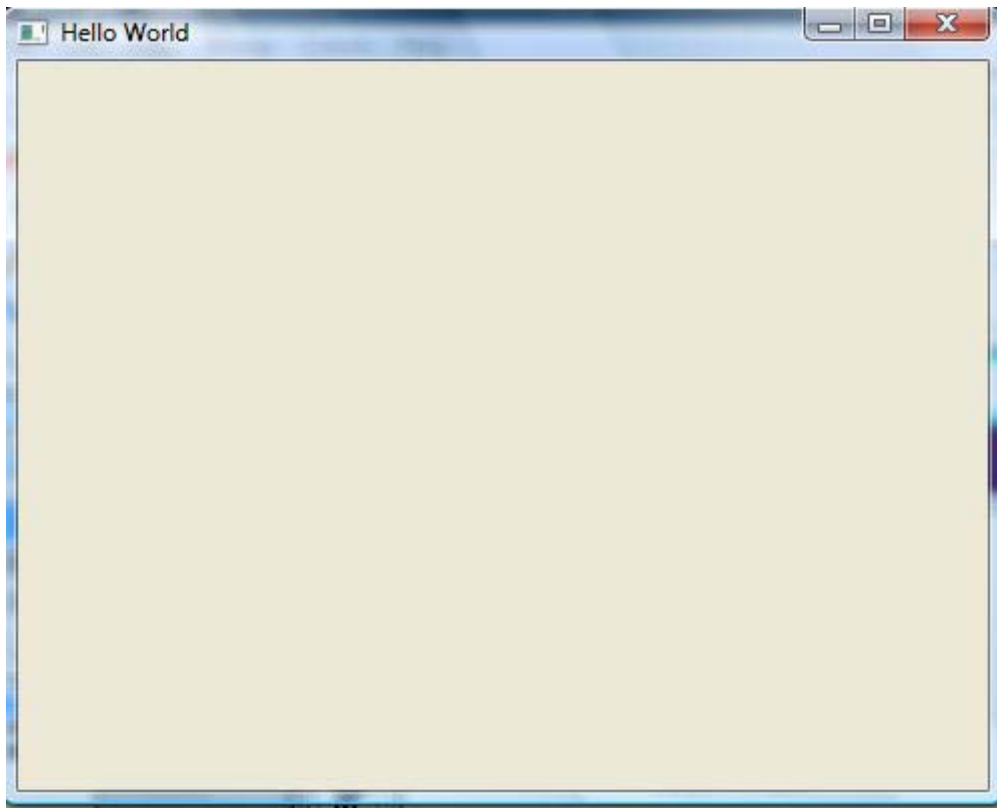
Navigation: [Back] [Previous] [Next] [Forward] Page1 [Again] **Ok** [Cancel]

Interaction Page



Steps Tree





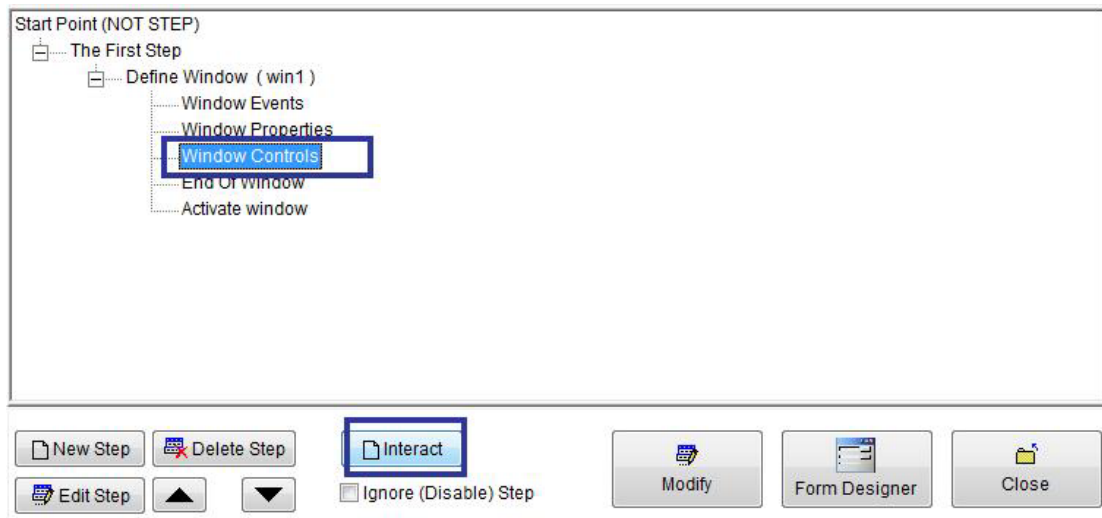
The final application

## GUI – Controls (Objects, Events & Classes)

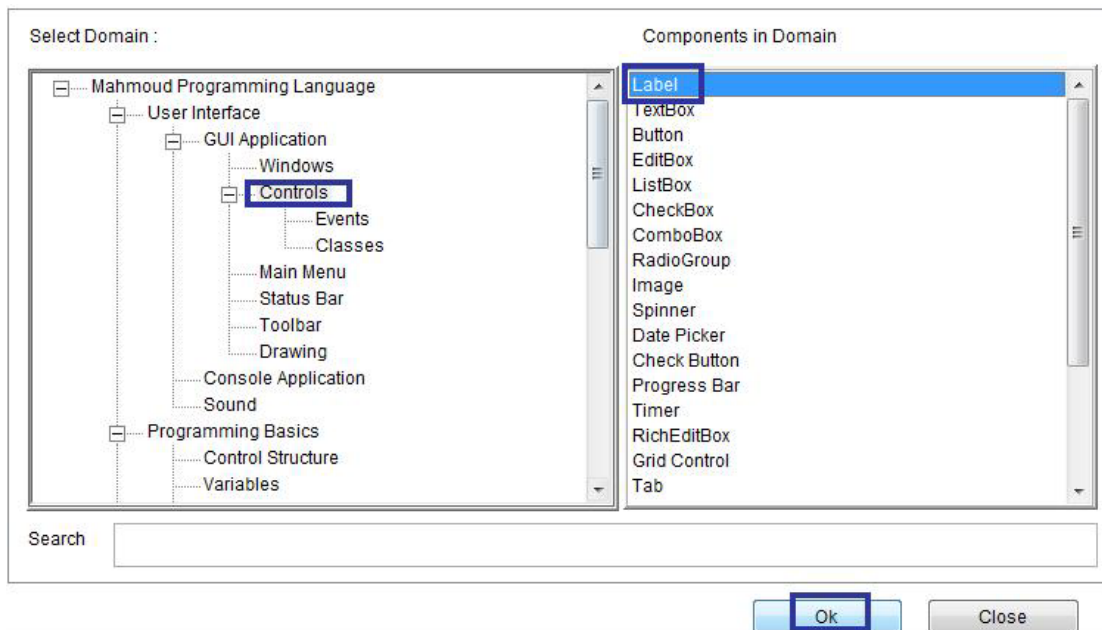
- Label
- TextBox
- Button
- EditText
- Listbox
- CheckBox
- ComboBox
- RadioGroup
- Image
- Spinner
- DatePicker
- CheckButton
- ProgressBar
- Timer
- RichEditText
- Grid
- Tab
- Tab Page
- Tree
- Slider
- Frame

- HyperLink
- AnimateBox
- Browse

## Adding Control



Steps Tree



Domain (Controls) Component (Label)

FILE ( C:\SSRPW\IDOBLES\RPWI1\IDF\IDF2.IDF )

### Define New Label

Top  Left

Caption

Name

To define new label , you need at least to determine  
Top, Left, Caption & Name

### Label Properties (Optional)

ID

Parent

Width   Height

Tool Tip

Back Color

Border

Vertical Scroll

Horizontal Scroll

Invisible

Italic

ClientEdge

Autotsize

Transparent

Strickout

Bold

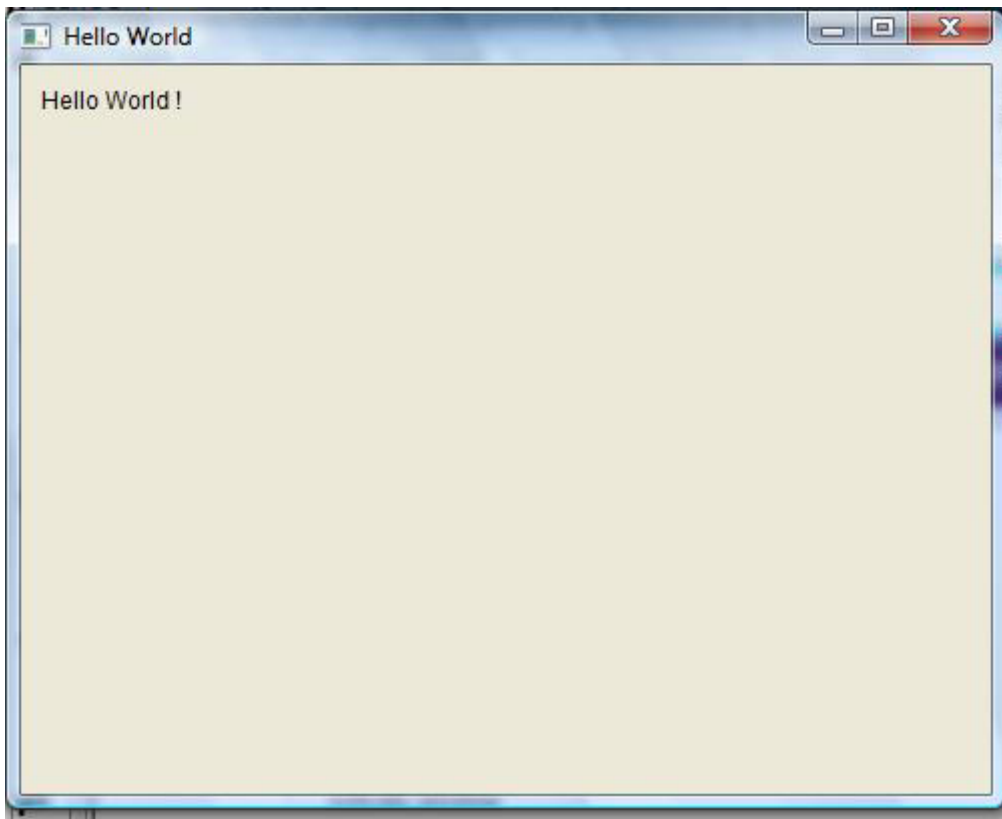
Underline

Navigation: [Previous] [Next] [Page 1] [Again] **Ok** [Cancel]

Interaction Page

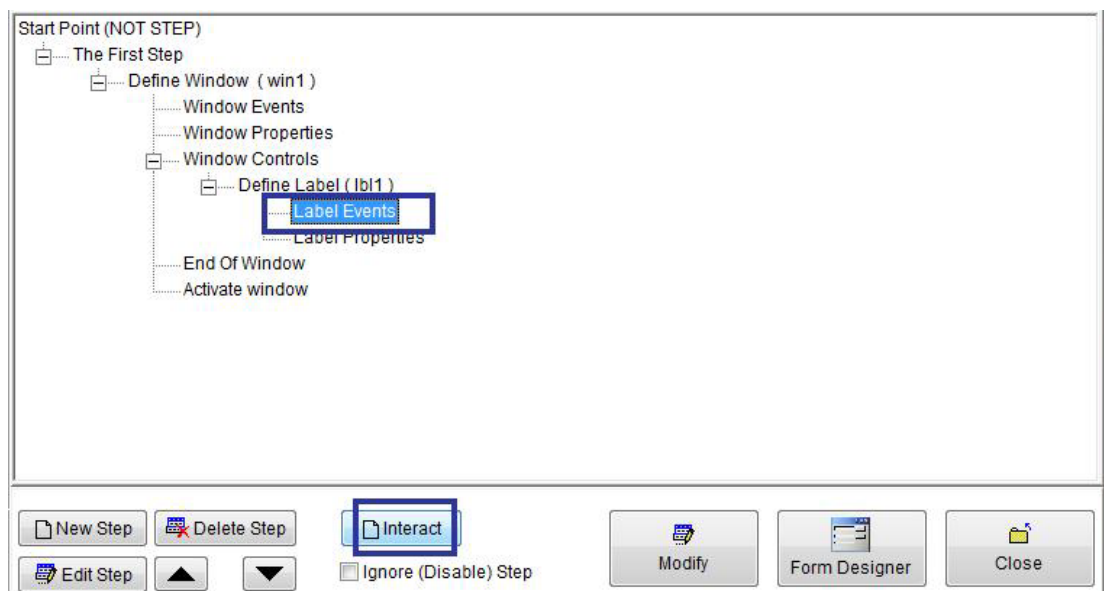


Final Steps Tree

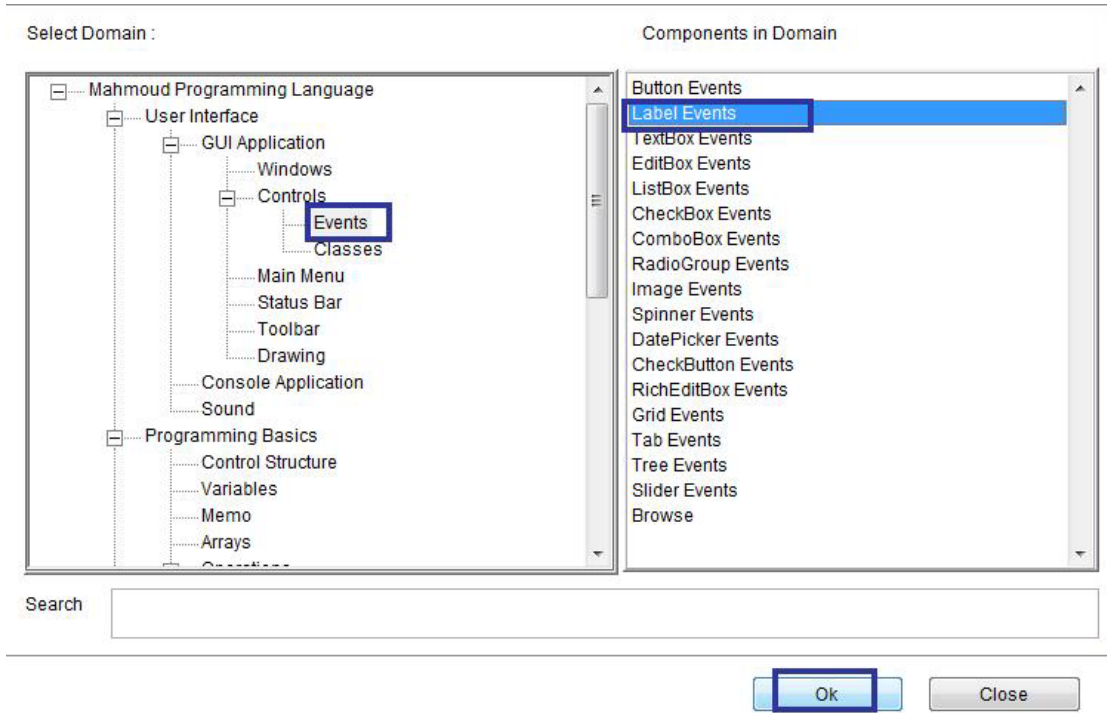


The Final Application

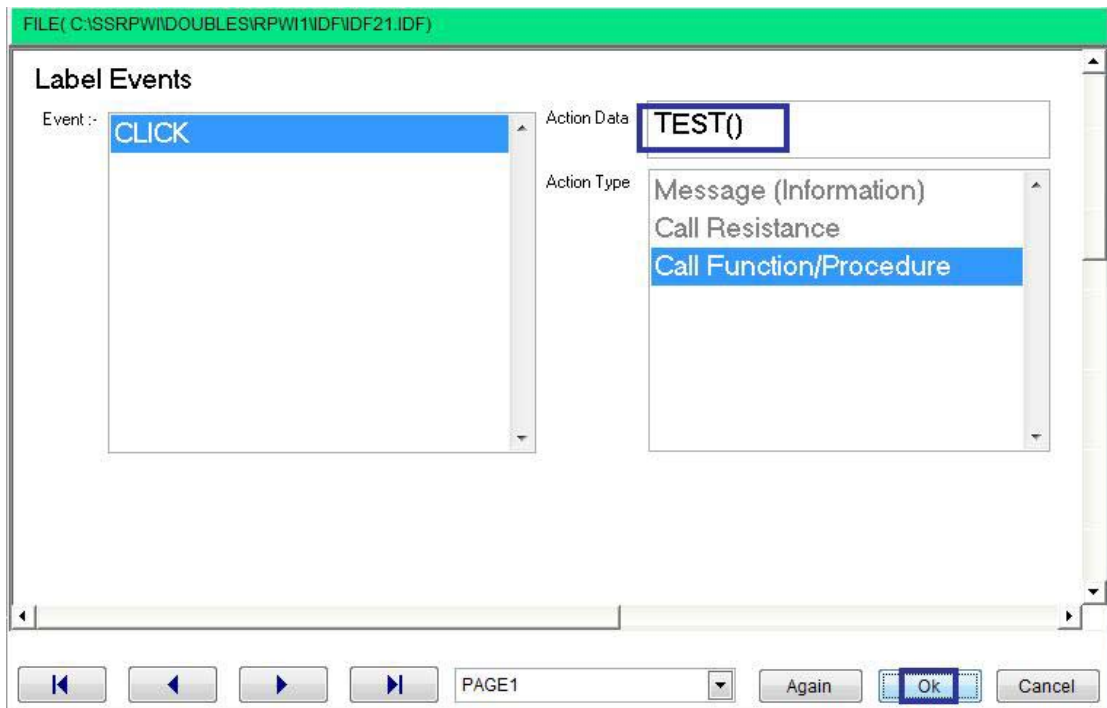
## Control Events & Control Class



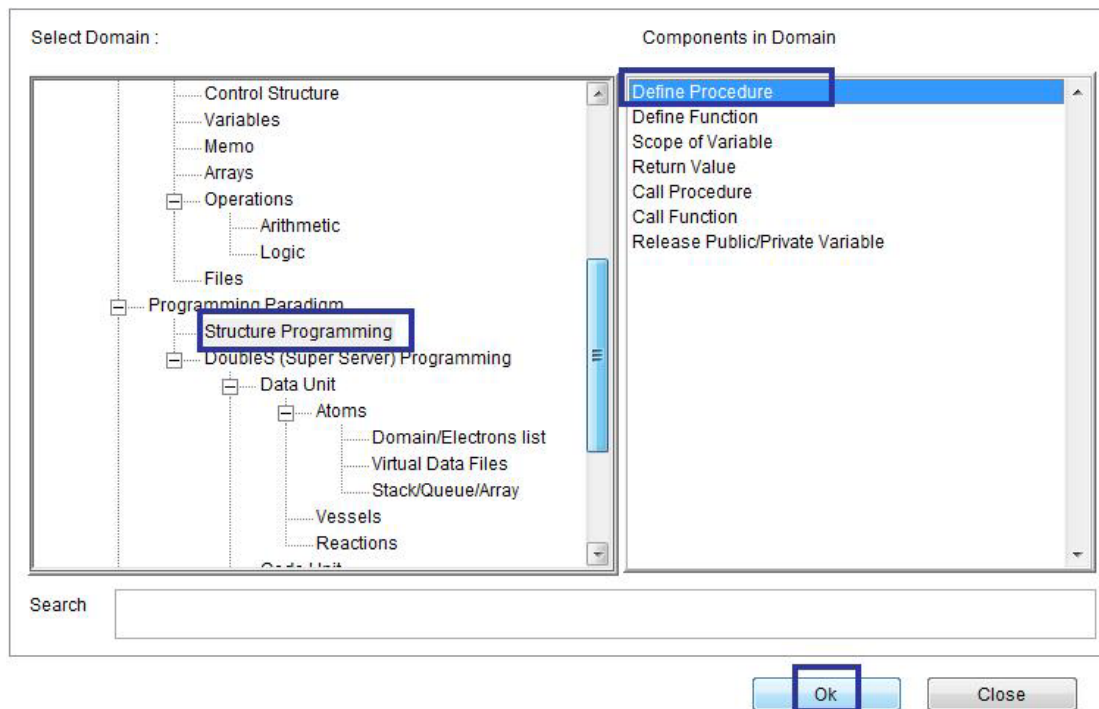
Steps Tree



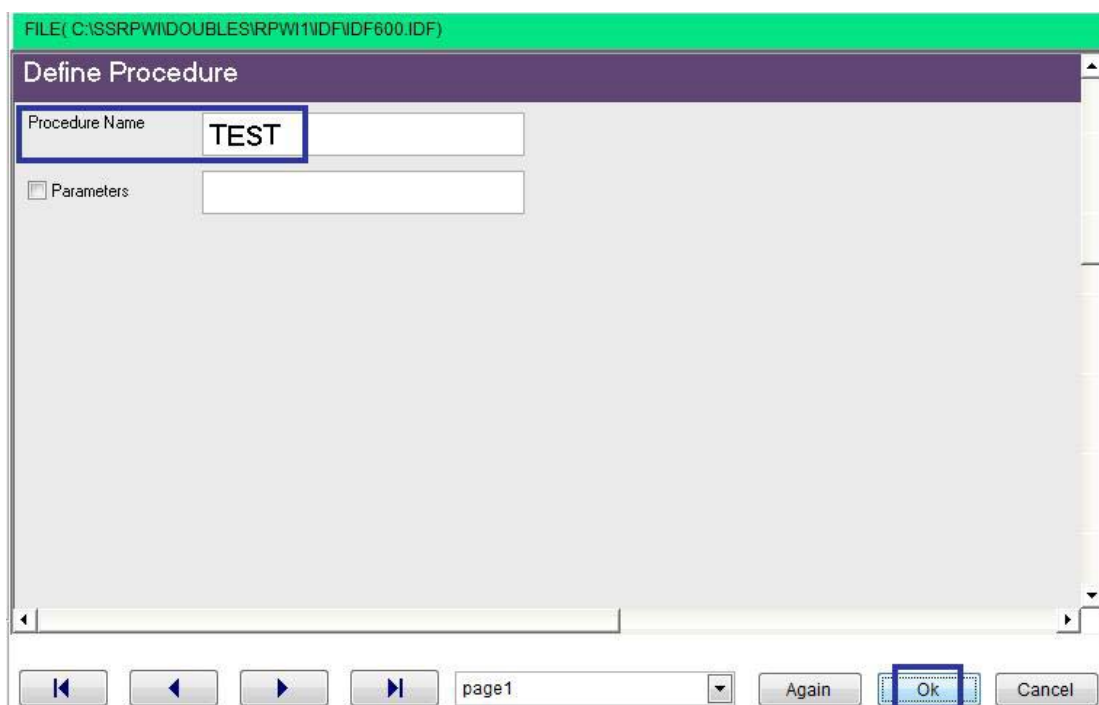
Domain(Events) Component (Label Events)



Interaction Page



Domain (Structure Programming) Component (Define Procedure)



Interaction Page

Start Point (NOT STEP)

- [-] The First Step
  - [-] Define Window ( win1 )
    - Window Events
    - Window Properties
    - [-] Window Controls
      - [-] Define Label ( lbl1 )
        - [-] Label Events
          - Event: ON CLICK
        - Label Properties
    - End Of Window
    - Activate window
  - [-] Define Procedure TEST
    - Code Block
    - End of Procedure

Steps Tree

Select Domain :

- [-] Mahmoud Programming Language
  - [-] User Interface
    - [-] GUI Application
      - Windows
      - [-] Controls
        - Events
        - Classes
      - Main Menu
      - Status Bar
      - Toolbar
      - Drawing
    - [-] Console Application
    - Sound
    - [-] Programming Basics
      - Control Structure
      - Variables
      - Memo
      - Arrays

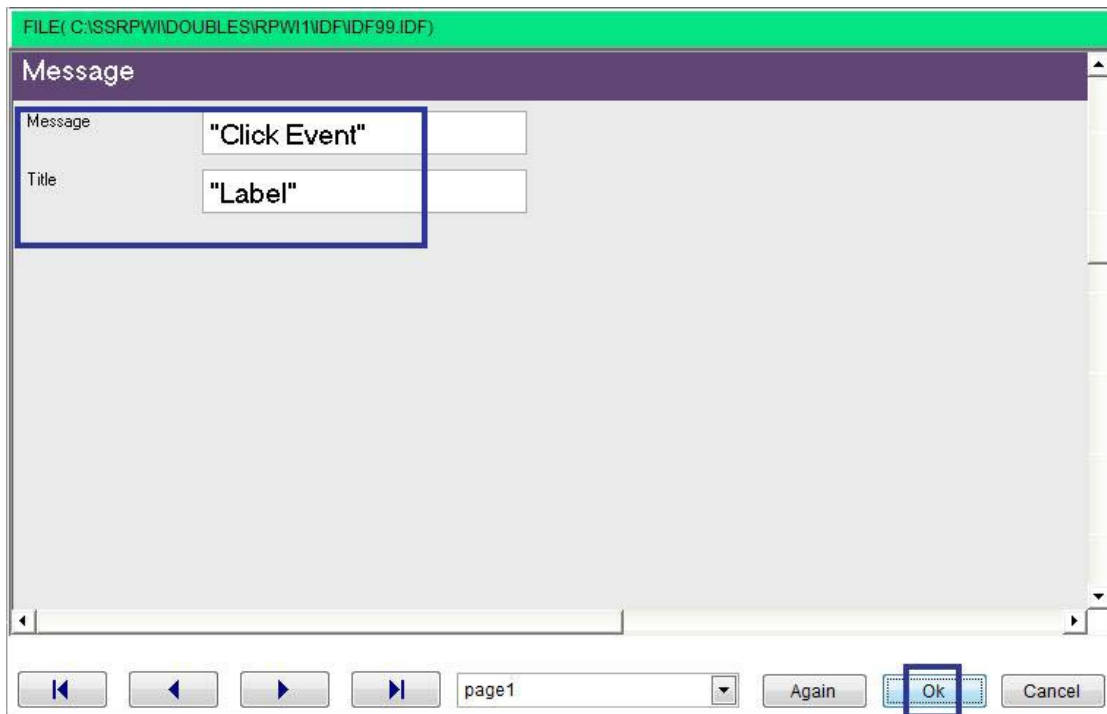
Components in Domain

- Show Message (Information)
- Input Box

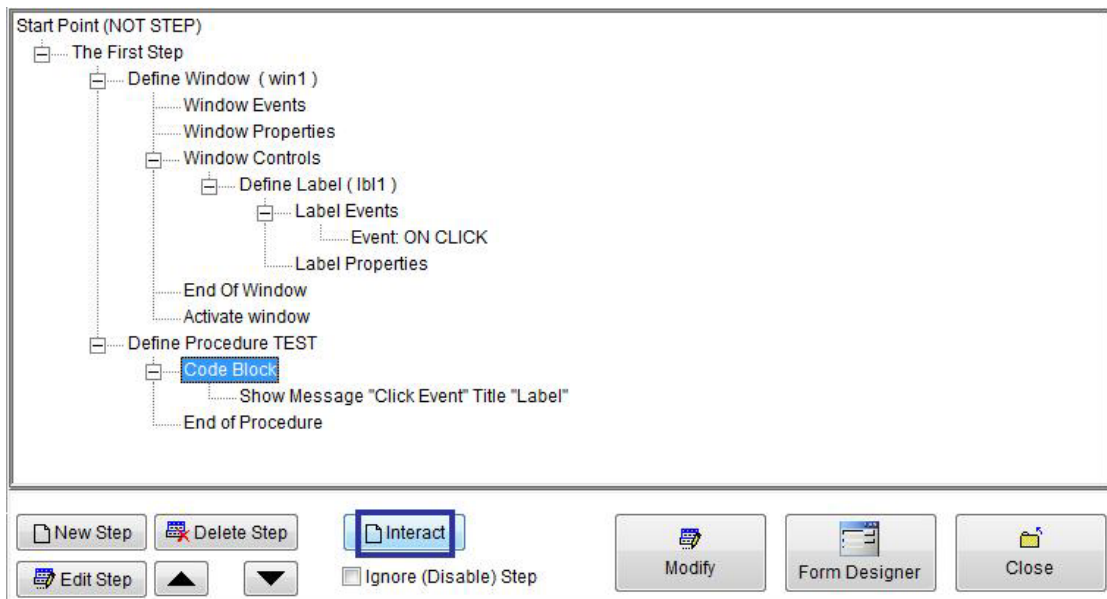
Search

Domain (GUI Application) Component (Show Message)

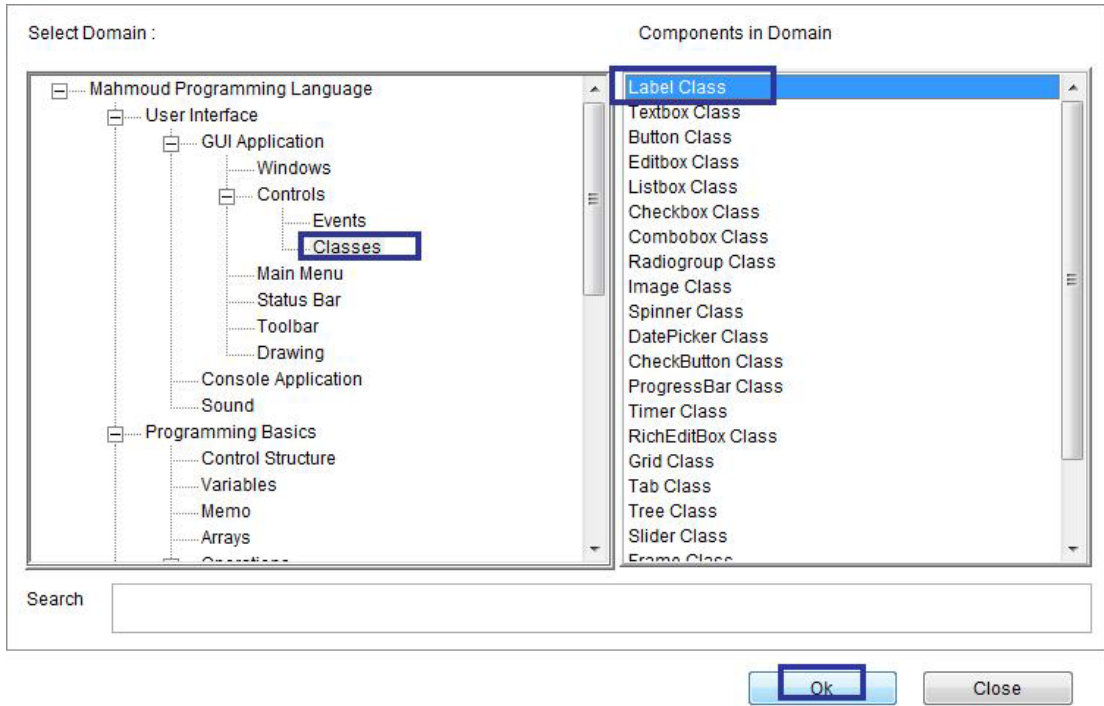




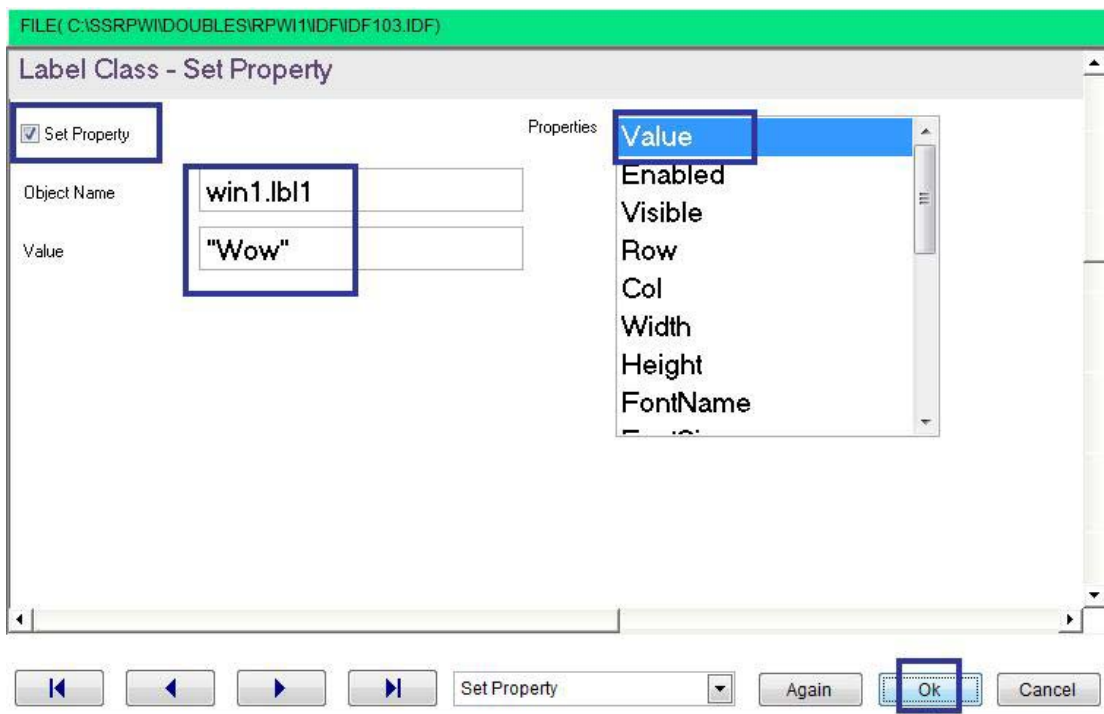
Interaction Page



Steps Tree



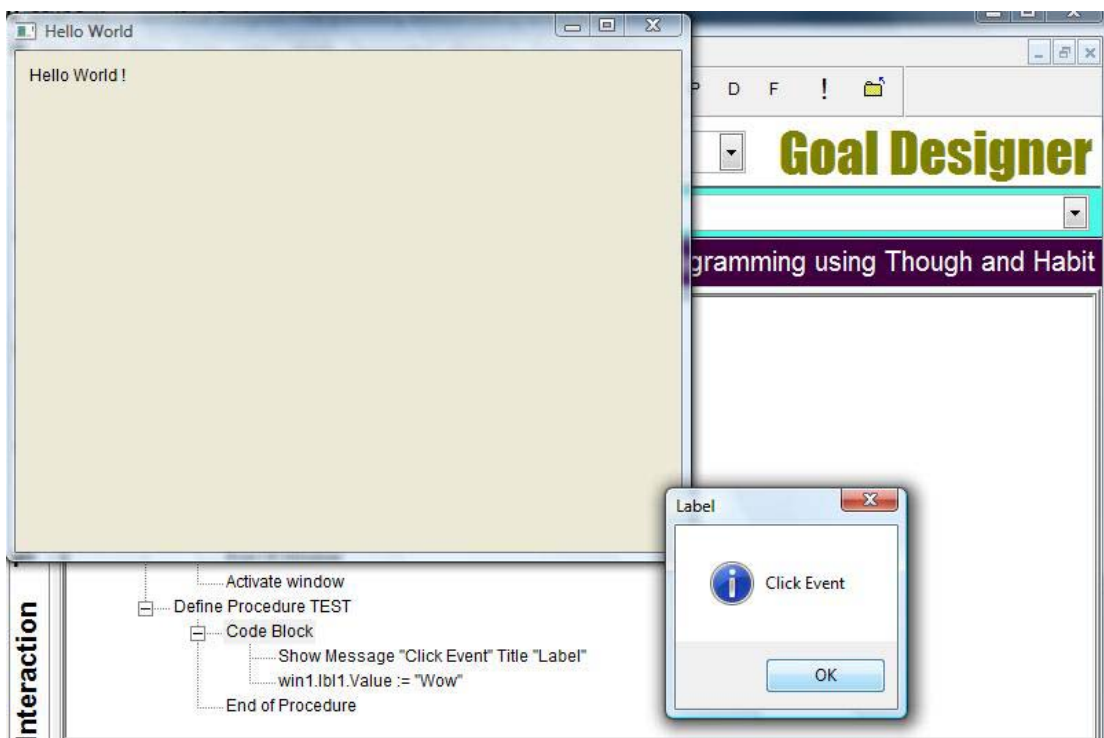
Domain (Classes) Component (Label Class)



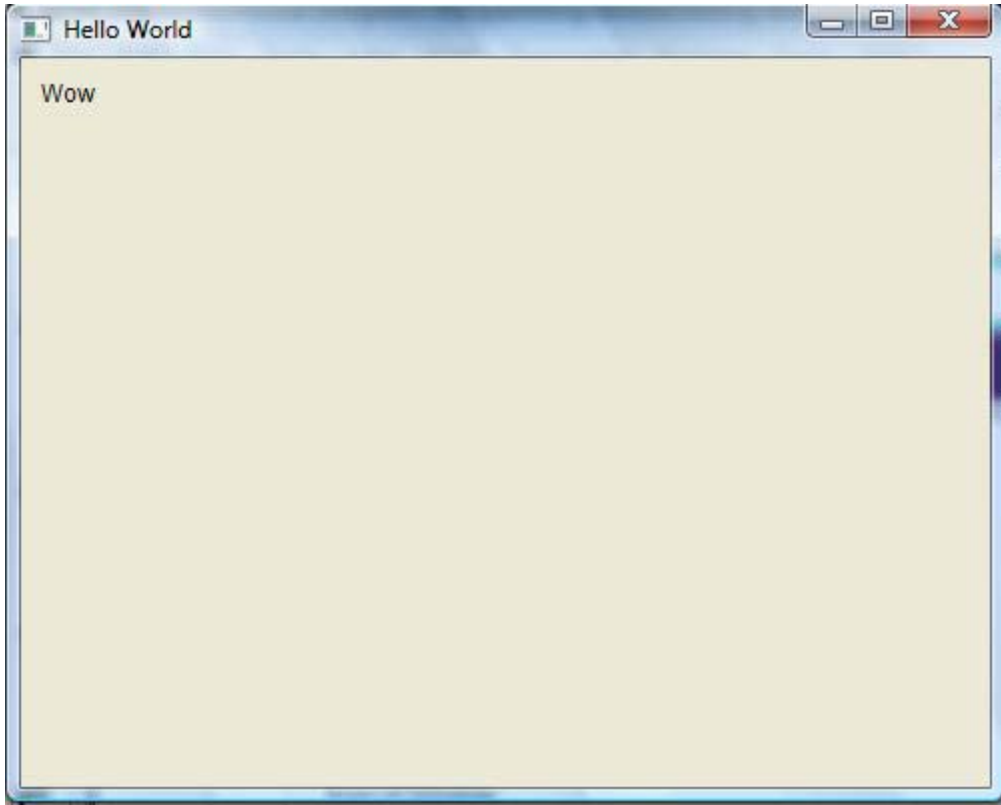
Interaction Page



Steps Tree

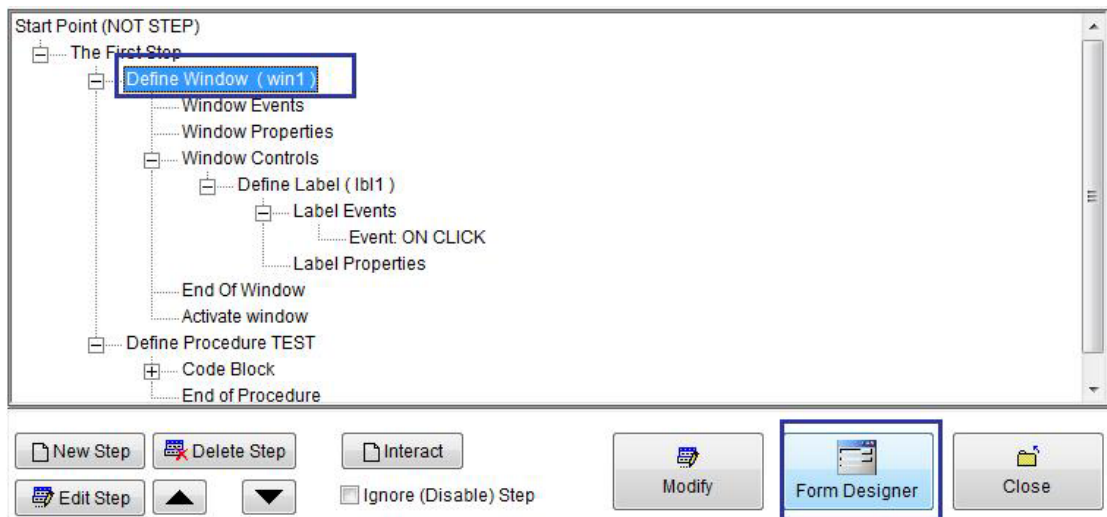


The Final Application

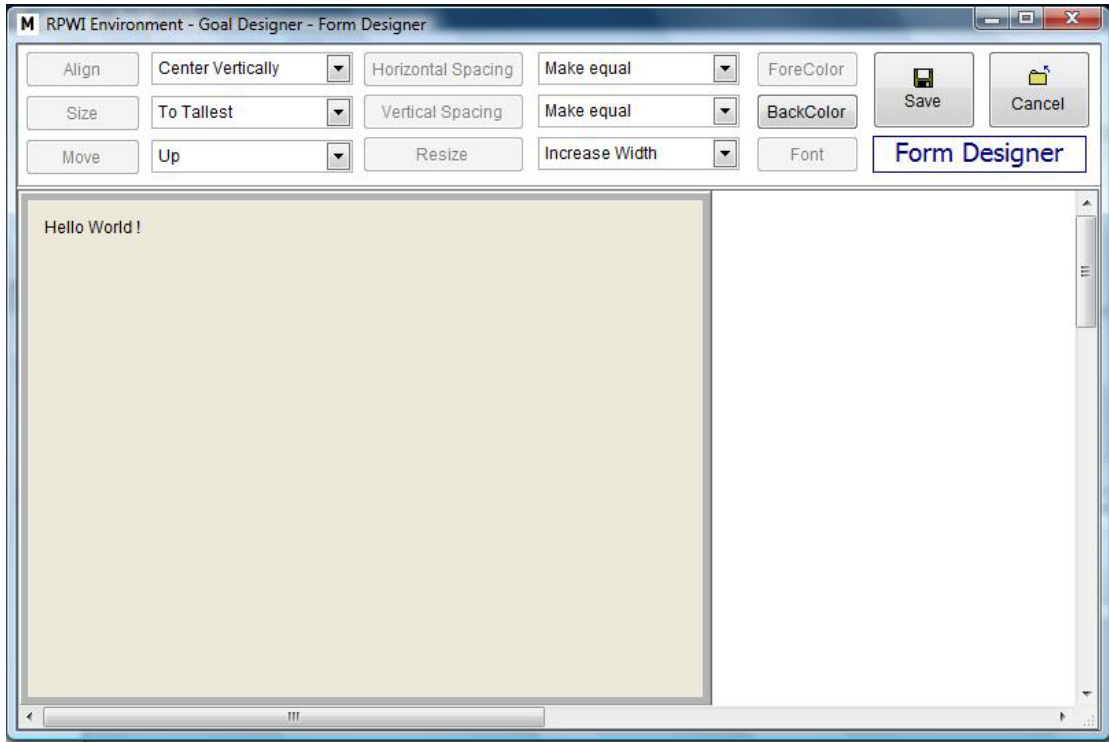


The Final Application

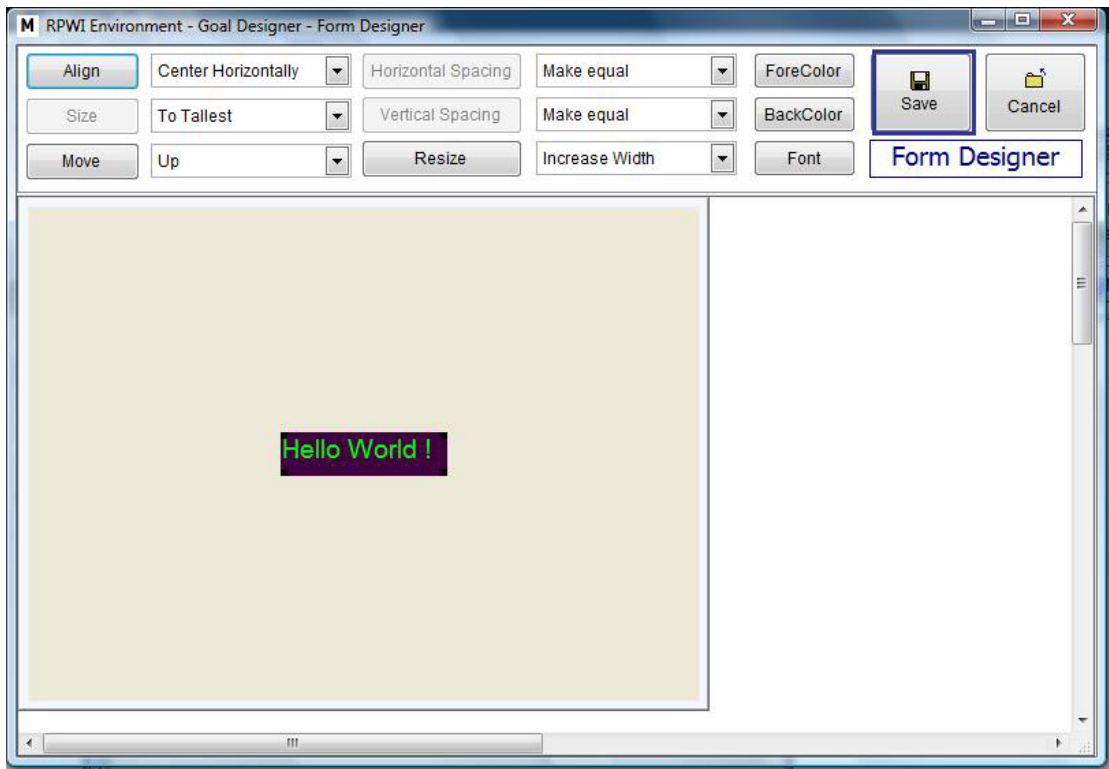
## Form Designer



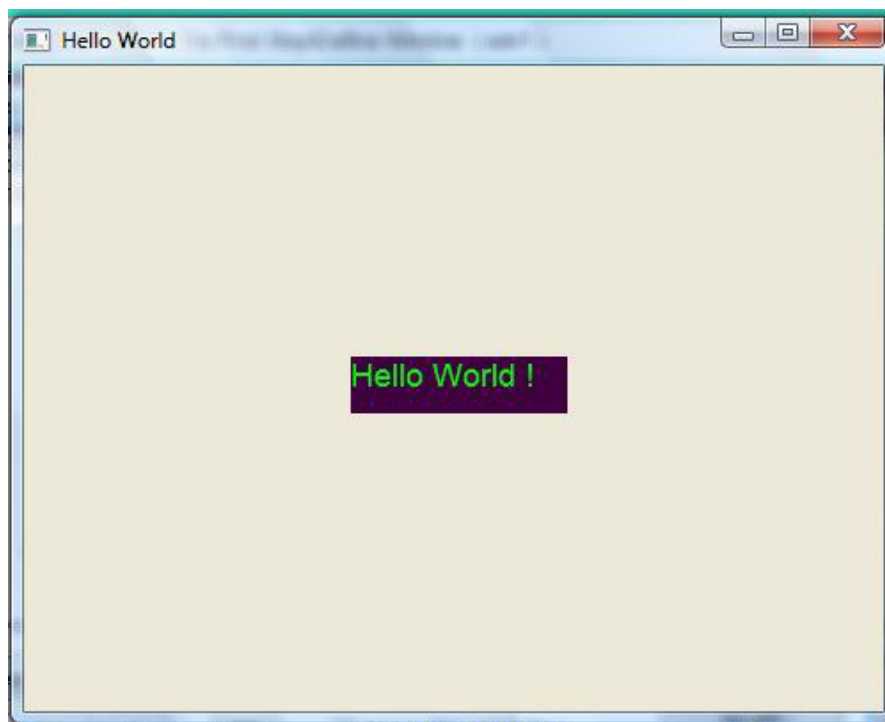
Steps Tree



Form Designer



Form Designer

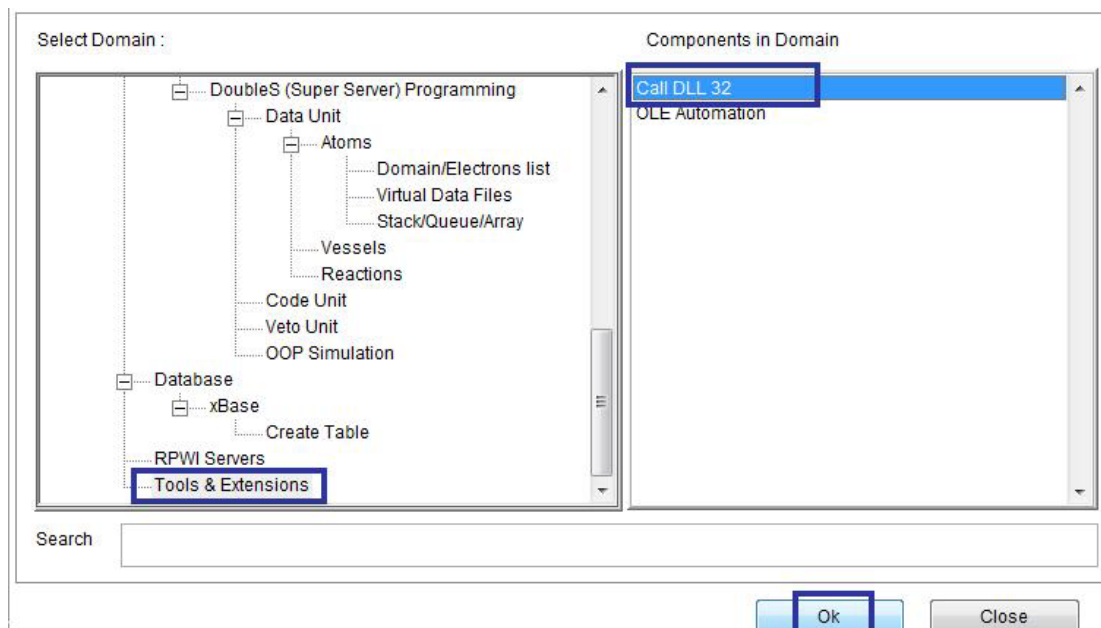


The Final Application

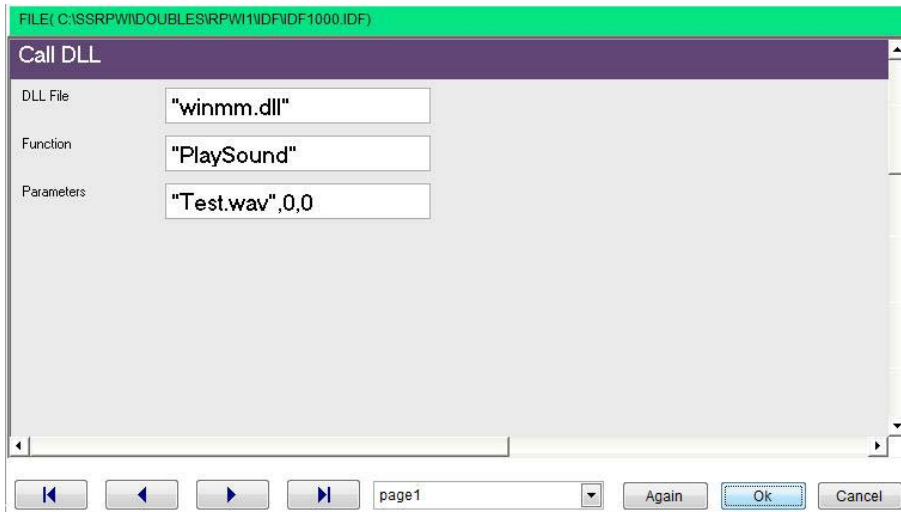
## Language Extension

- Calling DLL Functions
- OLE Automation

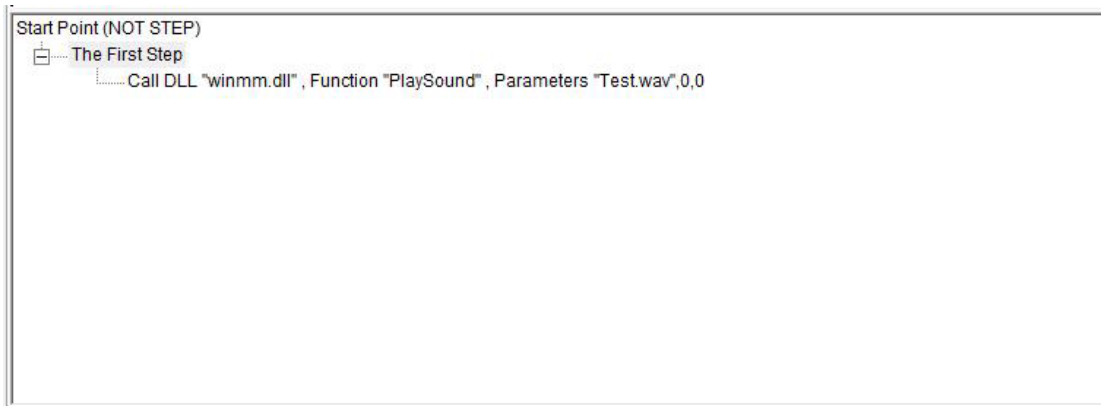
### Calling DLL Functions



Domain (Tools & Extensions) Component (CALL DLL 32)

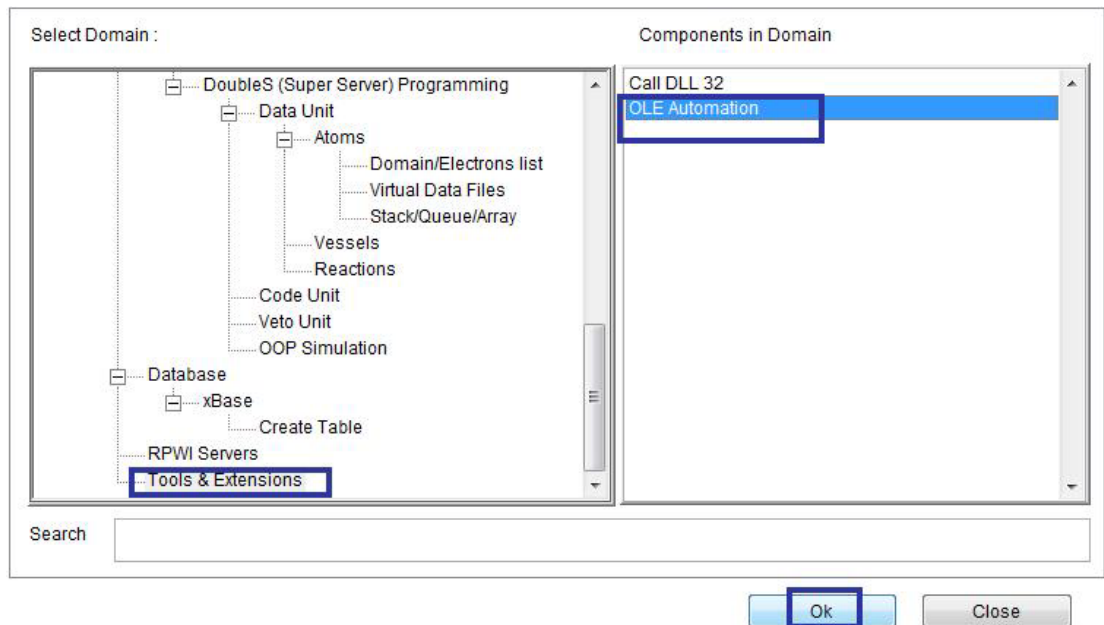


Interaction Page



Steps Tree

## OLE Automation



Domain (Tools & Extensions) Component (OLE Automation)

FILE( C:\SSRPW\DOUBLES\RPWI1\IDF\IDF1003.IDF)

**OLE**

Create Object

Object Name: MyObj

Object Type: "Word.Application"

Set Property

Object Name:

Property Name:

Value:

Get Property

page1

Again Ok Cancel

Interaction Page

FILE( C:\SSRPW\DOUBLES\RPWI1\IDF\IDF1003.IDF)

Object Name:

Property Name:

Variable (Output):

Invoke Method

Object Name: MyObj:Documents

Method Name: Add

Method Parameters:

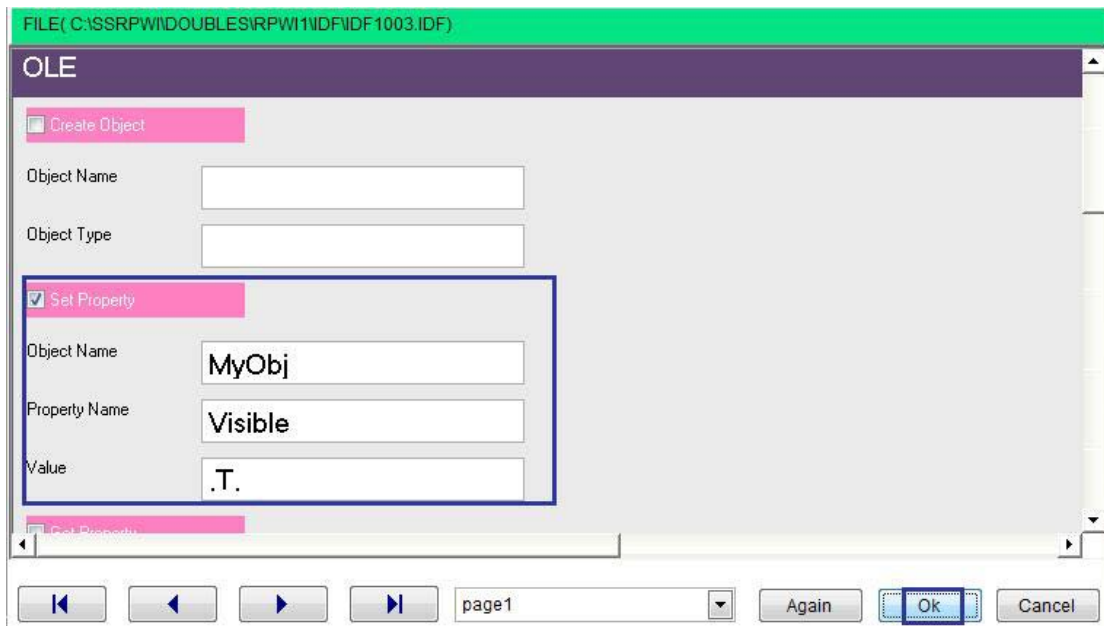
Variable (Output):

page1

Again Ok Cancel

Interaction Page

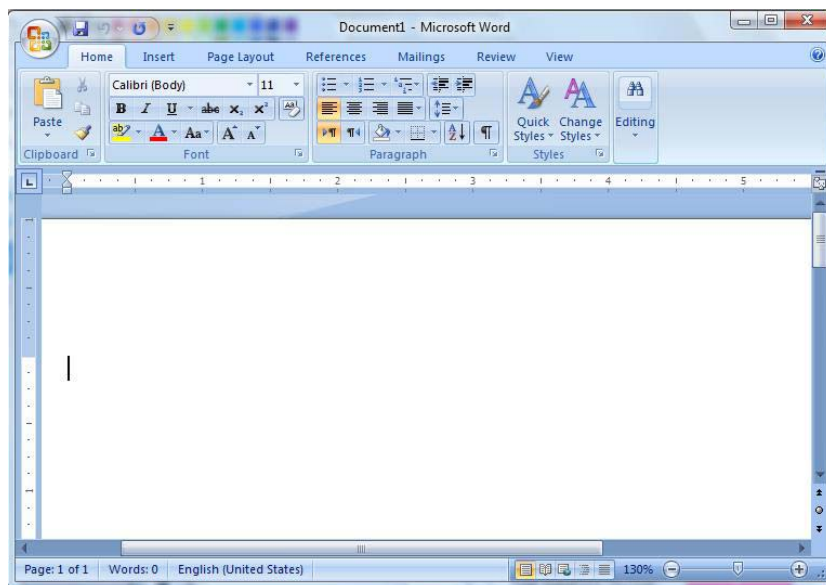




Interaction Page



Final Steps Tree



Microsoft Word