

SAP Composite Application Framework



Creating a Form- Based Process (Adobe)



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Typographic Conventions

Type Style	Represents
<i>Example Text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.
	Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

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Scenario

An Adobe form can be used to gather information as part of a Business Process. Interactive forms can be incorporated into a Guided Procedure or you can use them as standalone objects.

You are allowed to send personalized and impersonalized interactive forms, as well as online and offline interactive forms.

For example, you can:

- create an offline form from a form template and publish it to an URL
- send a form to an e-mail
- trigger a GP process using an interactive form, and so on

About This Document

General Prerequisites

To implement an Interactive Form based process using Adobe interactive forms you should perform the configuration steps described in the document **"Error! Reference source not found."**.

To use Adobe interactive forms you should install the newest version of Adobe Reader using www.adobe.com

In case of Problems concerning ADOBE Reader please refer to [SAP Note 934981](#)

Applicable Releases

This tutorial is compatible with the following release" Free from SAP NetWeaver '04s SPS07".

Disclaimer

Any software coding and/or code lines / strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, except if such damages were caused by SAP intentionally or grossly negligent.

The Step By Step Solution

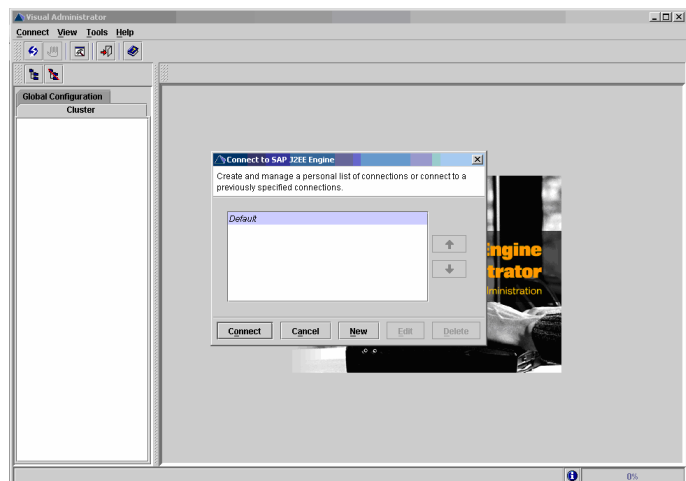
How to Check the Configuration of the J2EE Engine

Prerequisites

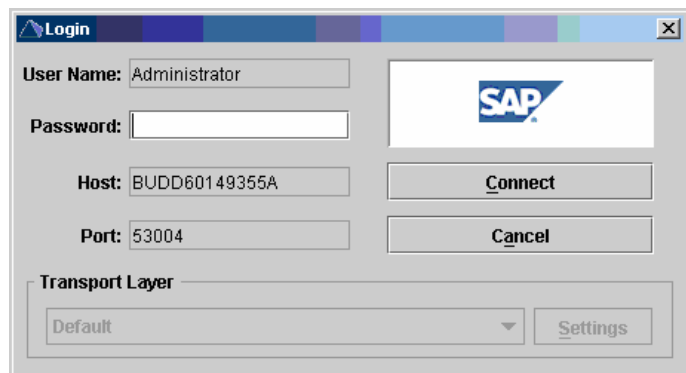
For a detailed discussion about the configuration of your J2EE engine see also [1].

Description of the Scenario

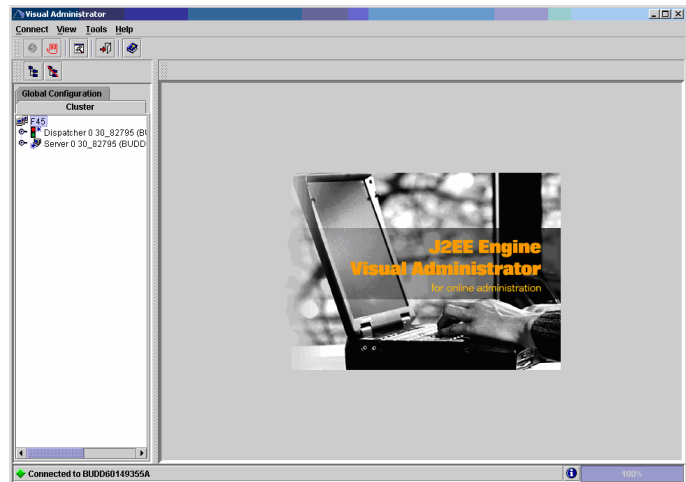
1. Open the Visual Administrator of your J2EE engine.
(Start -> Programs -> SAP J2EE Engine -> Visual Administrator)
Select your connection configuration and click the *Connect* button.



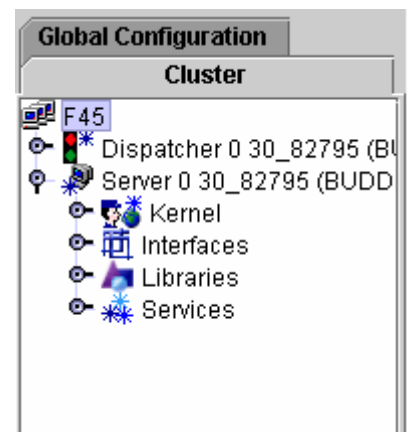
2. The *Login* dialog appears. Type in your password and then click *Connect*.



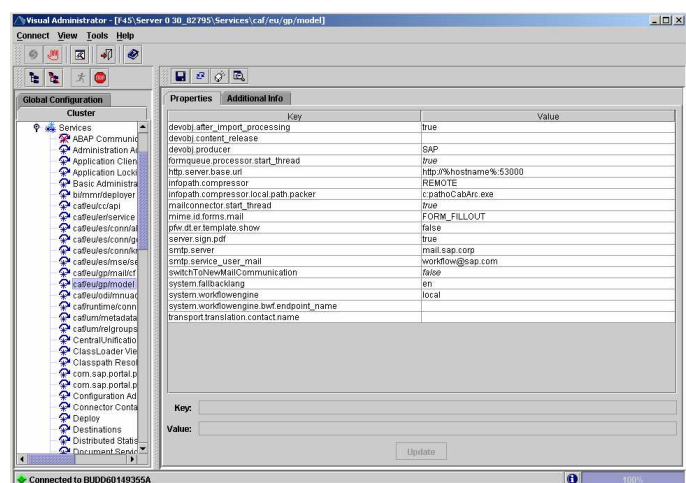
3. The main window of the Visual Administrator opens. On the left-hand side of the window select the *Cluster* tab if needed and then expand the server's node.



4. Expand the *Services* node.



5. Select the *caf/eu/gp/model* node.



6. Check the entries on the right-hand side of the window.
If you adjust any of the entries, restart the engine when you have changed the configuration values.

Properties		Additional Info
Key	Value	
devobj.after_import_processing	true	
devobj.content_release		
devobj.producer	SAP	
formqueue.processor.start_thread	true	
http.server.base.url	http://%hostname%:53000	
infopath.compressor	REMOTE	
infopath.compressor.local.path.packer	c:\pathoCabArc.exe	
mailconnector.start_thread	true	
mime.id.forms.mail	FORM_FILLOUT	
pfw.dt.er.template.show	false	
server.sign.pdf	true	
smtp.server	mail.sap.corp	
smtp.service.user.mail	workflow@sap.com	
switchToNewMailCommunication	false	
system.fallbacklang	en	
system.workflowengine	local	
system.workflowengine.bwf.endpoint_name		
transport.translation.contact.name		

How to Create Adobe Interactive Forms with Adobe Designer

Prerequisites

You have already installed the SAP NetWeaver Developer Studio 7.0.0. The SAP NetWeaver Developer Studio 7.0.0 includes the Adobe Designer as well, so you should not install it separately.

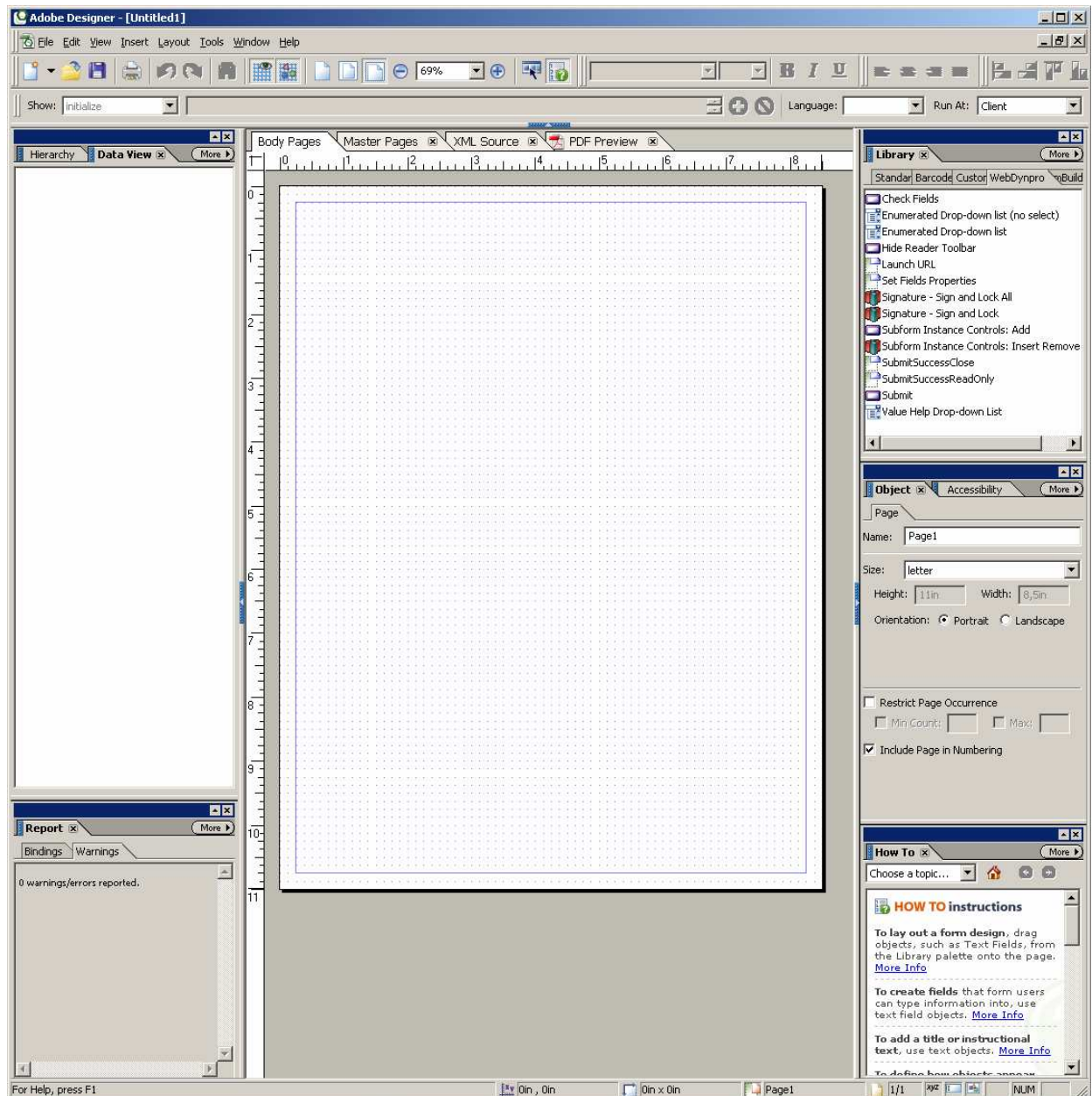
Description of the Scenario

This section provides a high level description of how Adobe Interactive Forms can be created using either the Adobe Designer or the Adobe Plug-In for the NetWeaver IDE.

You do not have to prepare a new template here as the template used in the following chapters is attached in the appendix of this document.

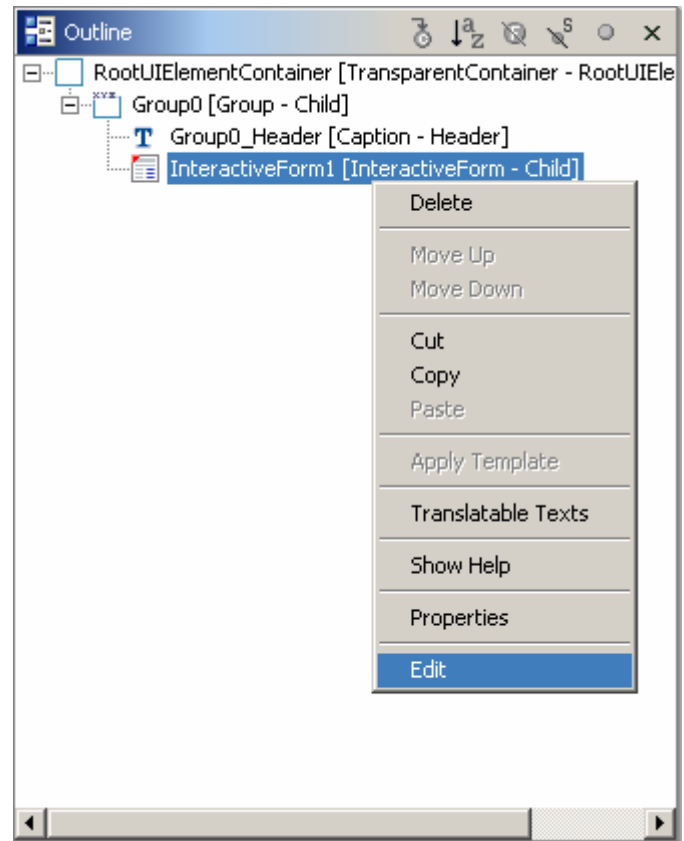
1. Start the Adobe Designer application as a standalone application or as part of the SAP NetWeaver Developer Studio.

THE BEST-RUN BUSINESSES RUN SAP



If you want to start the Adobe Designer from within the SAP NetWeaver Developer Studio, you should:

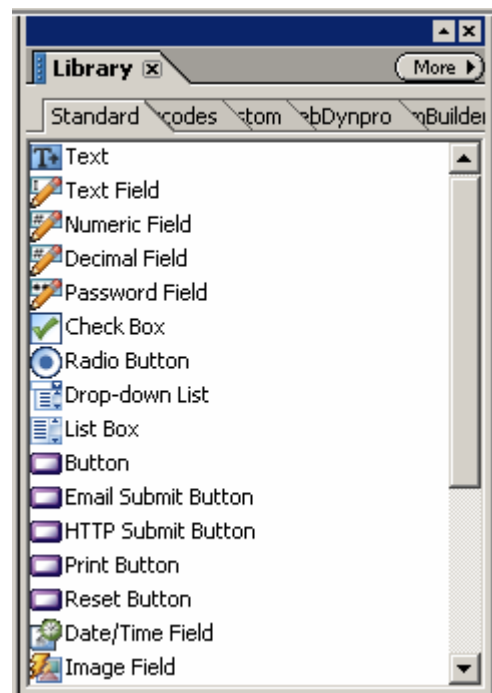
- a. Add an *InteractiveForm* element to one of your views
- b. Select the *InteractiveForm* element
- c. Right-click it and choose the *Edit* menu item from its context menu



2. When you have started the Adobe Designer you will find the *Library* panel on the right-hand side of its window. The *Library* panel contains the list of the available GUI elements. You can select the appropriate element and drag and drop it into the body page.



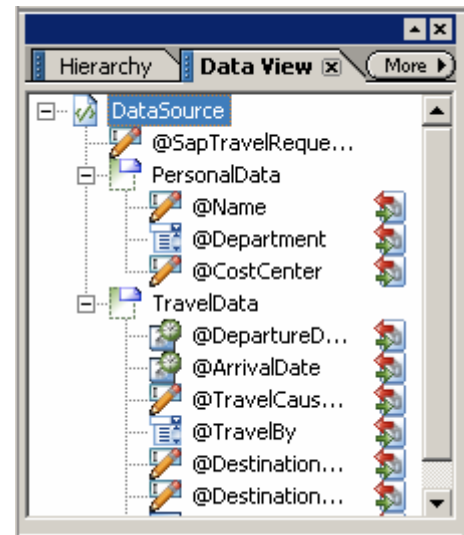
Master pages are currently not supported by Guided Procedures; you should use only the body pages.



If you are working from within the SAP NetWeaver Developer Studio the *Data View* tab contains the context elements of your Web Dynpro view and you can drag and drop them into the body page of Adobe form as well. In this case the binding between the context element and the Adobe GUI element will be created automatically too.



Please ensure that every single data element has a unique binding name! If, for example, employee and approver data is included, please choose a different binding name for the name of the employee (for example eName) from the name of the approver (for example aName). Otherwise you may get an error when sending the data.

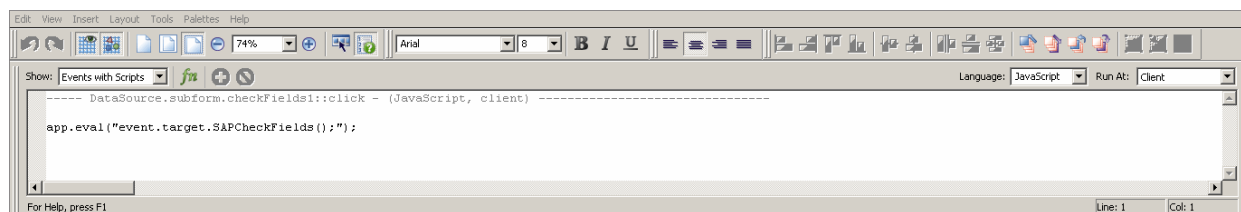


3. A script editor panel can be found on the upper side of the Adobe Designer window. Here you can attach scripts to the GUI elements. The GUI elements located on the WebDynpro tab already contain some predefined scripts, for example:

```
-- form1.#subform[0].submitToSAP1::click - (JavaScript, client) -
// DO NOT MODIFY THE CODE BEYOND THIS POINT - SubmitToSAP.xfo

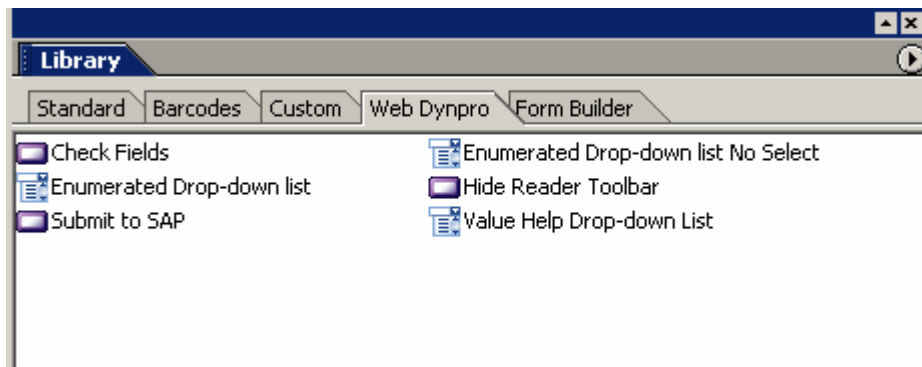
app.eval("event.target.SAPSubmit();");

// END OF DO NOT MODIFY
```



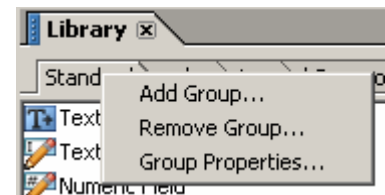
You can use JavaScript and FormCalc script languages

A Web Dynpro page is also available in the library; it contains several SAP specific elements.

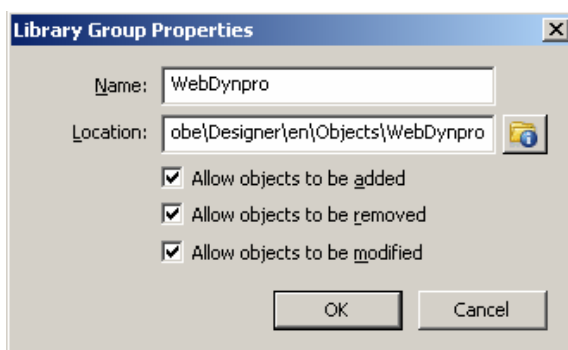


If you have no WebDynpro tab page, you can create it by right-clicking the tabs, then choosing *Add Group* and specifying its name in the *Add Library Group* dialog.

When you have added the new tab, you have to select it, right click on it, and choose the *Group Properties* menu item from its context menu.

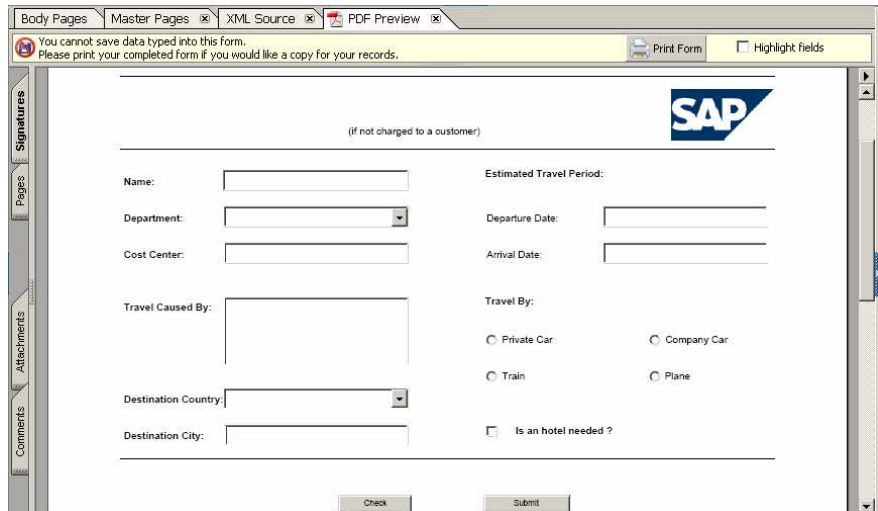


The following dialog appears:



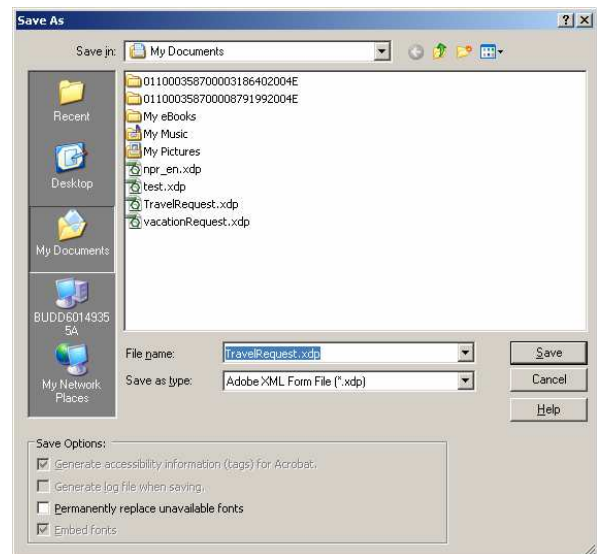
Correct the ending of the string typed into the *Location* field as above.

4. When you have created the form you can use the *PDF Preview* tab to check its layout.



The screenshot shows the SAP PDF Preview window. At the top, there are tabs for 'Body Pages', 'Master Pages', 'XML Source', and 'PDF Preview'. A yellow warning bar at the top states: 'You cannot save data typed into this form. Please print your completed form if you would like a copy for your records.' Below this, the form is displayed with the SAP logo in the top right corner. The form is titled '(if not charged to a customer)'. It contains several input fields: 'Name:', 'Department:' (a dropdown menu), 'Cost Center:', 'Estimated Travel Period:' (with 'Departure Date:' and 'Arrival Date:' sub-fields), 'Travel Caused By:', 'Travel By:' (with radio buttons for 'Private Car', 'Company Car', 'Train', and 'Plane'), 'Destination Country:' (a dropdown menu), 'Destination City:', and a checkbox for 'Is an hotel needed?'. At the bottom, there are 'Check' and 'Submit' buttons. On the left side, there is a vertical toolbar with icons for 'Signatures', 'Pages', 'Attachments', and 'Comments'.

5. Save the file you have created as an Adobe XML Form File (XDP file), if you are working with a standalone Adobe Designer application. Later you can use this file in your GP process when you create an Interactive Form callable object. For example, see step 7 in section 0.



How to Use a Personalized Offline Interactive Form via E-mail

In this scenario we modify the Time-Off Process example from the GP installation by replacing its *Book Request* action with an Adobe interactive form; that is, the HR consultant receives an Adobe Interactive Form containing the approved time-off request data by e-mail.

Description of the Scenario

1. Create a new process named *Vacation Request Process*.

Process: Vacation Request Process

Flow

Name	Type	Target	Item	Status
Vacation Request Process	Process		Vacation Request Process	

2. Set its built-in roles to *Initiator*.

Process: Vacation Request Process (edit mode)

Basic Data Parameters Roles Default Roles Built-in Roles

Administrator: Initiator

Overseer: Initiator

Owner: Initiator

3. Create a new sequential block named *Vacation Request*. This block is a modified version of the *Time-Off Process* block located in the folder *Examples->Time-Off Process->Blocks* of the GP.

Process: Vacation Request Process

Flow

Name	Type	Target	Item	Status
Vacation Request Process	Process		Vacation Request Process	
Vacation Request	Sequential Block		Vacation Request	

4. Add the actions *Create Request*, *Set 1st Approver*, *Set Second Approver*, *Set HR Consultant*, *1st Approval*, *2nd Approval* and *Summary* to the *Vacation Request* block; that is, all actions from the *Time-Off Process* except the *Book Request* action.

Process: Vacation Request Process

Flow

Name	Type	Target	Item
Vacation Request Process	Process		Vacation Request Process
Vacation Request	Sequential Block		Vacation Request
Create Request	Action		Create Request
Set 1st Approver	Action		Set 1st Approver
Set Second Approver	Action		Set Second Approver
Set HR Consultant	Action		Set HR Consultant
1st Approval	Action		1st Approval
2nd Approval	Action		2nd Approval
Summary	Action		Summary

Row 1 of 9

5. Create a new action named *Adobe Book Request* and move it up to between the *2nd Approval* and the *Summary* actions.

Process: Vacation Request Process

Flow

Name	Type	Target	Item
Vacation Request Process	Process		Vacation Request Process
Vacation Request	Sequential Block		Vacation Request
Create Request	Action		Create Request
Set 1st Approver	Action		Set 1st Approver
Set Second Approver	Action		Set Second Approver
Set HR Consultant	Action		Set HR Consultant
1st Approval	Action		1st Approval
2nd Approval	Action		2nd Approval
Adobe Book Request	Action		Adobe Book Request
Summary	Action		Summary

Row 1 of 10

6. Create a new *Interactive Form* type callable object under the *Adobe Book Request* action.

Enter the following basic data:

- *Name*, for example **Adobe Interactive Form CO**
- *Description*
- *Language*
- Choose a location for your callable object (*Folder*)

Create callable object

1 Basic Data 2 Define Object 3 Define Input 4 Define Output 5 Set Configuration 6 Finish

Type

- BI Application
- External Service
- Web Dynpro Application
- ABAP Web Dynpro Application
- Composite Application Web Dynpro Component
- Composite Application Service
- Interactive Form**
- SAP Transaction
- Portal View or Page
- Web Dynpro Component (OP Interface)
- Content Package
- KM Resource
- Background Execution
- Business Server Page (BSP)
- Decision Dialog
- Web Pages
- Data Forms
- Process Control
- User Management
- Miscellaneous


Name: * Adobe Interactive Form CO
Description: * Adobe Interactive Form Callable Object

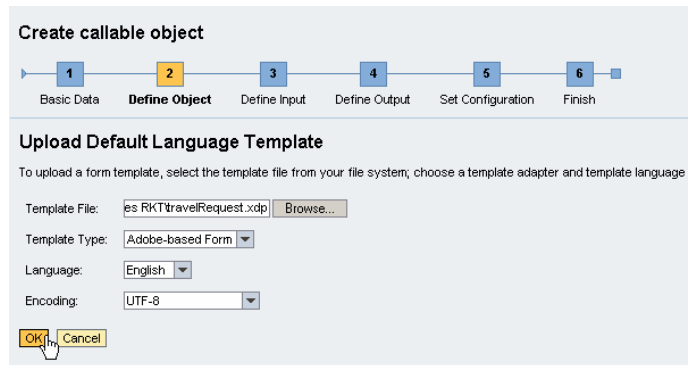
Original Language: * English
Folder: * Adobe Forms Choose

Next Cancel

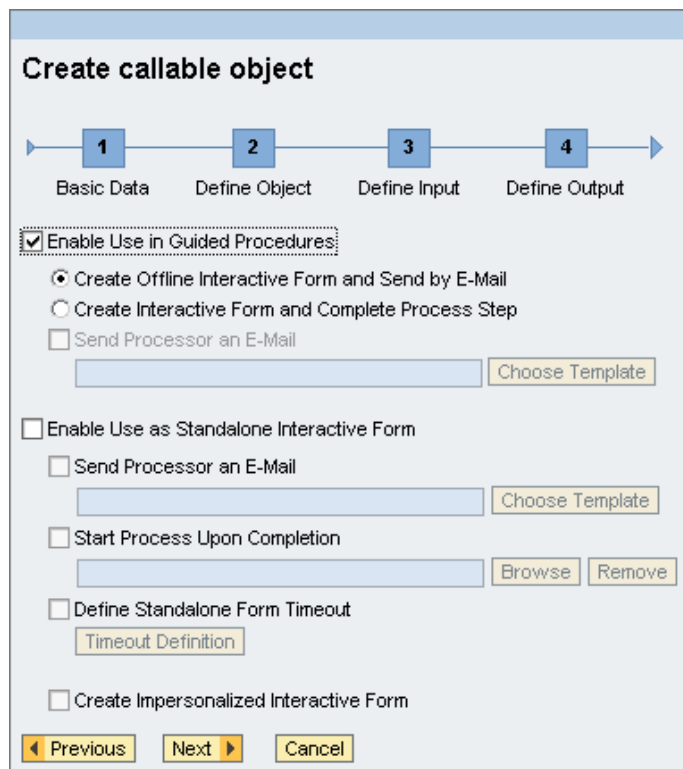
Choose Next.

7. Set the XDP document located in section 0 of the “**Error! Reference source not found.**” into the *Define Object* part of the callable object.










Click **Next** .














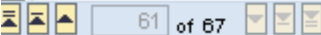


8. Skip the *Define Input* and *Define Output* screens, and then set the configuration as shown.



9. Consolidate the parameters as shown.

<div>Show Technical Details</div> <div>Hide Technical Details</div>				
	Context Parameter	Object Type	Parameter Defined For	List
<input type="checkbox"/>	▶  HR Consultant Data	Structure	Summary	<input type="checkbox"/>
<input type="checkbox"/>	▼  HR Consultant Data Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ HR Consultant Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ HR Consultant Data	Structure	1st Approval	<input type="checkbox"/>
<input type="checkbox"/>	▶ HR Consultant Data	Structure	2nd Approval	<input type="checkbox"/>
<input type="checkbox"/>	▼  Employee Data Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ Employee Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ Employee Data	Structure	1st Approval	<input type="checkbox"/>
<input type="checkbox"/>	▶ Employee Data	Structure	2nd Approval	<input type="checkbox"/>
<input type="checkbox"/>	▶ Employee Data	Structure	Summary	<input type="checkbox"/>
<input type="checkbox"/>	▼  Approver Data Mapped	Structure	<Group>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	▶ Approver Data	Structure	Create Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	▶ Approver Data	Structure	1st Approval	<input checked="" type="checkbox"/>
<input type="checkbox"/>	▶ Approver Data	Structure	2nd Approval	<input checked="" type="checkbox"/>
<input type="checkbox"/>	▶ Approver Data	Structure	Summary	<input checked="" type="checkbox"/>
<input type="checkbox"/>	▼  Second Approver Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ Processor of Second Approval	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ User List	Structure	Set Second Approver	<input type="checkbox"/>
<input type="checkbox"/>	▼  Processor of First Approval Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ Processor of First Approval	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ User List	Structure	Set 1st Approver	<input type="checkbox"/>
<input type="checkbox"/>	▼  HR Consultant Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ Processor for HR consultant	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ User List	Structure	Set HR Consultant	<input type="checkbox"/>
<input type="checkbox"/>	▼  Time-Off Data Mapped	Structure	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	▶ Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	▶ Time-Off Data	Structure	1st Approval	<input type="checkbox"/>
<input type="checkbox"/>	▶ Time-Off Data	Structure	2nd Approval	<input type="checkbox"/>
<input type="checkbox"/>	▶ Time-Off Data	Structure	Summary	<input type="checkbox"/>
<input type="checkbox"/>	▶  employee	Structure	Adobe Booking Request	<input type="checkbox"/>

<input type="checkbox"/>	 prefill	Structure	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	 FormInputData	Structure	Adobe Booking Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 Session ID	String	Adobe Booking Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 Process ID	String	Adobe Booking Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 Task ID	String	Adobe Booking Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 Interactive Form	Structure Template	Adobe Booking Request	<input checked="" type="checkbox"/>
<input type="checkbox"/>	 Paid Flag Mapped	String	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	PaidFlag	String	Time-Off Data	<input type="checkbox"/>
<input type="checkbox"/>	Paid.1	String	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	 Absence Type Mapped	String	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	AbsenceTypeText	String	Time-Off Data	<input type="checkbox"/>
<input type="checkbox"/>	ABSTYPE	String	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	 First Name Mapped	String	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Employee Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	FirstName	String	Employee Data	<input type="checkbox"/>
<input type="checkbox"/>	employee	Structure	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	firstname	String	employee	<input type="checkbox"/>
<input type="checkbox"/>	 Last Name Mapped	String	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Employee Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	LastName	String	Employee Data	<input type="checkbox"/>
<input type="checkbox"/>	employee	Structure	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	lastname	String	employee	<input type="checkbox"/>
<input type="checkbox"/>	 User Id Mapped	String	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Employee Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	UserId	String	Employee Data	<input type="checkbox"/>
<input type="checkbox"/>	employee	Structure	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	userid	String	employee	<input type="checkbox"/>
<input type="checkbox"/>	 Begin Date Mapped	Date	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	BeginDate	Date	Time-Off Data	<input type="checkbox"/>
<input type="checkbox"/>	BEGDA	Date	Adobe Booking Request	<input type="checkbox"/>
<input type="checkbox"/>	 End Date Mapped	Date	<Group>	<input type="checkbox"/>
<input type="checkbox"/>	Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	EndDate	Date	Time-Off Data	<input type="checkbox"/>
<input type="checkbox"/>	ENDDA	Date	Adobe Booking Request	<input type="checkbox"/>
<div>  61 of 67 </div> <div> all </div>				
<input type="checkbox"/>	Time-Off Data	Structure	Create Request	<input type="checkbox"/>
<input type="checkbox"/>	COMMENT	String	Adobe Book Request	<input type="checkbox"/>

Do **not** expose any input parameters at process level:

Process: Vacation Request

Basic Data Parameters Roles Built-in Roles Default Roles Due Date Permissions Control Items View Permissions

Consolidated Parameters Input Parameters Output Parameters

Context Parameter	Object Type	List	Value Required	Default Value	Technical Name	Namespace	Min. Required	Max. Allowed	Exposed
<input type="checkbox"/> HR Consultant Data	Structure	<input type="checkbox"/>	<input type="checkbox"/>		HR_consultant_data.2		Unlimited	1	<input type="checkbox"/>
<input type="checkbox"/> Time-Off Data Mapped	Structure	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Time_Off_Data_Mapped		1	1	<input type="checkbox"/>
<input type="checkbox"/> employee	Structure	<input type="checkbox"/>	<input type="checkbox"/>		employee		0	1	<input type="checkbox"/>
<input type="checkbox"/> prefill	Structure	<input type="checkbox"/>	<input type="checkbox"/>		prefill	com.sap.caf	0	1	<input type="checkbox"/>
<input type="checkbox"/> FormInputData	Structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>		FormInputData		Unlimited	Unlimited	<input type="checkbox"/>
<input type="checkbox"/> Paid Flag Mapped	String	<input type="checkbox"/>	<input type="checkbox"/>		Paid_Flag_Mapped		0	1	<input type="checkbox"/>
<input type="checkbox"/> Absence Type Mapped	String	<input type="checkbox"/>	<input type="checkbox"/>		Absence_Type_Mapped		0	1	<input type="checkbox"/>
<input type="checkbox"/> Begin Date Mapped	Date	<input type="checkbox"/>	<input type="checkbox"/>		Begin_Date_Mapped		0	1	<input type="checkbox"/>
<input type="checkbox"/> End Date Mapped	Date	<input type="checkbox"/>	<input type="checkbox"/>		End_Date_Mapped		0	1	<input type="checkbox"/>

10. Consolidate the roles as shown.

Block Roles	Type	Items	Filled from Context Parameter
<input type="checkbox"/> Employee	G	2	
<input type="checkbox"/> Processor of Create Request	U	Create Request	
<input type="checkbox"/> Processor of Summary	U	Summary	
<input type="checkbox"/> FirstApprover	G	2	
<input type="checkbox"/> Processor of Set 1st Approver	U	Set 1st Approver	
<input type="checkbox"/> Processor of 1st Approval	U	1st Approval	
<input type="checkbox"/> SecondApprover	G	2	
<input type="checkbox"/> Processor of Set Second Approver	U	Set Second Approver	
<input type="checkbox"/> Processor of 2nd Approval	U	2nd Approval	
<input type="checkbox"/> HRConsultant	G	2	
<input type="checkbox"/> Processor of Set HR Consultant	U	Set HR Consultant	
<input type="checkbox"/> Processor of Action1	U	Adobe Book Request	

11. (Optional) Assign a default role to the *Employee*, *SecondApprover*, *FirstApprover*, *HRConsultant* roles.

Process: Vacation Request Process

Basic Data Parameters Roles **Default Roles**

Save

Remove Default

Employee

SecondApprover

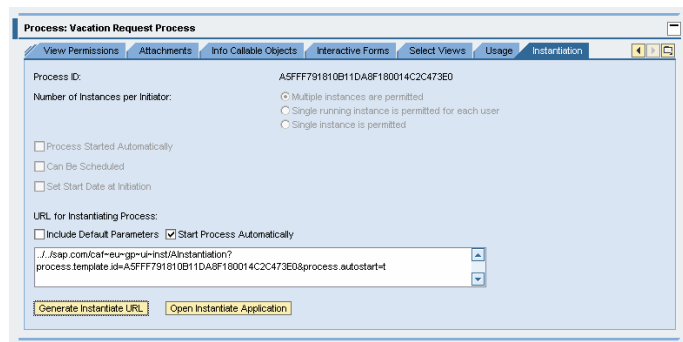
FirstApprover

HRConsultant

Name

12. Make sure that the *HRConsultant* user has a valid e-mail address.

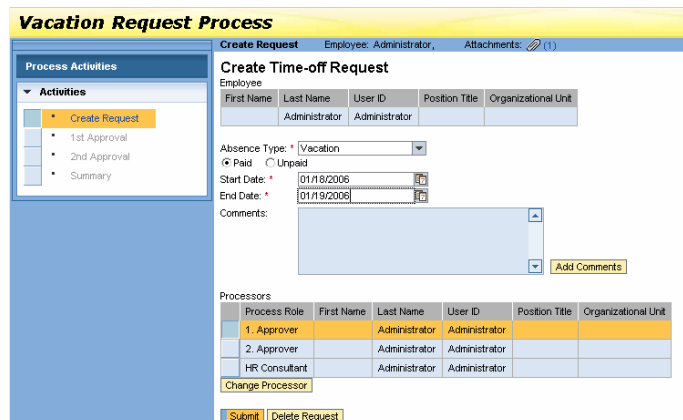
13. Once you have saved and activated your process, instantiate it via its URL.



14. Complete the required fields in the *Vacation Request Process*.

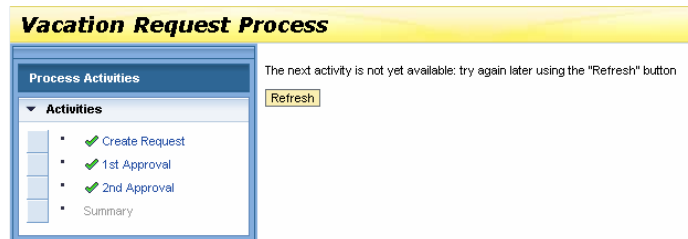
For example:

Absence Type: Vacation
Paid
Start Date: 01/18/2006
End Date: 01/19/2006

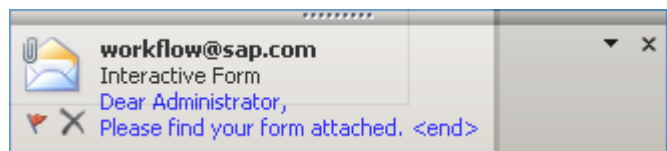


Process Role	First Name	Last Name	User ID	Position Title	Organizational Unit
1. Approver		Administrator	Administrator		
2. Approver		Administrator	Administrator		
HR Consultant		Administrator	Administrator		

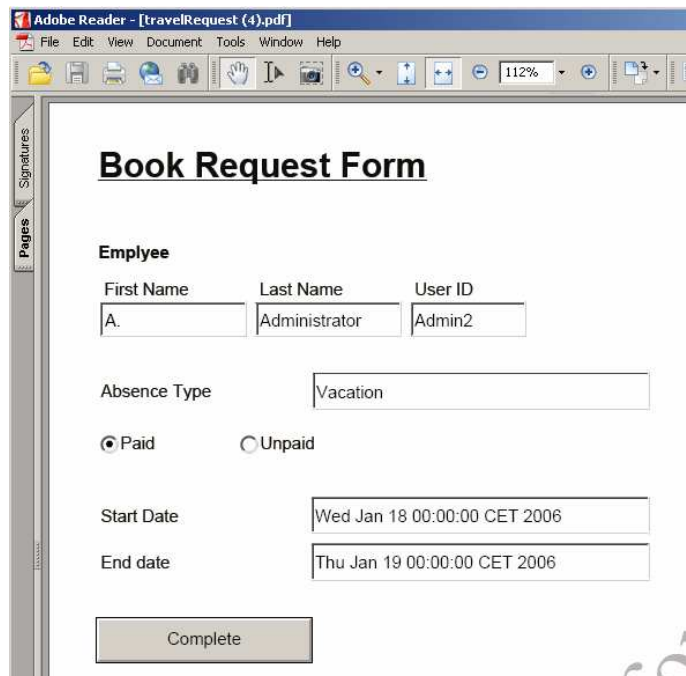
- 15.** Complete the *Create Request*, *1st Approval* and *2nd Approval* actions. After that you will receive the message shown.



- 16.** After a while an e-mail will be sent by the Guided Procedure. Open the mail and its attachment.



- 17.** Fill out the form and then choose the *Submit* button.



The screenshot shows the Adobe Reader interface with a document titled "travelRequest (4).pdf". The document contains a form titled "Book Request Form". The form fields are as follows:

Employee		
First Name	Last Name	User ID
A.	Administrator	Admin2

Absence Type:

☒ Paid ☐ Unpaid

Start Date:

End date:

Complete

- 18.** You will get a confirmation.



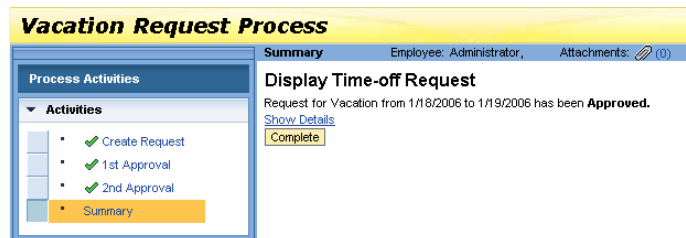
The screenshot shows the Microsoft Internet Explorer browser window. The title bar reads "SAP Guided Procedures - Success - Microsoft Internet Explorer". The address bar shows the URL: <http://paln00404268a:53000/gpcore/iformprocessor/adapter.adobe>. The Links bar shows "CAF" and "Google".

SAP Guided Procedures - Success

Your form input was successfully received by the Interactive Form

Thank you

- 19.** Start a new browser instance, choose the GP runtime URL and login as the user who is assigned to the data display step. Select the running *Vacation Request Process* work item. Choose **Complete**.



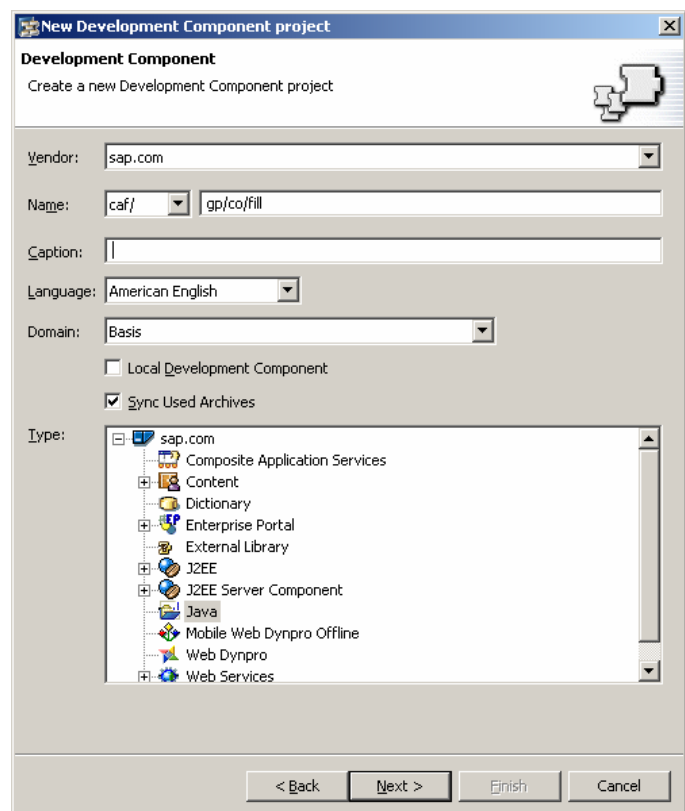
The screenshot shows the SAP 'Vacation Request Process' interface. On the left, under 'Process Activities', the 'Activities' list includes 'Create Request', '1st Approval', '2nd Approval', and 'Summary'. The 'Summary' activity is highlighted in orange. On the right, the 'Summary' tab is active, displaying 'Display Time-off Request' for Employee: Administrator. It states 'Request for Vacation from 1/18/2006 to 1/19/2006 has been **Approved**.' and includes a 'Show Details' link and a 'Complete' button.

How to Create and Use Callable Objects to Fill the Adobe Forms

In the following scenario we implement a *Background Execution* callable object to fill the interactive forms. Note that any other background callable object, for example, an *External Services* callable object, could be used as well.

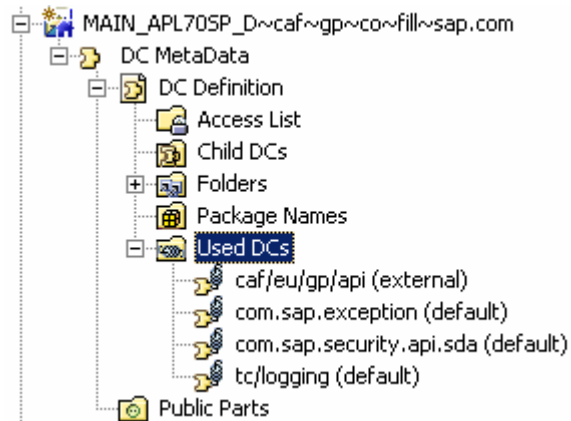
Description of the Scenario

1. Create a new Java development component for your background object, which has to perform the pre-filling of the interactive forms.



2. Add the following used DCs with Build-Time dependency

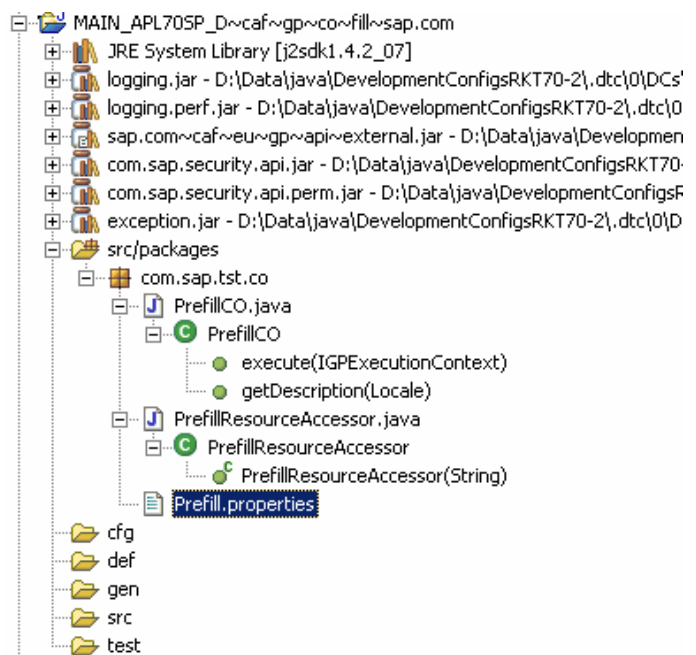
- sap.com_SAP-EU_1 -
caf/eu/gp/api (external)
- sap.com_SAP-JEE_1 -
com.sap.exception
- sap.com_SAP-JEE_1 -
com.sap.security.api.sda
- sap.com_SAP-JEE_1 -tc/logging



3. Create a new package and then a new class in your DC. Remember that your class must implement the [IGPBackgroundCallableObject](#) interface. See **Error! Reference source not found..**

4. Create another class in this package called "PrefillResourceAccessor". As super class of this class the "GPStandardResourceAccessor" has to be chosen.

5. Add a simple file to the "Prefill.properties" package.



6. Please add the following text to the new “Prefill.properties” file:

CO_NAME=Prefill Background

CO_DESCRIPTION=Background Callable Object for prefilling booking form

7. Implement the getDescription method as follows:

```
public IGPTechnicalDescription getDescription(Locale originalLocale) {
    try {
        PrefillResourceAccessor resourceAccessor = new
            PrefillResourceAccessor(
                "com.sap.tst.co.Prefill.properties");

        //create technical description instance
        IGPTechnicalDescription technicalDescription =
            GPCallableObjectFactory.createTechnicalDescription(
                "CO_NAME",
                "CO_DESCRIPTION",
                resourceAccessor,
                originalLocale);

        //get root structure for output parameters
        IGPStructureInfo output =
            technicalDescription.getOutputStructureInfo();

        //define attributes for output parameters
        output.addAttribute("beginDate",
            IGPAtributeInfo.BASE_DATE);
        output.addAttribute("endDate", IGPAtributeInfo.BASE_DATE);
    }
}
```

```

//add a result state for successful execution
IGPCOResultStateInfo success =
    technicalDescription.addResultState("Success");
//add result state description
success.setDescriptionKey("Success_desc");
return technicalDescription;
} catch (GPInvocationException e) {
    com.sap.tc.logging.Location logger =
        com.sap.tc.logging.Location.getLocation(PrefillCO.class);
    logger.logT(
        Severity.ERROR,
        Category.APPLICATIONS,
        "Incorrect technical name");
    logger.traceThrowableT(
        Severity.ERROR,
        "Exception while creating technical description: ",
        e);
    return null;
}
}

```

8. Implement the execute method as follows:

```

public void execute(IGPExecutionContext executionContext)
    throws GPTechnicalCallableObjectException {
    com.sap.tc.logging.Location logger =
        com.sap.tc.logging.Location.getLocation(PrefillCO.class);

    try {
        //retrieve the runtime representation of the output structure
        IGPStructure output = executionContext.getOutputStructure();

        //set values to output parameters
        output.setAttributeValue(
            "beginDate", new java.util.Date(System.currentTimeMillis()));
        output.setAttributeValue(
            "endDate", new java.util.Date(System.currentTimeMillis()));

        //set result state
    }
}

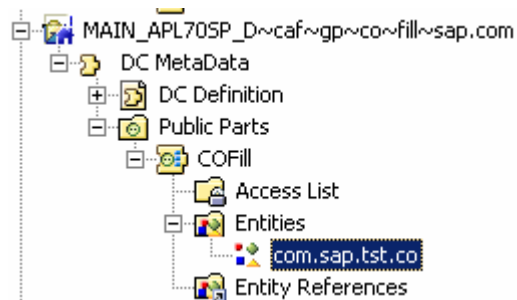
```

```

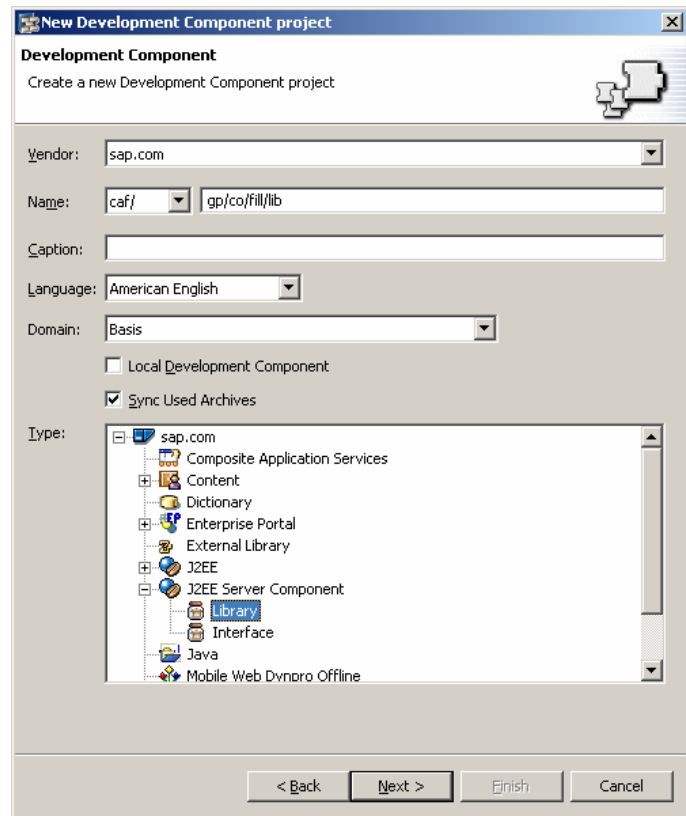
executionContext.setResultState("Success");
//complete object execution
executionContext.processingComplete();
} catch (GPInvocationException e) {
    PrefillResourceAccessor resourceAccessor =
        new PrefillResourceAccessor("com.sap.tst.co.Prefill.properties");
    throw new GPTechnicalCallableObjectException(
        logger, resourceAccessor, "ERROR_PARAMETERS", e);
} catch (GPEngineException e) {
    PrefillResourceAccessor resourceAccessor =
        new PrefillResourceAccessor("com.sap.tst.co.Prefill.properties");
    throw new GPTechnicalCallableObjectException(
        logger, resourceAccessor, "INTERNAL_ERROR", e);
}
}

```

9. Define a public part for your DC.
Check "Can be packaged into other
build results (e.g. SDAs)"



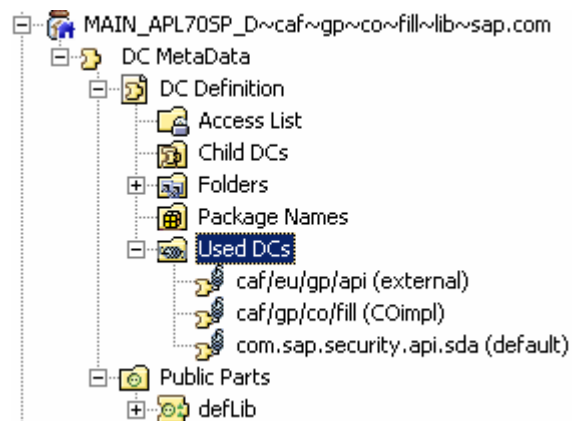
- 10.** Create a new Library development component for your background object which has to encapsulate your Java development component.



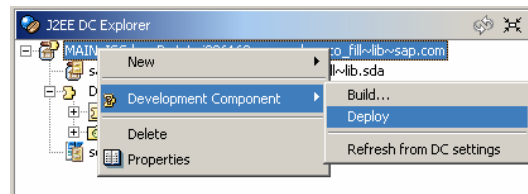
- 11.** Add the (sap.com_SAP-EU_1) caf/eu/gp/api (external) and the (sap.com_SAP-JEE_1) com.sap.security.api.sda development components and your Java DC created in the steps 1-9 to the *Used DCs* of your Library development component.



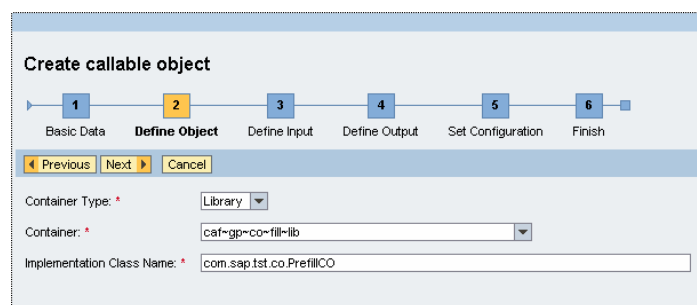
You must also specify deploy time and runtime dependencies for the caf/eu/gp/api and the com.sap.security.api.sda development components. **After** you have added the used DCs, please check that these flags are really set!



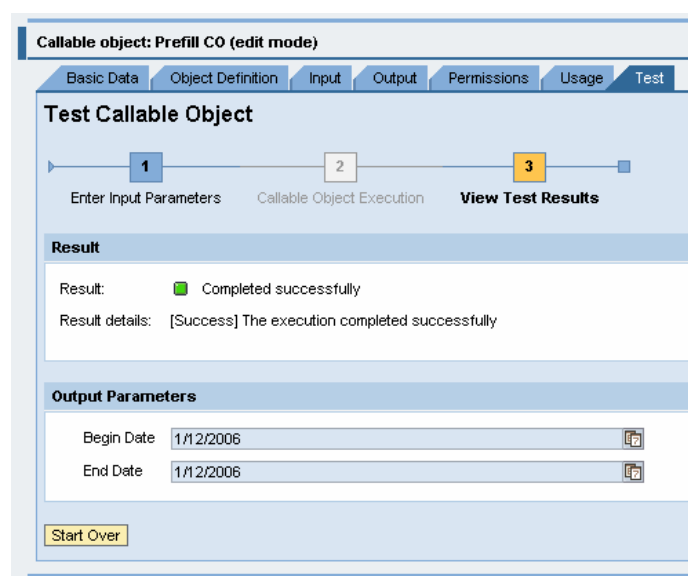
12. Build and deploy your Library DC.



13. Login in to Guided Procedures Design Time and create a *Background Execution* callable object.
In the *Define Object* dialog specify your Library DC deployed in step 12 and the class name of your implementation class.



14. Test, save and activate your callable object.



15. Open your GP process using interactive forms.

Process: Vacation Request Process

Flow

Name	Type	Target	Item
▼ Vacation Request Process	Process		Vacation F
▼ Vacation Request	Sequential Block		Vacation F
▶ Create Request	Action		Create Re
▶ Set 1st Approver	Action		Set 1st Ap
▶ Set Second Approver	Action		Set Secon
▶ Set HR Consultant	Action		Set HR Co
▶ 1st Approval	Action		1st Appro
▶ 2nd Approval	Action		2nd Appro
▼ Adobe Book Request	Action		Adobe Bo
▶ Adobe Interactive Form CO	Callable Object for Execution		Adobe Inte

Row 1 of 11

Callable object: Adobe Interactive Form CO

Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

Name: Adobe Interactive Form CO

Description: Adobe form

Original Language: English

Folder: Adobe Forms

16. Open your interactive form CO. Switch to edit mode and navigate to the *Input* tab.

Click the *Define Prefilling* link.

Callable object: Adobe Interactive Form CO (edit mode)

Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

Display Form Fields | Define Prefilling

Parameter	Object Type	is List	Value Required
• BEGDA	Date		✓
• ENDDA	Date		✓
• ABSTYPE	String		
• COMMENT	String		
▼ prefill	Structure		
▶ Abstype	Structure	✓	
▼ FormInputData	Structure	✓	
• EmailAddress	String		

17. Choose *Select a prefilling service*.

Callable object: Adobe Interactive Form CO (edit mode)

Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

Display Form Fields | Define Prefilling

1. Select a prefilling service

2. Define input for service

3. Define prefilling for form Adobe Interactive Form CO

- Select

Select

- Done

Done

 Selected target structure Parameter of Service Prefill CO does not define parameters: you cannot set mapping

20. Define the mappings as follows:

Parameter of Form Adobe Interactive Form CO			
Remove Mapping Set Default			
Parameter	Object Type	Mapped To	
▪ BEGDA	Date	Begin Date	
▪ ENDDA	Date	End Date	

Highlight the corresponding line of the left table. Then select the row to be mapped in the right table. This will create a new mapping.

1. Select a prefilling service
2. Define input for service Prefill CO (Edit Mode)
3. Define prefilling for form Adobe Interactive Form CO

Parameter of Form Adobe Interactive Form CO				
Parameter	Object Type	Mapped To	Default	List
▶ employee	Structure			
▪ ABSTYPE	String			
▪ Paid	String			
▪ BEGDA	Date	beginDate		
▪ ENDDA	Date	endDate		
▪ prefill	Not defined			
▶ FormInputData	Structure			✓

Row 1 of 7


Done

Parameter of Service Prefill CO (Edit Mode)		
Parameter	Object Type	List
▪ beginDate	Date	
▪ endDate	Date	

Row 1 of 2

Then choose **Done**.

21. Click the **Save** button.

The  Prefilling service has been saved message appears.

Callable object: Adobe Interactive Form CO (edit mode)

Basic Data Object Definition Input Output

1. Select a prefilling service
2. Define input for service Prefill CO
3. Define prefilling for form Adobe Interactive Form CO

Save **Cancel**

22. Save all changes and activate your GP process again.

- 23.** After instantiating your *Vacation Request Process*, the *Start Date* and the *End Date* specified by the Initiator will be overwritten to the current date by the prefilling callable object.

Note that functionality makes no sense in this particular case, it was implemented only as an example; but if you use the same Adobe form to start the *Vacation Request Process*, then it could make sense to use such a callable object.

Book Request Form

Employee

First Name	Last Name	User ID
A.	Administrator	Admin2

Absence Type	Vacation
--------------	----------

☒ Paid
 ☐ Unpaid

Start Date	Tue Mar 21 10:52:39 CET 2006
------------	------------------------------

End date	Tue Mar 21 10:52:39 CET 2006
----------	------------------------------

Complete

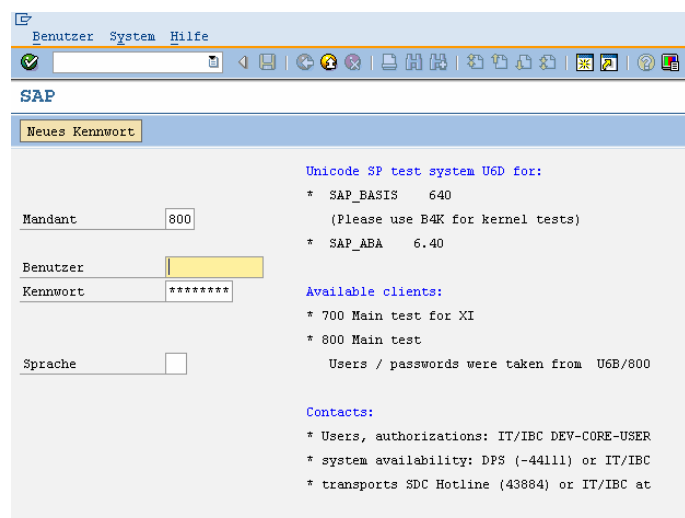


How to Create and Use Callable Objects to Validate the Adobe Forms

In the following scenario we implement an *External Service* callable object to validate the interactive forms. Note that any other background callable object, for example, a *Background Execution* callable object, could be used as well.

Description of the Scenario

1. Logon to your SAP external system.



The screenshot shows the SAP login interface. At the top, there is a menu bar with 'Benutzer', 'System', and 'Hilfe'. Below it is a toolbar with various icons. The main area is titled 'SAP' and contains a 'Neues Kennwort' button. The login form has fields for 'Mandant' (800), 'Benutzer' (empty), 'Kennwort' (masked with asterisks), and 'Sprache' (empty). To the right of the form, there is a section titled 'Unicode SP test system U6D for:' with the following details:

- * SAP_BASIS 640 (Please use B4K for kernel tests)
- * SAP_ABA 6.40

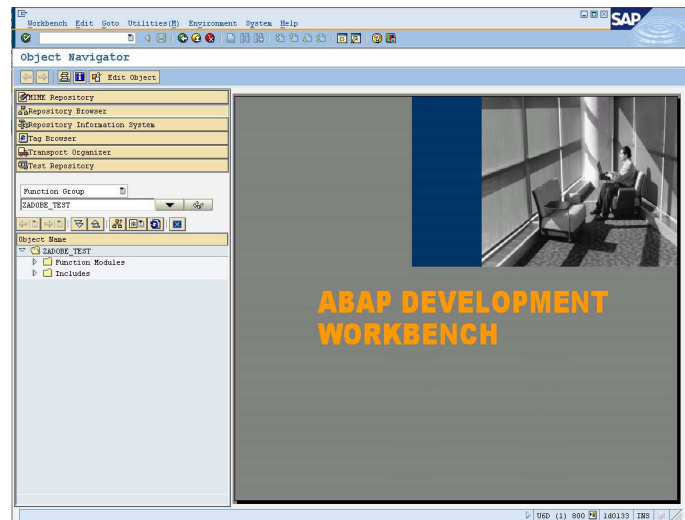
Below this, there is a section titled 'Available clients:' with the following details:

- * 700 Main test for XI
- * 800 Main test

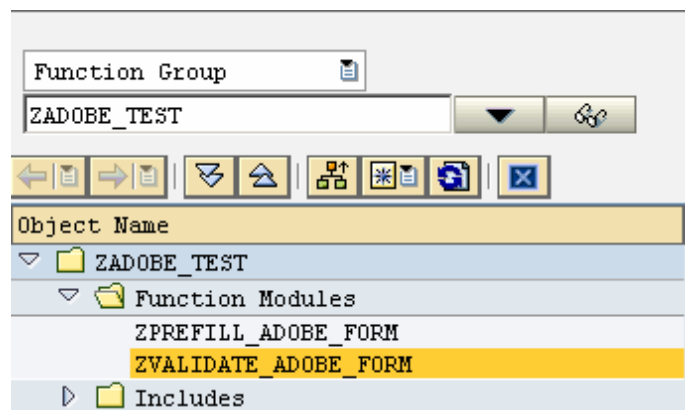
At the bottom, there is a section titled 'Contacts:' with the following details:

- * Users, authorizations: IT/IBC DEV-CORE-USER
- * system availability: DPS (-44111) or IT/IBC
- * transports SDC Hotline (43884) or IT/IBC at

2. Open the SE80 transaction.



3. Create a new ZADOBE_TEST function group and a new ZVALIDATE_ADOBE_FORM function in it.
The following screenshots demonstrate the input parameters, exceptions and source code of our example function.



```

FUNCTION ZVALIDATE_ADOBE_FORM.
  -----
  ***Local Interface:
  *** IMPORTING
  ***   VALUE(IN_BEGIN_DATE) TYPE D
  ***   VALUE(IN_END_DATE) TYPE D
  *** EXCEPTIONS
  ***   FAILED
  ***-----

  if in_begin_date < sy-datum or in_end_date < sy-datum.
    raise FAILED.
  endif.

ENDFUNCTION.

```

Attributes Import Export Changing Tables Exceptions Source code						
Parameter Name	Type	Associated Type	Default value	Op...	Pa...	Short text
IN_BEGIN_DATE	TYPE D			<input type="checkbox"/>	<input checked="" type="checkbox"/>	
IN_END_DATE	TYPE D			<input type="checkbox"/>	<input checked="" type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	

Attributes Import Export Changing Tables Exceptions Source code						
<input type="checkbox"/> Exceptn Classes						
Exception	Short text		Long txt			
FAILED	Validation failed					

- In the attributes tab check the “Remote-Enabled Module” flag!
- Save and activate your function.

Function module ZVALIDATE_ADOBE_FORM

Attributes Import Export Changing

Classification

Function Group ZADOBE_TEST

Short Text Validate form dates

Processing Type

☐ Normal Function Module

☒ Remote-Enabled Module

☐ Update Module

☒ Start immed.

☐ Immediate Start, No Restart

☐ Start Delayed

☐ Coll.run

- Login to Guided Procedures Design Time and create an *External Service* callable object.

Create callable object

1 Basic Data 2 Finish

Type

- BI Application
- External Service**
- Web Dynpro Application
- ABAP Web Dynpro Application
- Composite Application Web Dynpro Component
- Composite Application Service
- Interactive Form
- SAP Transaction
- Portal View or Page
- Web Dynpro Component (GP Interface)
- Content Package
- HM Resource
- Background Execution
- Business Server Page (BSP)
- Decision Dialog
- Web Pages
- Data Forms
- Process Control
- User Management
- Miscellaneous

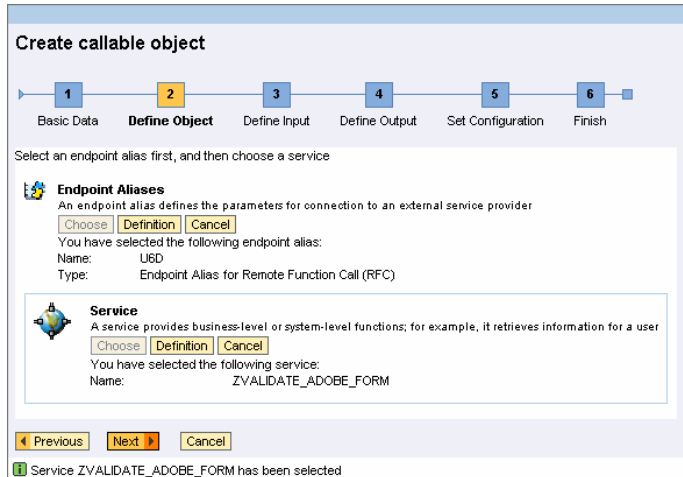
Name: * ValidateCO

Description: * ValidateCO

Original Language: * English

Folder: * Interactive Forms

7. In the *Define Object* dialog specify the endpoint alias of your external server and then the name of your validation service.



Create callable object

1 Basic Data 2 **Define Object** 3 Define Input 4 Define Output 5 Set Configuration 6 Finish

Select an endpoint alias first, and then choose a service

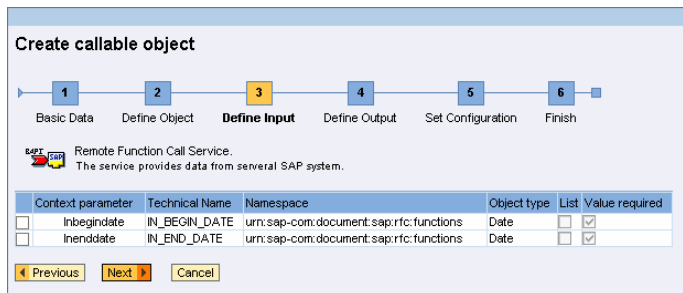
Endpoint Aliases
An endpoint alias defines the parameters for connection to an external service provider
Choose Definition Cancel
You have selected the following endpoint alias:
Name: U6D
Type: Endpoint Alias for Remote Function Call (RFC)

Service
A service provides business-level or system-level functions; for example, it retrieves information for a user
Choose Definition Cancel
You have selected the following service:
Name: ZVALIDATE_ADOBE_FORM

Previous Next Cancel

Service ZVALIDATE_ADOBE_FORM has been selected

8. Leave the input parameters unchanged.



Create callable object

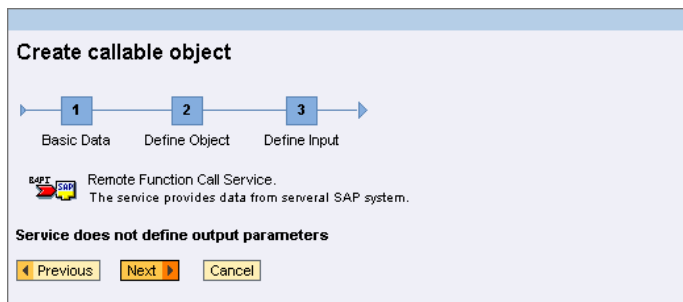
1 Basic Data 2 Define Object 3 **Define Input** 4 Define Output 5 Set Configuration 6 Finish

Remote Function Call Service.
The service provides data from several SAP system.

Context parameter	Technical Name	Namespace	Object type	List	Value required
<input type="checkbox"/> Inbegindate	IN_BEGIN_DATE	urn:sap-com:document:sap:rfc:functions	Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Inenddate	IN_END_DATE	urn:sap-com:document:sap:rfc:functions	Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Previous Next Cancel

9. Choose **Next**. (Our service has no output parameters.)



Create callable object

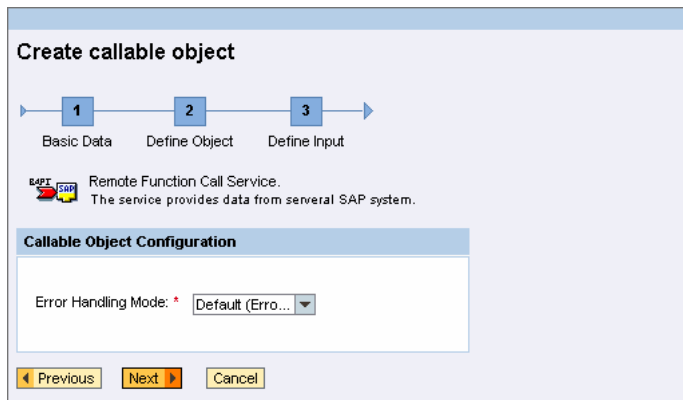
1 Basic Data 2 Define Object 3 **Define Input**

Remote Function Call Service.
The service provides data from several SAP system.

Service does not define output parameters

Previous Next Cancel

10. Specify the error handling mode, and then click **Next**.



Create callable object

1 Basic Data 2 Define Object 3 **Define Input**

Remote Function Call Service.
The service provides data from several SAP system.

Callable Object Configuration

Error Handling Mode: * Default (Error...) ▼

Previous Next Cancel

11. Choose **Finish and Open**.

Create callable object

1 Basic Data → 2 Define Object → 3 Define Input

Name: ValidateCO
Type: External Service
Description: ValidateCO

Previous Finish **Finish and Open** Cancel

12. Test, save and activate your callable object.

Callable object: ValidateCO

Basic Data Object Definition Input Output Config Permissions Usage **Test**

Test Callable Object

1 Enter Input Parameters → 2 Callable Object Execution → 3 View Test Results

Input Parameters

Inbegindate * 01/28/2006
Inenddate * 01/28/2006

Settings

Execution Mode: ☒ Execution mode
☐ Display mode

Process Instance ID: 9484A5D08F1411DA97B30014C2C473E0
Task ID: 9484A5D18F1411DAC8840014C2C473E0
Callable Object ID: 65BA7F908F1411DA854D0014C2C473E0

Execute

13. Open your GP process using interactive forms.

Process: Vacation Request Process

Flow

Name	Type	Target	Item
Vacation Request Process	Process		Vacation F
Vacation Request	Sequential Block		Vacation F
Create Request	Action		Create Re
Set 1st Approver	Action		Set 1st Ap
Set Second Approver	Action		Set Secon
Set HR Consultant	Action		Set HR Co
1st Approval	Action		1st Appro
2nd Approval	Action		2nd Appro
Adobe Book Request	Action		Adobe Bo
Adobe Interactive Form CO	Callable Object for Execution		Adobe Inte

Row 1 of 11

Callable object: Adobe Interactive Form CO

Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

Name: Adobe Interactive Form CO

Description: Adobe form

Original Language: English

Folder: Adobe Forms

14. Open your CO using the interactive form. Switch to edit mode, navigate to the *Output* tab and click the *Define Validation* link.

Callable object: Adobe Interactive Form CO (edit mode)

Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

Display Form Fields [Define Validation](#)

Parameter	Object Type	Is List	Value Required
BEGDA	Date		✓
ENDDA	Date		✓
ABSTYP	String		
COMMENT	String		
prefill	Structure		
Abstyp	Structure	✓	
FormInputData	Structure	✓	
EmailAddress	String		
Session ID	String	✓	
Process ID	String	✓	
Task ID	String	✓	
Interactive Form	Structure	✓	
Name	String		✓
Content Type	String		✓
Size	Long Integer		✓

Row 1 of 17

15. Choose *Select a validation service*.

Callable object: Adobe Interactive Form CO (edit mode)

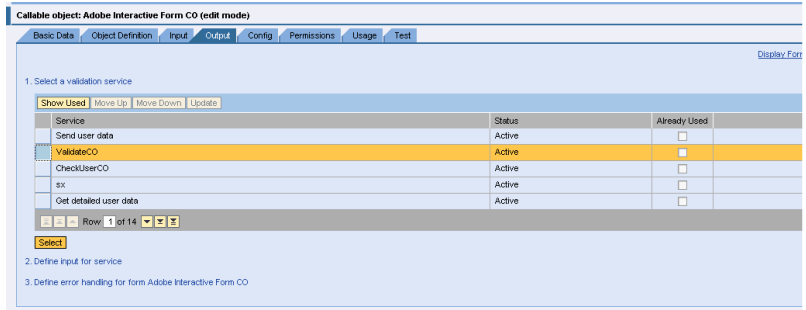
Basic Data | Object Definition | Input | Output | Config | Permissions | Usage | Test

1. Select a validation service

2. Define input for service

3. Define error handling for form Adobe Interactive Form CO

- 16.** Select the row of your callable object and then click the **Select** button.

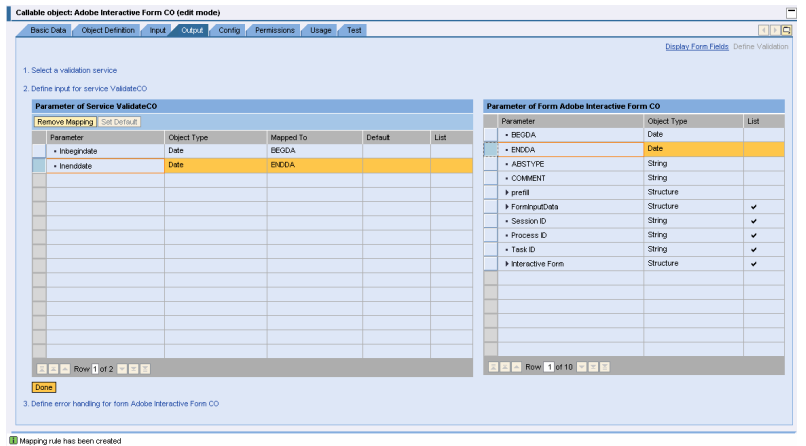


Service	Status	Already Used
Send user data	Active	<input type="checkbox"/>
ValidateCO	Active	<input checked="" type="checkbox"/>
CheckUserCO	Active	<input type="checkbox"/>
SX	Active	<input type="checkbox"/>
Get detailed user data	Active	<input type="checkbox"/>

- 17.** Define the mappings as follows:

Parameter of Service ValidateCO			
Remove Mapping Set Default			
Parameter	Object Type	Mapped To	
Inbegindate	Date	BEGDA	
Inenddate	Date	ENDDA	

Then choose **Done**.




Parameter	Object Type	Mapped To	Default	List
Inbegindate	Date	BEGDA		
Inenddate	Date	ENDDA		


- 18.** For error handling, select an email template then click **Done**.

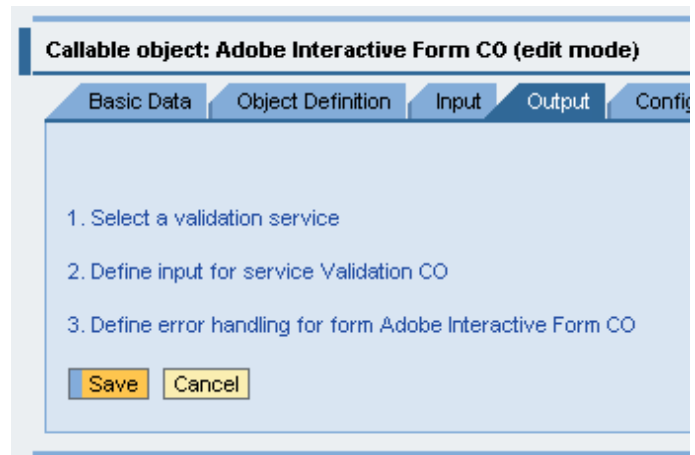
For more information about e-mail templates see **Error! Reference source not found..**



Technical Name	Text
MAIL	Interactive Form
MAIL	Interactive Form
MAIL	Interactive Form
validateError	Validation of your form failed
MAIL	Interactive Form
MAIL	Interactive Form
Approval message	Do not reply: generated message - approval
Decision Due	Do not reply: Decision is due
confirmationOfficeEquipment	Order Confirmation

19. Choose .

The  Validation service has been saved message appears.



20. (Optional) If you have set a prefilling service in section 4.4, then remove its mappings.

21. Save all changes and activate your GP process again.

Examples for a GP-Enabled Adobe Document

The following screenshot shows an example XDP file containing a request form for the Time-Off process.

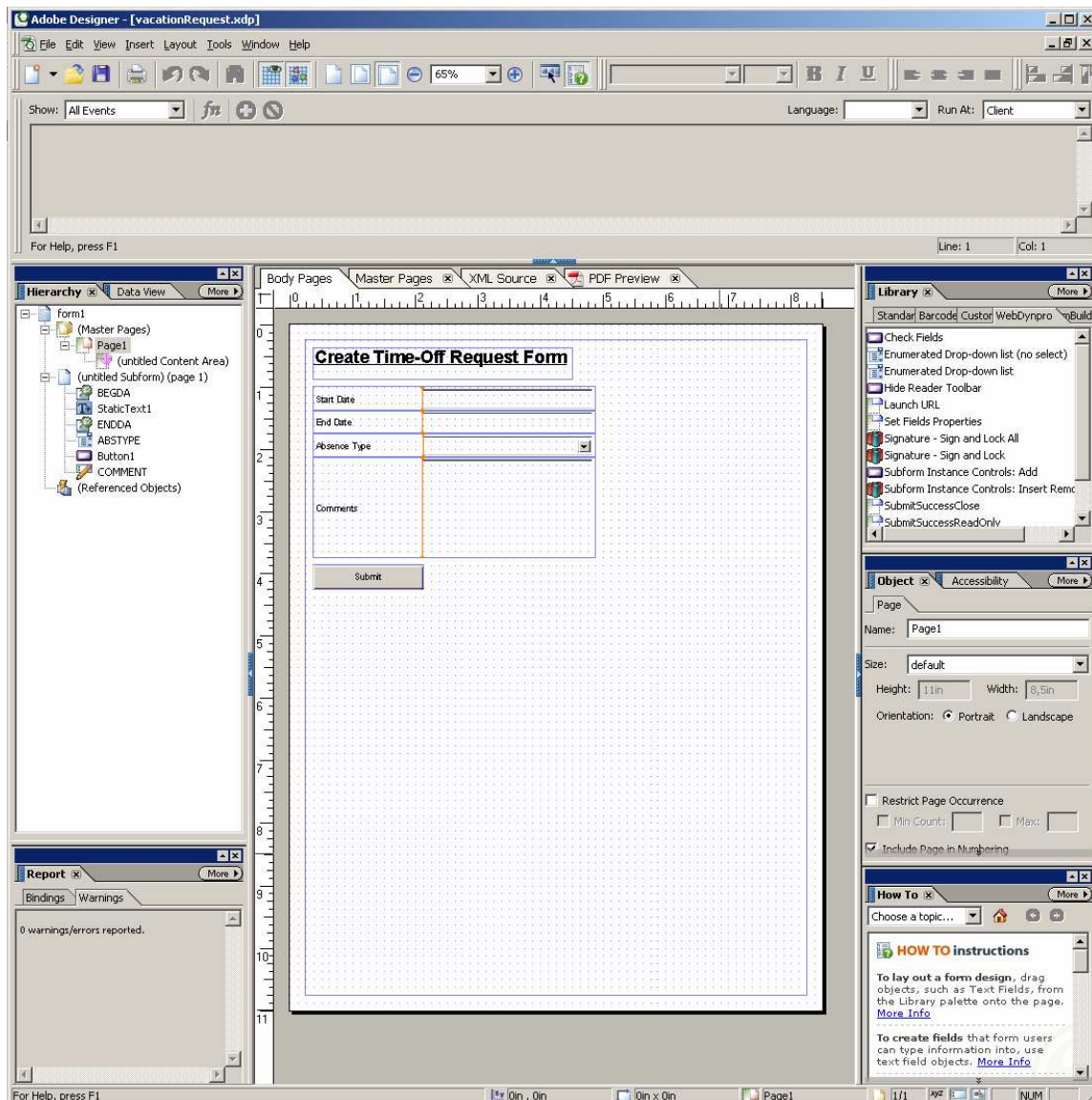


Figure 1: travelRequest.xdp in the Adobe Designer

The corresponding code example can be saved into an XDP file and then you can use it in your GP process.

```
<?xml version="1.0" encoding="UTF-8"?>
<?xfa generator="AdobeDesigner_V6.0_SAP" APIVersion="1.4.4183.0"?>
<xdp:xdp xmlns:xdp="http://ns.adobe.com/xdp/" timeStamp="2006-03-
20T13:50:41Z" uid="1c014d08-483f-4825-9e84-5929702355e9">
```

```
<template xmlns="http://www.xfa.org/schema/xfa-template/2.1/">
  <subform layout="tb" locale="en_US" name="form1">
    <pageSet>
      <pageArea id="Page1" name="Page1">
        <contentArea h="756pt" w="576pt" x="0.25in" y="0.25in"/>
        <medium long="792pt" short="612pt" stock="default"/>
      </pageArea>
    </pageSet>
    <subform h="756pt" w="576pt">
      <draw h="12.7mm" name="StaticText1" w="104.775mm" x="3.175mm"
y="3.175mm">
        <ui>
          <textEdit>
            </textEdit>
          </ui>
          <value>
            <text>Book Request Form</text>
          </value>
          <font size="20pt" typeface="Arial" underline="1"
weight="bold"/>
          <margin bottomInset="0.5mm" leftInset="0.5mm"
rightInset="0.5mm" topInset="0.5mm"/>
        </draw>
        <subform x="3.175mm" y="22.225mm" w="95.25mm" h="22.225mm"
name="employee">
          <field name="firstname" y="6.35mm" w="31.75mm"
h="13.7068mm" access="readOnly">
            <ui>
              <textEdit>
                <border>
                  <?templateDesigner StyleID aped3?>
                    <edge stroke="lowered"/>
                </border>
                <margin/>
              </textEdit>
            </ui>
            <font typeface="Arial"/>
            <margin topInset="1mm" bottomInset="1mm" leftInset="1mm"
```

```
rightInset="1mm"/>
    <para vAlign="middle"/>
    <caption reserve="0.185306in" placement="top">
        <font typeface="Arial"/>
        <para vAlign="middle"/>
        <value>
            <text>First Name</text>
        </value>
    </caption>
</field>
<field name="lastname" y="6.35mm" x="31.75mm" w="31.75mm"
h="13.7068mm" access="readOnly">
    <ui>
        <textEdit>
            <border>
                <?templateDesigner StyleID aped3?>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
            </border>
            <margin/>
        </textEdit>
    </ui>
    <font typeface="Arial"/>
    <margin topInset="1mm" bottomInset="1mm" leftInset="1mm"
rightInset="1mm"/>
    <para vAlign="middle"/>
    <caption reserve="0.185306in" placement="top">
        <font typeface="Arial"/>
        <para vAlign="middle"/>
        <value>
            <text>Last Name</text>
        </value>
    </caption>
</field>
<field name="userid" y="6.35mm" x="63.5mm" w="25.4mm"
```

```
h="13.7068mm" access="readOnly">
    <ui>
        <textEdit>
            <border>
                <?templateDesigner StyleID aped3?>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                </border>
            <margin/>
        </textEdit>
    </ui>
    <font typeface="Arial"/>
    <margin topInset="1mm" bottomInset="1mm" leftInset="1mm"
rightInset="1mm"/>
    <para vAlign="middle"/>
    <caption reserve="0.185306in" placement="top">
        <font typeface="Arial"/>
        <para vAlign="middle"/>
        <value>
            <text>User ID</text>
        </value>
    </caption>
</field>
<draw name="StaticText2" w="38.1mm" h="6.35mm">
    <ui>
        <textEdit>
        </textEdit>
    </ui>
    <value>
        <text>Emplyee</text>
    </value>
    <font typeface="Arial" weight="bold"/>
    <margin topInset="0.5mm" bottomInset="0.5mm"
leftInset="0.5mm" rightInset="0.5mm"/>
</draw>
```

```

        </subform>
        <field name="ABSTYPE" y="47.625mm" x="3.175mm" w="114.3mm"
h="9.525mm">
            <ui>
                <textEdit>
                    <border>
                        <edge stroke="lowered"/>
                        <edge stroke="lowered"/>
                        <edge stroke="lowered"/>
                        <edge stroke="lowered"/>
                    </border>
                    <margin/>
                </textEdit>
            </ui>
            <font typeface="Arial"/>
            <margin bottomInset="1mm" leftInset="1mm" rightInset="1mm"
topInset="1mm"/>
            <para vAlign="middle"/>
            <caption reserve="43.39mm">
                <font typeface="Arial"/>
                <para vAlign="middle"/>
                <value>
                    <text>Absence Type</text>
                </value>
            </caption>
        </field>
        <exclGroup name="Paid" x="3.175mm" y="60.325mm">
            <field w="28mm" h="6mm" name="paid">
                <ui>
                    <checkButton shape="round">
                        <border>
                            <?templateDesigner StyleID apcb4?>
                                <edge stroke="lowered"/>
                                <fill/>
                                <edge stroke="lowered"/>
                                <edge stroke="lowered"/>
                                <edge stroke="lowered"/>
                            </?templateDesigner StyleID apcb4?>
                        </border>
                    </checkButton>
                </ui>
            </field>
        </exclGroup>
    </form>

```

```

        </border>
    </checkBox>
</ui>
<font typeface="Arial"/>
<margin leftInset="1mm" rightInset="1mm"/>
<para vAlign="middle"/>
<caption placement="right" reserve="22mm">
    <para vAlign="middle"/>
    <font typeface="Arial"/>
    <value>
        <text>Paid</text>
    </value>
</caption>
<items>
    <text>true</text>
</items>
<value>
    <text xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-
instance" xsi:nil="true"/>
</value>
</field>
<field x="28.575mm" w="28mm" h="6mm" name="unpaid">
    <ui>
        <checkBox shape="round">
            <border>
                <?templateDesigner StyleID apcb4?>
                <edge stroke="lowered"/>
                <fill/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
            </border>
        </checkBox>
    </ui>
    <font typeface="Arial"/>
    <margin leftInset="1mm" rightInset="1mm"/>

```

```

        <para vAlign="middle"/>
        <caption placement="right" reserve="22mm">
            <para vAlign="middle"/>
            <font typeface="Arial"/>
            <value>
                <text>Unpaid</text>
            </value>
        </caption>
        <items>
            <text>false</text>
        </items>
        <value>
            <text xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-
instance" xsi:nil="true"/>
        </value>
    </field>
    <?templateDesigner expand 1?></exclGroup>
    <field h="9.525mm" name="BEGDA" w="114.3mm" x="3.175mm"
y="73.025mm">
        <ui>
            <dateTimeEdit>
                <border>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                    <edge stroke="lowered"/>
                </border>
                <margin/>
            </dateTimeEdit>
        </ui>
        <font typeface="Arial"/>
        <margin bottomInset="1mm" leftInset="1mm" rightInset="1mm"
topInset="1mm"/>
        <para vAlign="middle"/>
        <caption reserve="43.13mm">
            <font typeface="Arial"/>
            <para vAlign="middle"/>

```



```

        <value>
            <text>Start Date</text>
        </value>
    </caption>
    <value>
        <date/>
    </value>
</field>
<field h="9.525mm" name="ENDDA" w="114.3mm" x="3.175mm"
y="82.55mm">
    <ui>
        <dateTimeEdit>
            <border>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
                <edge stroke="lowered"/>
            </border>
            <margin/>
        </dateTimeEdit>
    </ui>
    <font typeface="Arial"/>
    <margin bottomInset="1mm" leftInset="1mm" rightInset="1mm"
topInset="1mm"/>
    <para vAlign="middle"/>
    <caption reserve="43.13mm">
        <font typeface="Arial"/>
        <para vAlign="middle"/>
        <value>
            <text>End date</text>
        </value>
    </caption>
    <value>
        <date/>
    </value>
</field>
<field h="9.525mm" name="complete" w="44.45mm" x="3.175mm"

```

```

y="98.425mm">
    <ui>
        <button/>
    </ui>
    <font typeface="Arial"/>
    <caption>
        <value>
            <text>Complete</text>
        </value>
        <para hAlign="center" vAlign="middle"/>
        <font typeface="Arial"/>
    </caption>
    <border hand="right">
        <edge stroke="raised"/>
        <fill>
            <color value="212,208,200"/>
        </fill>
    </border>
    <bind match="none"/>
    <event activity="click">
        <submit format="xml"
target="%com.sap.caf.gp.if.PostProcessorUrl%" textEncoding="UTF-8"/>
    </event>
    </field>
</subform>
<proto/>
</subform>
<?templateDesigner DefaultLanguage FormCalc?>
<?templateDesigner DefaultRunAt client?>
    <?templateDesigner Grid show:1, snap:1, units:0, color:ff8080,
origin:(0,0), interval:(125000,125000)?>
    <?templateDesigner Rulers horizontal:1, vertical:1, guidelines:1,
crosshairs:0?>
    <?templateDesigner Zoom 103?>
    <?templateDesigner DefaultPreviewDynamic 0?>
    <?templateDesigner XDCFile acrobat6.xdc?></template>
<config xmlns="http://www.xfa.org/schema/xci/1.0/"

```

```

xmlns:xfa="http://www.xfa.org/schema/xci/1.0/">
  <agent name="designer">
    <!-- [0..n] -->
    <destination>pdf</destination>
    <pdf>
      <!-- [0..n] -->
      <fontInfo/>
    </pdf>
  </agent>
  <present>
    <!-- [0..n] -->
    <destination>pdf</destination>
    <pdf>
      <!-- [0..n] -->
      <fontInfo>
        <embed>0</embed>
      </fontInfo>
      <tagged>1</tagged>
      <compression>
        <compressLogicalStructure>1</compressLogicalStructure>
      </compression>
      <interactive>1</interactive>
      <xdc>

<uri>D:\usr\sap\C11\SYS\global\AdobeDocumentServices\lib\acrobat6.xdc</uri>

      </xdc>
    </pdf>
    <coolType>

<unicodeDirectory>D:\usr\sap\C11\JC00\j2ee\os_libs\adssap\FontManagerService\fonts\adobe\typespt\unicode</unicodeDirectory>

<commonFontsDirectory>D:\usr\sap\C11\JC00\j2ee\os_libs\adssap\FontManagerService\fonts\adobe\reqrd\cmaps</commonFontsDirectory>

<additionalFontsDirectory>D:\usr\sap\C11\JC00\j2ee\cluster\server0\.\persistent\com.adobe~FontManagerService\fonts\customer;D:\usr\sap\C11\JC00\j2ee\os_libs\adssap\FontManagerService\fonts\adobe;D:\usr\sap\C11\JC00\j2ee\os_libs\adssap\FontManagerService\fonts\adobe\pdf1\6.0\fonts</ad

```

```
ditionalFontsDirectory>
  </coolType>
  <pcl>
    <fontInfo>
      <embed>1</embed>
    </fontInfo>
  </pcl>
  <ps>
    <fontInfo>
      <embed>1</embed>
    </fontInfo>
  </ps>
  <zpl>
    <fontInfo>
      <embed>0</embed>
    </fontInfo>
  </zpl>
  <xdp>
    <packets>*</packets>
  </xdp>
</present>
<trace>
  <area name="font" level="1"/>
</trace>
<acrobat>
  <common>
    <locale/>
    <data>
      <adjustData>1</adjustData>
      <attributes>preserve</attributes>
      <xsl>
        <uri/>
        <debug>
          <uri/>
        </debug>
      </xsl>
```

```
<outputXSL>
  <uri/>
</outputXSL>
</data>
<template>
  <relevant/>
  <base/>
  <uri/>
</template>
</common>
</acrobat>
</config>
<xfa:datasets xmlns:xfa="http://www.xfa.org/schema/xfa-data/1.0/">
  <xfa:data xfa:dataNode="dataGroup"/>
</xfa:datasets>
<localeSet xmlns="http://www.xfa.org/schema/xfa-locale-set/2.1/">
  <locale desc="English (United States)" name="en_US">
    <calendarSymbols name="gregorian">
      <monthNames>
        <month>January</month>
        <month>February</month>
        <month>March</month>
        <month>April</month>
        <month>May</month>
        <month>June</month>
        <month>July</month>
        <month>August</month>
        <month>September</month>
        <month>October</month>
        <month>November</month>
        <month>December</month>
      </monthNames>
      <monthNames abbr="1">
        <month>Jan</month>
        <month>Feb</month>
        <month>Mar</month>
```

```
<month>Apr</month>
<month>May</month>
<month>Jun</month>
<month>Jul</month>
<month>Aug</month>
<month>Sep</month>
<month>Oct</month>
<month>Nov</month>
<month>Dec</month>
</monthNames>
<dayNames>
  <day>Sunday</day>
  <day>Monday</day>
  <day>Tuesday</day>
  <day>Wednesday</day>
  <day>Thursday</day>
  <day>Friday</day>
  <day>Saturday</day>
</dayNames>
<dayNames abbr="1">
  <day>Sun</day>
  <day>Mon</day>
  <day>Tue</day>
  <day>Wed</day>
  <day>Thu</day>
  <day>Fri</day>
  <day>Sat</day>
</dayNames>
<meridiemNames>
  <meridiem>AM</meridiem>
  <meridiem>PM</meridiem>
</meridiemNames>
<eraNames>
  <era>BC</era>
  <era>AD</era>
</eraNames>
```

```

</calendarSymbols>
<datePatterns>
  <datePattern name="full">EEEE, MMMM D, YYYY</datePattern>
  <datePattern name="long">MMMM D, YYYY</datePattern>
  <datePattern name="med">MMM D, YYYY</datePattern>
  <datePattern name="short">M/D/YY</datePattern>
</datePatterns>
<timePatterns>
  <timePattern name="full">h:MM:SS A Z</timePattern>
  <timePattern name="long">h:MM:SS A Z</timePattern>
  <timePattern name="med">h:MM:SS A</timePattern>
  <timePattern name="short">h:MM A</timePattern>
</timePatterns>
<dateTimeSymbols>GyMdkHmsSEDFwWahKzZ</dateTimeSymbols>
<numberPatterns>
  <numberPattern name="numeric">z,zz9.zzz</numberPattern>
  <numberPattern
name="currency">$z,zz9.99|($z,zz9.99)</numberPattern>
  <numberPattern name="percent">z,zz9%</numberPattern>
</numberPatterns>
<numberSymbols>
  <numberSymbol name="decimal">.</numberSymbol>
  <numberSymbol name="grouping">,</numberSymbol>
  <numberSymbol name="percent">%</numberSymbol>
  <numberSymbol name="minus">-</numberSymbol>
  <numberSymbol name="zero">0</numberSymbol>
</numberSymbols>
<currencySymbols>
  <currencySymbol name="symbol">$</currencySymbol>
  <currencySymbol name="isoname">USD</currencySymbol>
  <currencySymbol name="decimal">.</currencySymbol>
</currencySymbols>
</locale>
</localeSet>
<x:xmpmeta xmlns:x="adobe:ns:meta/" x:xmptk="3.1-701">
  <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">

```

```
<rdf:Description xmlns:pdf="http://ns.adobe.com/pdf/1.3/"
xmlns:xap="http://ns.adobe.com/xap/1.0/"
xmlns:xapMM="http://ns.adobe.com/xap/1.0/mm/"
xmlns:dc="http://purl.org/dc/elements/1.1/" rdf:about="uuid:4fc34b91-
5e78-423e-b328-16ad68887029" pdf:Producer="Adobe PDF Library 6.1"
xap:ModifyDate="2005-07-26T12:01:30-07:00" xap:CreateDate="2005-07-
26T20:59:50+02:00" xap:MetadataDate="2005-07-26T20:59:50+02:00"
xapMM:DocumentID="uuid:7f7a22db-4091-4250-951d-1a8c3eee692b"
xapMM:InstanceID="uuid:4fc34b91-5e78-423e-b328-16ad68887029"
dc:format="application/pdf">

  </rdf:Description>

</rdf:RDF>

</x:xmpmeta>

<xfdf xmlns="http://ns.adobe.com/xfdf/" xml:space="preserve">

  <annots/>

</xfdf>

<PDFSecurity xmlns="http://ns.adobe.com/xdp/" print="1"
printHighQuality="1" change="1" modifyAnnots="1" formFieldFilling="1"
documentAssembly="1" contentCopy="1" accessibleContent="1"
metadata="1"/></xdp:xdp>
```

Figure 2: travelRequest.xdp Source Code

THE BEST-RUN BUSINESSES RUN SAP

