Building Your First Process with Oracle BPM 11g

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Purpose

This tutorial shows you how to build a simple Hello World application using Oracle BPM Suite 11gR1. It also shows you how to deploy the process to the BPM engine and test it in the BPM Workspace.

Time to Complete

Approximately 2 hours

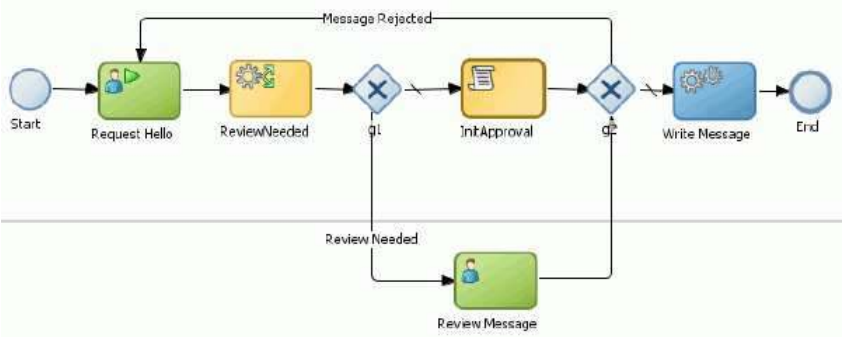
Overview

In this tutorial, you use Studio, the JDeveloper based IDE, to create a simple Hello World process. This process demonstrates the use of a file service, interactive tasks implemented by the human workflow engine, and by conditional branching. The conditions for the conditional branching are determined through the use of a business object and a business rule. You also use a script task to initialize a variable. After building the process, you deploy it to the BPM engine and test it in the runtime environment.

Scenario

There are two roles involved in the Hello World process, the sender of the message, acting in the Requester role, and a reviewer, acting in the Reviewer role. The requester is prompted, through the Request Hello activity, to enter a Hello message, greeting, and a date for the message. After the form is submitted, a business rule is applied to the message content to determine whether the message requires a review, based on the length of the greeting and message fields.

If the message does not require review, the process flows to a script task, which initializes a variable needed by the next task, then the message is sent to the Write Message activity to be written to the file system. If the message requires review, the reviewer is prompted to review the message and either accept or reject it. If the message is rejected, it returns to the Request Hello activity so that the requester can correct the message, otherwise, it goes directly to the Write Message activity for file processing.



Software and Hardware Requirements

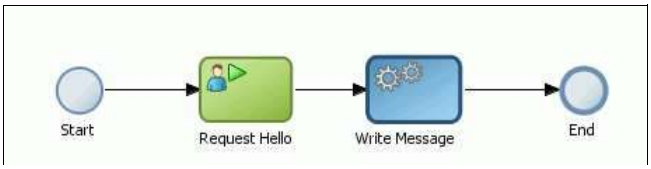
In order to perform this tutorial, you must have previously installed Oracle BPM 11gR1 and JDeveloper 11.1.1.3 with both the SOA and BPM extensions. You will also need to have at least one user in the internal LDAP database of your WebLogic server in the OBPM installation in order to map this user to the roles that you define in your Hello World process. You can take care of both of these tasks (installation and seeding of the LDAP database) by performing the **Installing Oracle BPM 11g** OBE.

Prerequisites

If you have not yet installed OBPM 11gR1, perform the **Installing OBPM 11g** OBE. Performing this OBE will also seed your LDAP database.
If you already have an OBPM 11gR1 installation, but still wish to seed the Demo Community in the WebLogic server's internal LDAP database, download the zip file containing ANT files needed to perform this task. This is available from OTN as a **SOA 11g Human Workflow** sample code download. You will need to modify some parameters in the ANT build file to match your particular installation. A ReadMe file is included in the zip file to assist you.

Creating the Basic Hello World Application

In this section you create the basic starting point for the Hello World process using the JDeveloper Studio. You add two activities - an interactive activity and a service activity. The end user will be able to enter a Hello message, using the BPM Workspace. The message will be captured in a business object and passed to a file service, which, in turn will write the message to a disk file. Later, you expand upon this to add more complexity to the process.



You create several process elements throughout this section of the tutorial. The following naming convention will be used throughout this section:

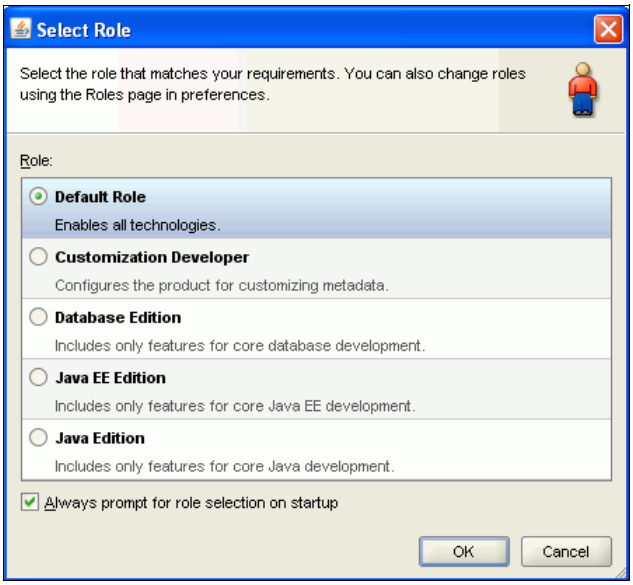
Name	Description
`HelloWorld_OBE`	Application name
`HelloWorldProject`	Main project name
`HelloWorld_UI`	Project containing user task web form(s)

`HelloWorldProcess`	Process name

Creating the Process Model
Creating the Business Object
Implementing the User Task
Implementing the File Service

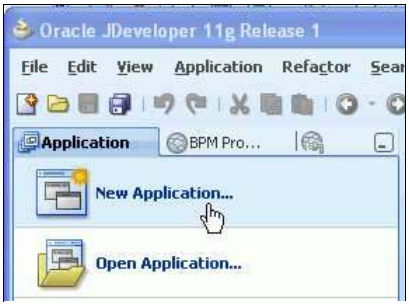
Creating the Process Model

1. Open **JDeveloper Studio 11.1.1.3** from the Windows Start menu. When prompted to select a role, choose the **Default Role**. Click **OK**.

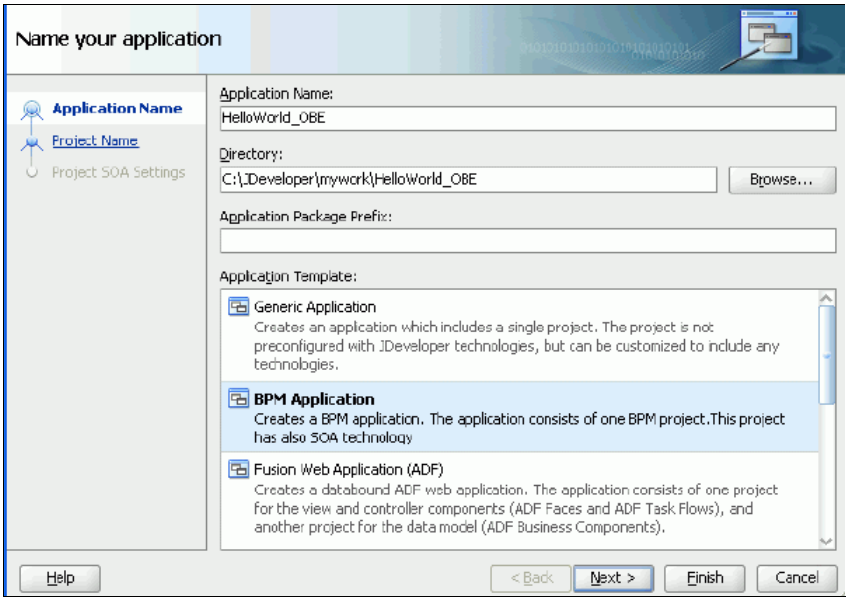


Close the Daily Tips window.

2. Create a new application. Click the **New Application** bar in the left panel.

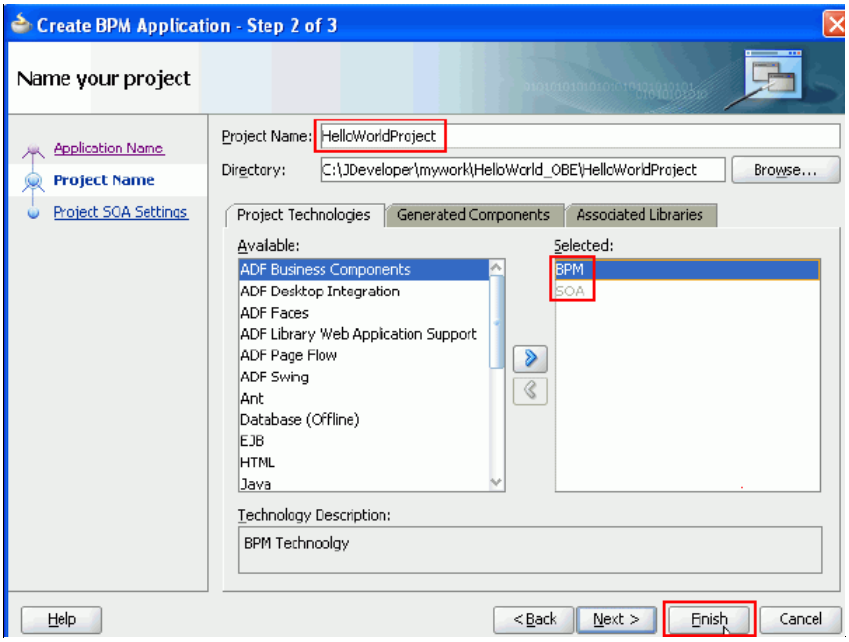


The BPM Application wizard opens. Name the application "`HelloWorld_OBE`" and accept the default directory for storing application files (`C:\JDeveloper\mywork`). Select **BPM Application** in the Application Template panel.

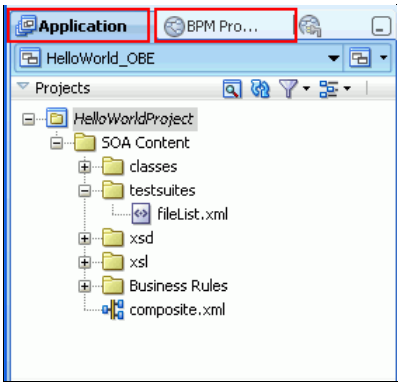


Click **Next**.

3. In **Step 2** of the **Create BPM Application** wizard, you create a project for the HelloWorld_OBE application. Enter **`HelloWorldProject`** as the Project Name. Notice that **BPM** and **SOA** are selected as project technologies by default. Click **Finish**.

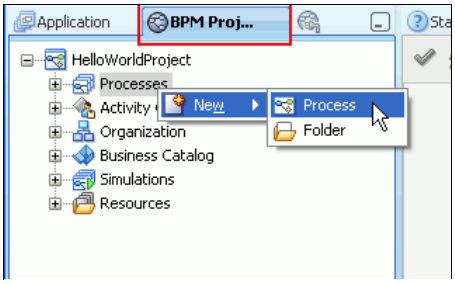


In the upper left corner of the JDeveloper Studio window, you see the Navigator panel. This contains two tabs that will be important to you as you perform this tutorial: The **Application Navigator** tab and the **BPM Project Navigator** tab. Currently the Application Navigator tab is selected by default. You can see the HelloWorld_OBE application appearing in the drop-down list just above the panel and the HelloWorldProject appearing as the parent node within the panel. The fact that it appears in *italics* indicates that there are unsaved changes.

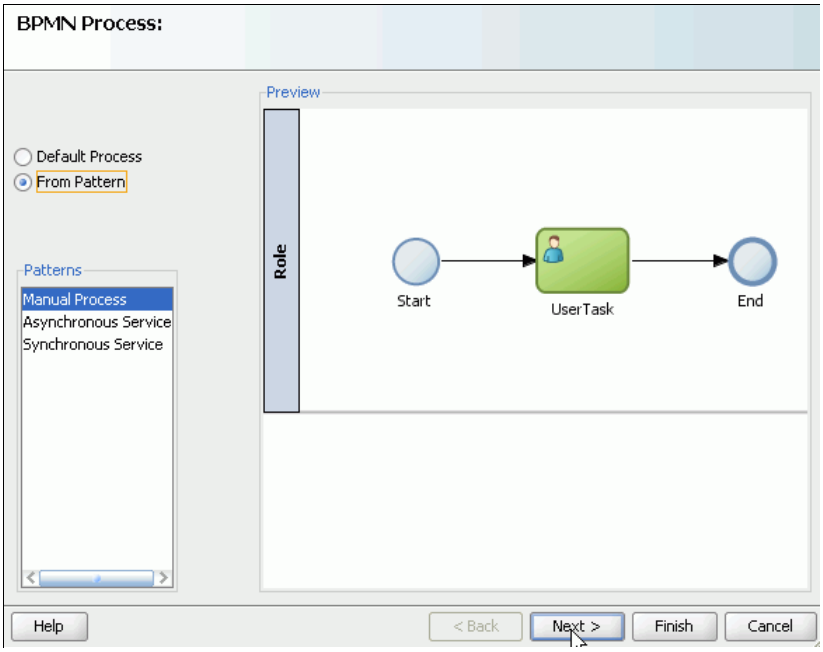


Click the **Save All** icon on the main toolbar.

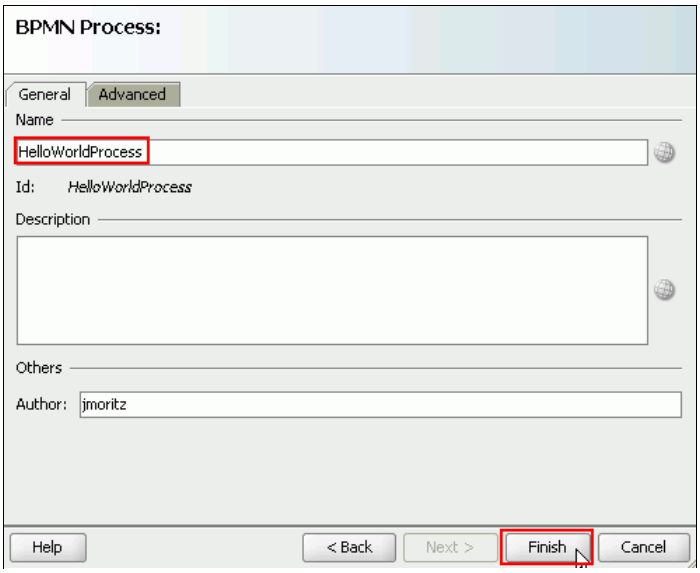
4. To create a new process within this project, first click the **BPM Project Navigator** tab. Then right click on **Processes** and select **New > Process** .



In the **BPM Process** wizard, select the **From Pattern** radio button, and then the **Manual Process** pattern. Click **Next**.



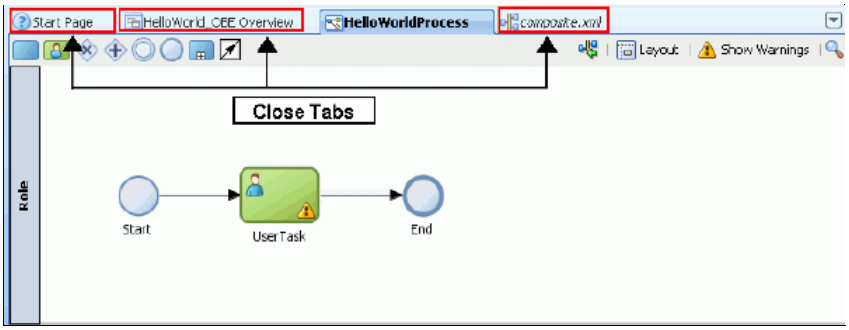
In the next screen, name the process "**`HelloWorldProcess`**" and click **Finish**.



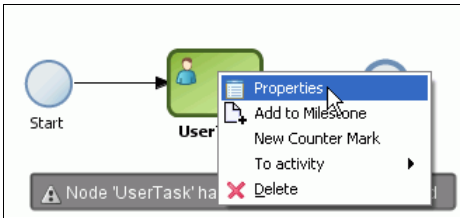
The process model appears in the design editor panel in the middle of the JDeveloper window. The tab name will be same as the name of your new process.

Click the **Save All** icon again.

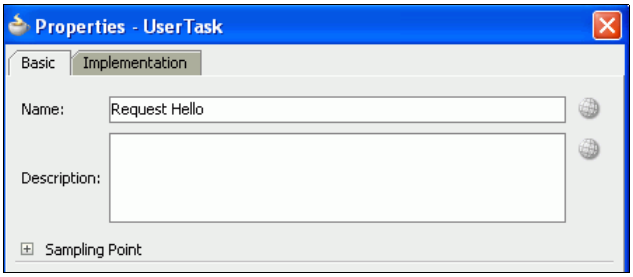
You may wish to close the other tabs, as you will not be using these. An **X** will appear in the upper right corner of the tab when your cursor approaches it. The X will close the tabbed pane. All of these can be easily reopened later from either the menu or one of the navigator panels.



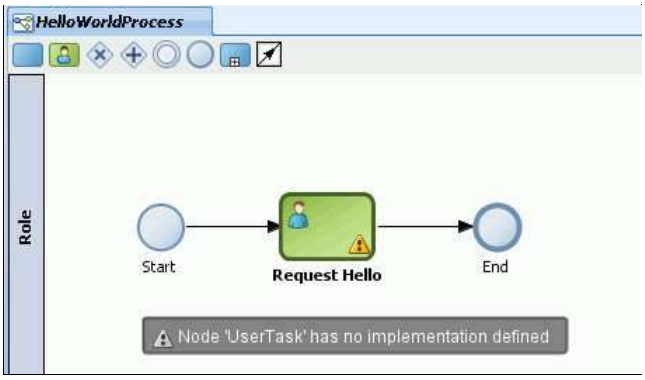
5. Change the name of the user task in the design model. Notice that the model begins and ends with two circular icons. The circle on the left is a **Start** activity and the circle on the right is an **End** activity. Connecting the two circles is a line that represents the flow of activities through the process. This is called the **sequence flow** and sometimes is referred to as the "transition line". Between the Start and End activities is a **User Task** type activity. Right click on this and select **Properties**.



When the **Properties** dialog box appears, on the **Basic** tab, change the name of the activity to "**`Request Hello`**". Click **OK**.



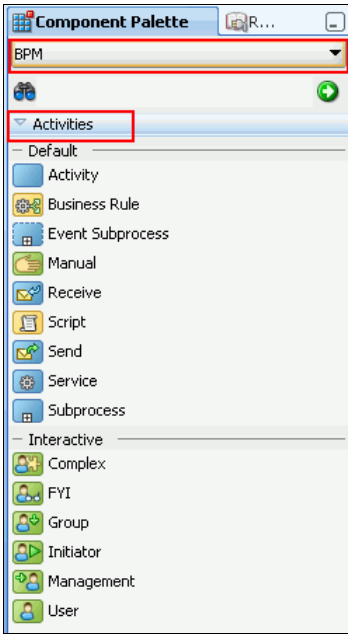
Don't worry about the warning message indicating that no implementation has been defined. You will do this later.



Click **Save All**.

6. Add the Component Palette to the JDeveloper window by selecting **View > Component Palette** from the menu. The palette will appear in the right pane of the window.

   Select **BPM** from the drop-down list at the top of the Component Palette, then expand the **Activities** accordion panel as shown below.



7. Add a service activity to the process. You'll need to first make room for another activity on the sequence flow.

   Click on the **End** activity and drag it to the right, dropping it on the right side of the design panel, allowing enough room for another activity icon to fit between the **Request Hello** activity and the **End** activity.

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