

# ZFRAME INFRASTRUCTURE

Technical Document

Software Topology

Development

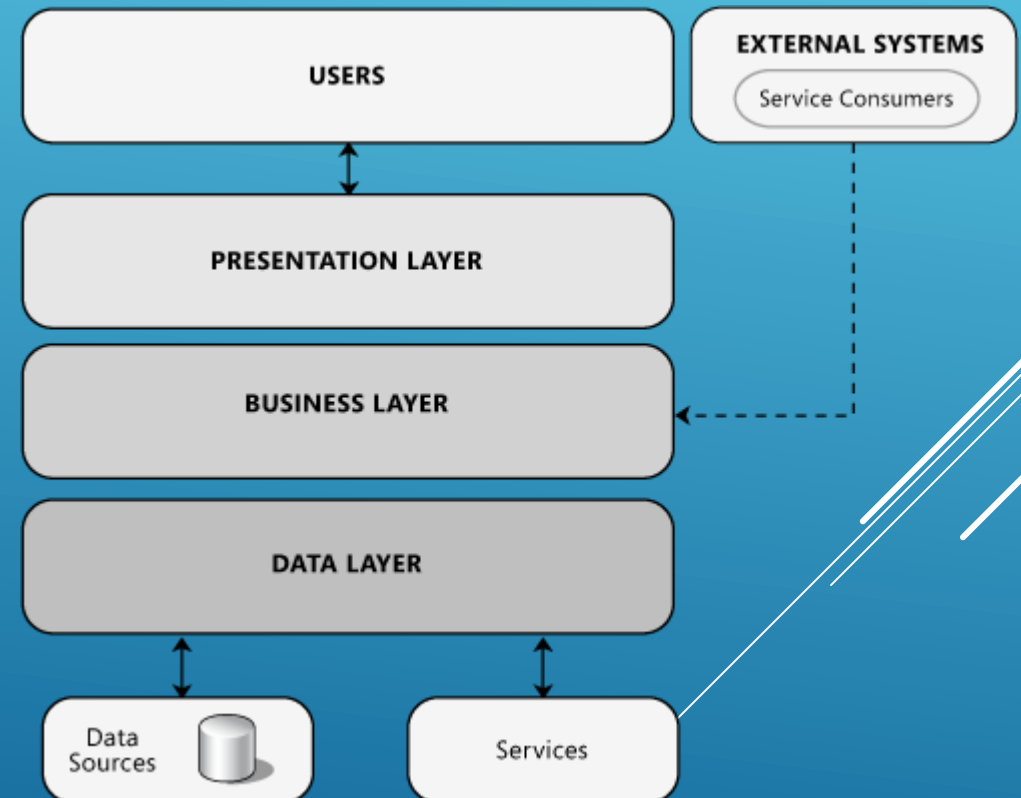
Deployment

Presenter : Siavash Rafiei

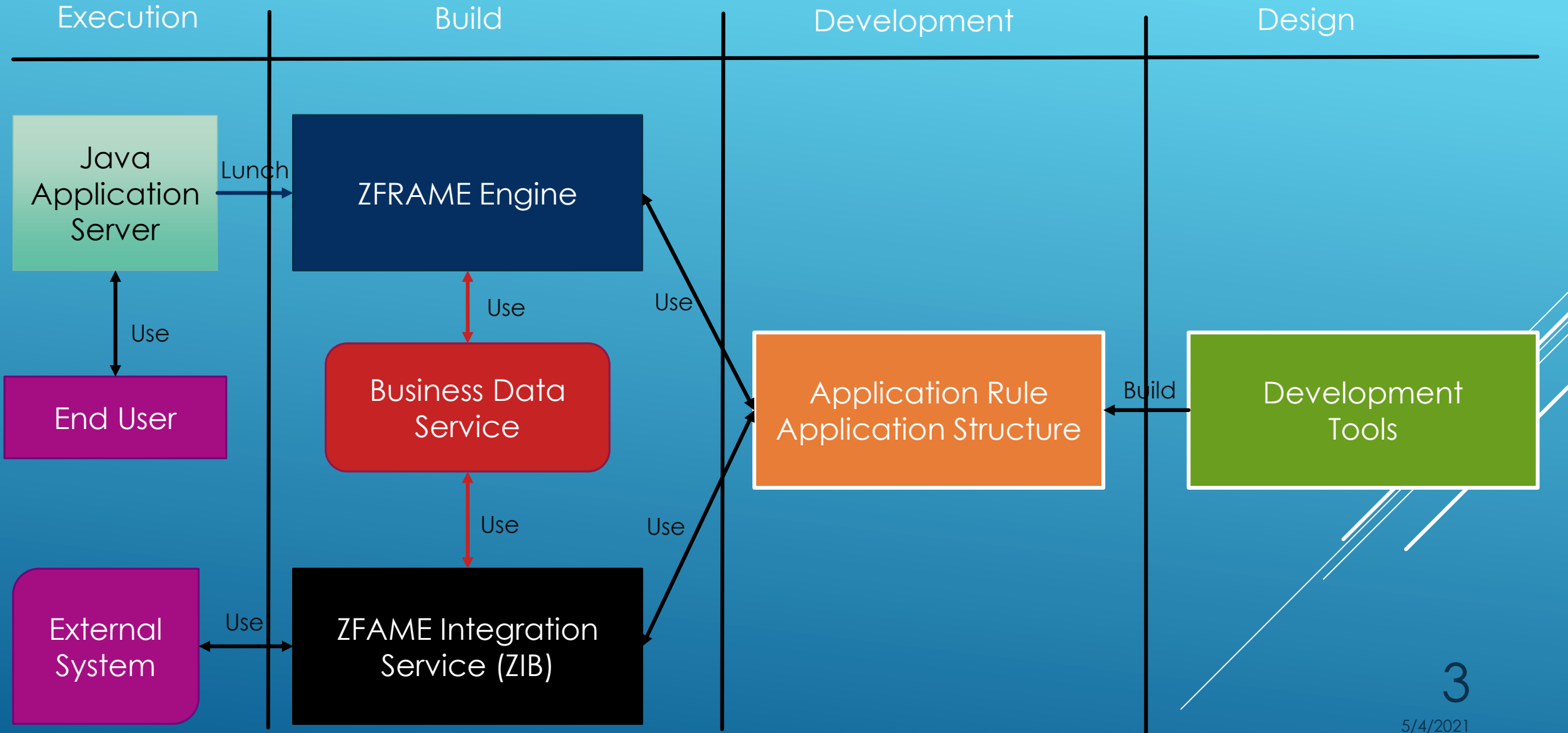


# ZFRAME is a low-code application development tool that lets your organization build and deploy custom apps easily and securely

ZFRAME Scope

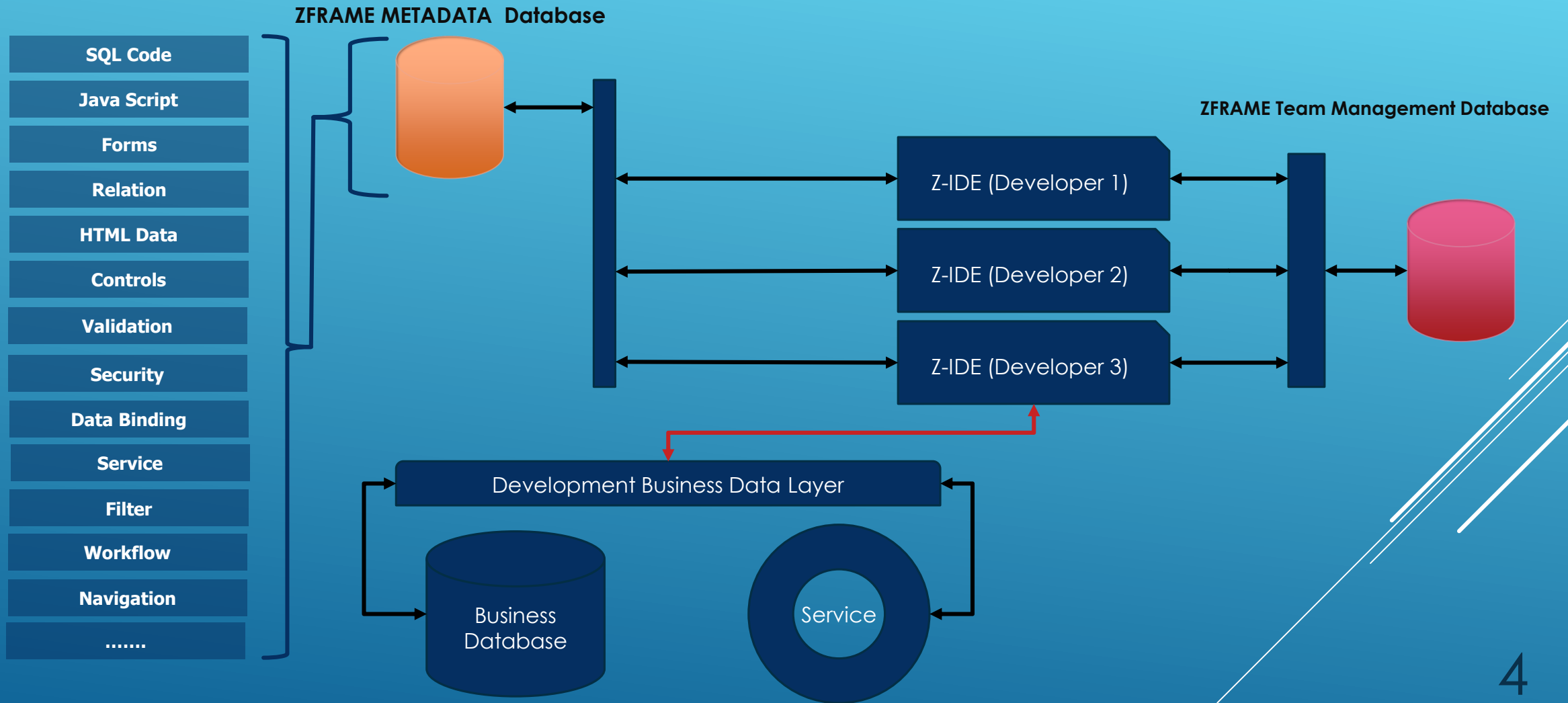


# Topology



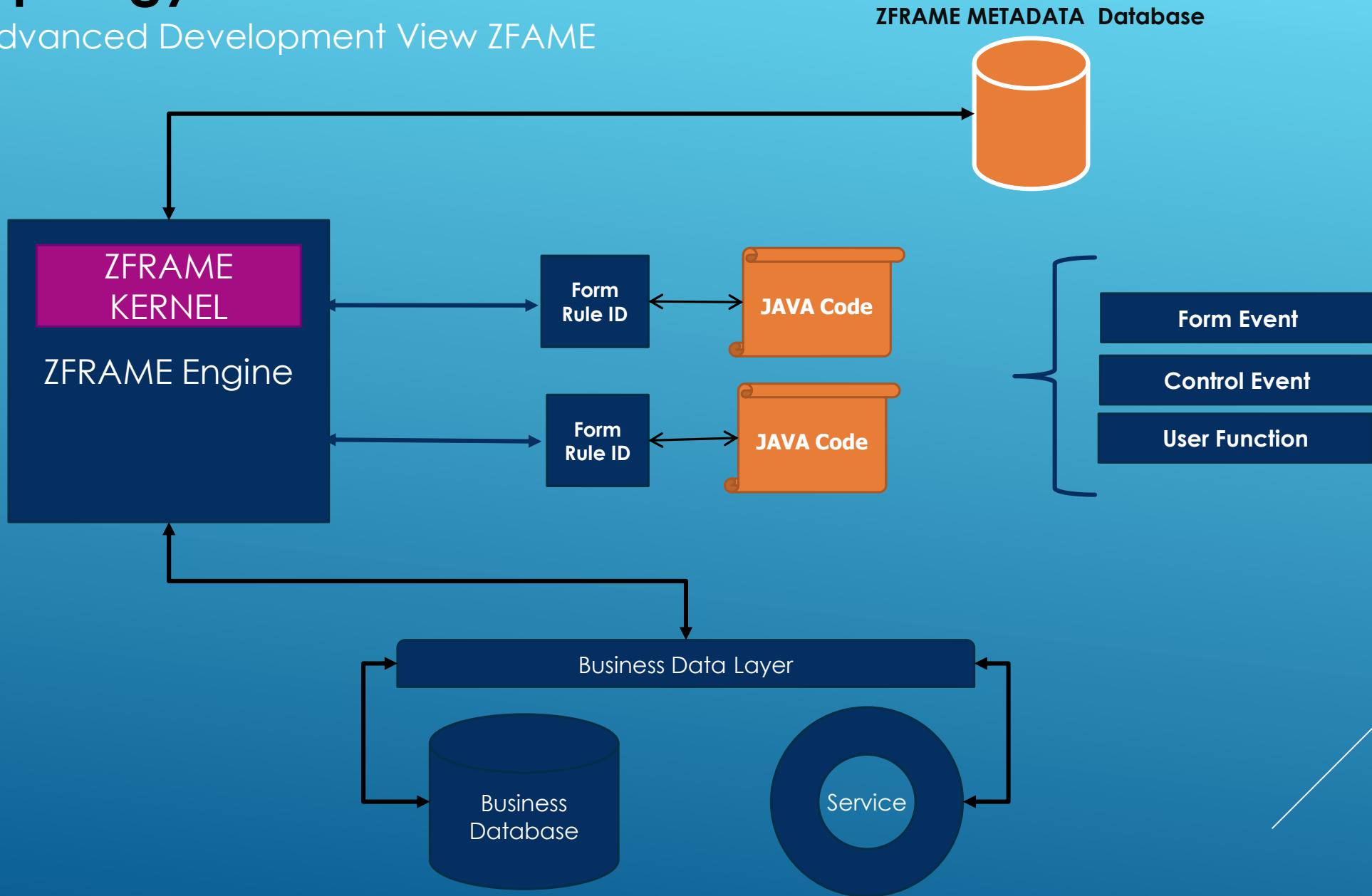
# Topology

## Simple Development View



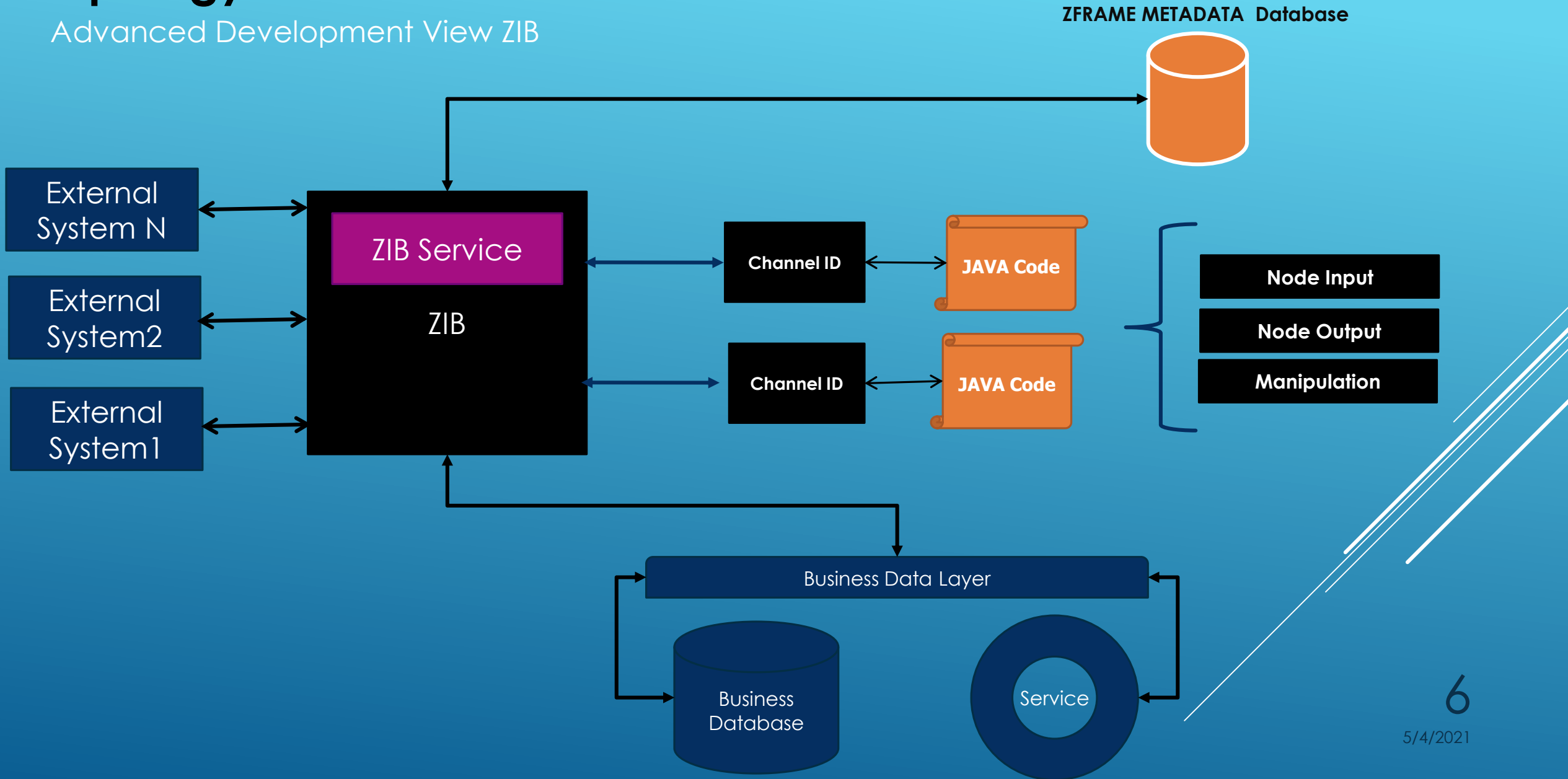
# Topology

Advanced Development View ZFAME



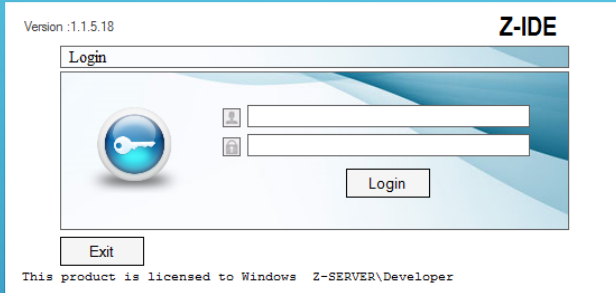
# Topology

Advanced Development View ZIB



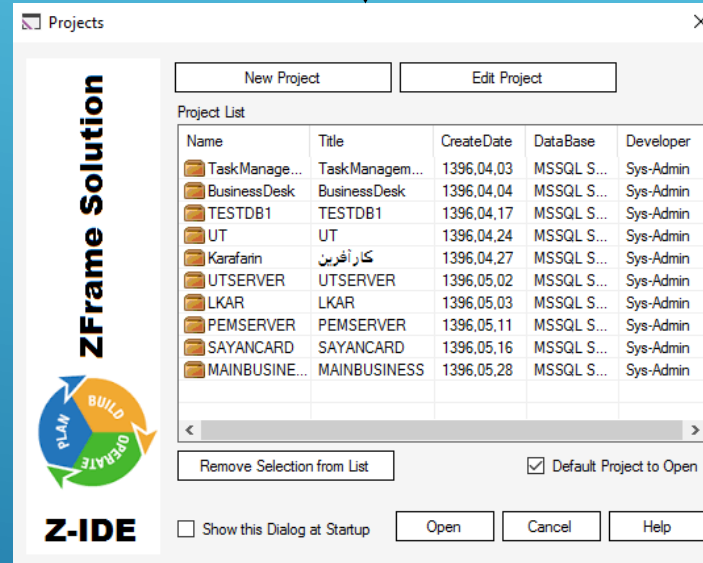
# Development

## Z-IDE Project And Application

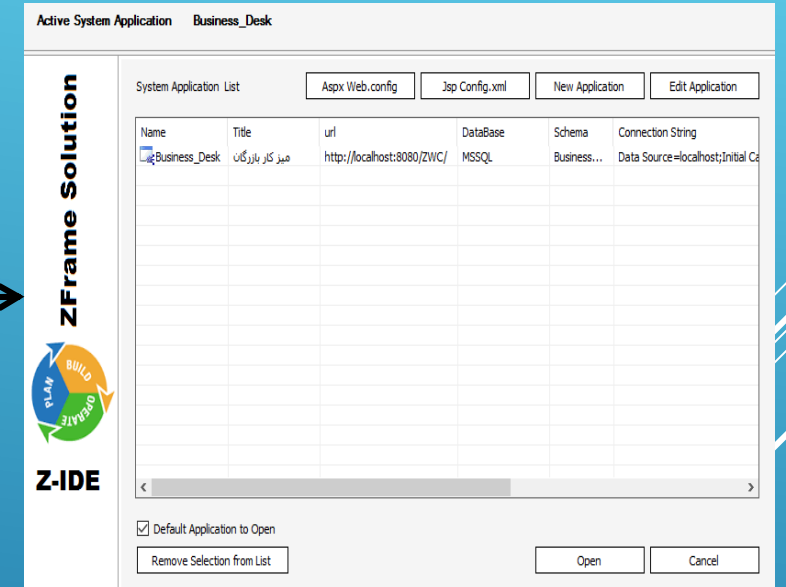


Authentication

Project List



Application List In Project



ERP Project

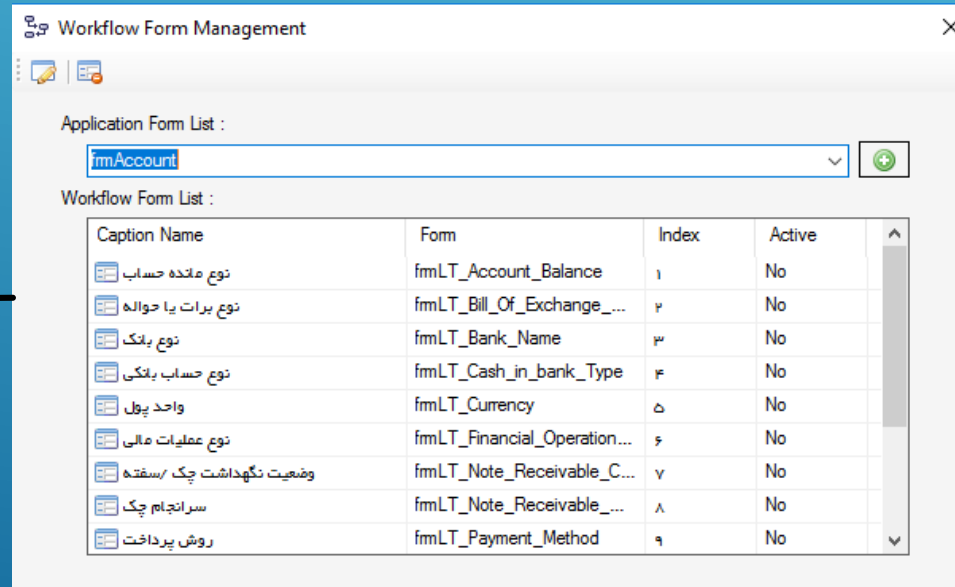
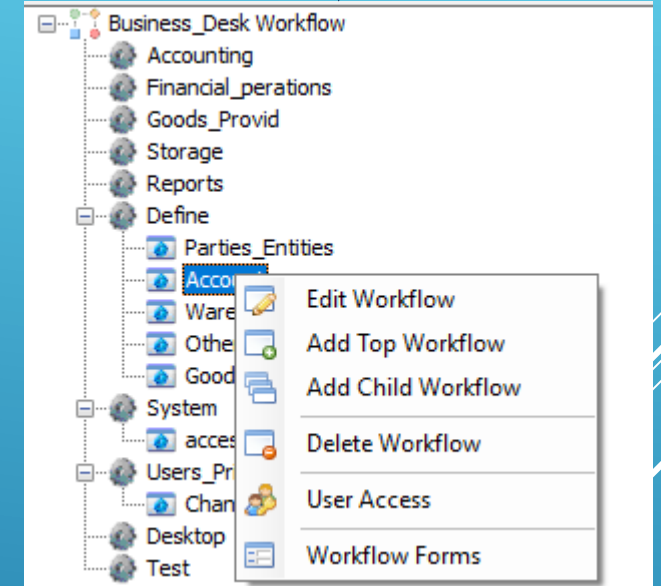
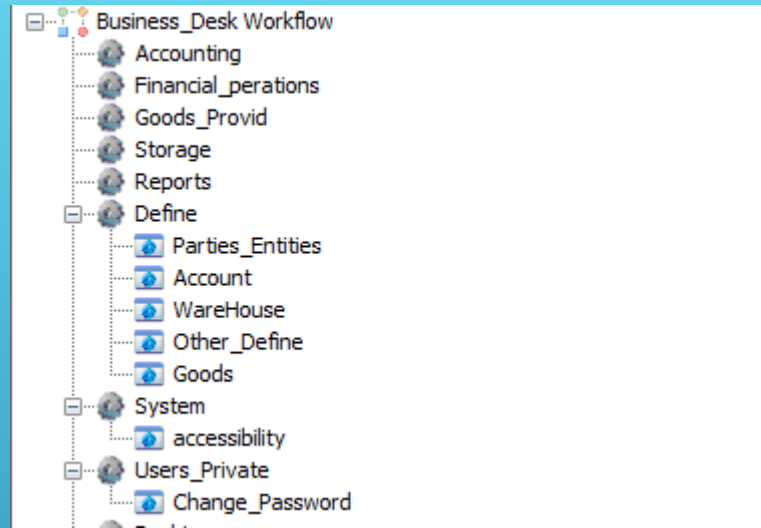
SCM

KMS

CRM

# Development

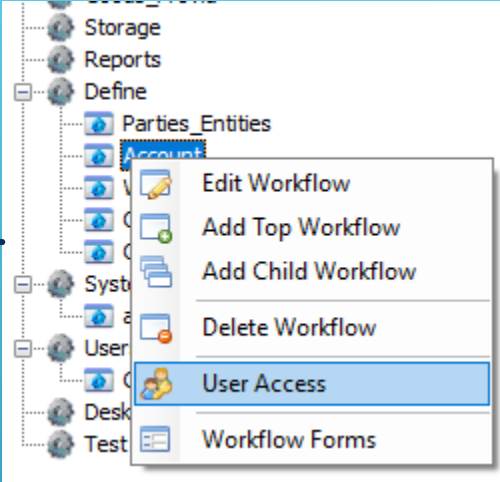
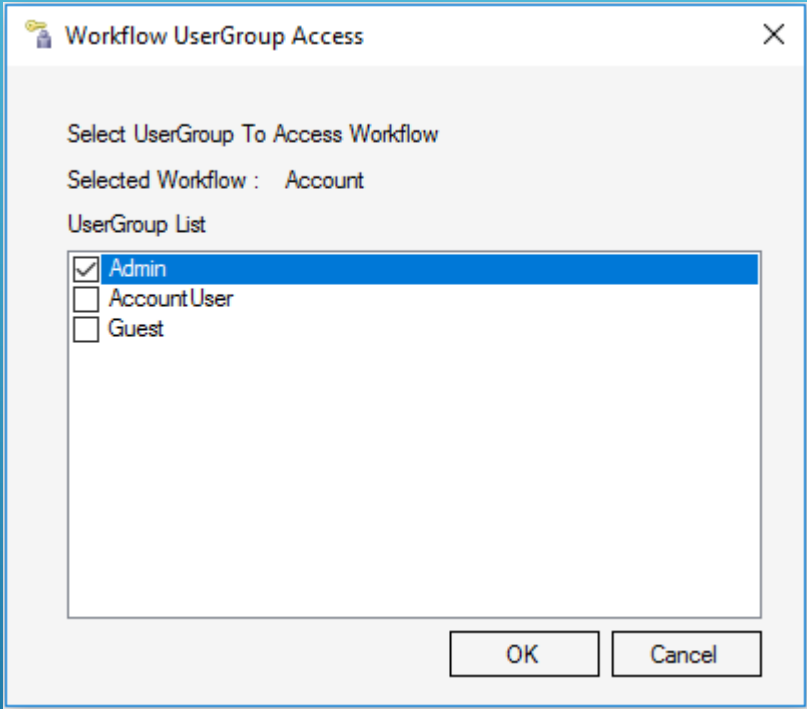
## Workflow and Forms





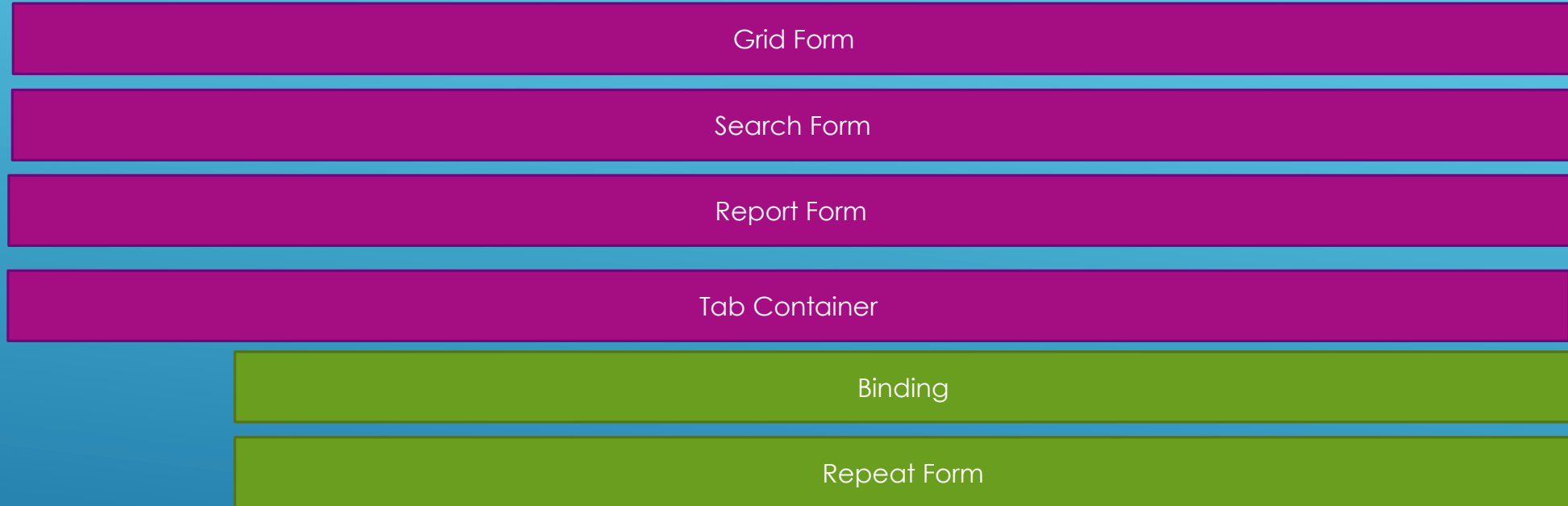
# Development

## Workflow and Accessibility



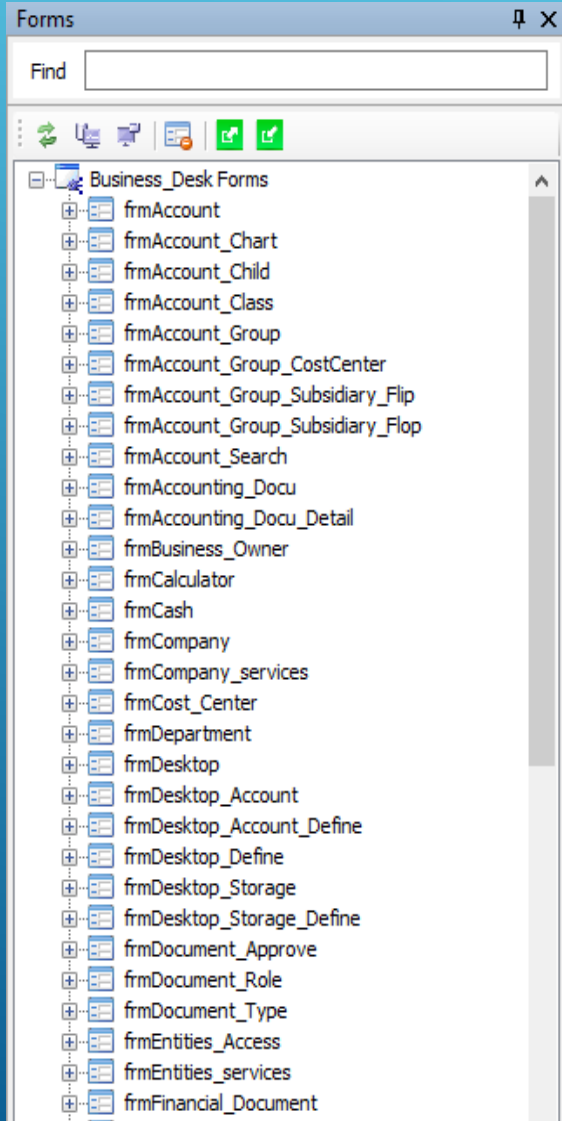
# Development

## Form Types

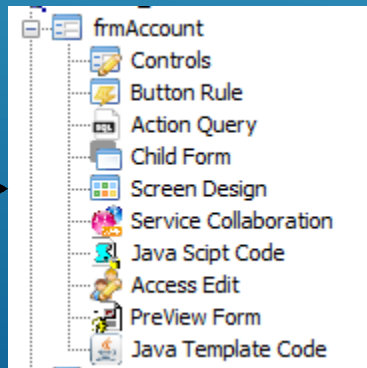


# Development

## Forms



Form Management



Control

Button Rule

Action Query

Child Form

Screen Design

Service Collaboration

Java Script

Access Edit

Java Code

# Development

## Forms - Controls

1. Hidden
2. Text Box
3. Data Combo
4. Check Box
5. Option
6. DateBox
7. Multi Line Text
8. Lookup Table Box
9. Find Object Box
10. Grid View
11. File
12. Button
13. Tree
14. Image
15. Check Box List
16. Radio Button List
17. Form
18. Download Object
19. Search Text
20. Label
21. Text Editor
22. List Box
23. Dropdown Tree
24. Chart
25. Menu
26. Flat Tree

# Development

## Forms – Button Rule In Form

Button Rule

Grid Form



- New
- Save
- Delete
- Search
- Print
- Firest
- Back
- Next
- End
- ExcelGrid
- ExcelReport

# Development

## Forms – Access Edit

Manage Form Access With User Group

User Group List  ▼

Can View     Can Insert     Can Delete  
 Can Edit     Can View Report     Can Export

| Control Name | Can View                 | Can Edit                 |
|--------------|--------------------------|--------------------------|
| AnswerID     | <input type="checkbox"/> | <input type="checkbox"/> |
| QuestionID   | <input type="checkbox"/> | <input type="checkbox"/> |
| AnswerNumber | <input type="checkbox"/> | <input type="checkbox"/> |
| AnswerText   | <input type="checkbox"/> | <input type="checkbox"/> |
| Weight       | <input type="checkbox"/> | <input type="checkbox"/> |
| NewLabel     | <input type="checkbox"/> | <input type="checkbox"/> |

# Development

## Forms – Action Query

### Action Query

Insert Query Update Query Delete Query Constraints List

IF Form Access To Database

The screenshot displays three overlapping Microsoft Access Action Query forms. The leftmost form shows the 'DataBase Object' pane with the 'dbo.Account' table selected, listing fields like Account\_ID, Account\_Group\_ID, Account\_Name, etc. The middle form is an 'Insert Query' with a SQL editor containing an INSERT statement and a message box with Persian text: 'اطلاعات مربوط به تعاریف حساب با موفقیت در سیستم ثبت گردید'. The rightmost form is a 'Delete Query' with a SQL editor containing a DELETE statement and a message box with Persian text: 'اطلاعات مربوط به تعاریف حساب از سیستم حذف گردید'. A table with columns 'Name' and 'Error' is visible in the top right, showing a constraint error: 'Constraint شماره حساب تکراری است'. The bottom right form shows a 'Delete Query' with a SQL editor containing a DELETE statement and a message box with Persian text: 'اطلاعات مربوط به تعاریف حساب با موفقیت از سیستم حذف گردید'.

# Development

## Forms – Child Form

Child Forms List

| Child Name       | Caption     | Active | KeyName          |
|------------------|-------------|--------|------------------|
| frmAccount_Class | حساب های کل | Yes    | Account_Group_ID |

Child Form Name:

Reference Form:

Caption:

Key Name:

Active

Load Query

```

1  SELECT
2  [ACCOUNT_GROUP_ID]
3  , [ACCOUNT_GROUP_NAME]
4  , [ACCOUNTCODE]
5  , [ACCOUNT_TITLE_COMPLETE]
6  FROM DBO.Account_Group
7
8  WHERE [PARENT_CODE] =
9

```

حساب های اصلی

| نام حساب                      |                                     |   |
|-------------------------------|-------------------------------------|---|
| دارایی های جاری               | <input type="checkbox"/>            | ۱ |
| دارایی های ثابت               | <input checked="" type="checkbox"/> | ۲ |
| بدهیهای جاری                  | <input type="checkbox"/>            | ۳ |
| بدهیهای بلندمدت               | <input type="checkbox"/>            | ۴ |
| حقوق صاحبان سهام              | <input type="checkbox"/>            | ۵ |
| درآمدها                       | <input type="checkbox"/>            | ۶ |
| هزینه ها                      | <input type="checkbox"/>            | ۷ |
| بیای تمام شده کالای ساخته شده | <input type="checkbox"/>            | ۸ |
| حسابهای کنترلی                | <input type="checkbox"/>            | ۹ |

حساب های اصلی

حساب های کل

جزئیات

| عنوان | کد  | نام حساب                           |                          |   |
|-------|-----|------------------------------------|--------------------------|---|
| دار   | ۲۱۰ | اموال ، اثاثه و تجهیزات            | <input type="checkbox"/> | ۱ |
| دار   | ۲۲۰ | داراییهای غیر مشهود                | <input type="checkbox"/> | ۲ |
| دار   | ۲۳۰ | سرمایه گذاری و مشارکت ها           | <input type="checkbox"/> | ۳ |
| دار   | ۲۴۰ | هزینه های تأسیس قبل از بهره برداری | <input type="checkbox"/> | ۴ |
| دار   | ۲۵۰ | سایر دارایی ها                     | <input type="checkbox"/> | ۵ |
| قرض   | ۲۱۱ | قیمت تمام شده دارایی در حال تکمیل  | <input type="checkbox"/> | ۶ |
| د     | ۲۵۵ | ذخیره استهلاک داراییها             | <input type="checkbox"/> | ۷ |

حساب های کل

کد

نام سر فصل حساب

ماهیت

شرح

Load Form In New I frame With Filter



# Development

## Forms – Screen Design

CSS Management

HTML Code

Inline Java Script

Add Media

The screenshot displays a web design tool interface. The top part shows a table with the following content:

| تعاریف حساب            |                |
|------------------------|----------------|
| Account_Group_ID@      | سرفصل حساب     |
| Account_Code@          | کد حساب        |
| Account_Name@          | نام حساب       |
| AccountTitle_Complete@ | نام کامل حساب  |
| Account_Description@   | تشرح           |
| @Creat_Date@           | تاریخ ایجاد    |
| @Debit_Verify@         | اعتبار بدهکاری |
| @LBLMESSAGE@           |                |
| @CHILDFORM@            |                |

The bottom part of the screenshot shows the HTML code for the table:

```
1 <DIV dir=rtl align=center>
2 <TABLE class=FromTable style="WIDTH: 380px" border=1>
3 <TBODY>
4 <TR>
5 <TD class=HeaderFrom colspan=2 align=center><SPAN class=Title>حساب تعاریف</SPAN></TD></TR>
6 <TR>
7 <TD class=ObjectControl style="WIDTH: 220px"><SPAN class=Title>حساب سرفصل</SPAN></TD>
8 <TD class=ObjectControl style="WIDTH: 120px" > @Account_Group_ID@ </TD></TR>
9 <TR>
10 <TD class=ObjectControl style="WIDTH: 220px"><SPAN class=Title>کد حساب</SPAN></TD>
```

# Development

## Forms – Web Service Collaboration

Web Service WSDL Schema

### WebService

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [CreatreAccount](#)
- [DeleteAccount](#)
- [EditAccount](#)
- [GetAllAccount](#)

---

**This web service is using <http://tempuri.org/> as its default namespace.**

**Recommendation: Change the default namespace before the XML Web service is made public.**

# Development

## Forms – Web Service Collaboration

External Web Service

Add Service

Service Name:

Service Uri:

SOAP Action:

Name Space:

EnvelopePrefix:

Step 1 Service Register

Add Service

Service Name:

Service Uri:

SOAP Action:

Name Space:

EnvelopePrefix:

```
GetAllAccount
Input Message: GetAllAccount SoapIn
parameters
Output Message: GetAllAccount SoapOut
parameters
CreateAccount
Input Message: CreateAccount SoapIn
parameters
Output Message: CreateAccount SoapOut
parameters
DeleteAccount
Input Message: DeleteAccount SoapIn
parameters
Output Message: DeleteAccount SoapOut
parameters
EditAccount
Input Message: EditAccount SoapIn
parameters
Output Message: EditAccount SoapOut
```

# Development

## Forms – Web Service Collaboration

Step 1 Service Register

New Service Delete Service

Service Name:  Name Space

Service Url:

SOAP Action:

EnvelopePrefix  Save

Function List

- GetAllAccount
- GetAllAccountResponse
- CreatreAccount
- CreatreAccountResponse
- DeleteAccount
- DeleteAccountResponse
- EditAccount**
- EditAccountResponse

Parameter List

- AccountID**
- AccountName
- AccountCode

ZFRAME Load Service Function And Parameter

# Development

## Forms – Web Service Collaboration

Form

Step 2 Service Assignment

| Behavior                     | Web Service | Function |      |        |                              |
|------------------------------|-------------|----------|------|--------|------------------------------|
| Insert Service Collaboration | Account     |          | Save | Config | Delete Service Collaboration |
| Update Service Collaboration | Account     |          | Save | Config | Delete Service Collaboration |
| Delete Service Collaboration | Account     |          | Save | Config | Delete Service Collaboration |
| Select Service Collaboration | Account     |          | Save | Config | Delete Service Collaboration |

# Development

## Forms – Web Service Collaboration Simple Mode

| Behavior                     | Web Service | Function      |      |        |                              |
|------------------------------|-------------|---------------|------|--------|------------------------------|
| Insert Service Collaboration | Account     | CreateAccount | Save | Config | Delete Service Collaboration |
| Select Service Collaboration | Account     | GetAllAccount | Save | Config | Delete Service Collaboration |

Config Service Parameter To From Object

Form Objects

- AccountID
- AccountName
- AccountCode

AccountName

AccountName

Process Function

1 |

Save Delete

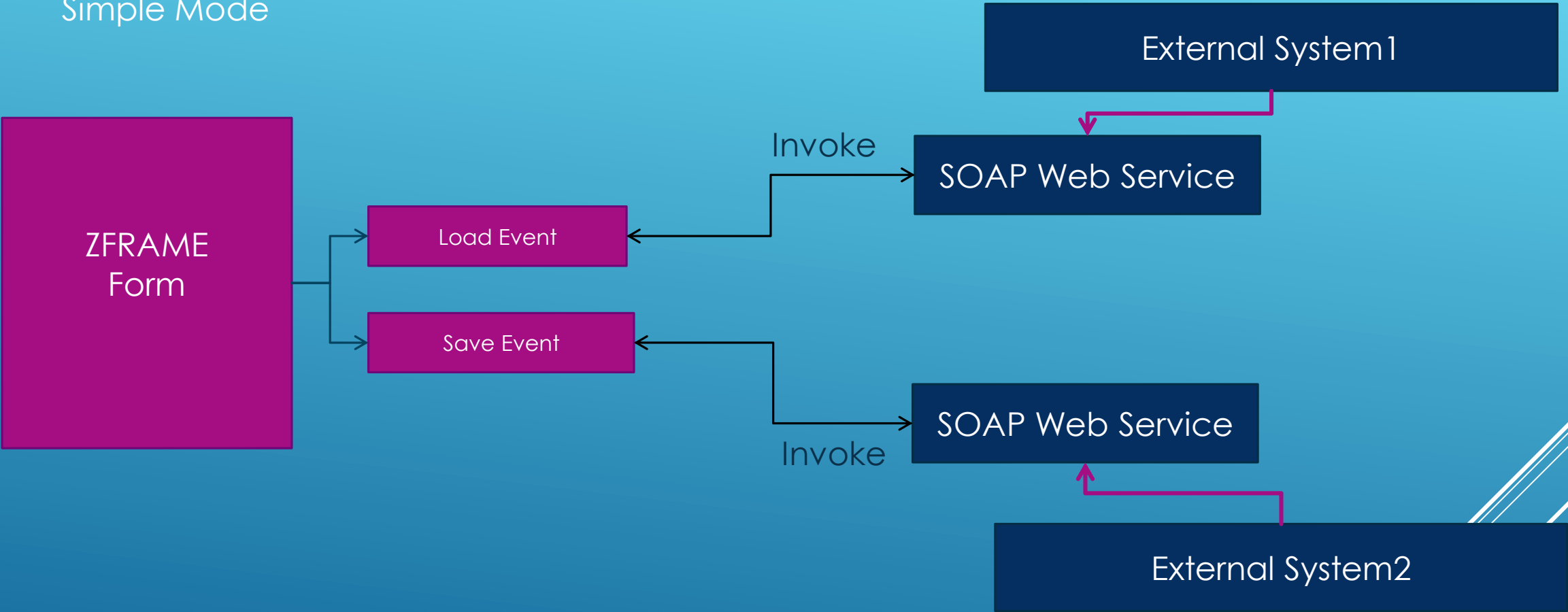
| CONTROLNAME | FUNCTIONNAME |
|-------------|--------------|
| AccountName | AccountName  |
| AccountCode | AccountCode  |
| *           |              |

Service Parameter

- AccountName
- AccountCode

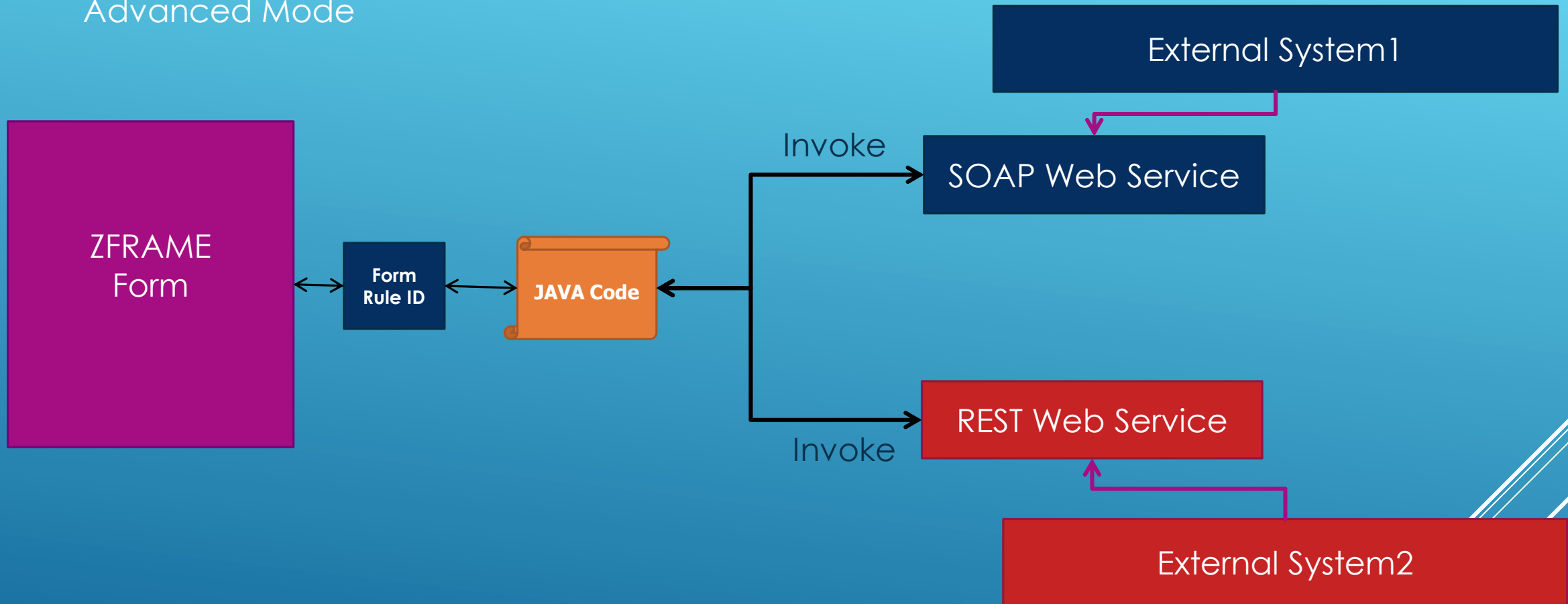
# Development

Forms – Web Service Collaboration  
Simple Mode



# Development

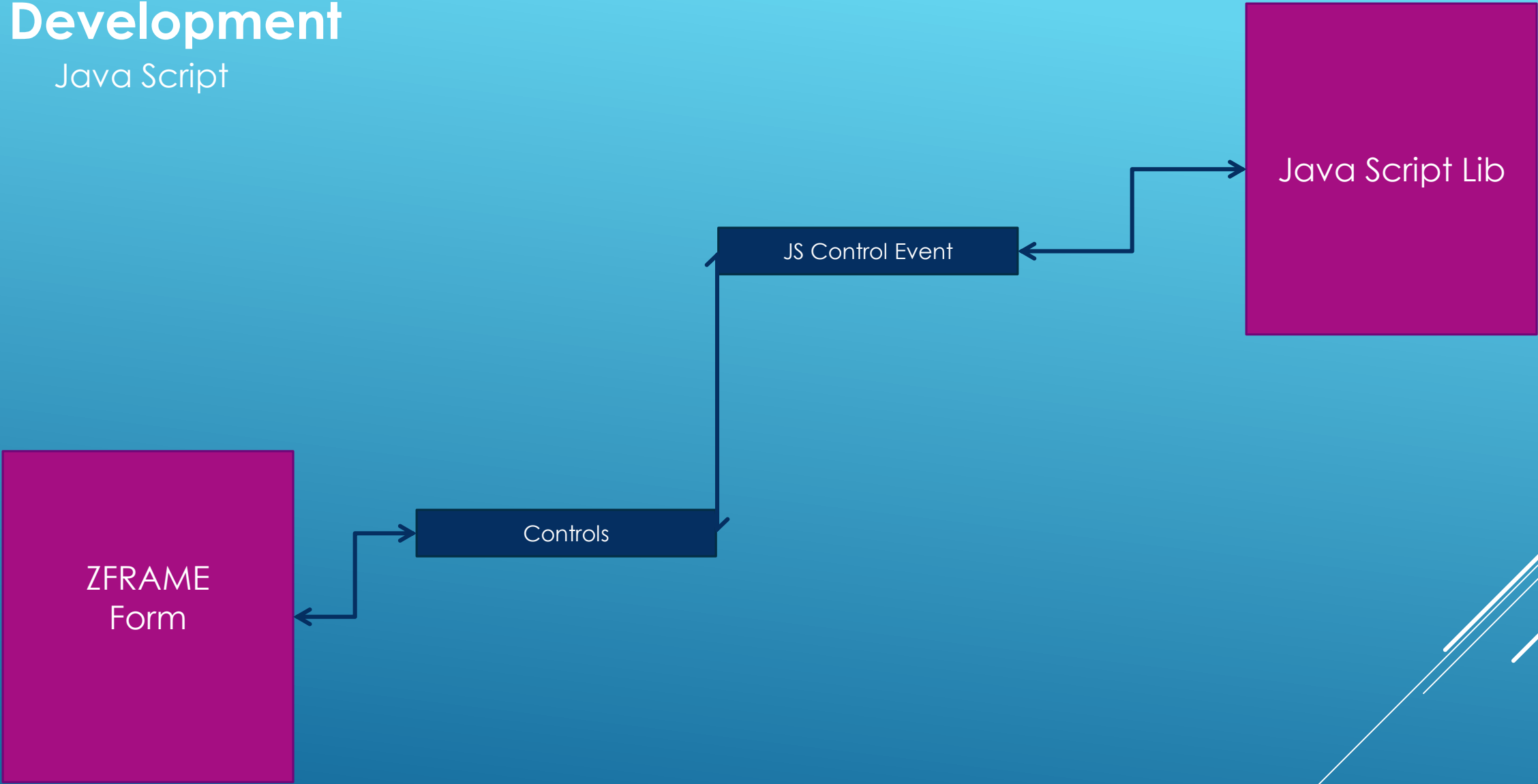
Forms – Web Service Collaboration  
Advanced Mode





# Development

Java Script



# Development

## Java Script

### JS Control Event

Control Event List

Events

- onabort
- oncanplay
- onchange
- onblur
- oncanplaythrough
- onclick
- oncontextmenu
- oncuechange
- ondblclick
- ondrag
- ondragend

Form Control List

| Control Name |
|--------------|
| AccountID    |
| AccountName  |
| AccountCode  |

Java Script Function Call

Client Action For : AccountCode

```
1  
2  
3  
4  
5  
6  
onclick =\" MFunction (@AccountName@) ;\"
```

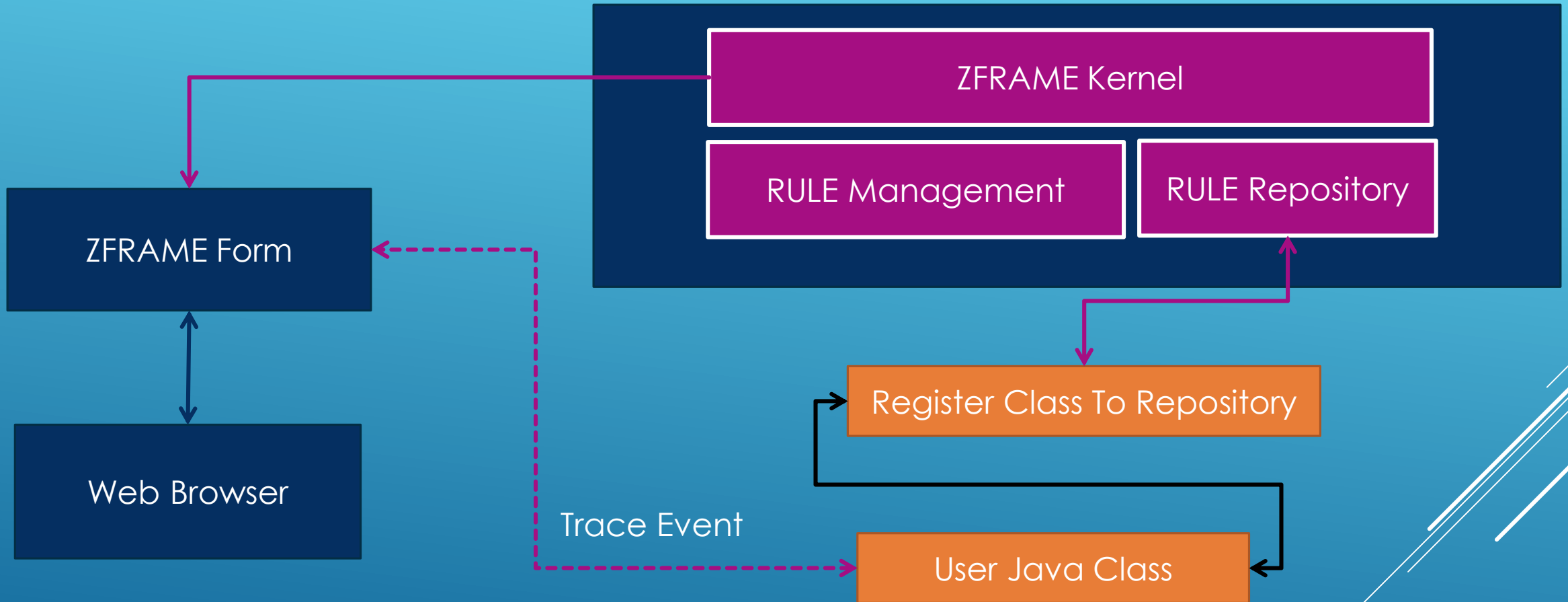
Show Java Script Cancel OK

### Java Script Lib

```
1 function MFunction(obj)  
2 {  
3  
4     alert(obj.value);  
5  
6 }
```

# Development

Java Programming With ZFRAME



# Development

## Java Programming With ZFRAME

```
package RuleCode;

import BusinessRule.Structure.Table.Sys_Object_Control;

public class frmAnswer extends Z_Framework.UI.RuleCommand.BaseCommandRule
{
    public frmAnswer()
    {
        this.RuleID = 0;
    }

    /* Control List */
    BusinessRule.Structure.Table.Sys_Object_Control Control_AnswerID = new Sys_Object_Control ();
    BusinessRule.Structure.Table.Sys_Object_Control Control_QuestionID = new Sys_Object_Control ();
    BusinessRule.Structure.Table.Sys_Object_Control Control_AnswerNumber = new Sys_Object_Control ();
    BusinessRule.Structure.Table.Sys_Object_Control Control_AnswerText = new Sys_Object_Control ();
    BusinessRule.Structure.Table.Sys_Object_Control Control_Weight = new Sys_Object_Control ();
    BusinessRule.Structure.Table.Sys_Object_Control Control_NewLabel = new Sys_Object_Control ();

    public void FillClassData()
    {
        /* Load Control Data From Request Form */
        Control_AnswerID = this.ControlByName ("AnswerID");
        Control_QuestionID = this.ControlByName ("QuestionID");
        Control_AnswerNumber = this.ControlByName ("AnswerNumber");
        Control_AnswerText = this.ControlByName ("AnswerText");
        Control_Weight = this.ControlByName ("Weight");
        Control_NewLabel = this.ControlByName ("NewLabel");
    }
}
```

```
public void ManageAction()
{
    FillClassData ();

    if (this.CommandType == StandardCommandType.BackCommand)
    {
        OnBackButtonClick ();
        return;
    }
}
```

```
else if (this.CommandType == StandardCommandType.PrintCo
{
    OnPrintCommandButtonClick ();
    return;
}

else if (this.CommandType == StandardCommandType.SaveCom
{
    OnSaveCommandButtonClick ();
    return;
}

else if (this.CommandType == StandardCommandType.Search
{
    OnSearchQueryCommandButtonClick ();
    return;
}

else if (this.CommandType == StandardCommandType.StartPr
{
    OnStartPrintCommandButtonClick ();
    return;
}

}

private void OnBackButtonClick ()
{
}

private void OnDeleteButtonClick ()
{
}
```

# Development

ZFRAME And Angular Js

# Deployment

Operation System

Microsoft Windows

Linux

Main Frame Z/OS

# Deployment

Database Engine

MSSQL Server

IBM DB2

Oracle

# Deployment

Application Server

Apache Tomcat

Glassfish

Oracle Web Logic

IBM Websphere Application Server