

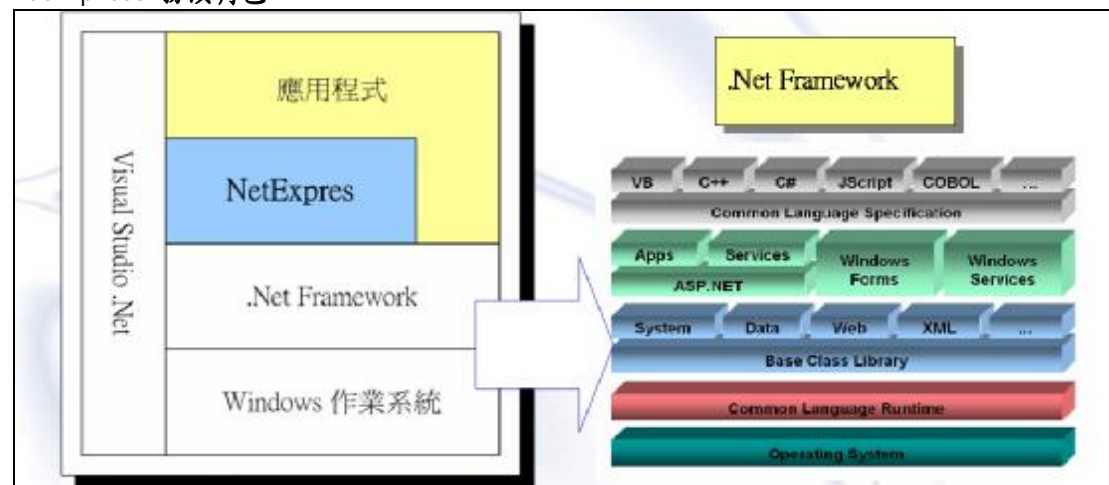
Maintain 維護程式開發

平台設計架構	NetExpress 應用程式模組架構 NetExpress 扮演角色 NetExpress 元件關係 NetExpress 3 Tiers 客戶端與服務端 NetExpress 安控說明 NetExpress 網路架構 NetExpress 負載平衡架構
程式設計概觀	定義資料結構 開發企業服務型別 畫面設計 程式碼編寫

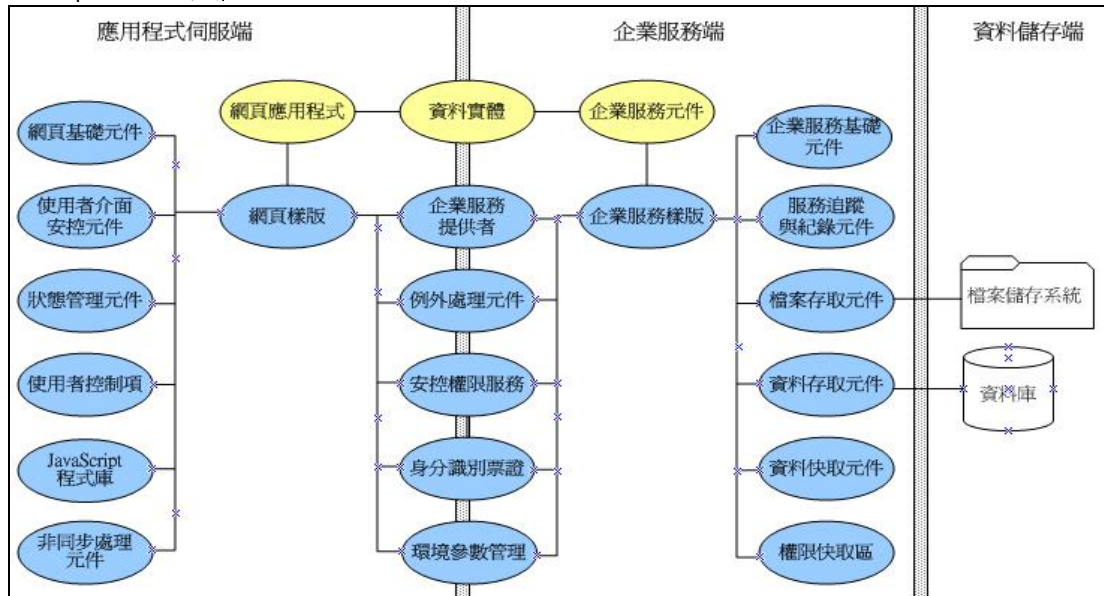
NetExpress 應用程式模組架構：



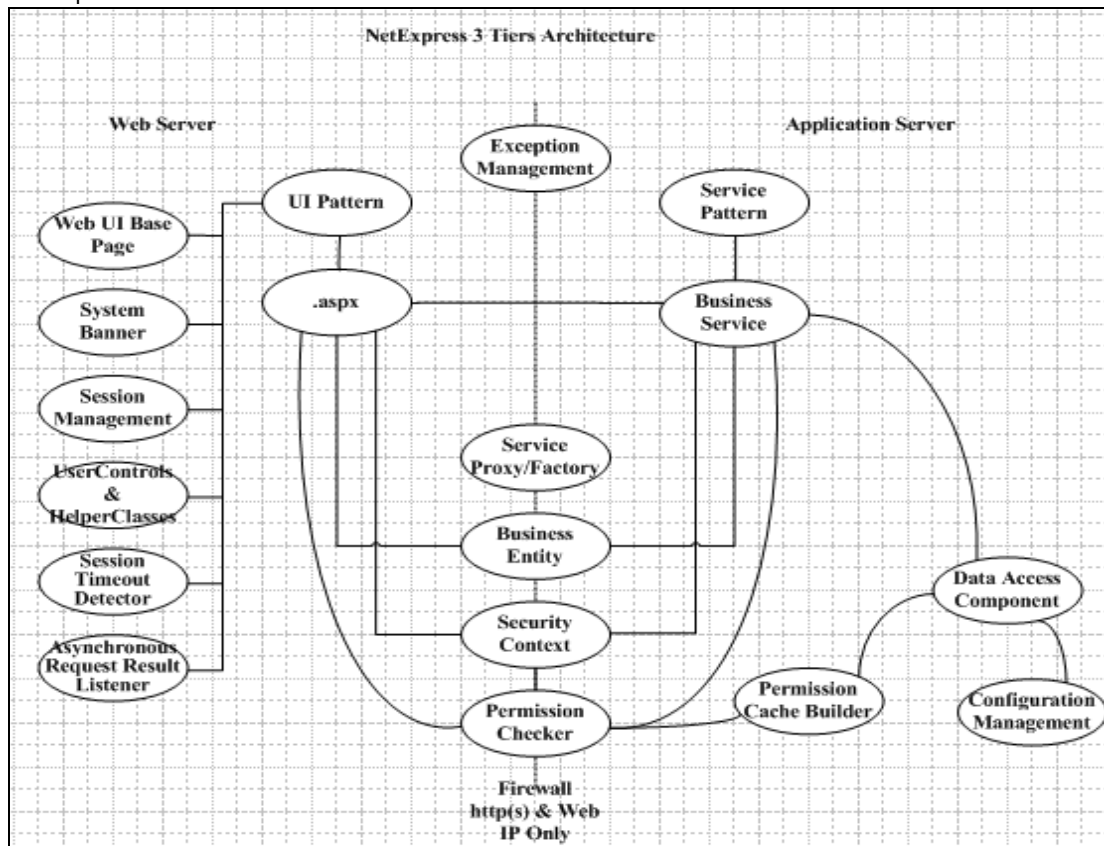
NetExpress 扮演角色：



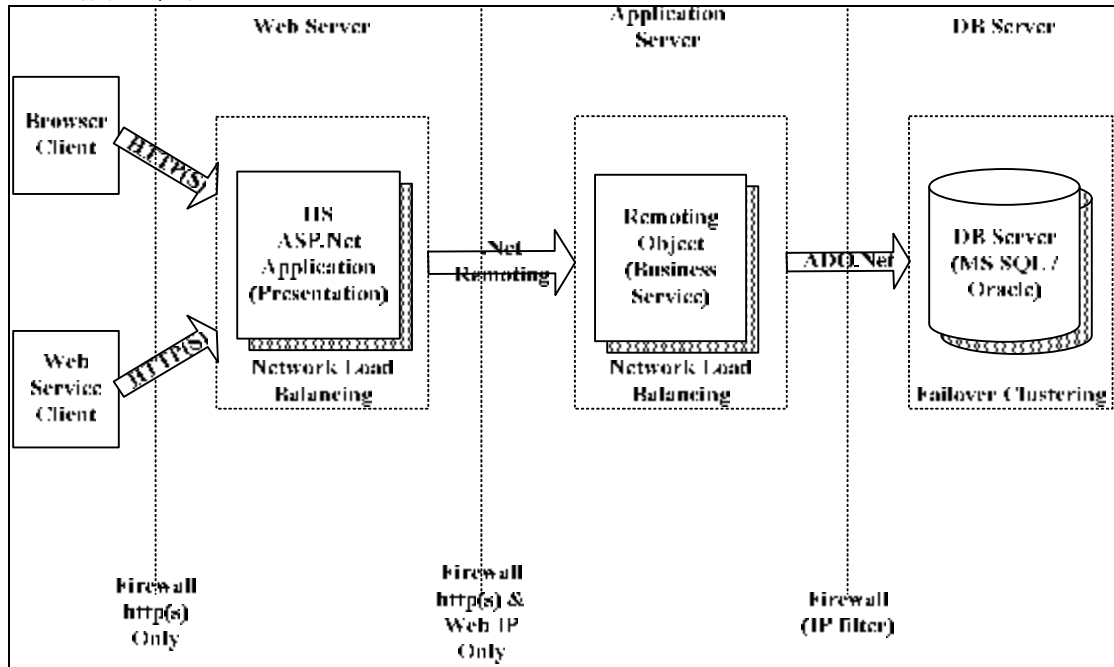
NetExpress 元件關係：



NetExpress 3 Tiers：



客戶端與服務端：



NetExpress 安控說明：

開發流程階段

- 程式碼版本控管
 - Visual SourceSafe
- 軟體部署與出版流程
- Configuration Setting
 - Connection String Encryption
 - Virtual User Password Encryption

系統登入身份驗證

- Forms Authentication
 - 密碼以雜湊值儲存
 - 雜湊值比對
 - 明碼無法恢復
- Windows Authentication
 - Active Directory
 - Windows Local Account

虛擬使用者

- Network File Access
- Active Directory Access
- External Data Source Access
- 異質系統整合

應用程式基本資料

- 程式代號
- 程式名稱
- 程式路徑與檔名
- 程式操作型態
- 程式 UI 與操作型態對應

程式操作型態

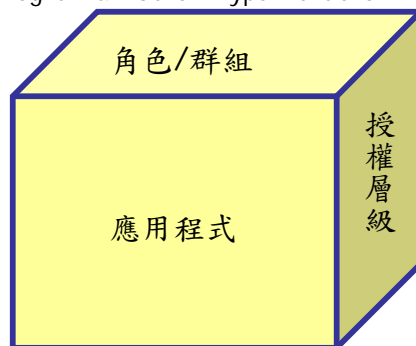
- Add
- Delete
- Update
- Query
- Export
- Import
- Print
- Run

授權層級

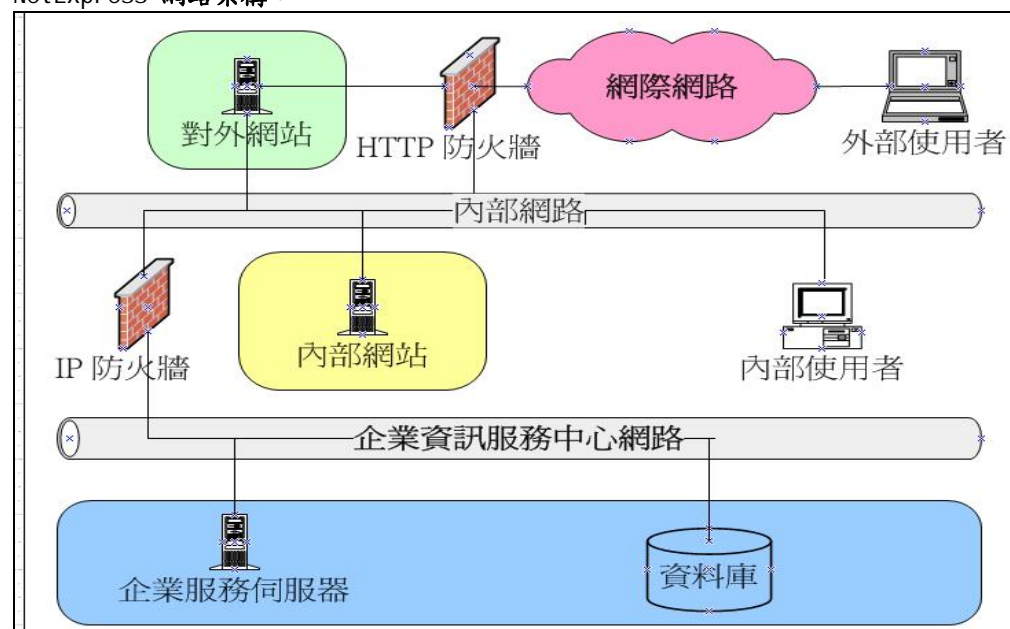
- Prohibit
- None
- Granted
- Medium
- Highest

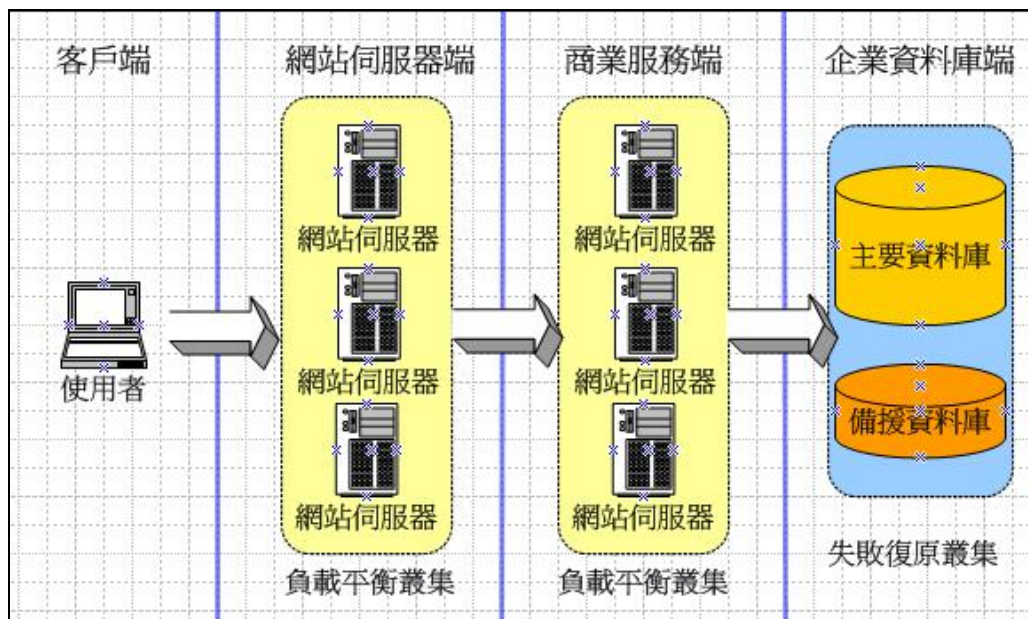
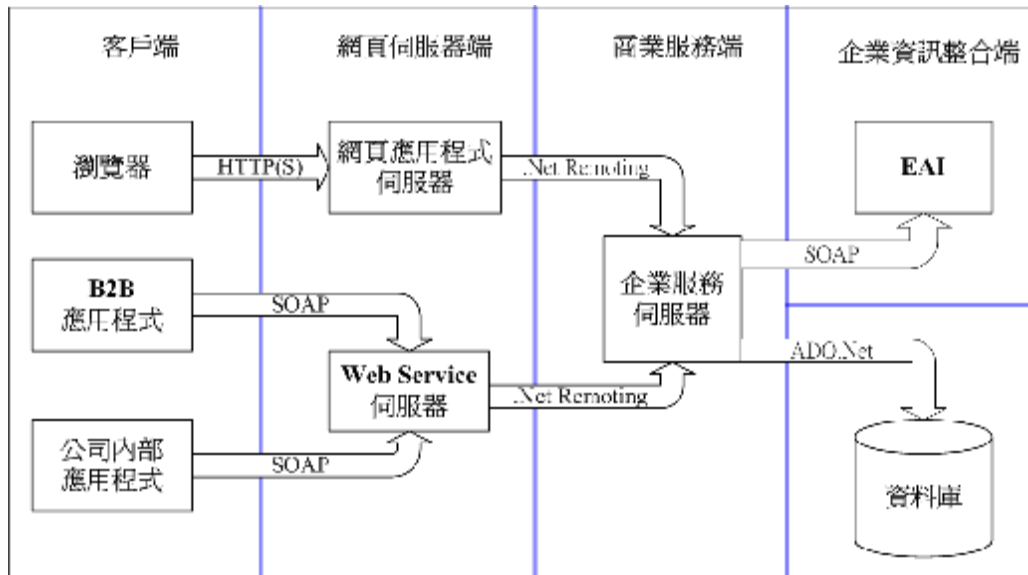
授權關聯性

- Role Permission Level
- Role & User Relation
- Menu & Program Relation
- Program & Action Type Relation



NetExpress 網路架構：





定義資料結構：

- ├ 瀏覽參數
 - ├ 提供使用者輸入非精確的查詢條件
 - ├ 瀏覽結果的資料結構通常與瀏覽參數相同
 - ├ 瀏覽結果的內容僅包含部分欄位，供使用者挑選欲編輯的精確紀錄
- ├ 查詢參數
 - ├ 通常就是使用者挑選欲編輯的該筆瀏覽結果資料
 - ├ 查詢結果為欲編輯的該筆完整資料
- ├ 儲存參數
 - ├ 通常就是查詢結果資料

開發企業服務型別

- ├ 瀏覽服務
 - ├ 參數為非精確的查詢條件
 - ├ 回傳符合查詢條件的部分欄位資料

- | 查詢服務
 - | 參數為精確的查詢條件
 - | 回傳符合查詢條件的單筆完整資料
- | 儲存服務
 - | 參數為經過編輯的完整資料
 - | 回傳完成儲存後的完整資料

畫面設計

- | Title & Style
 - | 用以顯示 IE 視窗名稱，並套用 Html Stylesheet
- | Application Banner
 - | Banner 使用者資訊與視窗連結功能
 - | TitleBar 程式代號與名稱
 - | ToolBar 操作命令按鈕
 - | StatusBar 操作訊息
- | Query Area
 - | 查詢條件輸入欄位
- | Data Area
 - | 資料欄位顯示與編輯

程式碼編寫

- | 匯入命名空間
 - | Intelli Sys.NetExpress.Web
- | 繼承型別
 - | SingleRowPage
 - | MultiRowPage
- | 覆寫必要成員
 - | App*
- | 選擇性覆寫基本實作成員
 - | Base*

1、基本架構

Ps：SAMPLE 使用說明

程式碼需更改處以紅色字體標示

程式區段需自行設計處以[EDIT]標示

2、單檔維護

i. 單筆

範例參考：

SAMPLE. SAMPLE101000

ApplicationBanner
按鈕控制項

Query Area
查詢條件輸入欄位

Data Area
資料欄位顯示與編輯

所需 Code：

- (1) 資料集 Entity: beSAMPLE101000.xsd , beSAMPLE101000Query.xsd
- (2) 前端 Web 畫面設計: SAMPLE101000.aspx
- (3) 後端 Code Behind: SAMPLE101000.aspx.vb
- (4) 多筆查詢 Service: bsSAMPLE101000Browse.vb
- (5) 單筆查詢 Service: bsSAMPLE101000Load.vb
- (6) 異動(增、刪、改)Service: bsSAMPLE101000Save.vb

Entity 資料集實作要點:

- (1) 建立 MainDataSet: 設計主要資料集 Schema
由平台自動產生 OID 需設定：
 - OID 需設主 key
 - OID 屬性 AutoIncrement 為 true
 - OID 屬性 AutoIncrementSeed 為 true
 - OID 屬性 AutoIncrementStep 為 true

MainDataSet beSAMPLE101000.xsd

OID 設定

屬性

OID <x:element>

type decimal

資料集

AutoIncrement true

AutoIncrementSeed -1

AutoIncrementStep -1

Caption

Expression

NullValue

ReadOnly (預設)

- (2) 建立 QueryDataSet: 設計查詢資料集 Schema

QueryDataSet beSAMPLE101000Query.xsd

SAMPLE101000Query (SAMPLE101000Query)	
E DATE1_1	string
E KCODE1	string
E KCODE2	string
E OID	decimal
E DATE1_2	string

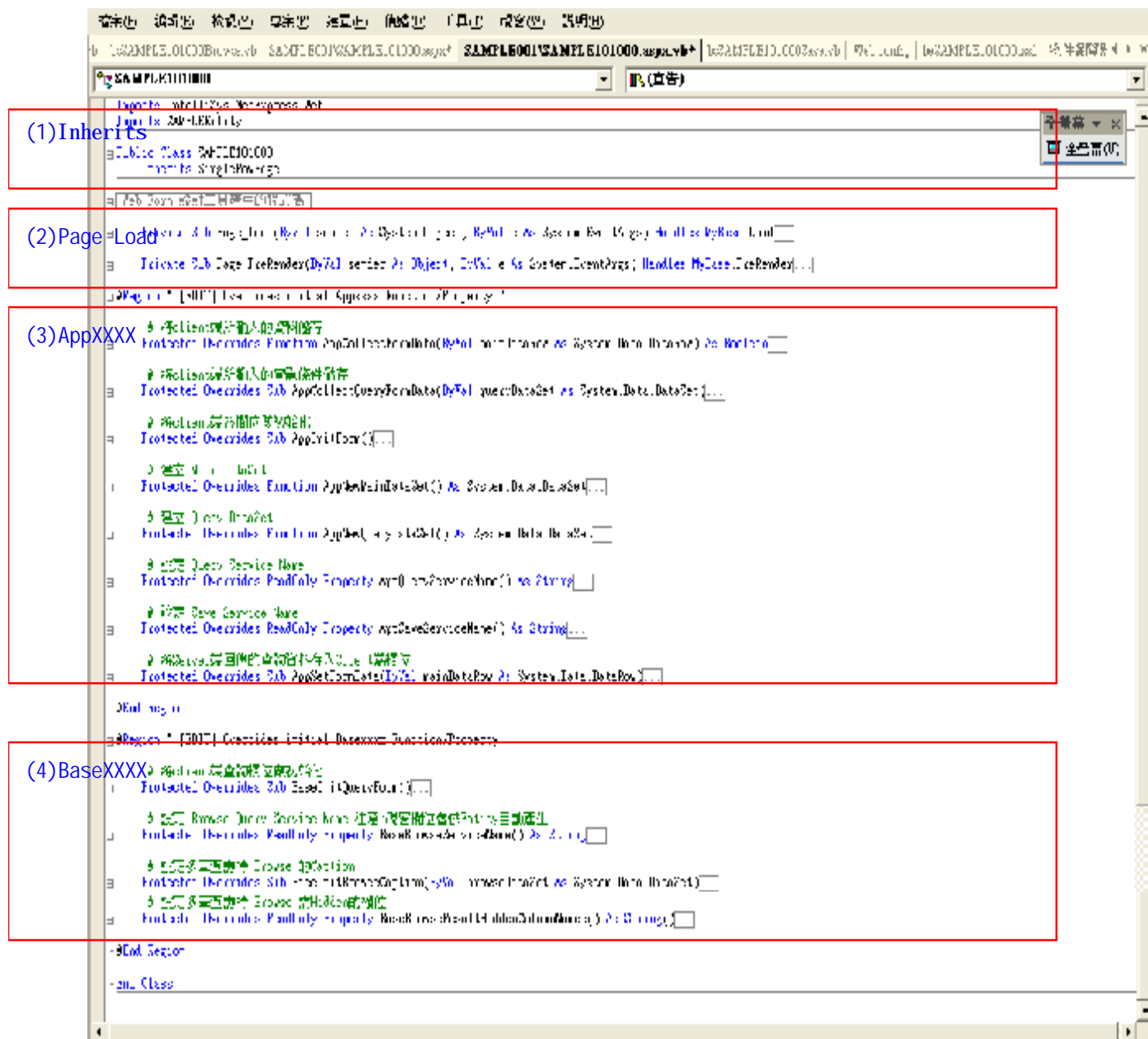
ASPX 實作要點:

- (1) 自定控制項-按鈕控制項: ApplicationBanner.ascx
- (2) CSS 樣版: Styles.css
- (3) 設計表單: Query Area , Data Area

SAMPLE101000.aspx

The screenshot shows the Visual Studio code editor with the file `SAMPLE101000.aspx` open. The code is written in ASP.NET and includes various controls and CSS links. Red boxes highlight specific sections of the code corresponding to the labels on the left:

- 自定控制項** (Custom Control): Points to the `ApplicationBanner` control at the top of the page.
- CSS**: Points to the `Styles.css` link in the `head` section.
- ApplicationBanner 按鈕控制項** (ApplicationBanner Button Control): Points to the `ApplicationBanner` control.
- Query Area 查詢條件輸入欄位** (Query Area Query Condition Input Fields): Points to the `QueryArea` control, which contains several input fields for querying data.



Code: SAMPLE101000.aspx.vb	
<pre>Public Class Sample101000 Inherits SingleRowPage 略..... Protected ucQuerydate2 As ucRocDate Protected WithEvents Panel1 As System.Web.UI.WebControls.Panel Protected WithEvents ddlKcode1 As System.Web.UI.WebControls.DropDownList Protected WithEvents txtKcode2 As System.Web.UI.WebControls.TextBox Protected WithEvents txtQueryKcode2 As System.Web.UI.WebControls.TextBox Protected WithEvents ddlQueryKcode1 As System.Web.UI.WebControls.DropDownList Protected WithEvents ucQueryDate1 As ucRocDate Protected WithEvents ucDate1 As ucRocDate</pre>	
<p>VS.Net 會自動宣告控制項變數。</p> <p>但自定變數需自行宣告，如日期控制項 ucRocDate</p>	

略.....

```
Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    If Not Me.IsPostBack Then
        Me.UISetConfirmMessage(UICommands.csDelete, "確定刪除？")
        MyBase.BaseDoClear()
    End If
End Sub
```

Page_load
Page_PreRender

```
Private Sub Page_PreRender(ByVal sender As Object, ByVal e As System.EventArgs) Handles MyBase.PreRender
    BasePreRender()
End Sub
```

```
#Region " [EDIT] Overrides initial Appxxxx Function/Property "
```

'# 將client端所輸入的資料儲存

```
Protected Overrides Function AppCollectFormData(ByVal mainDataRow As System.Data.DataRow) As Boolean
    Dim bolChanged As Boolean = False
    bolChanged = bolChanged Or UTF.SetColumnText(mainDataRow, "KCODE1", Me.ddlKcode1.Selected.Value)
    bolChanged = bolChanged Or UTF.SetColumnText(mainDataRow, "KCODE2",
        Me.txtKcode2.Text.Trim.ToUpper)
    bolChanged = bolChanged Or UTF.SetColumnText(mainDataRow, "DATE1", Me.ucDate1.Text.Trim())

    If mainDataRow.RowState = DataRowState.Detached Then
        UTF.SetColumnText(mainDataRow, "ICREATE", Me.User.Identity.Name)
        UTF.SetColumnText(mainDataRow, "DCREATE", Now.ToString)
    ElseIf mainDataRow.RowState = DataRowState.Modified Then
        UTF.SetColumnText(mainDataRow, "IUPDATE", Me.User.Identity.Name)
        UTF.SetColumnText(mainDataRow, "DUPDATE", Now.ToString)
    End If
    Return bolChanged
End Function
```

UTF.SetColumnText 儲存
Data Area 欄位資料，並回
傳是否與原欄位資料相同

'# 將client端所輸入的查詢條件儲存

```
Protected Overrides Sub AppCollectQueryFormData(ByVal queryDataSet As System.Data.DataSet)
    Dim dr As beSAMPLE101000Query.SAMPLE101000QueryRow = CType(queryDataSet,
        beSAMPLE101000Query).SAMPLE101000Query.NewSAMPLE101000QueryRow

    UTF.SetColumnText(dr, "DATE1_1", Me.ucQueryDate1.Text.Trim)
    UTF.SetColumnText(dr, "DATE1_2", Me.ucQuerydate2.Text.Trim)
    UTF.SetColumnText(dr, "KCODE1", Me.ddlQueryKcode1.SelectedValue)
    UTF.SetColumnText(dr, "KCODE2", Me.txtQueryKcode2.Text.Trim.ToUpper)
    queryDataSet.Tables("SAMPLE101000Query").Rows.Add(dr)
End Sub
```

UTF.SetColumnText 儲存
Query Area 欄位資料。

'# 將client端各欄位做初始化

```
Protected Overrides Sub AppInitForm()
    ucDate1.Text = ""
    ddlKcode1.SelectedIndex = 0
    txtKcode2.Text = ""
End Sub
```

'# 建立 Main DataSet

```
Protected Overrides Function AppNewMainDataSet() As System.Data.DataSet
    Return New beSAMPLE101000
End Function
```

'# 建立 Query DataSet

```
Protected Overrides Function AppNewQueryDataSet() As System.Data.DataSet
    Return New beSAMPLE101000Query
End Function
```

'# 設定 Query Service Name

```
Protected Overrides ReadOnly Property AppQueryServiceName() As String
    Get
        Return "SAMPLEService.bsSAMPLE101000Load"
    End Get
End Property
```

'# 設定 Save Service Name

```
Protected Overrides ReadOnly Property AppSaveServiceName() As String
    Get
        Return "SAMPLEService.bsSAMPLE101000Save"
    End Get
End Property
```

'# 將Server端回傳的查詢資料存入Client端欄位

```
Protected Overrides Sub AppSetFormData(ByVal mainDataRow As System.Data.DataRow)
    Me.ucDate1.Text = UTF.GetColumnText(mainDataRow, "Date1")
    Me.ddlKcode1.SelectedValue = UTF.GetColumnText(mainDataRow, "KCODE1")
    Me.txtKcode2.Text = UTF.GetColumnText(mainDataRow, "KCODE2")
End Sub
```

UTF.GetColumnText
取得資料。

#End Region

#Region " [EDIT] Overrides initial Basexxxx Function/Property "

'# 將client端查詢欄位做初始化

```
Protected Overrides Sub BaseInitQueryForm()
    ucQueryDate1.Text = ""
    ddlQueryKcode1.SelectedIndex = 0
    txtQueryKcode2.Text = ""
End Sub
```

'# 設定 Browse Query Service Name 注意:視窗欄位會依Entity自動產生

```
Protected Overrides ReadOnly Property BaseBrowseServiceName() As String
    Get
        Return "SAMPLEService.bsSAMPLE101000Browse"
    End Get
End Property
```

'# 設定多筆查詢時 Browse 的Caption

```
Protected Overrides Sub BaseInitBrowseCaption(ByVal browseDataSet As System.Data.DataSet)
    Dim dcc As DataColumnCollection = browseDataSet.Tables(0).Columns
    Dim captions As String() = {"", "", "類別1", "類別2", "日期1"}
    Dim i As Integer
    For i = 0 To captions.Length - 1
        dcc(i).Caption = captions(i)
    Next i
End Sub
```

'# 設定多筆查詢時 Browse 需Hidden的欄位

```
Protected Overrides ReadOnly Property BaseBrowseResultHiddenColumnNames() As String()
    Get
        Return New String() {"OID", "DATE1_1", "DATE1_2"}
    End Get
End Property
#End Region
```

End Class

Service 端實作要點:

多筆查詢 BrowseService

(1) Inherits BaseService

(2) Overrides:

RequestParameterEntity(), ResultType(), DefaultInstanceName(), DoRequest()

(3) 必須將服務名稱及組件, 類別資料加入 Web.Config 檔案

Web.Config

```
<add key="bscs://SAMPLEService.bsSAMPLE101000Browse/"
value="AssemblyName=SAMPLEService; TypeName=SAMPLEService.bsSAMPLE101000Browse" />
```

Code: bsSAMPLE101000Browse.vb

```
Public Class bsSAMPLE101000Browse
    Inherits BaseAppService

    '# 設定Client端傳過來的 Query Entity
    Public Overrides Function RequestParameterEntity() As System.Data.DataSet
        Return New beSAMPLE101000Query
    End Function

    '# 設定回傳 Result Entity Browse 注意:視窗欄位會依Entity自動產生
    Protected Overrides ReadOnly Property ResultType() As System.Type
        Get
            Select Case Me.ProgramID
                Case "SAMPLE101000"
                    Return GetType(beSAMPLE101000Query)
                Case "SAMPLE101010"
                    Return GetType(beSAMPLE101000)
            End Select
        End Get
    End Property

    '# 設定預設的資料庫Instance Name
    Protected Overrides ReadOnly Property DefaultInstanceName() As String
        Get
            Return "SKERP_AP"
        End Get
    End Property

    '# 處理Client傳遞過來的Param
    Protected Overloads Overrides Sub DoRequest(ByVal param As System.Data.DataSet, ByVal result As
        System.Data.DataSet, ByVal trans As System.Data.IDbTransaction)

        Dim row As beSAMPLE101000Query.SAMPLE101000QueryRow = CType(param,
            beSAMPLE101000Query).SAMPLE101000Query(0)

        Dim sb As New SqlStringBuilder

        sb.Append("SELECT OID, DATE1, KCODE1, KCODE2 FROM SAMPLE101000")
        sb.ReservePosition("WHERE")
        If Not row.IsDATE1Null Then
            sb.Append(" TO_CHAR(DATE1, 'mm/dd/yyyy') BETWEEN ")
            sb.Append(New ParameterInfo("DATE1", DbType.DateTime, row.DATE1)).Append("AND")
            sb.Append(New ParameterInfo("DATE1", DbType.DateTime, row.DATE1))
            sb.ReservePosition("AND")
        End If
        If Not row.IsKCODE1Null Then
            sb.Append("KCODE1" & "LIKE").Append(New ParameterInfo("KCODE1", DbType.String, row.KCODE1))
            sb.ReservePosition("AND")
        End If
        If Not row.IsKCODE2Null Then
            sb.Append("KCODE2 " & "LIKE").Append(New ParameterInfo("KCODE2", DbType.String, row.KCODE2))
        End If
        sb.ApplyReservation()
        sb.Append("ORDER BY KCODE1")

        Me.LoadDataSet(sb.ToSqlString, result, trans)
    End Sub
End Class
```

(1)param取得查詢條件。
(2)使用 SqlStringBuilder 組出 SQL 字串。
(3)並將查詢結果以 result 回傳

單筆查詢 QueryService

- (1)Inherits BaseAppService
- (2)Overrides:
RequestParameterEntity(), ResultType(), DefaultInstanceName(), DoRequest()
- (3) 必須將服務名稱及組件,類別資料加入 Web.Config 檔案

Web. Config
<pre><add key="bscs: //SAMPLEService.bsSAMPLE101000Load/" value="AssemblyName=SAMPLEService; TypeName=SAMPLEService.bsSAMPLE101000Load" /></pre>

Code: bsSAMPLE101000Load.vb
<pre>Public Class bsSAMPLE101000Load Inherits BaseDbAccessService '# 設定bsXXXXBrowse端傳過來的 Query Entity Public Overrides Function RequestParameterEntity() As System.Data.DataSet Return New bsSAMPLE101000Query End Function '# 設定回傳給Client端的 Result Entity 注意: ResultType是非Query的那個 Protected Overrides ReadOnly Property ResultType() As System.Type Get Return GetType(bsSAMPLE101000) End Get End Property '# 設定預設的資料庫Instance Name Protected Overrides ReadOnly Property DefaultInstanceName() As String Get Return "SKERP_AP" End Get End Property '# 處理bsXXXXBrowse傳遞過來的Param Protected Overrides Sub DoRequest(ByVal param As System.Data.DataSet, ByVal result As System.Data.DataSet, ByVal trans As System.Data.IDbTransaction) Dim row As bsSAMPLE101000Query.SAMPLE101000QueryRow = CType(param bsSAMPLE101000Query).SAMPLE101000Query(0) Dim sb As New SqlStringBuilder sb.Append("SELECT OID, KCODE1, KCODE2, DATE1 FROM SAMPLE101000 WHERE OID=") sb.Append(New ParameterInfo("OID", DbType.Decimal, row.OID)) Me.LoadDataSet(sb.ToString, result, trans) End Sub End Class</pre>

(1)param 取得查詢條件。
(2)使用 SqlStringBuilder 組出 SQL 字串。
(3)並將查詢結果以 result 回傳

異動(增、刪、改)SaveService

(1)Inherits BaseAppService

(2)Overrides:

RequestParameterEntity(), PrepareResult (), DefaultInstanceName(), DoRequest ()

(3) 必須將服務名稱及組件, 類別資料加入 Web. Config 檔案

Web. Config
<pre><add key="bscs: //SAMPLEService.bsSAMPLE101000Save/" value="AssemblyName=SAMPLEService; TypeName=SAMPLEService.bsSAMPLE101000Save" /></pre>

Code: bsSAMPLE101000Save.vb

```

Public Class bsSAMPLE101000Save
    Inherits BaseAppService

    '# 設定預設的資料庫Instance Name
    Protected Overrides ReadOnly Property DefaultInstanceName() As String
        Get
            Return "SKERP_AP"
        End Get
    End Property

    '# 設定PrepareResult
    Protected Overrides Function PrepareResult(ByVal param As System.Data.DataSet) As System.Data.DataSet
        Return param
    End Function

    '# 設定RequestParameterEntity
    Public Overrides Function RequestParameterEntity() As System.Data.DataSet
        Return New beSAMPLE101000
    End Function

    '# 依據Insert, Update, Delete狀態更新 DataSet
    Protected Overloads Overrides Sub DoRequest(ByVal param As System.Data.DataSet, ByVal result As
System.Data.DataSet, ByVal trans As System.Data.IDbTransaction)
        Me.DefaultRunner.UpdateDataSet( _
            result, _
            Me.GetInsertCommand(param result), _
            Me.GetUpdateCommand(param result), _
            Me.GetDeleteCommand(param result), _
            trans _
        )
    End Sub

    '# 建立Insert SqlString
    Protected Function GetInsertCommand( _
        ByVal param As DataSet, ByVal result As DataSet ) As SqlString

        Return DataSetUtils.GetInsertSqlString( _
            CType(param, beSAMPLE101000).SAMPLE101000, Me.DefaultRunner _
        )
    End Function

    '# 建立Update SqlString
    Protected Function GetUpdateCommand( _
        ByVal param As DataSet, ByVal result As DataSet _
    ) As SqlString

        Return DataSetUtils.GetUpdateSqlString( _
            CType(param, beSAMPLE101000).SAMPLE101000, Me.DefaultRunner _
        )
    End Function

    '# 建立Delete SqlString
    Protected Function GetDeleteCommand( _
        ByVal param As DataSet, ByVal result As DataSet _
    ) As SqlString
        Return DataSetUtils.GetDeleteSqlString( _
            CType(param, beSAMPLE101000).SAMPLE101000, Me.DefaultRunner _
        )
    End Function
End Class

```

依據
Insert, Update, Delete
狀態更新 DataSet，並
交由平台更新資料庫

建立 Insert、Update、
Delete SqlString

ii. 多筆
範例參考:

SAMPLE. SAMPLE101010

ApplicationBanner
按鈕控制項

Query Area
查詢條件輸入欄位

DataGrid
資料欄位顯示與編輯

所需 Code :

- (1) 資料集 Entity: beSAMPLE101000.xsd , beSAMPLE101000Query.xsd
- (2) 前端 Web 畫面設計: SAMPLE101010.aspx
- (3) 後端 Code Behind: SAMPLE101010.aspx.vb
- (4) 多筆查詢 Service: bsSAMPLE101000Browse.vb
- (5) 異動(增、刪、改)Service: bsSAMPLE101000Save.vb

Entity 資料集實作要點: 同單筆維護

ASPX 實作要點:

- (1) 自定控制項-按鈕控制項: ApplicationBanner.ascx
- (2) CSS 樣版: Styles.css
- (3) 設計表單: Query Area , Data Area

SAMPLE101010.aspx

```

<%@ Register TagPrefix="uc1" TagName="DataGridBanner" Src="..\..\ISNEControl\DataGridBanner.ascx" %>
略.....
<uc1:datagridbanner id="dgdbanner" runat="server" DataGridID="dgdSAMPLE101000" NewItemCaption="新
[A]"></uc1:datagridbanner>
<asp:datagrid id="dgdSAMPLE101000" runat="server" CssClass="cssDataGrid" AllowSorting="True"
AutoGenerateColumns="False" AllowPaging="True" Width="100%">

<FooterStyle CssClass="cssDataGridFooter"></FooterStyle>
<SelectedItemStyle CssClass="cssDataGridSelectedItem"></SelectedItemStyle>
<EditItemStyle CssClass="cssDataGridEditItem"></EditItemStyle>
<AlternatingItemStyle CssClass="cssDataGridAlternatingItem"></AlternatingItemStyle>
<ItemStyle CssClass="cssDataGridItem"></ItemStyle>
<HeaderStyle ForeColor="#CFFFCF" CssClass="cssDataGridHeader"></HeaderStyle>

<Columns>
<asp:EditCommandColumn ButtonType="LinkButton" UpdateText="更新" CancelText="取消" EditText="編輯">
  <HeaderStyle Width="2cm"></HeaderStyle>
</asp:EditCommandColumn>
<asp:ButtonColumn Text="刪除" CommandName="Delete">
  <HeaderStyle Width="1cm"></HeaderStyle>
</asp:ButtonColumn>

<asp:TemplateColumn HeaderText="日期">
  <ItemTemplate>
<asp:Label id="Label1" runat="server" Text='<# iif(DataBinder.Eval(Container, "DataItem.Date1") is

```

宣告 DataGridBanner 控制項

宣告 DataGridBanner 控制項

宣告 DataGrid 套用 CSS

定義 DataGrid

```

dbnull.value, "", DataBinder.Eval(Container, "DataItem.Date1")) %>' >
</asp:Label>
</ItemTemplate>
<FooterTemplate>
<FONT face="新細明體"></FONT>
</FooterTemplate>
<EditItemTemplate>
<uc1:ucRocDate id=ucDate1 runat="server" DateText='<%=# IIF(DataBinder.Eval(Container,
"DataItem.Date1") IS DBNULL.VALUE, "", DataBinder.Eval(Container, "DataItem.Date1")) %>' >
</uc1:ucRocDate>
</EditItemTemplate>
</asp:TemplateColumn>

<asp:TemplateColumn HeaderText="類別 1">
<ItemTemplate>
<asp:Label id=Label2 runat="server" Text='<%=# DataBinder.Eval(Container, "DataItem.Kcode1") %>' >
</asp:Label>
</ItemTemplate>
<EditItemTemplate>
<asp:DropDownList id="ddlKode1" runat="server">
<asp:ListItem></asp:ListItem>
<asp:ListItem Value="1">1 清心</asp:ListItem>
<asp:ListItem Value="2">2 小歇</asp:ListItem>
<asp:ListItem Value="3">3 85 度c</asp:ListItem>
<asp:ListItem Value="4">4 橘子工房</asp:ListItem>
<asp:ListItem Value="5">5 水果工房</asp:ListItem>
<asp:ListItem Value="6">6 香蕉工房</asp:ListItem>
</asp:DropDownList>
<asp:requiredfieldvalidator id="rfvdKode1" runat="server" EnableClientScript="True" Display="Static"
ControlToValidate="ddlKode1" ErrorMessage="類別 1 必須輸入"></asp:requiredfieldvalidator>
</EditItemTemplate>
</asp:TemplateColumn>

<asp:TemplateColumn HeaderText="類別 2">
<ItemTemplate>
<asp:Label id=Label3 runat="server" Text='<%=# DataBinder.Eval(Container, "DataItem.Kcode2") %>' >
</asp:Label>
</ItemTemplate>
<EditItemTemplate>
<asp:TextBox id=txtKode2 runat="server" Text='<%=# DataBinder.Eval(Container, "DataItem.Kcode2") %>' >
</asp:TextBox>
</EditItemTemplate>
</asp:TemplateColumn>
</Columns>

<PagerStyle Visible="False"></PagerStyle>
</asp:datagrid>

```

Code Behind 實作要點:

- (1) Inherits MultiRowPage
- (2) Page_Load: Not IsPostBack 時 BaseDoClear()
Page_PreRender: BasePreRender()
- (3) 必須覆寫 AppXXXXXX 的方法或屬性
- (4) 如果要提供其它功能，需選擇性覆寫 BaseXXX 的方法或屬性
- (5) DataGrid DataBinding 及 ItemDataBound

SAMPLE101010.aspx
Public Class SAMPLe101010 Inherits MultiRowPage 略..... Protected WithEvents Panel1 As System.Web.UI.WebControls.Panel

```

Protected WithEvents ddlQueryKcode1 As System.Web.UI.WebControls.DropDownList
Protected WithEvents txtQueryKcode2 As System.Web.UI.WebControls.TextBox
Protected WithEvents ucQueryDate2 As ucRocDate
Protected WithEvents ucQueryDate1 As ucRocDate
Protected WithEvents dgdSAMPLE101000 As System.Web.UI.WebControls.DataGrid
略.....

Private Sub Page_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    If Not Me.IsPostBack Then
        Me.BaseDoClear()
    End If
End Sub

Private Sub Page_PreRender(ByVal sender As Object, ByVal e As System.EventArgs) Handles MyBase.PreRender
    BasePreRender()
End Sub

#Region " [EDIT] Overrides initial Appxxxx Function/Property "
'# 設定 Query Service Name
Protected Overrides ReadOnly Property AppQueryServiceName() As String
    Get
        Return "SAMPLEService.bsSAMPLE101000Browse"
    End Get
End Property

'# 設定 Save Service Name
Protected Overrides ReadOnly Property AppSaveServiceName() As String
    Get
        Return "SAMPLEService.bsSAMPLE101000Save"
    End Get
End Property

'# 建立 Main DataSet
Protected Overrides Function AppNewMainDataSet() As System.Data.DataSet
    Return New bsSAMPLE101000
End Function

'# 將client端所輸入的查詢條件儲存
Protected Overrides Function AppCollectDataGridItemData(ByVal currentDataGrid As
System.Web.UI.WebControls.DataGrid, ByVal currentItem As System.Web.UI.WebControls.DataGridItem, ByVal
currentRow As System.Data.DataRow) As Boolean

    Dim bolChanged As Boolean = False

    bolChanged = bolChanged Or UTF.SetColumnText(currentRow, "DATE1",
        CType(currentItem.FindControl("ucDate1"), ucRocDate).Text)
    bolChanged = bolChanged Or UTF.SetColumnText(currentRow, "KCODE1",
        CType(currentItem.FindControl("ddlKode1"), DropDownList).SelectedValue)
    bolChanged = bolChanged Or UTF.SetColumnText(currentRow, "KCODE2",
        CType(currentItem.FindControl("txtKode2"), TextBox).Text)

    If bolChanged Then
        If currentRow.RowState = DataRowState.Added Then
            UTF.SetColumnText(currentRow, "ICREATE", Me.ScsUserID)
            UTF.SetColumnText(currentRow, "DCREATE", Now.ToString)
        ElseIf currentRow.RowState = DataRowState.Modified Then
            UTF.SetColumnText(currentRow, "IUPDATE", Me.ScsUserID)
            UTF.SetColumnText(currentRow, "DUPDATE", Now.ToString)
        End If
    End If

    Return bolChanged

End Function

'# 取得DataGrid關聯的下層DataGrid，null(Nothing)或空陣列表示沒有關聯的下層 DataGrid

```

以 FindControl() 取得 DataGrid 相關 Control t 中的值

```

Protected Overrides Function AppGetChildDataGrids(ByVal parentDataGrid As
    System.Web.UI.WebControls.DataGrid) As System.Web.UI.WebControls.DataGrid()
    If parentDataGrid Is Nothing Then
        Return New DataGrid() {dgdSAMPLE101000}
    End If
    Return New DataGrid() {}
End Function

' # 取得currentDataGrid在mainDataSet中所要繫結的DataView執行個體
Protected Overrides Function AppGetDataGridBoundDataView(ByVal currentDataGrid As
System.Web.UI.WebControls.DataGrid, ByVal mainDataSet As System.Data.DataSet) As System.Data.DataView
    Dim dv As DataView = CType(mainDataSet, beSAMPLE101000).SAMPLE101000.DefaultView
    Me.BaseRestoreDataViewState(currentDataGrid.UniqueID, dv)
    Return dv
End Function

' # 將client端所輸入的查詢條件儲存
Protected Overrides Function AppGetQueryParameterDataSet() As System.Data.DataSet
    Dim ds As New beSAMPLE101000Query
    Dim dr As beSAMPLE101000Query.SAMPLE101000QueryRow = ds.Tables("SAMPLE101000Query").NewRow()

    UTF.SetColumnText(dr, "DATE1_1", Me.ucQueryDate1.Text.Trim)
    UTF.SetColumnText(dr, "DATE1_2", Me.ucQueryDate2.Text.Trim)
    UTF.SetColumnText(dr, "KCODE1", Me.ddlQueryKcode1.SelectedValue)
    UTF.SetColumnText(dr, "KCODE2", Me.txtQueryKcode2.Text.Trim.ToUpper)

    ds.Tables("SAMPLE101000Query").Rows.Add(dr)

    Return ds
End Function
#End Region

#Region " [EDIT] DataGrid Function"
' # DataGrid DataBinding
Private Sub dgdMain_DataBinding(ByVal sender As Object, ByVal e As System.EventArgs) Handles
    dgdSAMPLE101000.DataBinding
    Me.BaseDataGridDataBinding(dgdSAMPLE101000, 1)
End Sub

' # DataGrid DataBound
Private Sub dgdMain_ItemDataBound(ByVal sender As System.Object, ByVal e As
System.Web.UI.WebControls.DataGridItemEventArgs) Handles dgdSAMPLE101000.ItemDataBound
    Me.BaseDataGridItemDataBound(CType(sender, DataGrid), e.Item, 0, 1)

    Select Case e.Item.ItemType
    Case ListItemType.EditItem
        Dim dr As DataRow = CType(e.Item.DataItem, DataRowView).Row
        Dim strKcode1 As String = UTF.GetColumnText(dr, "KCODE1")
        If strKcode1.Trim <> "" Then
            Dim ddlKode1 As DropDownList = CType(e.Item.FindControl("ddlKode1"), DropDownList)
            ddlKode1.SelectedValue = strKcode1
        End If
    End Select
End Sub
#End Region
End Class

```

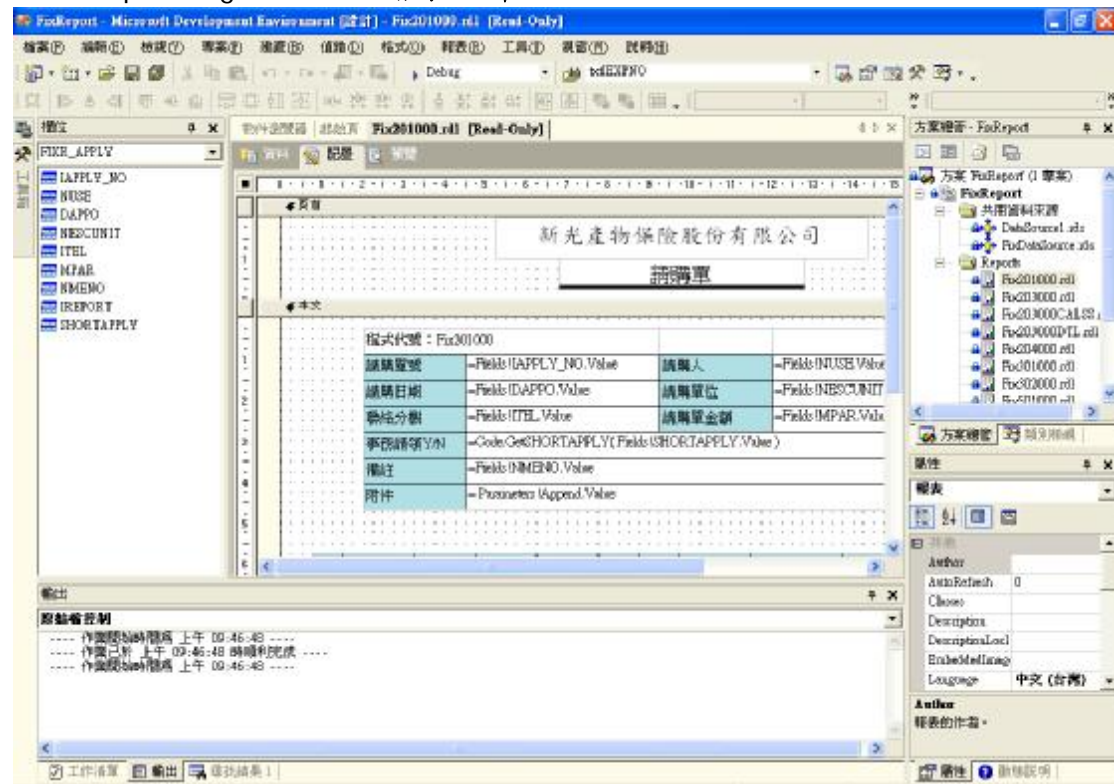
DataBinding

DataBound

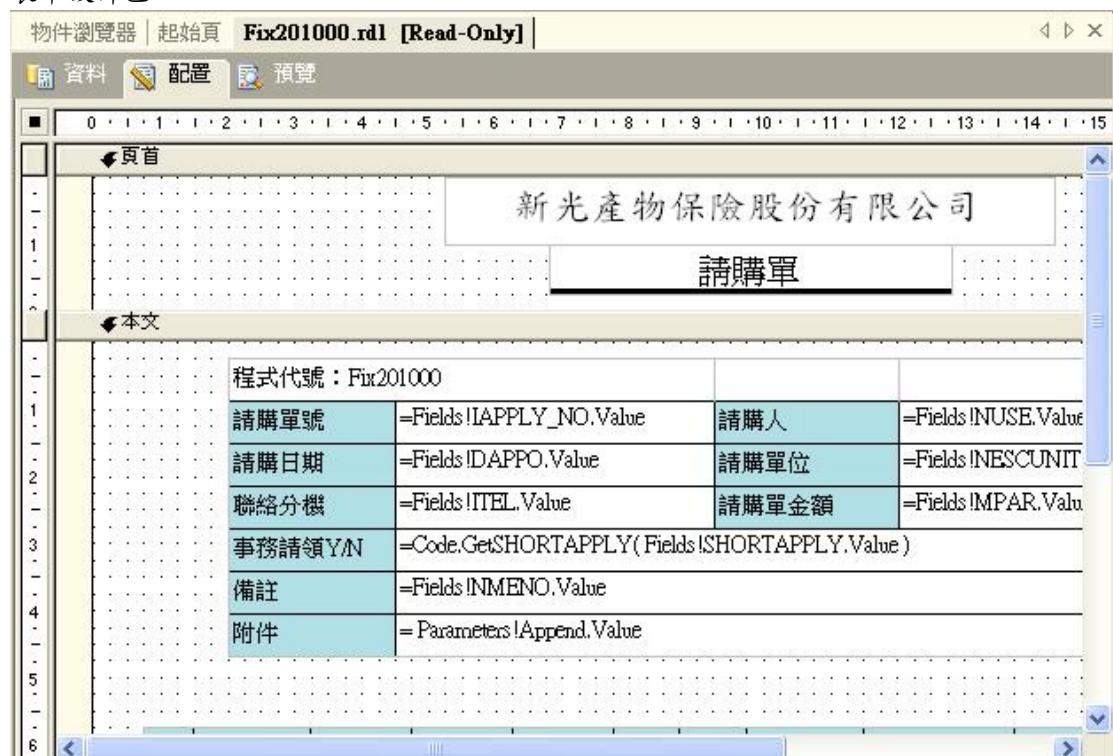
Service 端實作要點: 同單筆維護

報表程式開發

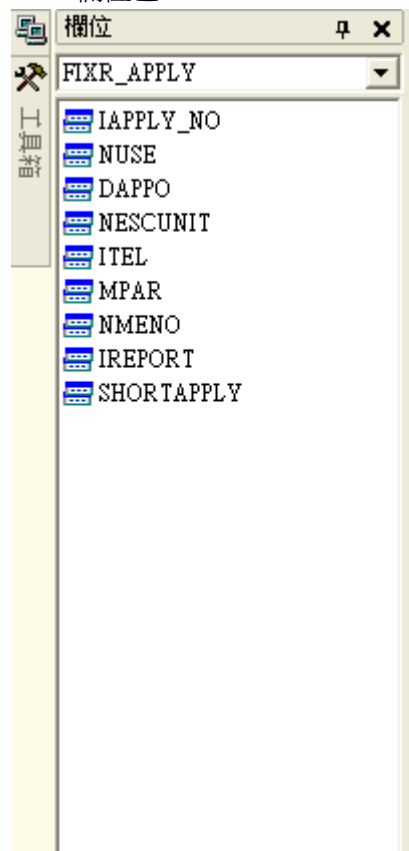
一、Reporting Services 報表設計



1. 表單設計區



2. 欄位區



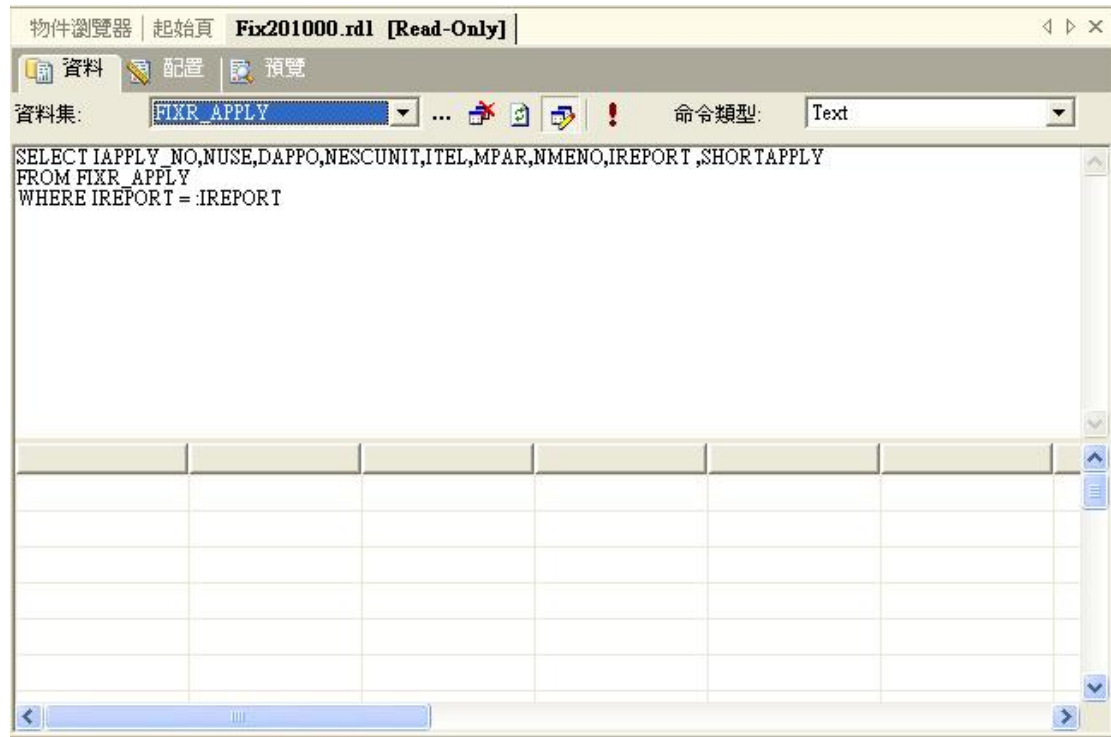
3. 工具箱



4. 內容規劃

可利用工具列工具拖拉進入設計區，欄位資料也可以用拖拉方式加入。

5. 資料欄位設計



透過”資料”頁籤，填入 S Q L，會依照 S Q L 內容顯示欄位。

詳情請看 Reporting Services 工具書

二、即時報表

PSN405001.vb

Protected Overrides Sub BaseDoPrint()

Dim dsPublicParameters As New beNameValues
Dim dsPrivateParameters As New beNameValues
Dim s0id As String = Me.lbl0id.Text
Dim flowstate As String = Me.lblflowstate.Text
Dim dabsentbeg As Date = Me.ucdabsentbeg.DateText.Trim
Dim intOption As Integer = 1

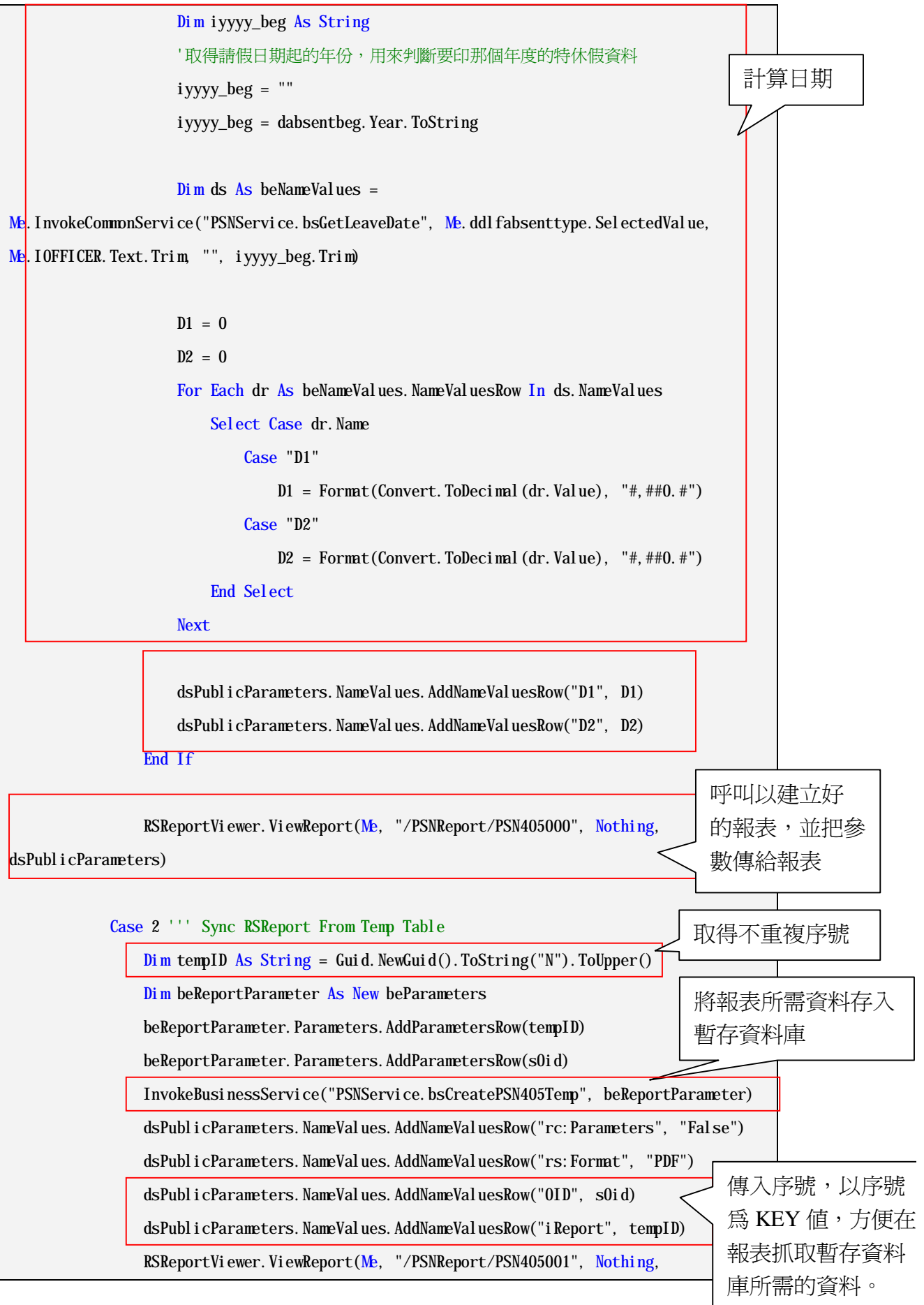
Select Case intOption
Case 1 ''' Sync RSReport
dsPublicParameters.NameValues.AddNameValuesRow("rc:Parameters", "False")
' dsPublicParameters.NameValues.AddNameValuesRow("rs:Format", "PDF")
dsPublicParameters.NameValues.AddNameValuesRow("OID", s0id)
dsPublicParameters.NameValues.AddNameValuesRow("FlowState", flowstate)

' 若是特休假才會傳送可請天數及已請天數的參數
If Me.ddl fabsenttype.SelectedValue.Trim = "HR" Then
Dim D1, D2 As Integer

參數預設

傳給報表參數

計算日期



```

dsPublicParameters)

    Case Else
    End Select

End Sub

```

三、 批次報表

```

PSN405001.vb

Protected Overrides Sub BaseDoPrint()

    Dim dsPublicParameters As New beNameValues
    Dim dsPrivateParameters As New beNameValues
    Dim s0id As String = Me.lbl0id.Text
    Dim flowstate As String = Me.lblflowstate.Text
    Dim dabsentbeg As Date = Me.ucdabsentbeg.DateText.Trim
    Dim int0ption As Integer = 1

    Select Case int0ption
    Case 3 ' ' ASync RSReport From Temp Table
        Dim tempID As String = Guid.NewGuid().ToString("N").ToUpper()
        Dim beReportParameter As New beParameters
        beReportParameter.Parameters.AddParametersRow(tempID)
        beReportParameter.Parameters.AddParametersRow(s0id)

        Dim jobID As String = InvokeJobService("PSNService.bsPrintPSN405Job",
        beReportParameter, "請假單:" + s0id)

        UIAppendMessage("請假單:" + s0id + "列印作業已經成功送出! 作業代號:" + jobID)
    Case Else
    End Select
End Sub

```

取得不重複序號

呼叫 JobService

SK Workflow 平台安裝

一、前置軟體需求

安裝 BorG SPM 之前，你的主機上必須已安裝：

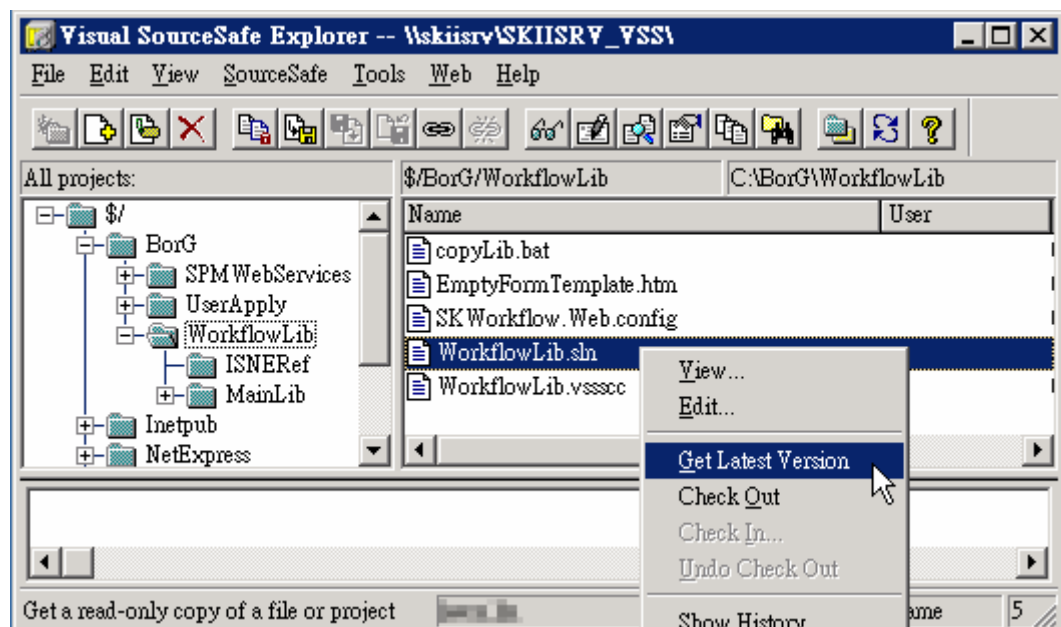
3. IIS。
4. Net Framework 1.1 (SP1)。
5. VS.Net 2003。
6. MS SQL Server 2000。

二、軟體安裝

1. 執行 \$BorG\Setup.exe，安裝 BorG SPM。
2. 執行 \$BorG\SPM Form Wizard\Setup.exe，安裝 BorG SPM Form Wizard。

三、平台組件安裝

1. 建立資料夾：
 - A. C:\BorG\WorkflowLib。
 - B. C:\inetpub\wwwroot\SKWorkflow。
2. 自 VSS 中取得原始程式檔案：
 - A. 開啟 VSS，並連結登入至：\\Skiisrv\SKIISRV_VSS\。
 - B. 設定 \$/BorG/WorkflowLib 的 Working Folder 為 C:\BorG\WorkflowLib。
 - C. 取得 \$/BorG/WorkflowLib/WorkflowLib.sln 的最新版本。



- D. 在檔案總管中以滑鼠雙擊 C:\BorG\WorkflowLib\WorkflowLib.sln，此時 VS.Net 將啟動，並自 VSS 中載入其餘的原始程式檔案。
3. 建置 C:\BorG\WorkflowLib\WorkflowLib.sln。
4. 開啟「命令提示字元」Console，切換至 C:\BorG\WorkflowLib 目錄並執行 copyLib.bat。

```

C:\>命令提示字元
C:\>cd BorG\Workf lowLib

C:\BorG\Workf lowLib>copyLib.bat
[Copying assembly files]
c:\BorG\Workf lowLib\bin\ISNRef.dll
c:\BorG\Workf lowLib\bin\Workf lowLib.dll
複製了      2 個檔案。
c:\BorG\Workf lowLib\bin\ISNRef.pdb
c:\BorG\Workf lowLib\bin\Workf lowLib.pdb
複製了      2 個檔案。
[Copying Web.config]
複製了      1 個檔案。
[Copying sampleForm.html]
複製了      1 個檔案。
Done!
請按任意鍵繼續 . . .

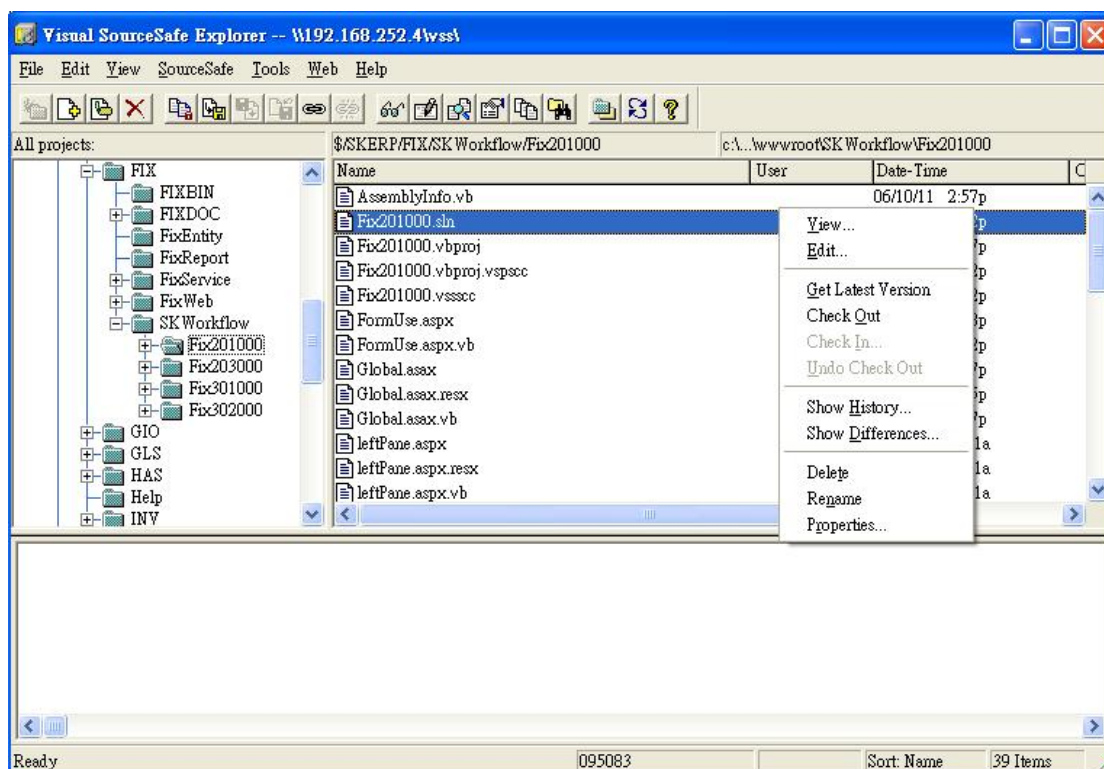
C:\BorG\Workf lowLib>

```

四、取得專案

一、自 VSS 中取得原始程式檔案：

- A. 開啟VSS，並連結登入至：\\Ski i srv\SK I I SRV_VSS\。
- B. 設定\$/FIX/ SKWorkflow/的Working Folder 為
C:\Inetpub\wwwroot\SKWorkflow。
- C. 取得\$/FIX/ SKWorkflow/Fix201000/Fix201000.sln 的最新版本。



- D. 在檔案總管中以滑鼠雙擊C:\Inetpub\wwwroot\SKWorkflow\Workf lowLib.sln，此時VS.Net 將啟動，並自VSS 中載入其餘的原始程式檔案。

Workflow 程式開發

參考範例 FIX201000

§

ERP 端寫作

```
bsFix201000Flow.vb

Imports FIXENTITY
Imports IntelliSys.NetExpress.Entity
Imports IntelliSys.NetExpress.Service
Public Class bsFix201000Flow
    Inherits BaseAppService
    #Region "        Service Setting"
    略...
#End Region

    Protected Overloads Overrides Sub DoRequest(ByVal param As DataSet, ByVal result As DataSet,
        ByVal trans As IDbTransaction)

        Dim DsReturnPrint As beFix201000Print = CType(param, beFix201000Print)
        Dim QueryOID As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("oid")
        Dim iapply_no As String =
DsReturnPrint.Tables("fixr_apply").Rows(0).Item("iapply_no")
        Dim nuse As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("nuse")
        Dim nescunit As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("nescunit")
        Dim Dept_id As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("DEPT_ID")
        Dim creatid As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("creatid")
        Dept_id =
CommonLib.Service.WorkflowDepartmentFinder.Instance.FindIdByDeptNo(Dept_id)

        Dim applymnt As String = Get_kcode(DsReturnPrint)
        Dim tempID As String = DsReturnPrint.Tables("fixr_apply").Rows(0).Item("ireport")
        Dim tempfilename As String =
DsReturnPrint.Tables("fixr_apply").Rows(0).Item("append")

        Dim data() As Byte = RSWebServiceRenderPDF(tempID, creatid, tempfilename)
        Dim dsCases As New WorkflowEntity.beCases
        Dim extName As String = ".PDF"
        Dim dsFile As New beFSReports
        Dim strTitle As String = iapply_no + " " + nescunit + " " + nuse + String.Format("請
```

所需資料抓取

報表轉成 byte

報表格式

Flow 參數收集

購單審核")

```
Dim CS_PLANID As String = "Fix201000請購"
dsFile.ReportItems.AddReportItemsRow(-1, FileService.NewFileName(extName),
strTitle, data)

Dim xmlEntity As String = EntityHelper.SerializeTypedXML(dsFile)
Dim drCasesRow As WorkflowEntity.beCases.CasesRow

drCasesRow = dsCases.Cases.AddCasesRow(QueryOID, CS_PLANID, _
strTitle, "", "", xmlEntity)

dsCases.FormFields.AddFormFieldsRow(drCasesRow, "aplymnt", aplymnt)
dsCases.FormFields.AddFormFieldsRow(drCasesRow, "PKOID", QueryOID)
dsCases.SystemVariables.AddSystemVariablesRow(drCasesRow, "APPLYDEPT", Dept_id)
Dim dsCaseTrace As WorkflowEntity.beCaseTrace = _
CType(Me.RequestLocalService("WorkflowService.bsSubmitCase", dsCases), _
WorkflowEntity.beCaseTrace)

Dim dsQuery As New beFix201000Query

dsQuery.fixm_applyQuery.Addfixm_applyQueryRow(QueryOID, Nothing, Nothing, Nothing,
Nothing, Nothing, Nothing, Nothing, Nothing, Nothing)

回壓ERP資料庫送單狀態...略...

For Each drCaseTrace As WorkflowEntity.beCaseTrace.CaseTraceRow In
dsCaseTrace.CaseTrace
    Me.AppendServiceMessage(String.Format("案件已送審：#{0}-{1}",
drCaseTrace.CaseID, drCaseTrace.Subject), True)
Next

End Sub

#Region " 用WebService產生PDF_Data"
Private Shared Function RSWebServiceRenderPDF(ByVal tempID As String, ByVal UserID As
String, ByVal tempfilename As String) As Byte()
    Dim rs As RSService.ReportingService = New RSService.ReportingService
    Dim reportPath As String = "/FixReport/Fix201000"
```

Flow 參數收集

把參數送至
平台,自動將
資料送至
SPM 系統

```

Dim Format As String = "PDF"
Dim historyID As String = Nothing
Dim devInfo As String = Nothing

Dim parameters() As RSService.ParameterValue = _
    New RSService.ParameterValue() {New RSService.ParameterValue, New
RSService.ParameterValue, New RSService.ParameterValue}

parameters(0).Name = "IREPORT"
parameters(0).Value = tempID
parameters(1).Name = "PrintUser"
parameters(1).Value = UserID
parameters(2).Name = "Append"
parameters(2).Value = tempfilename

Dim credentials() As RSService.DataSourceCredentials = Nothing
Dim showHideToggle As String = Nothing
Dim encoding As String
Dim mimeType As String
Dim reportHistoryParameters As RSService.ParameterValue() = Nothing
Dim warnings() As RSService.Warning = Nothing
Dim streamIDs As String() = Nothing
Dim sh As RSService.SessionHeader = Nothing
rs.SessionHeaderValue = sh
rs.Credentials =
VirtualUser.CreateNetworkCredentialFromConfig("ReportingServiceWebServiceUser")

Dim result() As Byte = Nothing

Try
    result = rs.Render(reportPath, Format, historyID, devInfo, _
        parameters, credentials, showHideToggle, _
        encoding, mimeType, reportHistoryParameters, _
        warnings, streamIDs)

Catch se As System.Web.Services.Protocols.SoapException
    Throw New ApplicationException(String.Format("呼叫SQL RS Web Service 發生錯誤
\n{0}", se.ToString()))
Catch
    Throw
End Try

```

傳入參數宣告

報表固定寫法

```

Return result
End Function
#End Region
#Region "Get SQL String"
略...
#End Region
End Class

```

§

SK Workflow 寫作

```

MyTaskPaneHelper.vb

Imports System.Xml
Imports System.Data.SqlClient
Imports BorG.SPM
Imports System.Text

Public Class MyTaskPaneHelper
    Inherits TaskPaneHelper

    Public Sub New(ByVal page As ITaskPanePage)
        MyBase.New(page)
    End Sub

#Region "Put Your Code Here"
    Dim IsLastStep As Boolean = False
    略...
    關卡處理, 決定下關卡的處理人員

    Private Sub HandleSPMEvent( _
        ByVal eventType As SPMEventType, ByRef con As IDbConnection _
    )
        If Me.IsNormalStep And Me.IsDefaultSendAction Then
            Select Case Me.GetServiceVariable("STEPNAME")
                Case "申請人主管"
                    關卡名稱

                    If Me.IsLastWorkflowStep(con) Then
                        決定是否結束

                        Dim stepHandler As String
                        Dim APPLYMT As String = GetTypeValue()
                        If APPLYMT.Length > 1 Then
                            Dim typearray() As String = APPLYMT.Split("|")
                            If typearray(1).Substring(0, 4) = "0073" Then
                                stepHandler = Me.GetStepHandleString("管理部門承辦人員",

```

```

GetDeptJob(con, "3秘書室總務科", "總務科承辦人"))

        ElseIf typearray(1).Substring(0, 4) = "0077" Then

            stepHandler = Me.GetStepHandleString("管理部門承辦人員",
GetDeptJob(con, "3資訊部系統科", "資訊部採購人"))

        End If

        Else '舊參數
            stepHandler = Me.GetStepHandleString("總務承辦人員")
        End If

        If SPMEventType.PageLoad = eventType Then
            'Me.IsLastStep = True
            Me.Page.SPMNextHandler = stepHandler
        ElseIf SPMEventType.BeforeSend = eventType Then
            Me.Page.SPMNextHandler = stepHandler
            Me.Page.SPMReassign = stepHandler
        End If

        Else

        略..

        End If

        略..

    End Sub

#Region "SPM Page 事件"
    略..

#End Region

#End Region

End Class

```

下一個關
卡參數

送件處理

附註:詳細範例請參考 Workflow_howto.pdf