

Course Exercises Guide

Process Modeling with IBM Business Process Manager Standard V8.5.7

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Exercises description

This course includes the following exercises:

- Exercise 1. Playback 0: Creating a process with ad-hoc activities
- Exercise 2. Playback 0: Creating a process application
- Exercise 3. Playback 0: Controlling process flow
- Exercise 4. Validating the process model

In the exercise instructions, you can check off the line before each step as you complete it to track your progress.

Most exercises include required sections, which should always be completed. It might be necessary to complete these sections before you can start later exercises. Some exercises also include optional sections that you might want to complete if you have sufficient time and want an extra challenge.



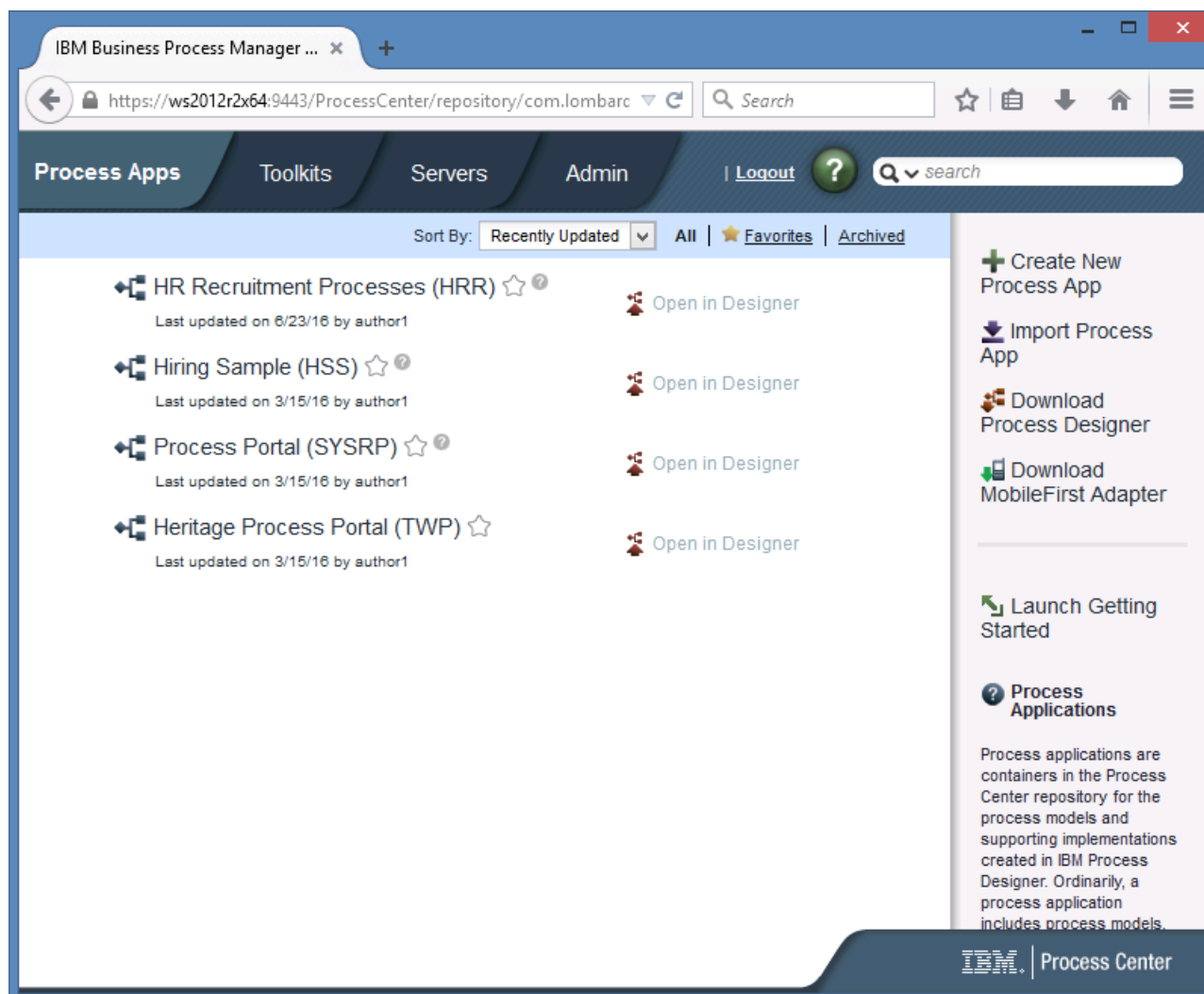
Important

Online course material updates might exist for this course. To check for updates, visit the Instructor wiki at: <http://ibm.biz/CloudEduCourses>.



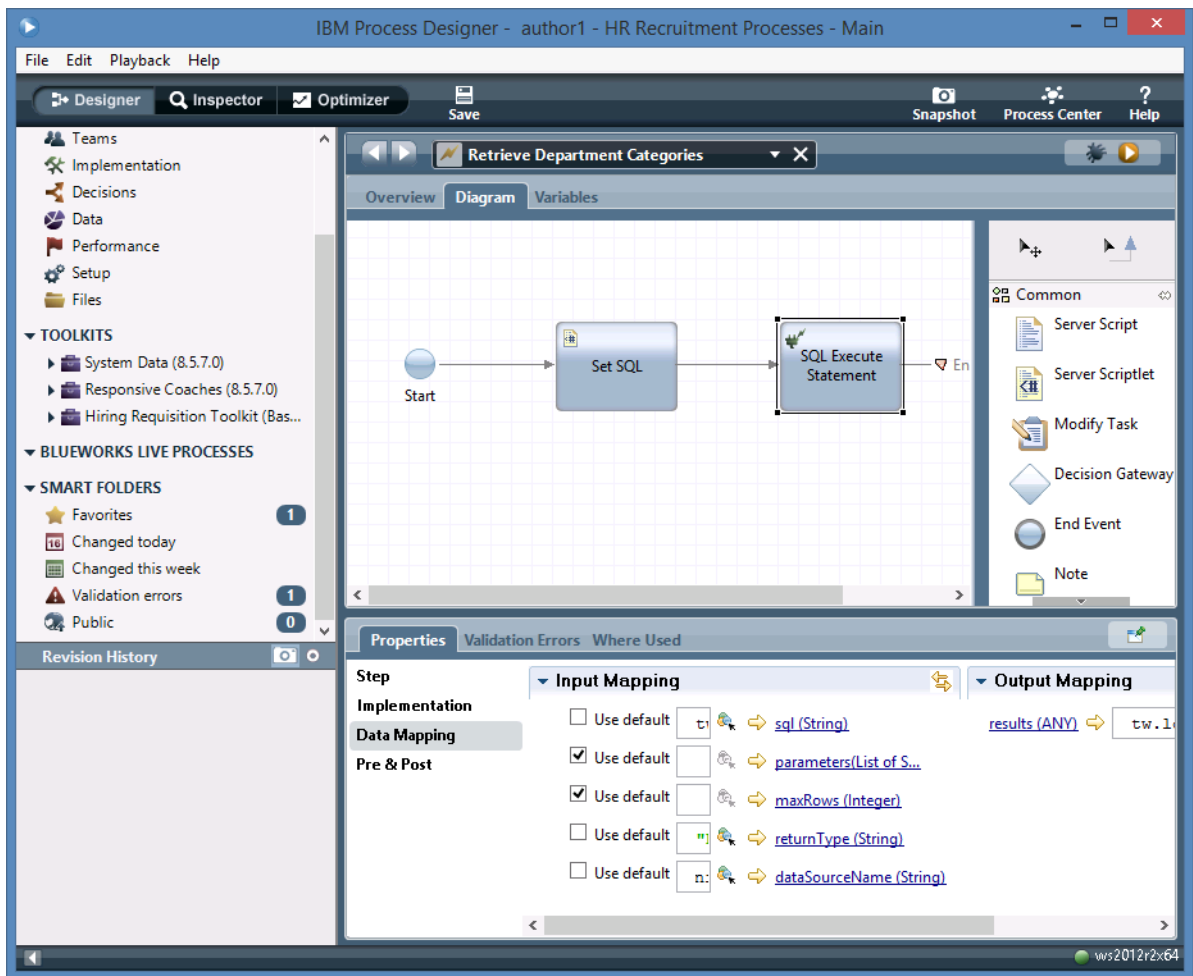
Important

Throughout this course, you use two tools to create your process assets. It is important to distinguish between the two tools because of the similar design and names. You create most of the process modeling and front-end (coach) development by using what is referred to throughout this course as the web Process Designer.



This browser-based tool uses your desktop browser to create most of your process application. The web Process Designer is cross-browser compatible, meaning the Designer runs on multiple operating systems. For more information on browser and system compatibility, visit the [Detailed System Requirements Supported Software tab](#) for IBM Business Process Manager Standard 8.5.7.

The second tool is used to implement services in your library along with some configuration options that are not found in the web Process Designer. This tool is called the Process Designer client application because this tool is downloaded and installed on a Windows based host. The web Process Designer is a web page you load inside your Internet browser, the client application must be launched as an executable file on your computer. You use both tools simultaneously to create your process applications, so always be aware of which tool you are currently using.



Exercise 1. Playback 0: Creating a process with ad hoc activities

Estimated time

01:30

Overview

This exercise covers how to create ad hoc activities in the IBM Business Process Manager web Process Designer.

Objectives

After completing this exercise, you should be able to:

- Start IBM Business Process Manager
- Create a process application by using the web Process Designer
- Create the foundation for a structured process by adding the appropriate lanes to the default pool
- Create a process
- Add ad hoc activities to the team lanes

Introduction

A process is a project that starts and finishes over time to resolve a problem. The problem can involve a claim or a request or a proposal. Many documents and records relevant to the process supplement to the problem. A process usually involves multiple people from inside and outside of an organization. These people often have a relationship to each other.

IBM Business Process Manager simplifies the job of designing and building Processes with ad hoc activities and provides a graphical user interface for Knowledge Workers to manage Processes. With IBM Business Process Manager, you design an application that is based on closely related processes and then deploy that solution into a production environment. Knowledge Workers can then complete work items that are associated with processes.

For example, to design an application for resolving credit card disputes, IBM Business Process Manager provides tools to design and create an application that Knowledge Workers can then use to work with the Processes that are created.

To create an application, you identify the user activities that are needed to complete the process. You also identify the documents that are used and the teams of users that work on the activities,

and the conditions that are required to start and complete the process and activities. Finally, you create the user interface that Knowledge Workers see in Process Portal.

Requirements

None



Important

The exercises in this course use a set of lab files that might include scripts, applications, files, solution files, PI files, and others. The course lab files can be found in the following directory:

`c:\labfiles` for the Windows platform

`/usr/labfiles` for the Linux platform

The exercises point you to the lab files as you need them.



Note

For IBM Business Process Manager on Cloud Users

The exercises in this book are designed for the on-premises version of IBM Business Process Manager. If you are taking the course that uses the IBM Business Process Manager on Cloud product, download the labfiles assets from the Cloud Education website. Substitute the local files that you extract from the labfiles compressed file when the text references files that are contained in the `c:\labfiles` folder.

Exercise instructions

Each exercise in this course contains one or more of the following parts:

- An introduction
- A set of instructions
- A challenge exercise

How to use the course exercise instructions

Text highlighting in exercises

Different text styles indicate various elements in the exercises.

Words that are highlighted in **bold** represent GUI items that you interact with, such as:

- Menu items
- Field names
- Icons
- Button names

Words that are highlighted with a `fixed font` include the following items:

- Text that you type or enter as a value
- System messages
- Directory paths
- Code

Exercise structure

Each exercise is divided into sections with a series of steps and substeps. The step represents an action to be completed. If required, the substeps provide guidance on completing the action.

Example:

- ___ 1. Create a user account named **ADMIN**.
 - ___ a. Right-click **My Computer** and click **Manage**.
 - ___ b. Expand **Local Users and Groups**.

... *continue*

In this example, the creation of a user account is the action to be completed. The substeps underneath provide specific guidance on how to create a user account. (In this example, the instructions are for the Windows operating system.) Words that are highlighted in bold represent menu items, field names, and other screen elements.

Tracking your progress

Based on the actions mentioned in the lab, you can continue to perform steps at your own without using the substeps provided or you can use all the substeps. And once you complete the action, you should review the substeps mentioned to verify your steps.

If you face any trouble or encounter any error while working on the exercise, you should go back and review your steps to find out if you correctly performed the steps and did not miss any step.

After completing the exercise, you are encouraged to go back over all the steps to make sure that you understand why you did the steps and how you did it.

An underscore precedes each numbered step and lettered substep.

You are encouraged to use these markers to track your progress. As you complete a step, place an X or a check mark on the underscore to indicate that it is completed. By tracking your progress in this manner, you can stay focused in case of interruptions during a lengthy exercise.

User IDs and passwords

Here is a list of user ID and password information for this course.

Entry point	User ID	Password
VMware image	administrator	web1sphere
Windows 2012 R2	administrator	web1sphere
IBM Process Designer	author1	author01
IBM Business Process Manager WebSphere Application Server cell administrator	administrator	web1sphere



Note

For IBM Business Process Manager on Cloud users

To follow along with the exercise instructions, you must create the author1, user1, and user2 accounts in your IBM Business Process Manager on Cloud environment. Use the administrative console to add the users as local accounts.

The data in the data dictionary must also be added to the database in the Appendix C, “Data dictionary” on page C-1 in this exercise guide. Contact your cloud administrator for assistance in setting up your environment.

**Stop*****Course updates and errata***

A Course Corrections document might be available for this course.

If you are taking the class with an instructor, the instructor can provide this document to you.

If you are taking the course in a self-paced environment, the course corrections document is provided with the other manuals.

To check whether a Course Corrections document exists for this course:

1. Go to the following URL: http://www.ibm.com/developerworks/connect/middleware_edu
 2. On the web page, locate and click the **Course Information** category.
 3. Find your course in the list and click the link.
 4. Click the **Attachments** tab to see whether an errata document exists with updated instructions.
 5. To save the file to your computer, click the document link and follow the dialog box prompts.
-

Exercise instructions

Hiring Requisition process

A company is experiencing rapid growth and must hire many people in a short amount of time. The process that you are going to examine and model is called the Hiring Requisition Process. This process covers a new job position through submission, approval, and completion so applicants can apply for the job position.

Here is a simple description of the process. In this exercise, you create a process. You add ad hoc activities to this process. A Hiring Manager submits a hiring requisition to the HR Department. The request contains the following information:

- Requisition number
- Job title
- Department
- Salary to offer

Part 1: Start IBM Business Process Manager and IBM web Process Designer

Before you can start IBM Business Process Manager, three server configurations must be started. After logging on to the lab environment, start the Deployment Manager profile, the Node Agent profile, and the Deployment Environment.



Important

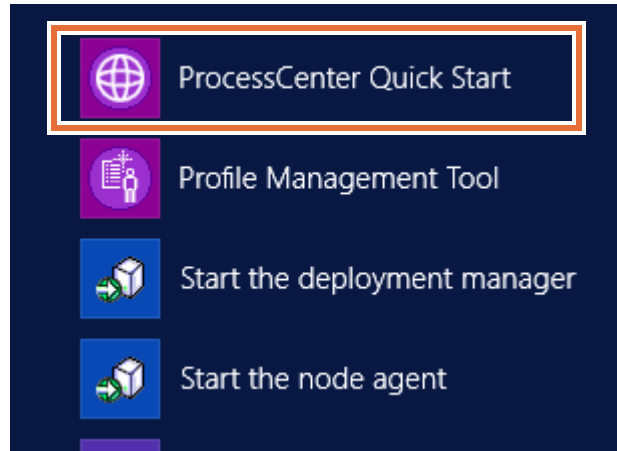
All three server configurations must be started in order, starting with the Deployment Manager profile; then, the Node Agent profile, followed last by the Deployment Environment. To accomplish this task quickly, IBM Business Process Manager provides a Quick Start routine to run the server start in order.

-
- ___ 1. Start the **Process Center** server.

**Note****For IBM BPM on Cloud users**

You do not need to start the Process Center. It is already running in your cloud environment.

- ___ a. Click **Start > Down Arrow > IBM > ProcessCenter Quick Start**.

**Important**

Some of the artifacts like the start menu folder and the Process Designer are labeled 8.5 even though the product version is 8.5.7. You can verify the server version by the System Data Toolkit version that is installed on the Process Center later in the course.

- ___ b. In the **IBM Business Process Manager Quick Start** window, click the **Start the Process Center Deployment Environment** link.

IBM Business Process Manager Standard Quick Start for ProcessCe**Deployment environment administration**

Start the Process Center Deployment Environment. Start all configured clusters, node agents, and serv

[Start the Process Center Deployment Environment](#)

It takes a few moments to start the deployment environment.



Important

A command prompt window runs through a start of the **Deployment Manager** profile, **Node Agent** profile, and **Deployment Environment**. Allow the entire start to complete. It can take 15 – 20 minutes, so make sure that you provide ample time for this initial start.

___ c. A command window opens. Press any key when it prompts **Press any key to continue**.

```

C:\Windows\system32\cmd.exe
CWUP00001I: Running configuration action detectNewProducts.ant
ADMU0116I: Tool information is being logged in file
           C:\IBM\BPM\v8.5\profiles\DmgrProfile\logs\dmgr\startServer.log
ADMU0128I: Starting tool with the DmgrProfile profile
ADMU3100I: Reading configuration for server: dmgr
ADMU3200I: Server launched. Waiting for initialization status.
ADMU3000I: Server dmgr open for e-business; process id is 3716
Starting node Node1.
CWUP00001I: Running configuration action detectNewProducts.ant
ADMU0116I: Tool information is being logged in file
           C:\IBM\BPM\v8.5\profiles\Node1Profile\logs\nodeagent\startServer.log
ADMU0128I: Starting tool with the Node1Profile profile
ADMU3100I: Reading configuration for server: nodeagent
ADMU3200I: Server launched. Waiting for initialization status.
ADMU3000I: Server nodeagent open for e-business; process id is 4448
Starting cluster SingleCluster.
When the BPMConfig command is used to start a deployment environment, it invoke
the processes that are used to start the associated clusters. If the command i
successful in invoking the processes, it returns a message to report that the
ommand completed successfully. However, to determine whether the cluster member
were all started successfully, you need to check the log files of the cluster
members. The log files are located in <profile_root>/logs.
The 'BPMConfig.bat -start -profile DmgrProfile -de ProcessCenter' command compl
ted successfully.
Press any key to continue . . . _
  
```

- ___ d. The quick start browser window populates. It might take up to 10 - 20 minutes for the servers to fully engage depending on the hardware configuration. When the four sections are populated in the **IBM Business Process Manager Quick Start** browser window (Deployment environment administration, Administration consoles & tools, Process application consoles & tools, and Documentation), the server is started.



IBM Business Process Manager Quick Start

IBM Business Process Manager Standard Quick Start for Process DmgrProfile

Deployment environment administration

Stop the Process Center Deployment Environment. Stop all configured clusters.

[Stop the Process Center Deployment Environment](#)

Administration consoles & tools

Manage applications, buses, servers and resources within the administrative domain. Monitor and

[WebSphere Application Server Administrative Console](#)

Administer the process servers in your environment, including the users and installed snapshots for view and manage process instances for process applications.

[Process Admin Console](#)

Work with Performance Data Warehouse queues, manage data transfer errors, and monitor overall

[Business Performance Admin Console](#)

Process application consoles & tools

Create, manage, share, and test high-level containers such as process applications and toolkits.

[Process Center Console](#)

Test and administer the business user interface for completing tasks.

[Process Portal](#)

Documentation

Learn about the capabilities and features of IBM Business Process Manager.

[Knowledge Center](#)



Note

For IBM Business Process Manager on Cloud users

Click Launch in the Process Portal tile of your IBM Business Process Manager on Cloud home screen to access the links to the tools shown in the quick start menu.

- ___ 2. Start the **IBM web Process Designer**.
 - ___ a. Click **Process Center Console** in the **IBM Business Process Manager Quick Start** browser window.



IBM Business Process Manager Quick Start

IBM Business Process Manager Standard Quick Start for Process DmgrProfile

Deployment environment administration

Stop the Process Center Deployment Environment. Stop all configured clusters.

[Stop the Process Center Deployment Environment](#)

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Test and administer the business user interface for completing tasks.

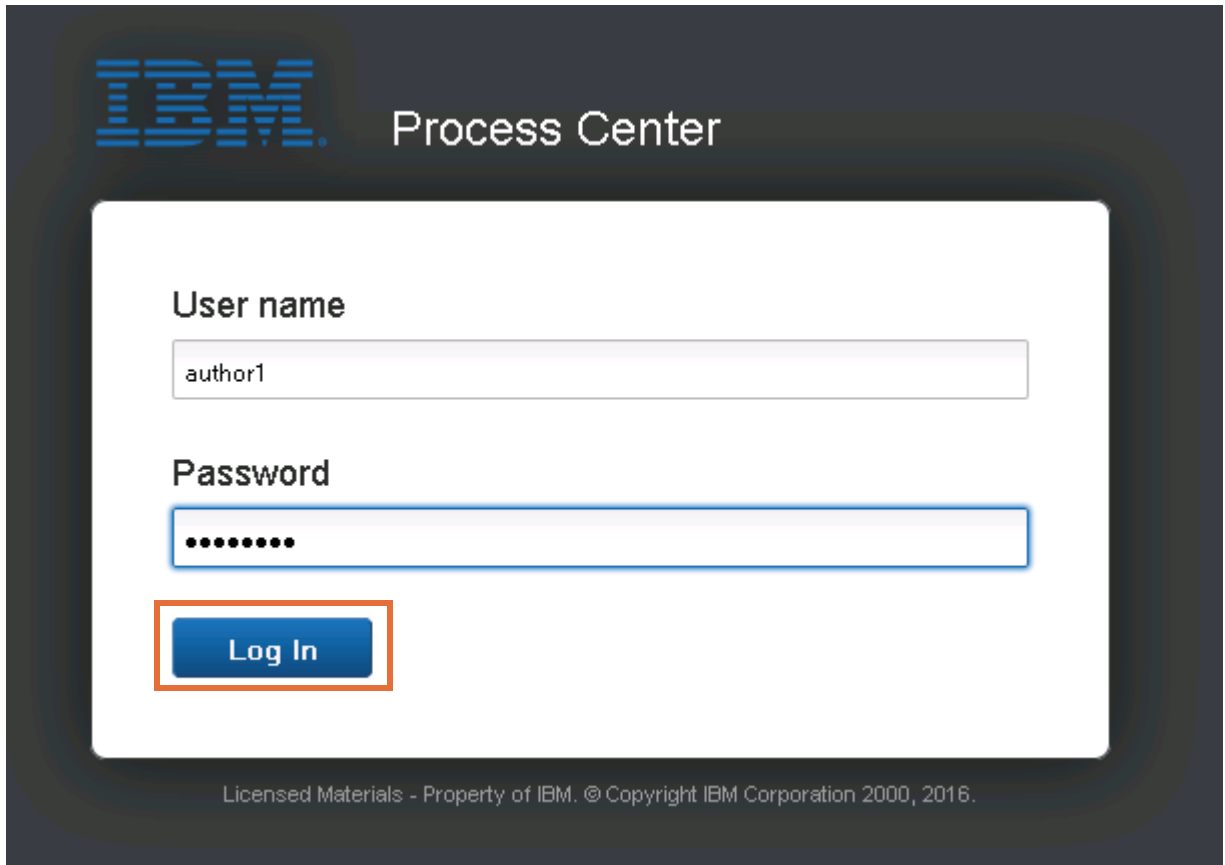
[Process Portal](#)

Documentation

Learn about the capabilities and features of IBM Business Process Manager.

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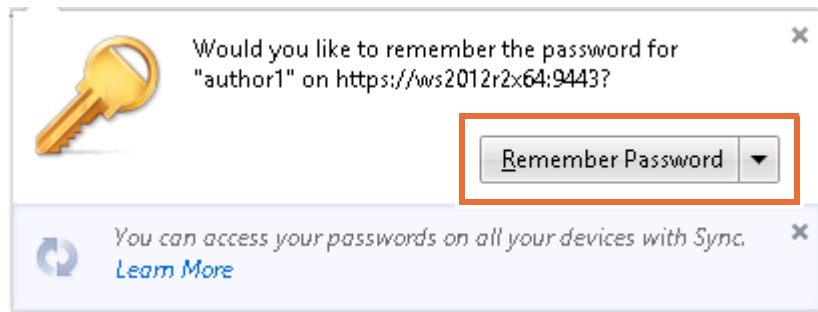
- ___ b. Minimize the **IBM Business Process Manager Quick Start** browser window and the **ProcessCenter Quick Start** window so that you can use the page to access the **Process Portal** later in the exercises.
- ___ c. A loading screen and then a login screen is displayed for the Process Center Console.
- ___ d. Enter `author1` for the **User name** and `author01` for the **Password**.
- ___ e. Click **Log In**.



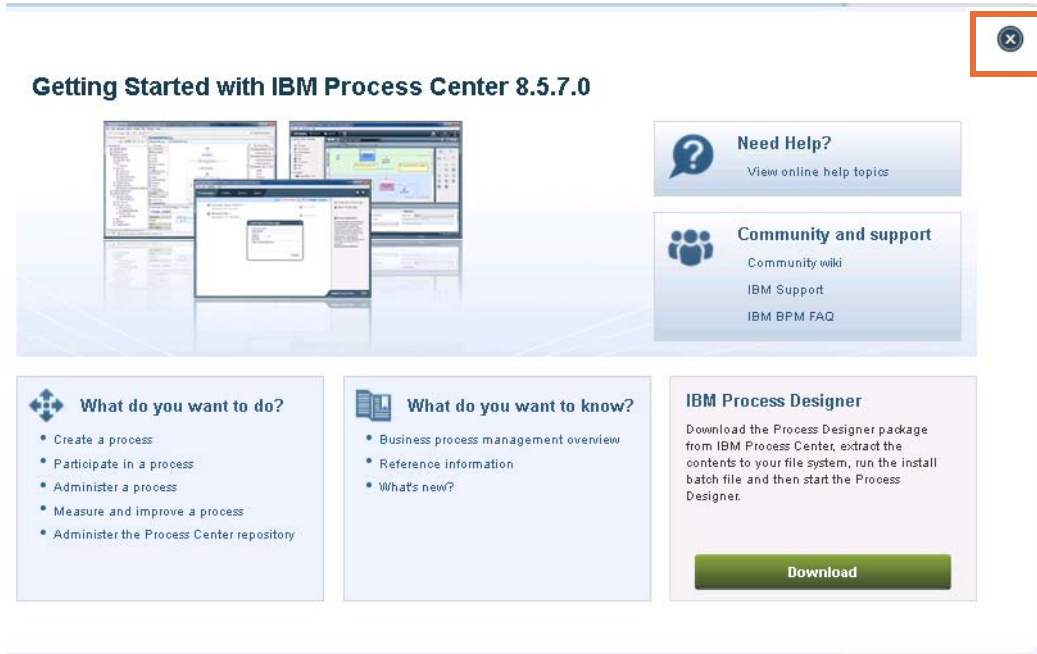
Important

At certain times when working inside the web-based Process Designer, the session times out due to inactivity. If at any time during this course you see an Authentication Required prompt, insert the same credentials that are shown above and click **OK**.

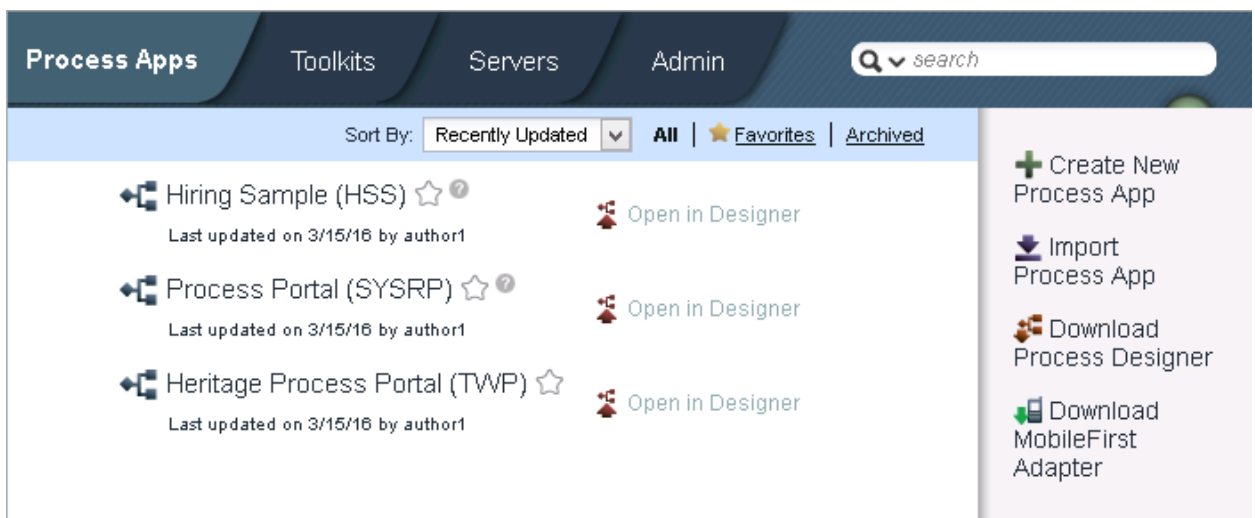
- ___ f. For the Remember Password message window that appears, click **Remember Password**.



- ___ g. Close the **Getting Started** window that appears the first time you open the Process Center console.



The **Process Center** window displays the list of process applications that are available.



Now that everything is started and you are in the Process Center, you are ready to start your exercises. Each exercise shows step-by-step instructions that you can follow to complete the tasks. In the IBM web Process Designer, there are many different ways to complete modeling tasks. The step-by-step instructions show one way to accomplish these tasks in the exercises, and there are numerous ways to accomplish the same thing.

**Note****For IBM BPM on Cloud users**

The Process Center perspective is the same when the Process Center is on the cloud.

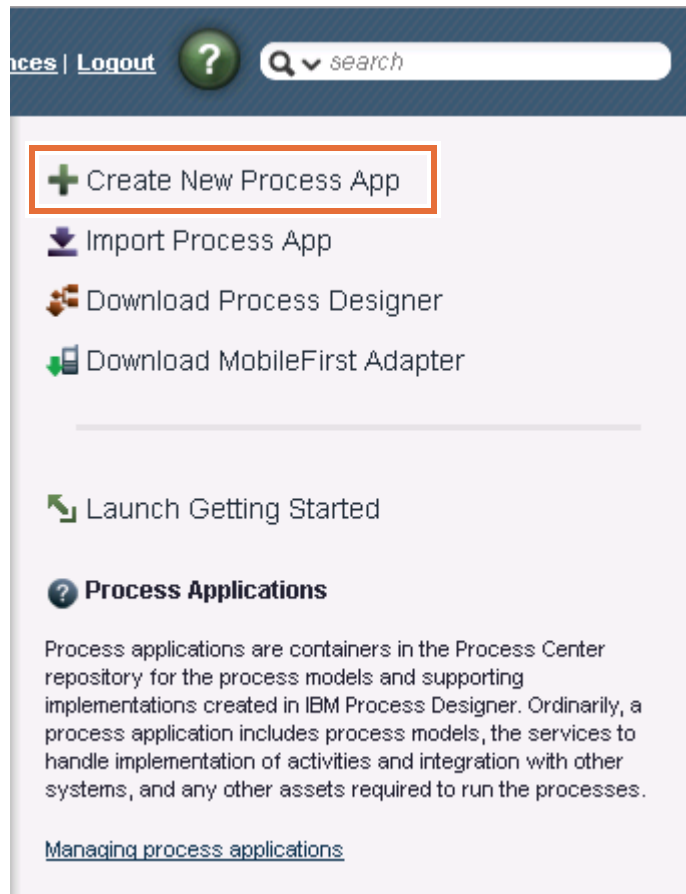
Part 2: Create a process application

In this exercise, you create a hiring request process with ad hoc activities. In the subsequent lab exercise, you refine and extend your process, specifying more details as you progress.

To accomplish the task of creating a process in the IBM web Process Designer, there must be a process application to contain the process. Using the Process Center, an author first creates a process application with all the appropriate information for the creation of a process.

___ 1. Create a process application.

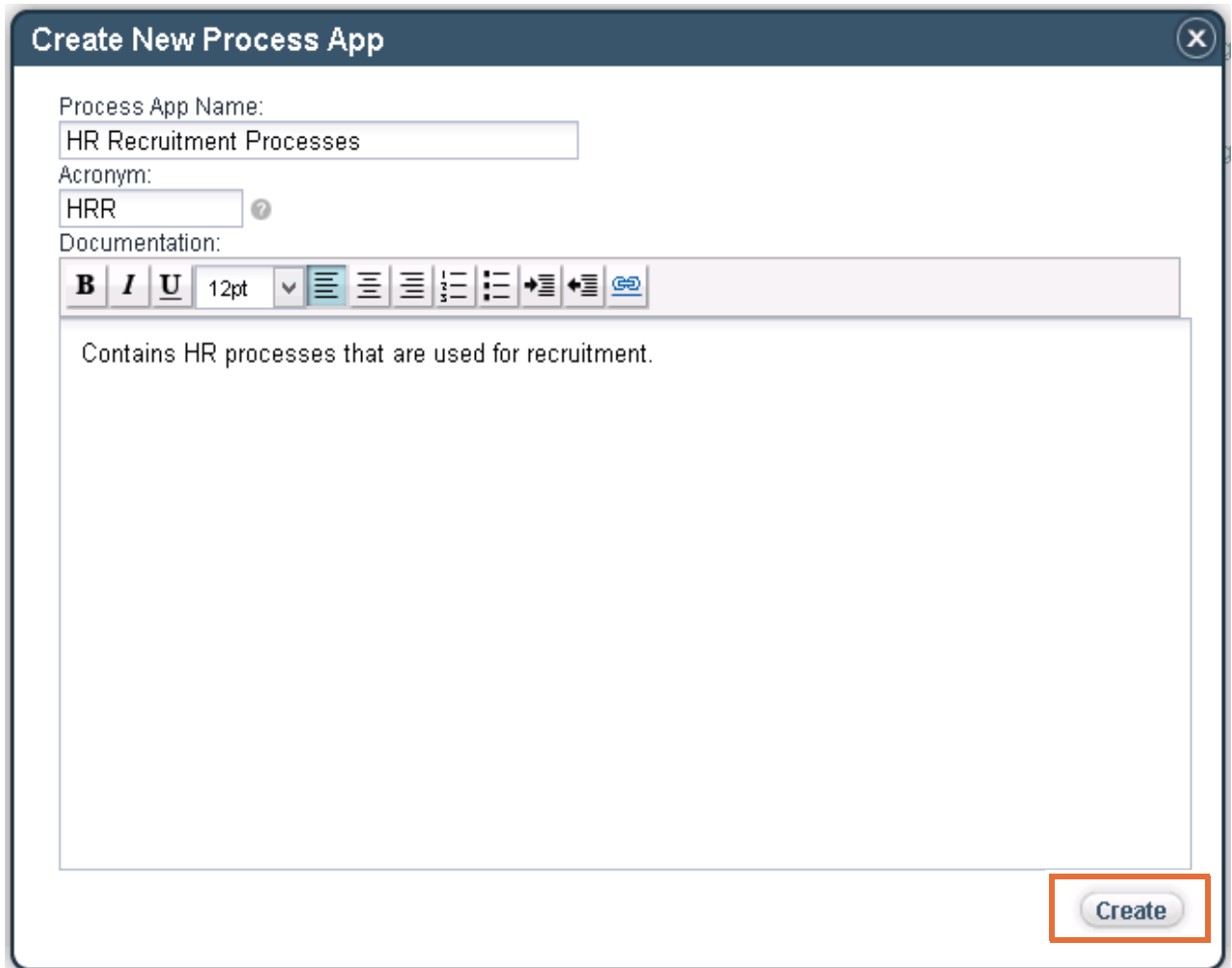
___ a. Click the **Create New Process App** link on right pane of IBM web Process Designer.



___ b. Once the **Create New Process App** dialog box is displayed, enter following values:

- Set **Process App Name** to: HR Recruitment Processes
- Set **Acronym** to: HRR
- Set **Documentation** to: Contains HR processes that are used for recruitment

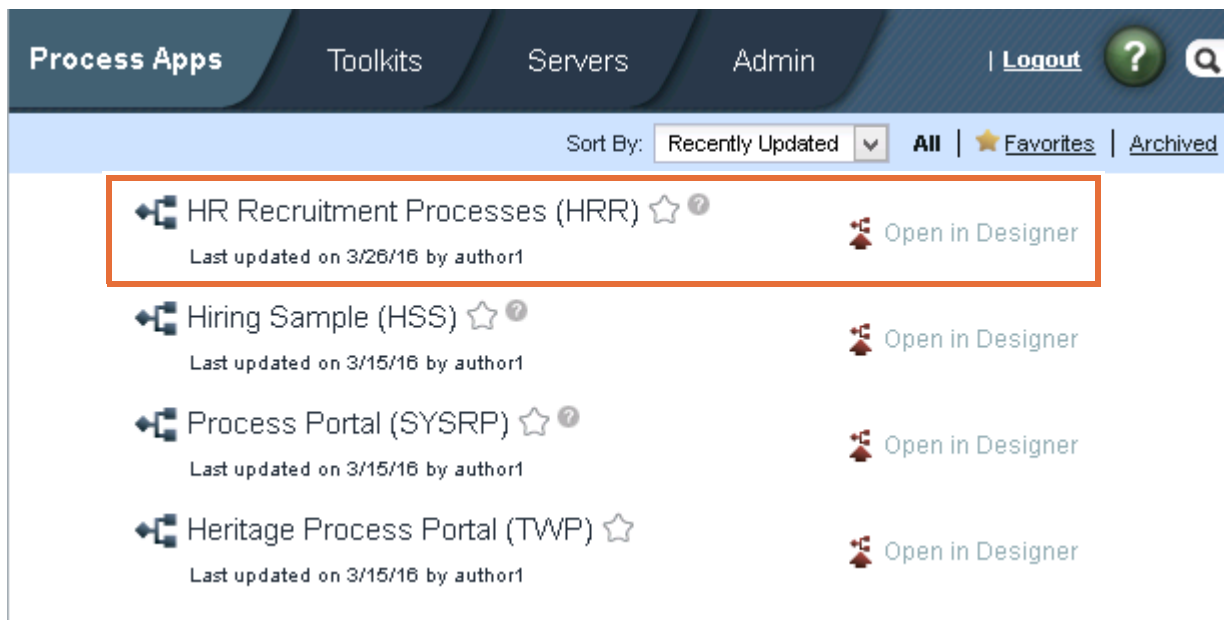
__ c. Click **Create**.



The 'Create New Process App' dialog box is shown. It has a title bar with a close button. The form contains the following fields and controls:

- Process App Name:** A text input field containing 'HR Recruitment Processes'.
- Acronym:** A text input field containing 'HRR' with a help icon.
- Documentation:** A rich text editor area containing the text 'Contains HR processes that are used for recruitment.' It includes a toolbar with bold, italic, underline, font size (12pt), bulleted list, numbered list, link, and unlink icons.
- Create Button:** A button labeled 'Create' is highlighted with a red rectangle in the bottom right corner.

The process application is created and is now in your list of process apps.

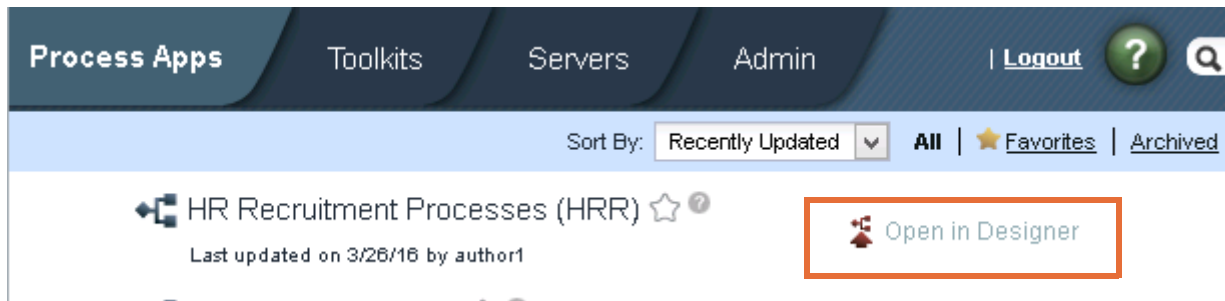


The 'Process Apps' page is displayed. The top navigation bar includes 'Process Apps', 'Toolkits', 'Servers', and 'Admin', along with a 'Logout' link and a help icon. Below the navigation bar, there is a 'Sort By' dropdown set to 'Recently Updated' and filters for 'All', 'Favorites', and 'Archived'. The main content area lists four process applications:

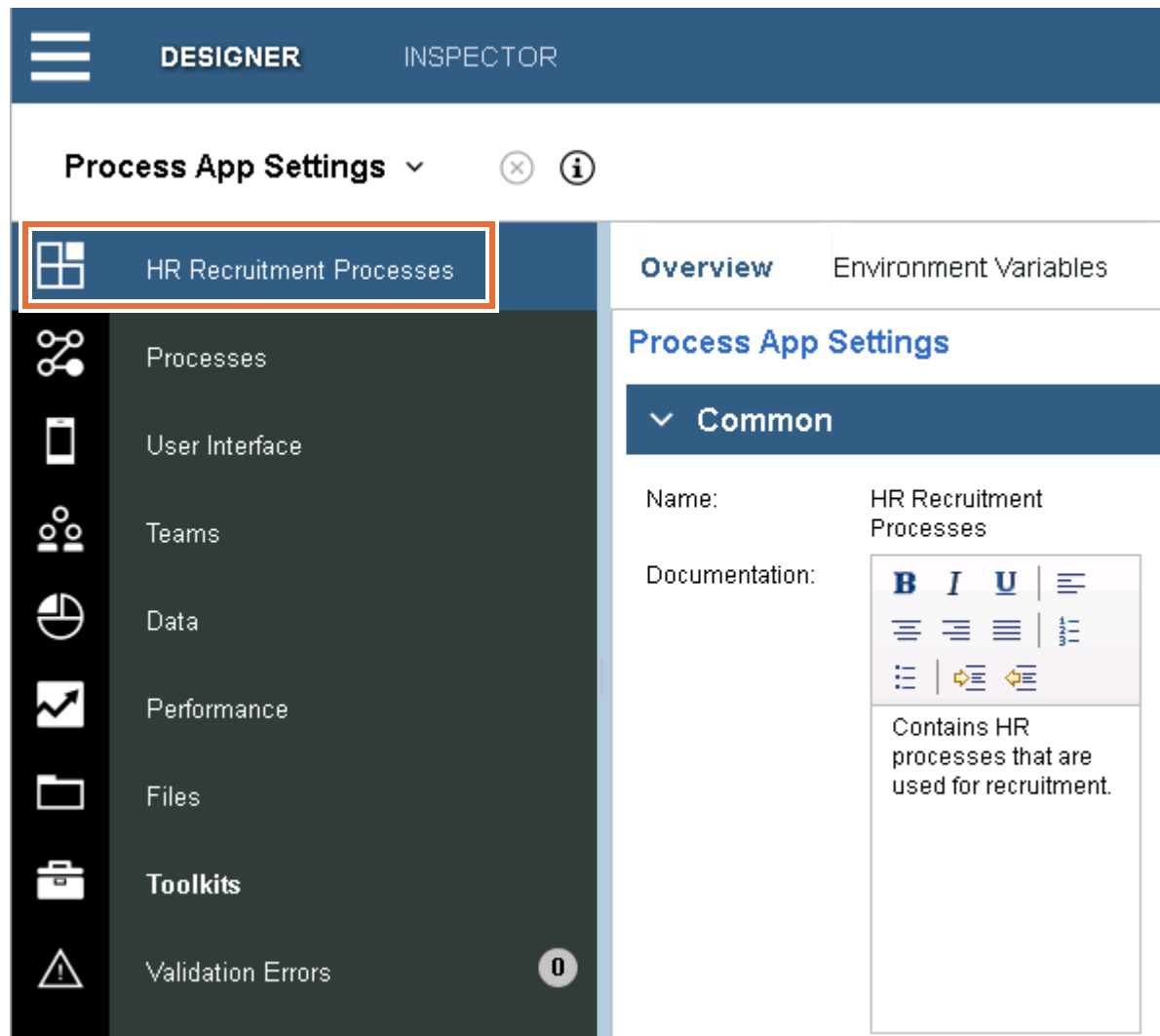
Process App Name	Last Updated	Author	Action
HR Recruitment Processes (HRR)	3/26/16	author1	Open in Designer
Hiring Sample (HSS)	3/15/16	author1	Open in Designer
Process Portal (SYSRP)	3/15/16	author1	Open in Designer
Heritage Process Portal (TWP)	3/15/16	author1	Open in Designer

The first row, 'HR Recruitment Processes (HRR)', is highlighted with a red rectangle.

- ___ 2. Open the HR Recruitment Processes process application.
 - ___ a. In the **Process Center**, find the HR Recruitment Processes process application and click **Open in Designer**.



After opening the process application, the initial view of the Designer is as follows:



**Important**

The highlighted area shows the process application that you are editing. Notice that the initial screen is also an opportunity to edit the process application settings such as name, acronym, description, and authorization. For this course, leave the settings as is and continue with your process modeling tasks.

The process owner provides detailed information about the process and its current state to the IBM BPM analyst, who in turn documents the information and analyzes the process for improvement. For this scenario, the process discovery and initial analysis has already been completed, and now the process model can be created.

To begin the task of creating the initial process, create a process with ad hoc activities in the IBM Business Process Manager web Process Designer.

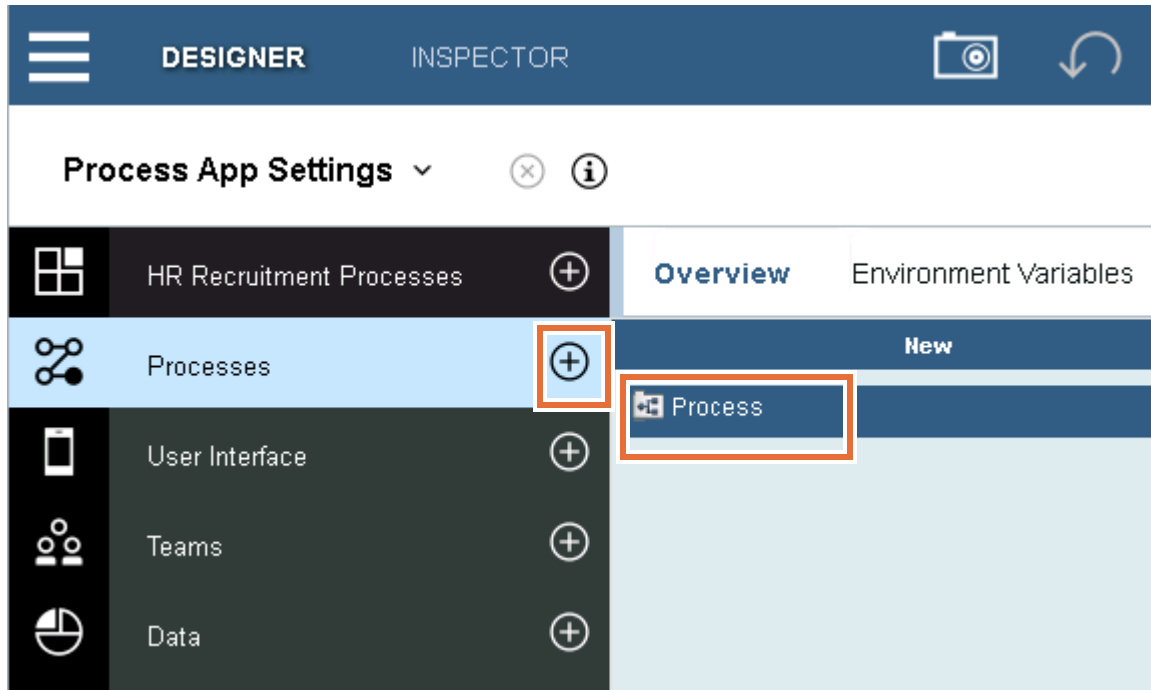
A process is a project that starts and finishes over time to resolve a problem. The problem can involve a claim, a request, or a proposal, and the supplement of many documents and records relevant to the process. A process usually involves multiple people from inside and outside of an organization. These people often have a relationship to each other. In this exercise, the Hiring Manager submits a hiring requisition to the HR Department.

To create a process, you identify the user activities that are needed to complete the process and then group those activities into a process. You identify the documents that are used and the teams of users that work on the activities. You also identify the conditions that are required to start and complete the ad hoc activities. Finally, you create the user interface that process workers see in the Process Portal.

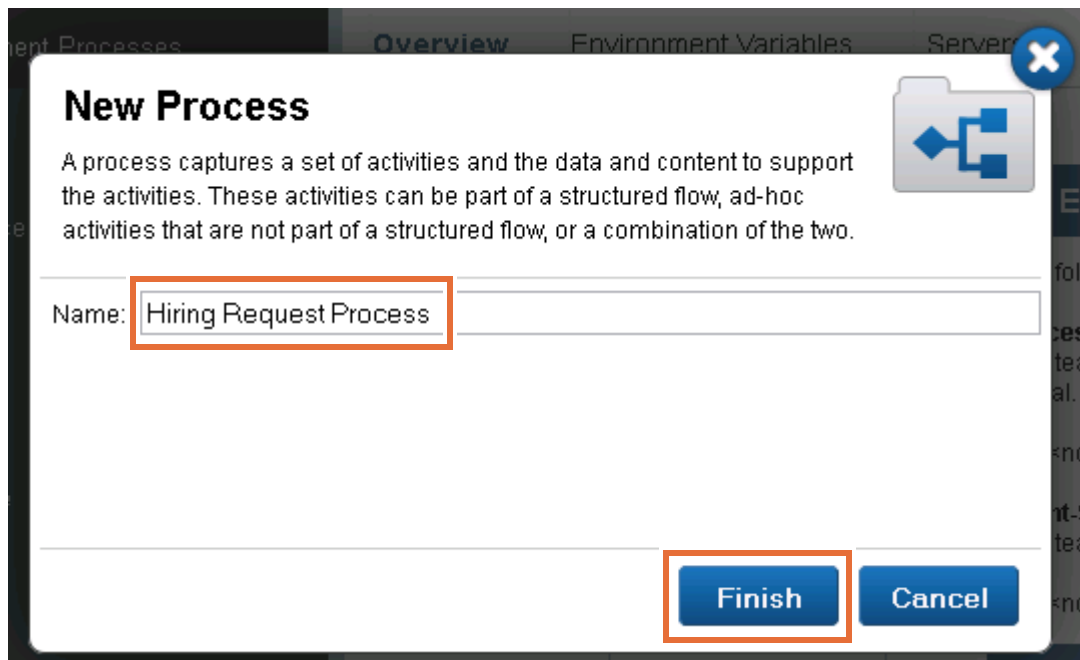
Part 3: Create a process

A process defines the activities that are needed to resolve a specific business problem. A process also defines who works on these activities and the steps they take to resolve the problem. At run time, a business user works with an instance of a process.

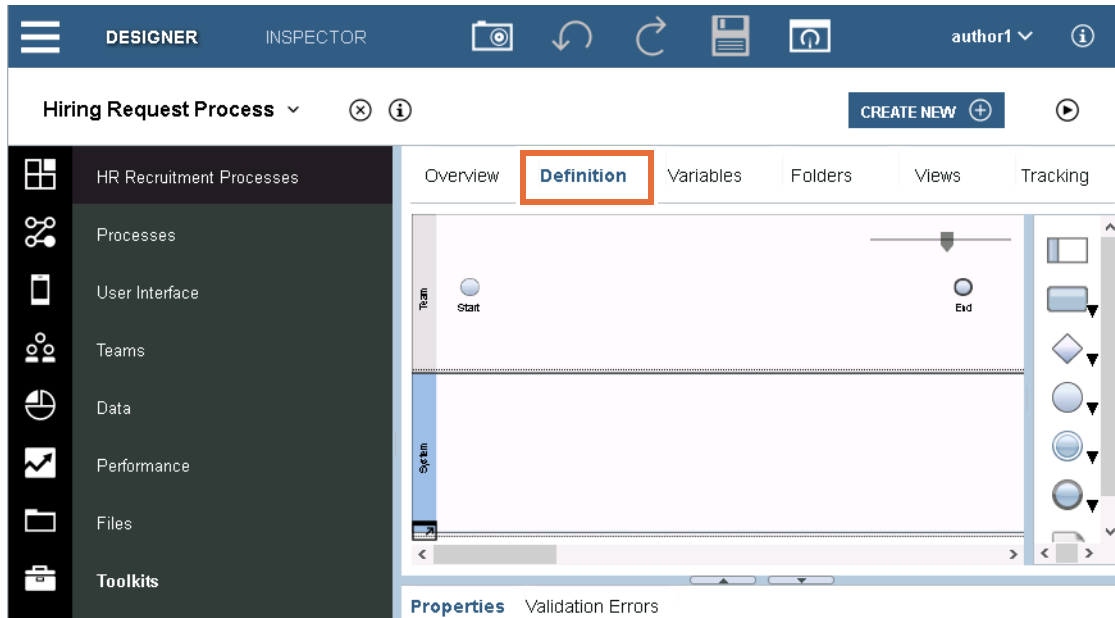
- ___ 1. Create a process.
 - ___ a. Return to the web Process Designer client application. From the process library, click the **(+) plus sign** next to Processes and select **Process**.



- ___ b. Enter Hiring Request Process in the Name field. Click **Finish**.

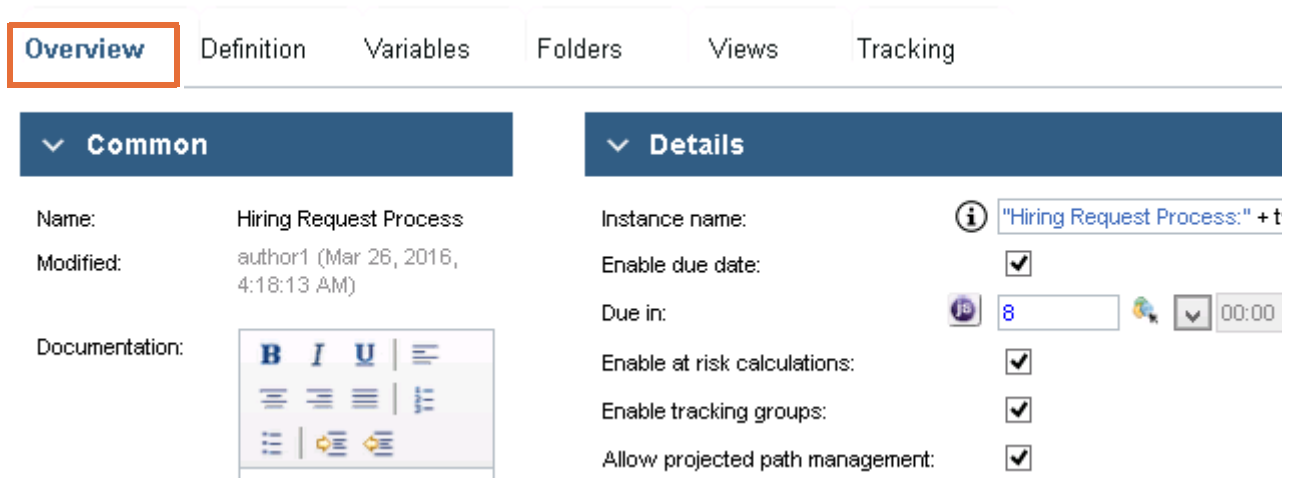


The process is created, and the initial view is shown under the **Definition** tab. By default you have a process with a team lane, a system lane, a Start event, and an End event. There is nothing special about these events. They are created by default because you must have a Start event and an End event when you create a process in IBM Business Process Manager web Process Designer.



__ 2. Expose the process to All Users so that all the users can start the process.

__ a. Click the **Overview** tab.



___ b. Under the Exposing section, click **Select** for the Expose to start option.

Overview

Definition

Variables

Folders

Views

Tracking

Common

Name:

Hiring Request Process

Modified:

author1 (Mar 26, 2016, 4:18:13 AM)

Documentation:

B I U

Symbolic name:

HRR_undefined

Details

Instance name:

"Hiring Request Process:" + t

Enable due date:

☒

Due in:

8

00:00

Enable at risk calculations:

☒

Enable tracking groups:

☒

Allow projected path management:

☒

Work Schedule

Time schedule:

(use default)

Timezone:

(use default)

Holiday schedule:

(use default)

Exposing

Expose to start:

<none>

Select...

New...

Expose business data:

<none>

Select...

New...

Expose performance metrics:

<none>

Select...

New...

___ c. Select **All Users**.

Type

Select Library Item

Team

6

All Users

Background (Users)

Managers

Managers of All Users

Process Owner

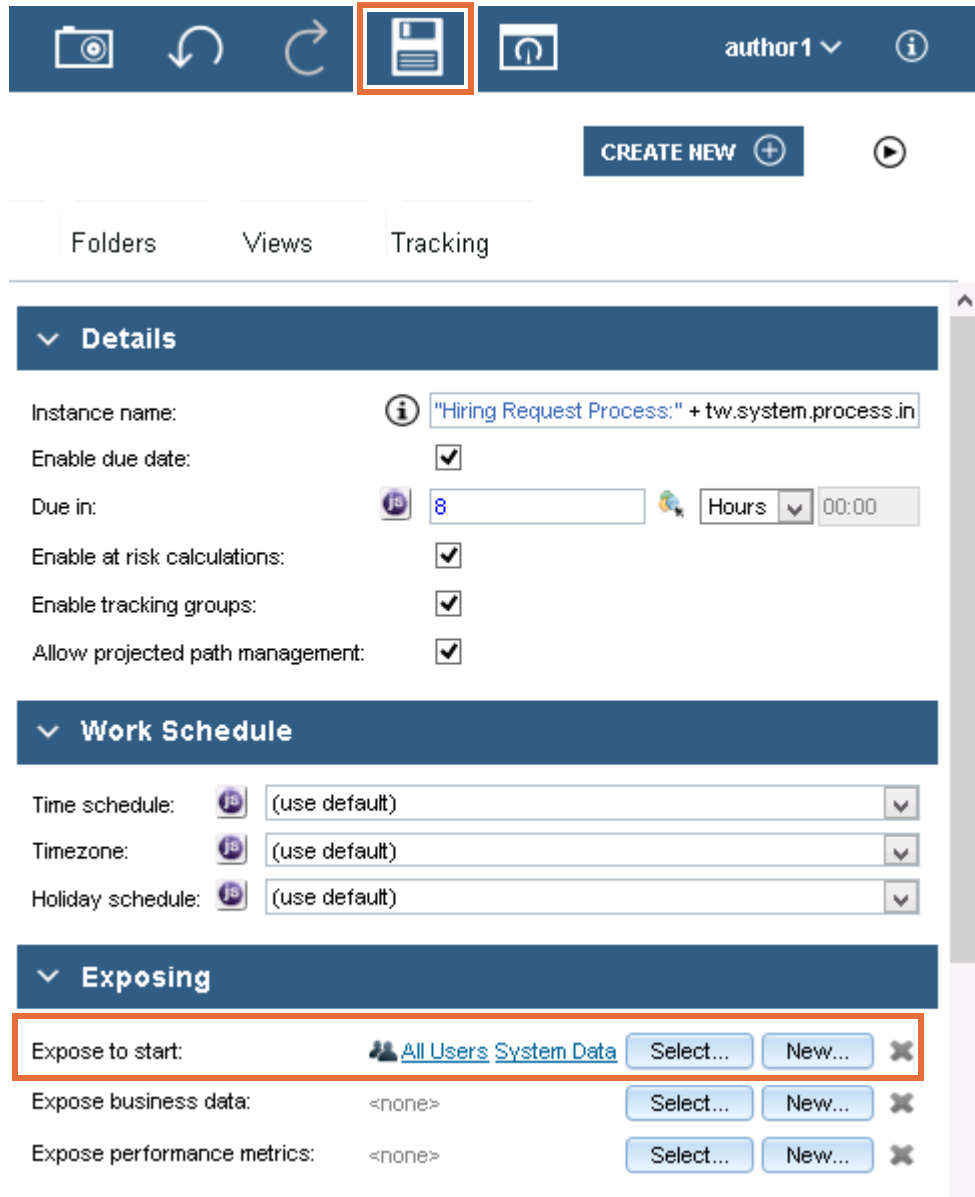
System (Users)

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1-22

___ 3. Click **Save** to save your changes.



The screenshot shows the IBM BPM console interface. At the top, there is a toolbar with icons for camera, undo, redo, save (highlighted with a red box), and refresh. The user is logged in as 'author1'. Below the toolbar, there are tabs for 'Folders', 'Views', and 'Tracking'. A 'CREATE NEW' button is visible. The main content area is divided into sections: 'Details', 'Work Schedule', and 'Exposing'. The 'Details' section includes fields for 'Instance name' (set to '"Hiring Request Process:" + tw.system.process.in'), 'Enable due date' (checked), 'Due in' (set to 8 hours), 'Enable at risk calculations' (checked), 'Enable tracking groups' (checked), and 'Allow projected path management' (checked). The 'Work Schedule' section includes 'Time schedule', 'Timezone', and 'Holiday schedule', all set to '(use default)'. The 'Exposing' section includes 'Expose to start' (set to 'All Users System Data'), 'Expose business data' (set to '<none>'), and 'Expose performance metrics' (set to '<none>'). The 'Expose to start' field is highlighted with a red box.



Hint

You can also use the short cut **Ctrl+S** to save your work.



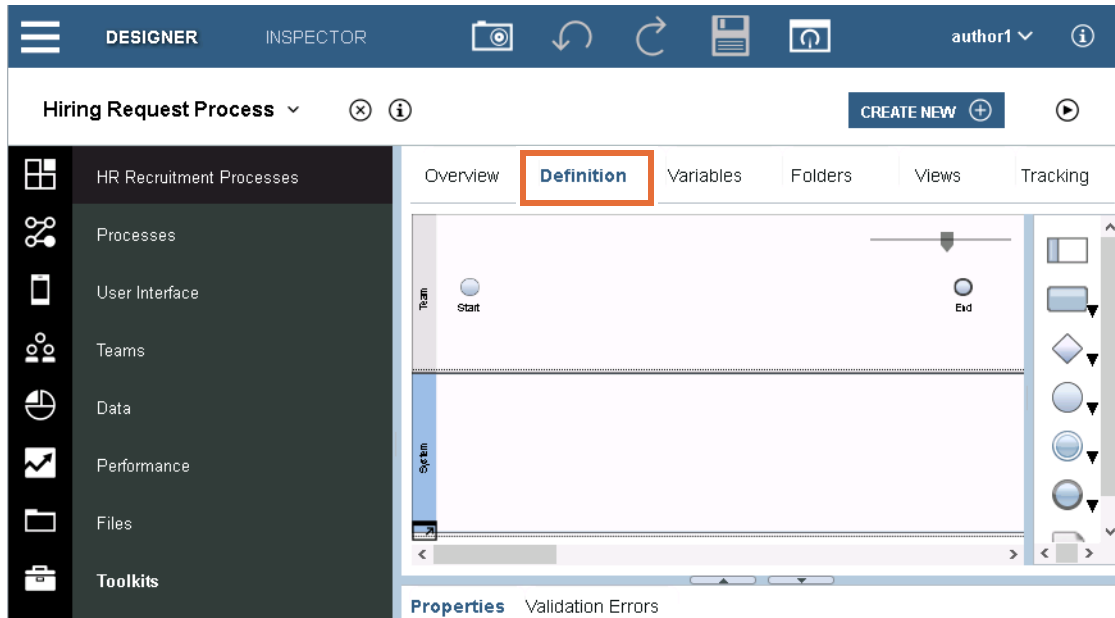
Note

You can assign a team whose members can start a process, or an instance owner's team whose members can work with the process at run time in the Process Portal. Currently, you assign all users to the HR Recruitment Processes process, and in a later unit and lab exercise in this course, you learn how to define and assign a team and users to your process.

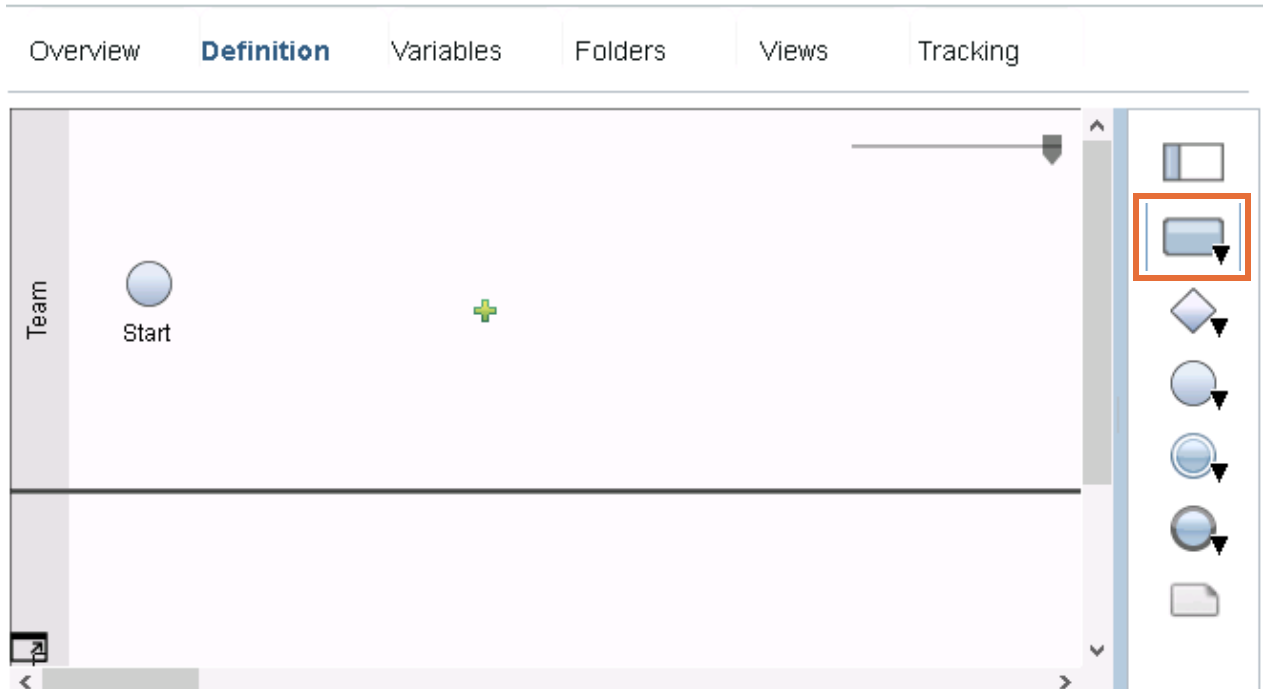
Part 4: Create process activities

An activity in a process is a discrete task that a person or a system completes as part of that process. Typically a process has a number of activities. Initially you add an activity in a process and classify it as required or optional. Next, you repeat the process to create three required activities and one optional activity.

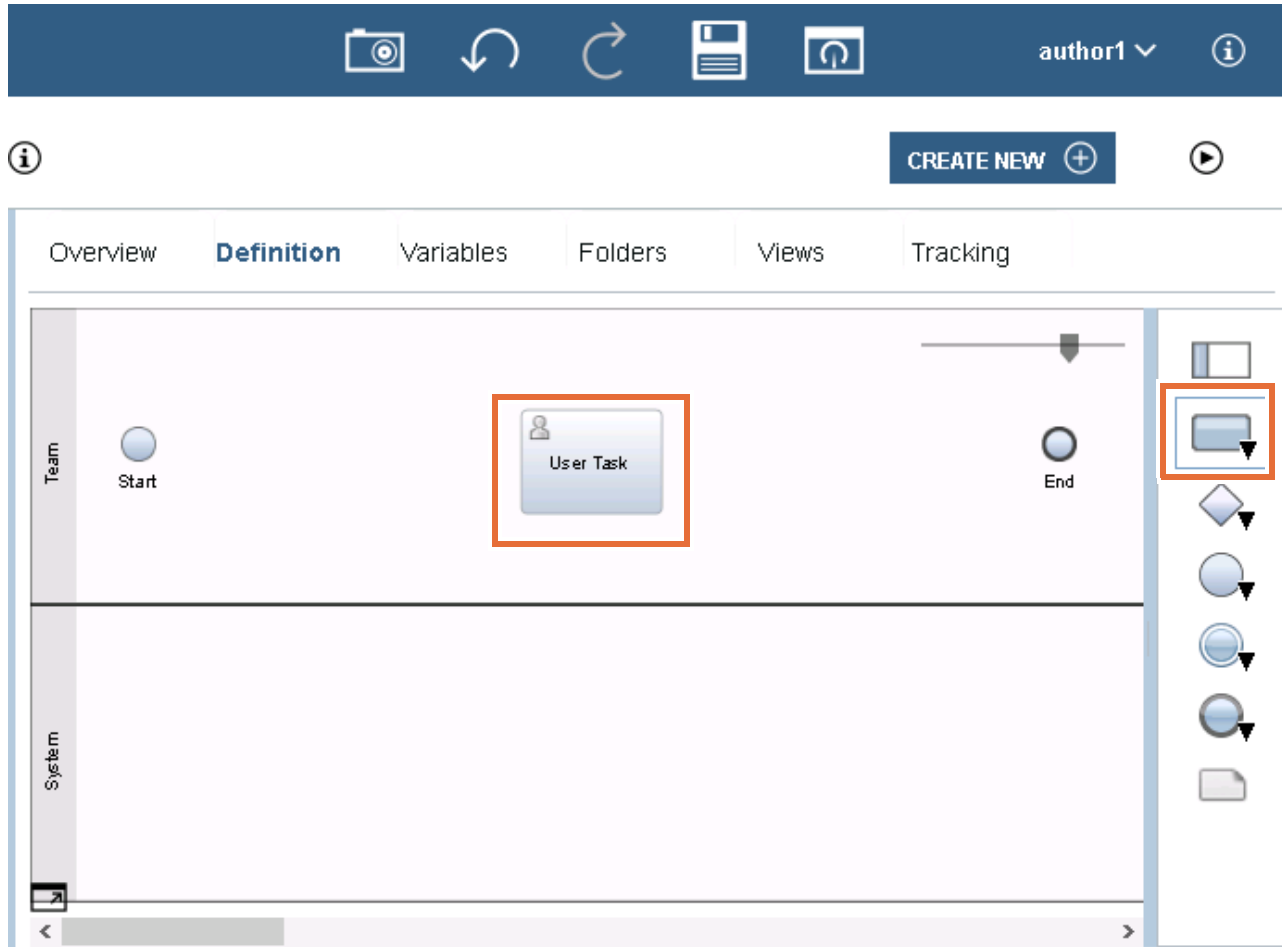
- ___ 1. Create a required process activity that is named **Submit Hiring Request**.
 - ___ a. From the Hiring Request Process, click the **Definition** tab.



- ___ b. Drag an activity from the palette on the right side of the canvas into the Team lane to the right of the start event. When you drag an object to the canvas, the cursor turns into a green plus sign while you drag the object.



___ c. Release the left mouse button to place the activity on the canvas.

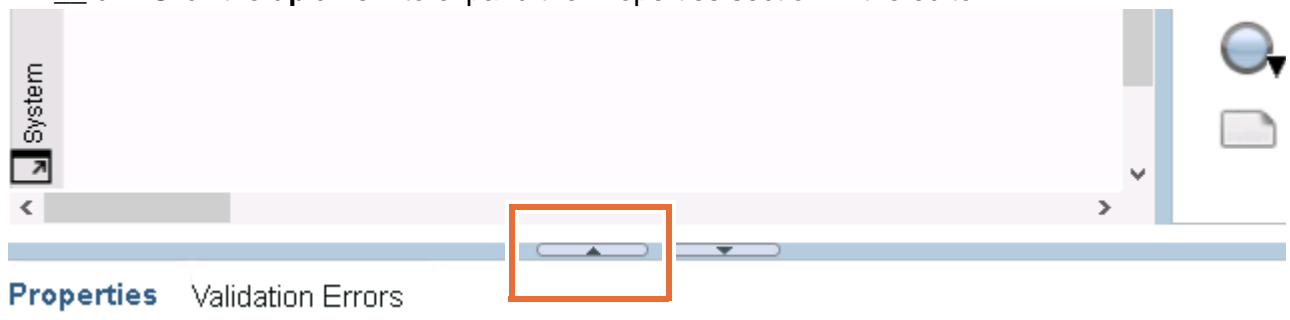


Hint

Click the element in the palette and hold for 1 second. When you drag to the canvas, a green plus sign verifies that you are dragging an element to the canvas. If you want to place an item above another item on the canvas, you can drag it to the item that must appear below it. Then, release the element on top of it when the element highlights on the canvas.

If you need to rearrange any elements on the canvas, use the same technique of clicking and holding the mouse button for 1 second before dragging to move the objects after they are placed.



___ d. Click the **up arrow** to expand the Properties section in the editor.




- ___ e. In the **Properties > General > Common** section, enter `Submit Hiring Request` as the name.

Properties Validation Errors

General
 Implementation
 Data Mapping
 Preconditions
 Assignments
 Pre & Post
 Tracking

Common
 Name:
 Color: 
 Documentation: 

Behavior
☒ The activity runs even though it does not have an inbound flow
 How is the activity started?
☒ **Automatically** by the system
☐ **Manually** by the user
 Does the activity have to be completed?
☒ Yes. The activity is **required**
☐ No. The activity is **optional**
☐ **Repeatable.** The activity can be invoked multiple times 
☐ **Hidden.** This is a background activity that users will not see

___ f. In the **Properties > General > Behavior** section, verify that the following options are selected by default:

- **This activity runs even though it does not have an inbound flow:** Enabled
- **How is the activity started?** Automatically
- **Does the activity have to be completed?** Yes. The activity is required
- **Repeatable:** Disabled
- **Hidden:** Disabled

Behavior

☒ The activity runs even though it does not have an inbound flow

How is the activity started?

☒ **Automatically** by the system

☐ **Manually** by the user

Does the activity have to be completed?

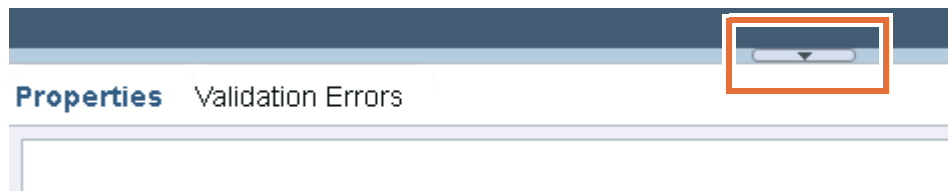
☒ Yes. The activity is **required**

☐ No. The activity is **optional**

☐ **Repeatable.** The activity can be invoked multiple times ⓘ

☐ **Hidden.** This is a background activity that users will not see

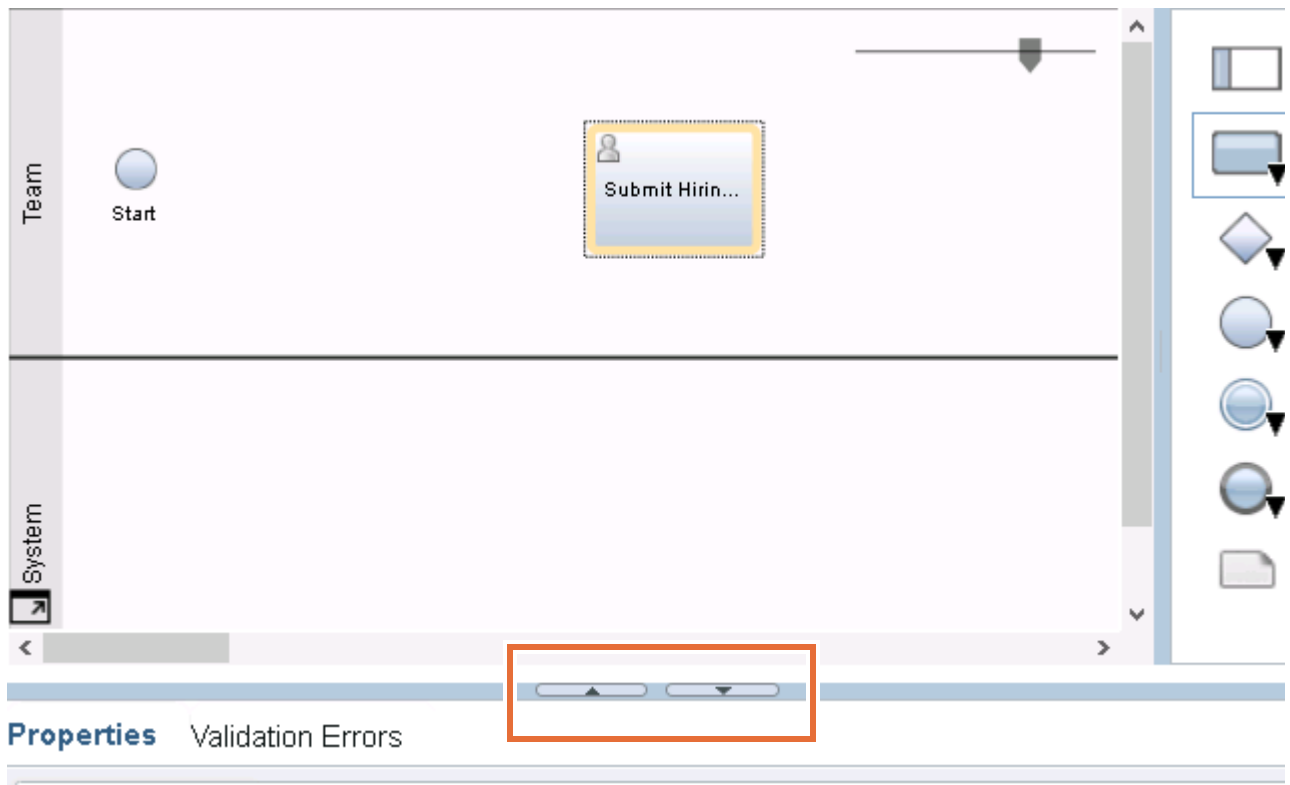
___ g. Click the **down arrow** to collapse the Properties section.





Reminder

You can click the down/up arrow to minimize or maximize the properties section for a process in the web Process Designer.



- __ 2. Create a manually started, required activity that is named **Approve Hire Request**.
 - __ a. Drag an activity from the palette to the right of the Submit Hiring Request activity.
 - __ b. Double-click the activity to rename it as: `Approve Hire Request` and press the **Enter** key apply the name change.



___ c. In the **Properties > General > Behavior** section, select the following options:

- **This activity runs even though it does not have an inbound flow:** Enabled
- **How is the activity started?** Manually
- **Does the activity have to be completed?** Yes. The activity is required
- **Repeatable:** Disabled
- **Hidden:** Disabled

Behavior

☒ The activity runs even though it does not have an inbound flow

How is the activity started?

☐ **Automatically** by the system

☒ **Manually** by the user

Does the activity have to be completed?

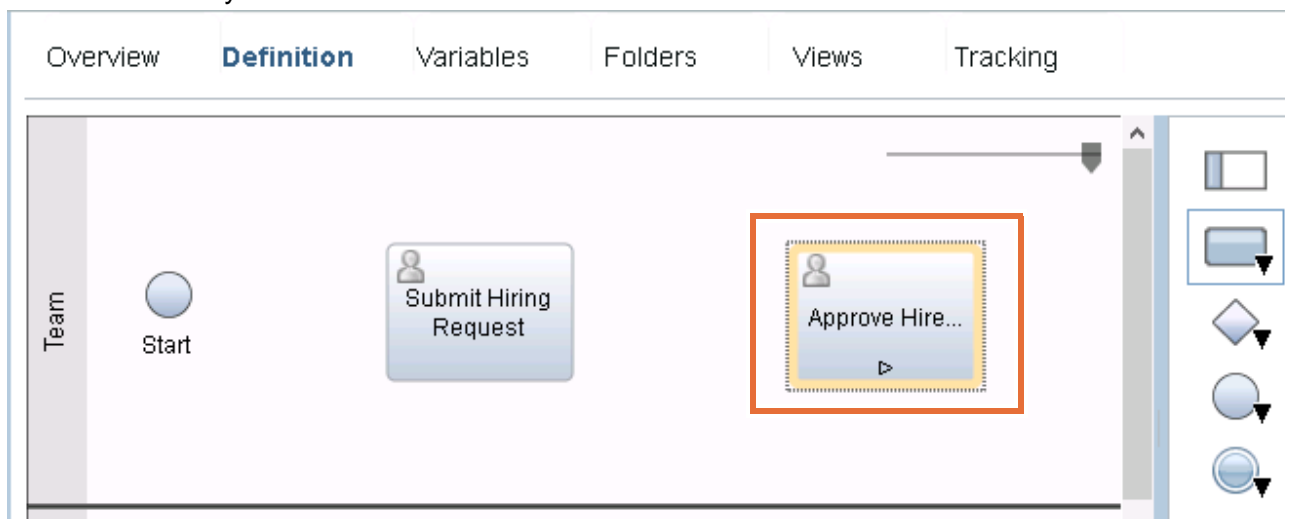
☒ Yes. The activity is **required**

☐ No. The activity is **optional**

☐ **Repeatable.** The activity can be invoked multiple times ⓘ

☐ **Hidden.** This is a background activity that users will not see

___ d. An icon is added to the activity in the canvas to designate it as a manually started activity.



___ 3. Create a manually started, required activity that is named **Complete Hire Request**.

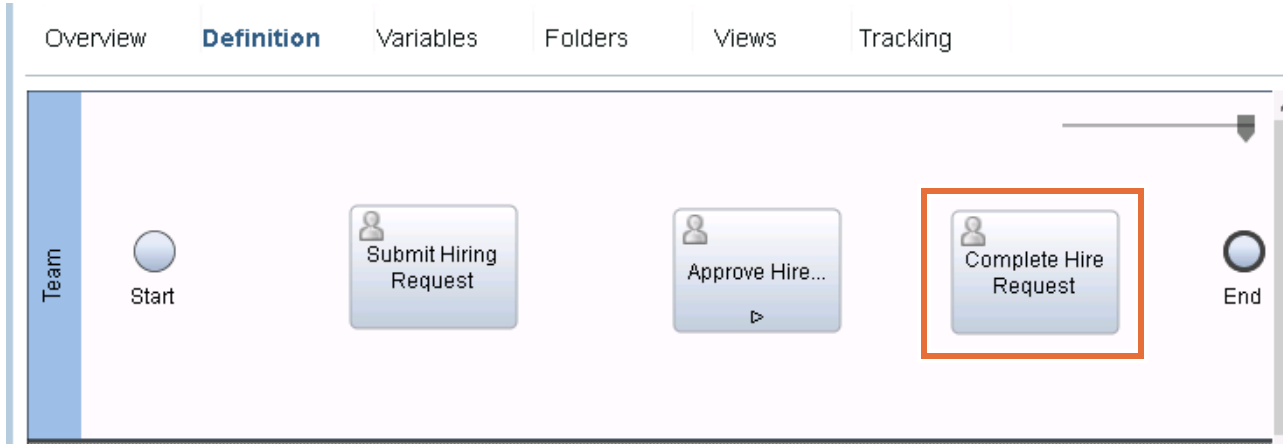
___ a. Drag an activity from the palette to the right of Approve Hire Request activity.

**Note**

To align the activities for the better presentation, you can follow below mentioned two different ways:

- Click the activity and then drag it in the wanted position.
- Click the activity and then use the arrow keys on the keyboard to move it in the wanted position.

__ b. Rename the activity as: Complete Hire Request



___ c. In the **Properties > General > Behavior** section, select the following options:

- **This activity runs even though it does not have an inbound flow:** Enabled
- **How is the activity started?** Manually
- **Does the activity have to be completed?** Yes. The activity is required
- **Repeatable:** Disabled
- **Hidden:** Disabled

Behavior

☒ The activity runs even though it does not have an inbound flow

How is the activity started?

☐ **Automatically** by the system

☒ **Manually** by the user

Does the activity have to be completed?

☒ Yes. The activity is **required**

☐ No. The activity is **optional**

☐ **Repeatable.** The activity can be invoked multiple times ⓘ

☐ **Hidden.** This is a background activity that users will not see

___ d. Save your changes.



Note

To create space for other activities in a process, select the **End** event and drag to the right side in the canvas.

You can also use the zoom bar to zoom out of the process to view more of the process in the canvas.



- ___ 4. Create an optional, manually started, repeatable activity named **Review Salary**.
- ___ a. Drag an activity from the palette to the right of Complete Hire Request activity.
- ___ b. Rename the activity as: Review Salary.
- ___ c. In the **Properties > General > Behavior** section, select the following options:
- **This activity runs even though it does not have an inbound flow:** Enabled
 - **How is the activity started?** Manually
 - **Does the activity have to be completed?** No. The activity is optional
 - **Repeatable:** Enabled
 - **Hidden:** Disabled

Behavior

☒ The activity runs even though it does not have an inbound flow

How is the activity started?

☐ **Automatically** by the system

☒ **Manually** by the user

Does the activity have to be completed?

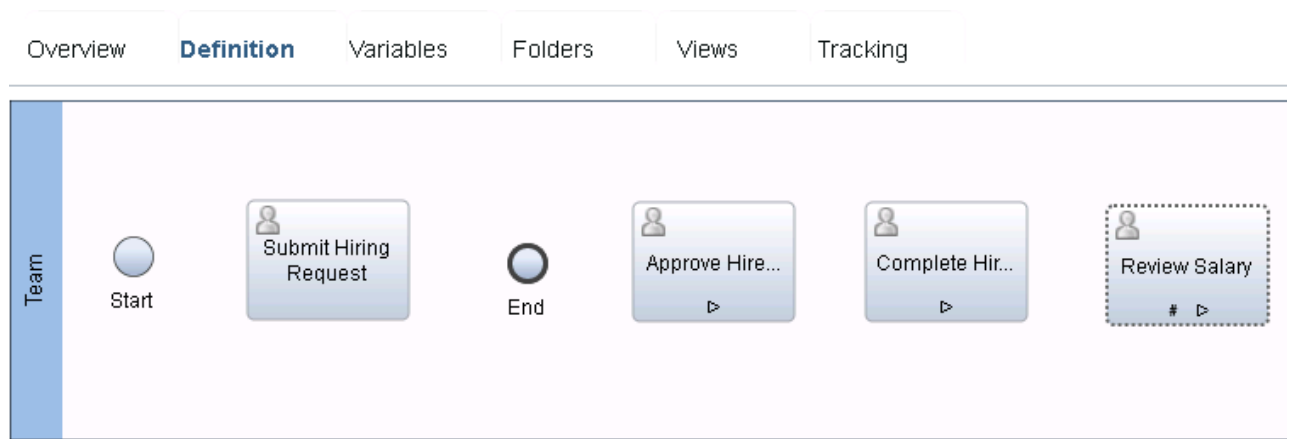
☐ Yes. The activity is **required**

☒ No. The activity is **optional**

☒ **Repeatable.** The activity can be invoked multiple times ⓘ

☐ **Hidden.** This is a background activity that users will not see

- ___ 5. Create a flow in the process.

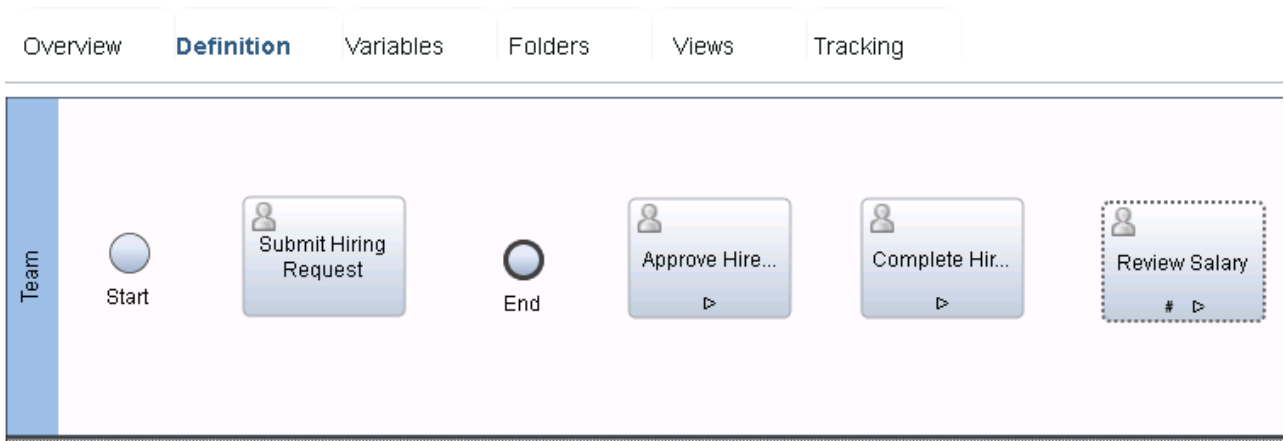


**Note**

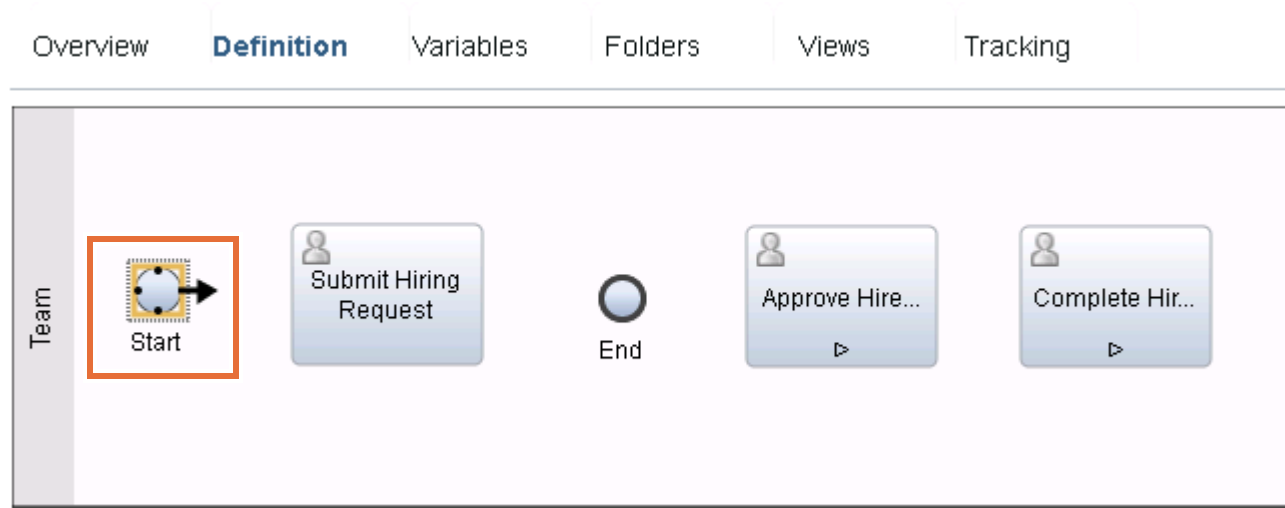
In this exercise, you modeled an as-is process with ad hoc activities and in the next exercises you work on creating a to-be process model. Because the activities in the current process can occur at any time, you modeled the process by using ad hoc activities.

In the later part of this exercise, you create an instance of the process and for that you connect the flow from Start event to the first activity and then to the End event. The Start event must always have an outgoing flow, and there must always be a flow to the End event.

- ___ a. Select the **End** event and drag it next to the Submit Hiring Request activity.



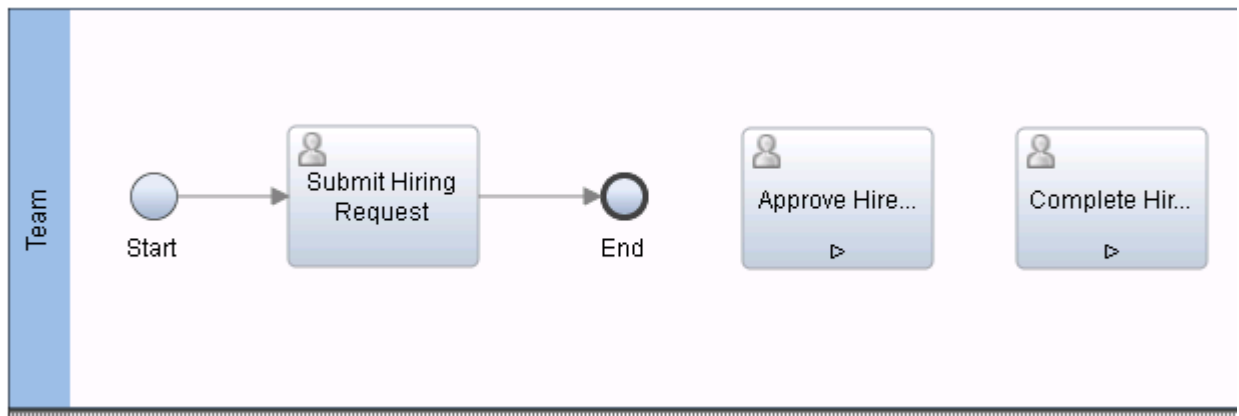
- ___ b. Hover over the **Start** event to see a flow that emerges out from the control point on the edge.



- ___ c. Drag the sequence flow from **Start** event to the **Submit Hiring Request** activity in the diagram and release the left mouse while you are on the anchor point on the connecting activity.



- ___ d. Connect **Submit Hiring Request** to the **End** event to complete the flow.



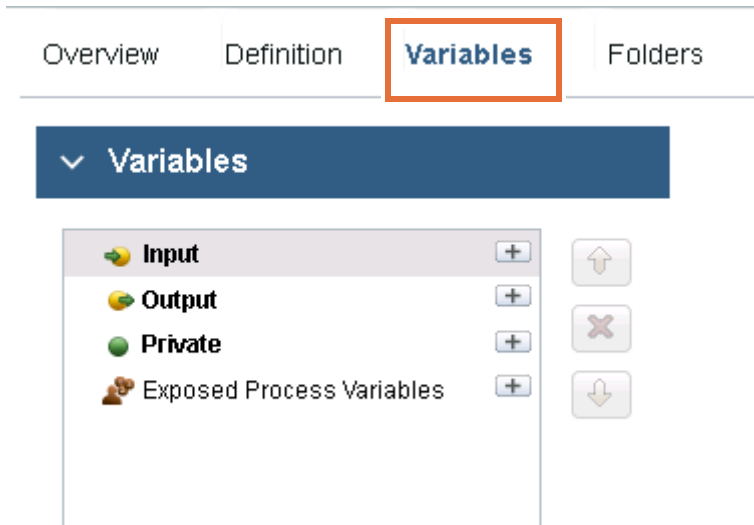
- ___ e. Save your changes.

Part 5: Create process variables

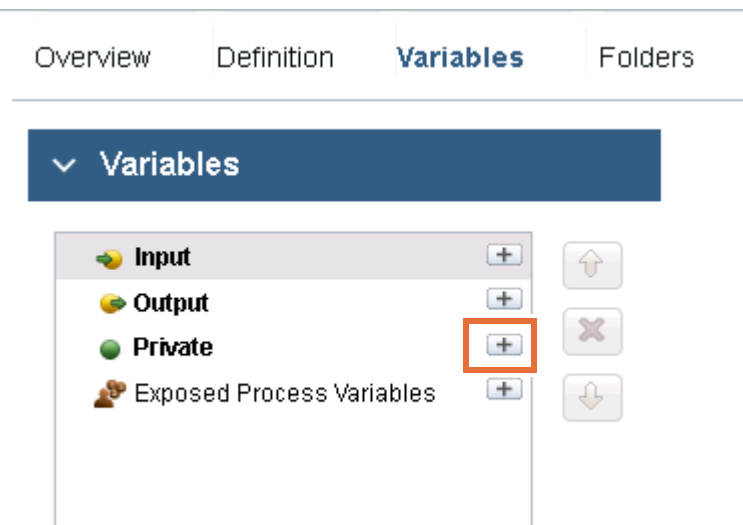
A variable contains information that can be shared between activities. A variable can have a primitive type such as a String. A variable can also be a business object with either a complex or simple type.

___ 1. Create the variables.

___ a. From the Hiring Request Process, click the **Variables** tab.



___ b. Click (+) next to **Private** to add a variable.



___ c. In the Details section on the right, enter the following values:

- **Name:** requisitionNumber
- **Variable Type:** String
- **List:** Disabled
- **Visible in Process Portal:** Enabled
- **Alias:** requisitionNumber

Details

Name:

Documentation:

Variable type:

List:

Visible in Process Portal:

Alias:

Track this variable:

Short name:

Variable is used as a Process Instance Identifier:

requisitionNumber

B **I** **U** |

String System Data
Select...
New...

☐

☒

requisitionNumber

☐

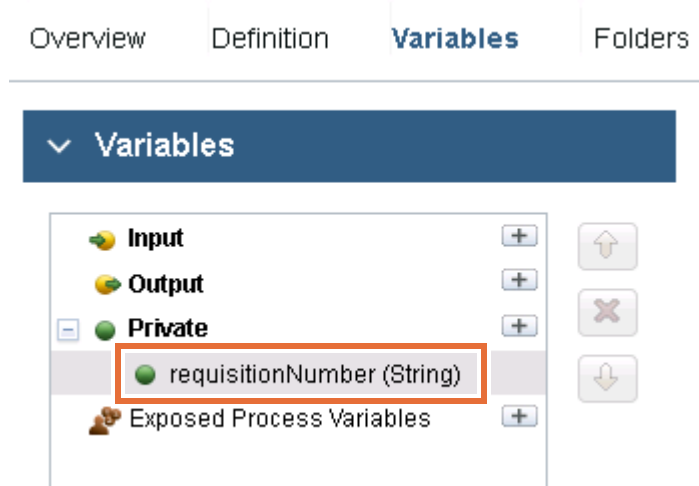
☐



Information

For each variable whose runtime values you want to search or to make viewable in the Process Portal task list, select the **Visible in Process Portal** check box in the Business Data section. For complex variables, be sure to select the check box for each parameter you want to make available.

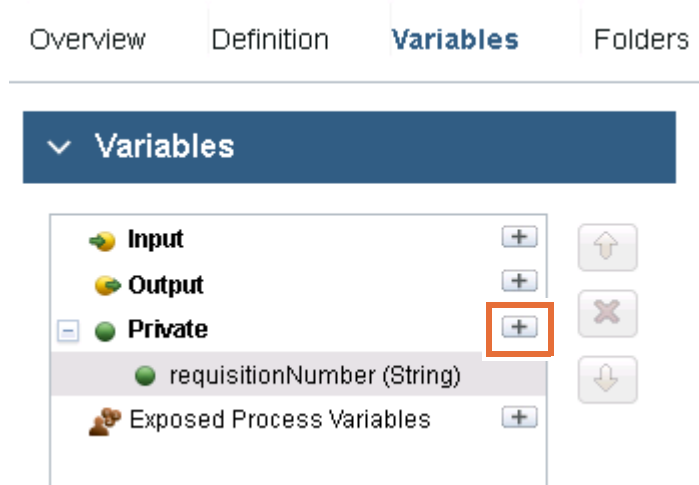
- ___ d. The variable is added in the Private list under the Variables section.



- ___ 2. Repeat the steps to create private variables for the rest of the properties as shown in the following table:

Name	Variable Type	List	Visible	Alias
jobTitle	String	No	Yes	jobTitle
salary	Integer	No	Yes	salary
department	String	No	Yes	department

- ___ a. Click (+) next to Private to add another private variable.



___ b. Enter the following data for the job title:

- **Name:** jobTitle
- **Variable Type:** String
- **List:** Disabled
- **Visible in Process Portal:** Enabled
- **Alias:** jobTitle

▼ Details

Name:

Documentation:

Variable type:

List:

Visible in Process Portal:

Alias:

Track this variable:

Short name:

Variable is used as a Process Instance Identifier:

jobTitle

B **I** **U** |

String System Data
Select...
New...

☐

☒

jobTitle

☐

☐

___ c. Repeat the previous step to create the rest of the private variables as shown in the following table:

Name	Variable Type	List	Visible	Alias
salary	Integer	No	Yes	salary
department	String	No	Yes	department

___ d. The list of private variables appear as follows:

Overview Definition **Variables** Folders

Variables

- Input
- Output
- Private
 - requisitionNumber (String)
 - jobTitle (String)
 - salary (Integer)
 - department (String)**
- Exposed Process Variables



Hint

For Variable type Integer, click **Select** next to Variable type to select **Integer**.

Detail Type Select Library Item

Name:

Documentat

Business Object 7

- ANY (Data; Public)
- Boolean (Data)
- Date (Data)
- Decimal (Data)
- Integer (Data)**
- String (Data)
- Time (Data)

Variable type

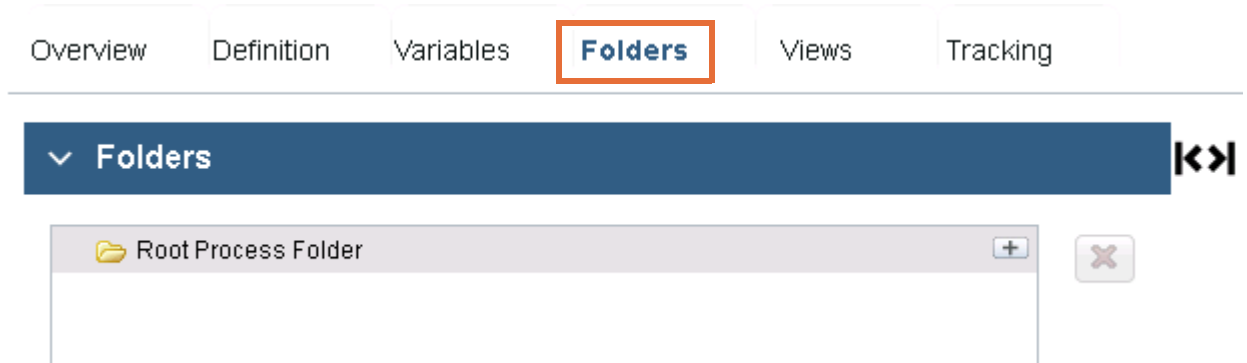
Select... New..

Part 6: Create process folders

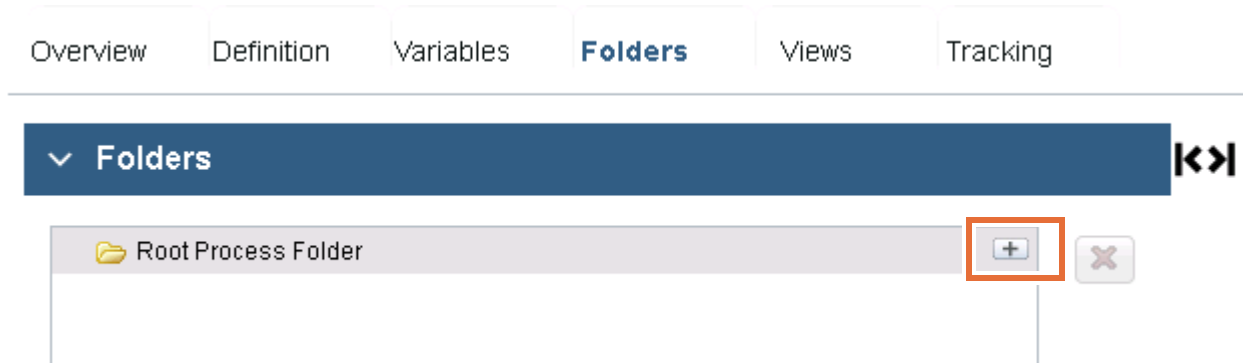
Folders provide a way of grouping documents that are related to a process. You can create a folder structure that knowledge workers or users in Process Portal can use to add documents that are required to complete the process. You create process folders in the process editor.

___ 1. Create process folders.

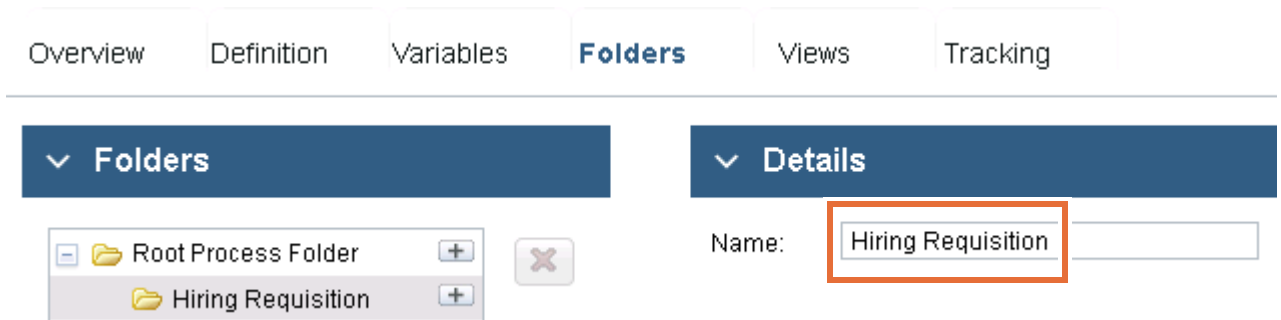
___ a. From the Hiring Request Process, click the **Folders** tab.



___ 2. Click (+) next to **Root Process Folder** to add a folder.



___ 3. Enter Hiring Requisition as the name.



- ___ 4. Under the Folder Management section, select **IBM Business Process Manager** to manage the sub folder hierarchy locally and select all the folder permissions under that.

Details

Name:

Folder Management

☒ IBM Business Process Manager

Allow locally managed documents ☒

Allow locally managed folders ☒

Allow external document references ☒

Allow external folder references ☒

☐ Enterprise Content Management system

Server:

Path:

Create automatically: ☐

Type:

- ___ 5. Click **Save** to save your changes. You created a new folder.

Overview Definition Variables **Folders**

Folders

☐ Root Process Folder

☒ Hiring Requisition



Information

Adding folders is a way to group logically related documents similar to the paper folders on a desk. In a large, complex process, folders bring order to the many documents that accumulate over the resolution of the business problem. A folder can contain one or more subfolders.

The folders that you define for the process are the initial set of folders that are automatically created when a process is started. At run time, you can add or remove subfolders under a specific process folder. In the Folder Management section, you can select either the subfolder hierarchy that is

locally managed by IBM Business Process Manager or you can provide reference to the folders that are managed by external ECM server.

- ___ 6. Click **Process Center** icon on the upper right corner of the web Process Designer window to return to the Process Center view.



CREATE NEW (+)



Part 7: Test the process activities in Process Portal

You can test the process with ad hoc activities that you built in the Process Portal.

- ___ 1. Log in to the process portal.



Note

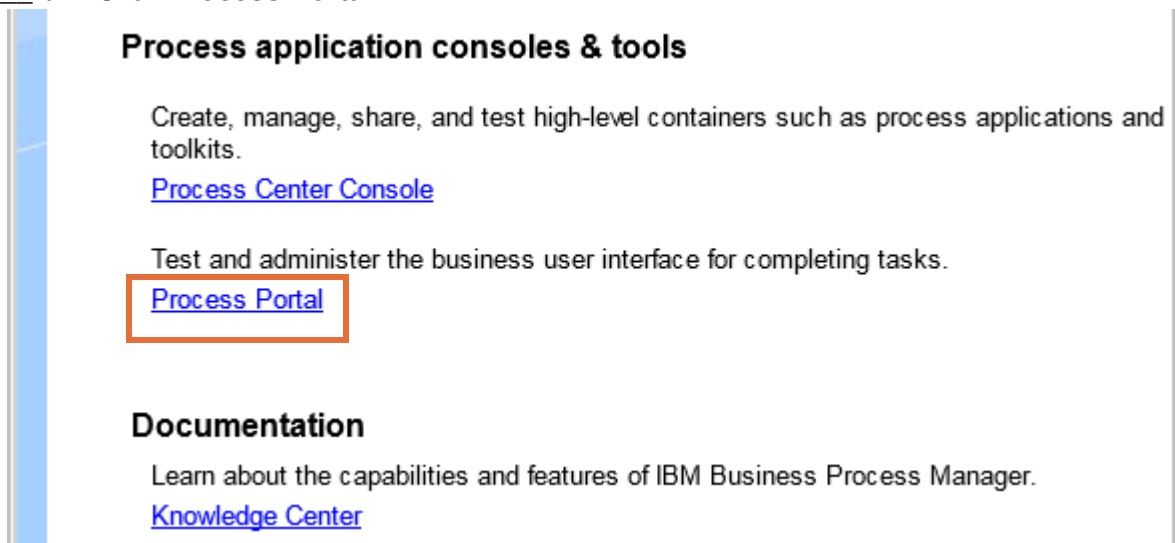
For IBM BPM on Cloud users

Click Launch in the Process Portal tile of your IBM BPM on Cloud home screen to access the Process Portal.

- ___ a. Return to the IBM Business Process Manager Quick Start window, which you minimized before.



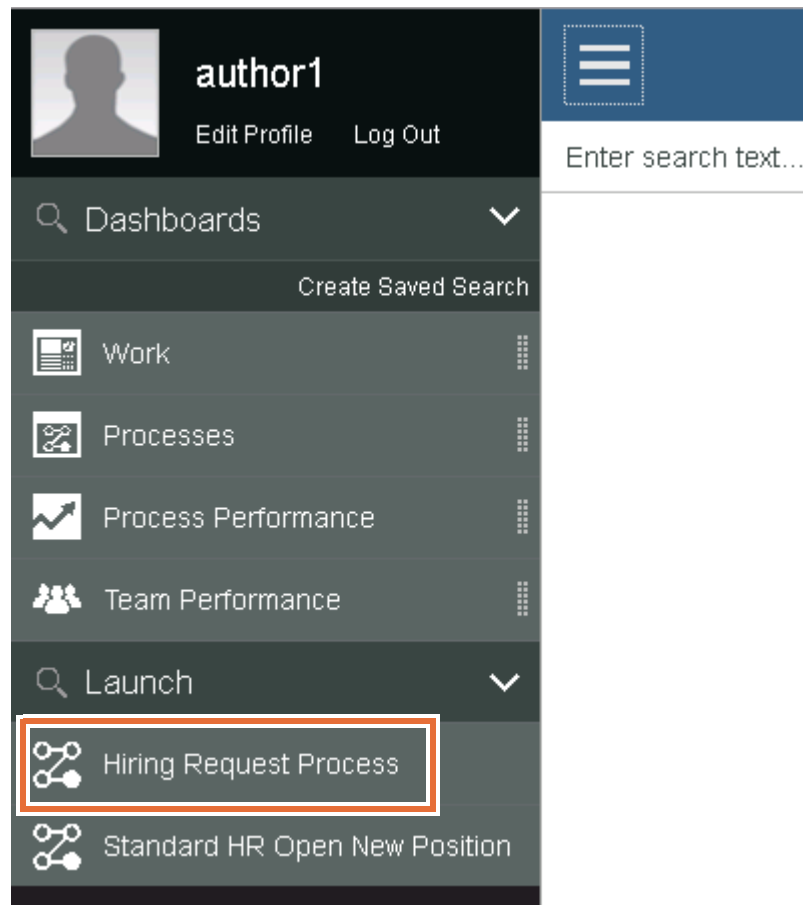
- ___ b. Click **Process Portal**.



Note

If prompted for credentials, enter `author1` for the **Username** and `author01` for the **Password**. Click **Continue**.

- ___ 2. On the left pane of the Process Portal browser window, start an instance of the **Hiring Request Process**.



A process instance is started. You see the message at the bottom of the window.

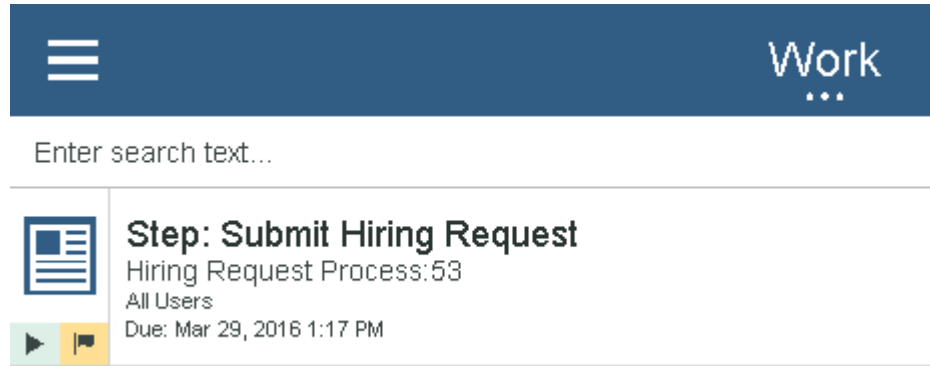
Work started for Hiring Request
Process:4



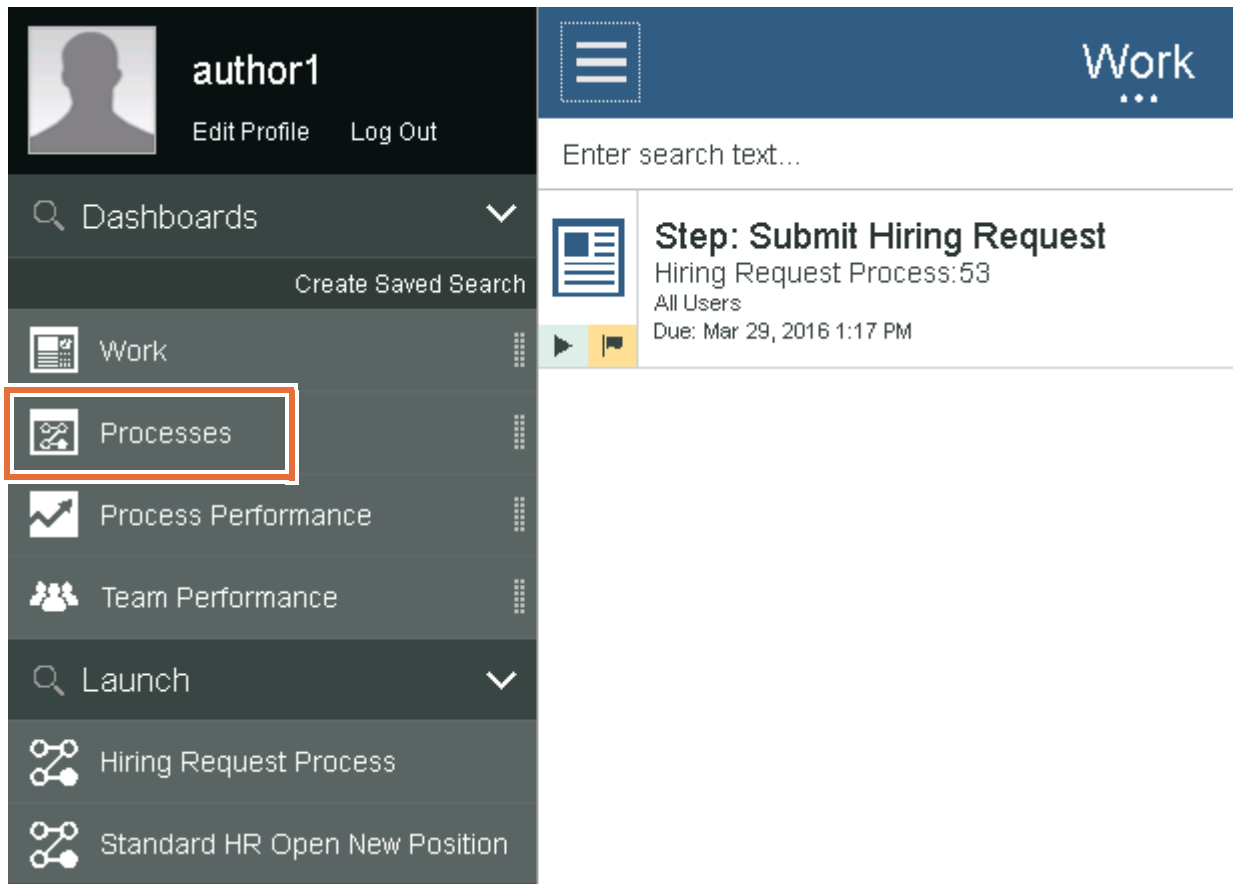
Note

Due to the environment, it might take up to a minute to create the first instance of the process, and to wait for the notification to show in the upper right corner of the portal page. After the data is cached, subsequent instances that are created take less time.

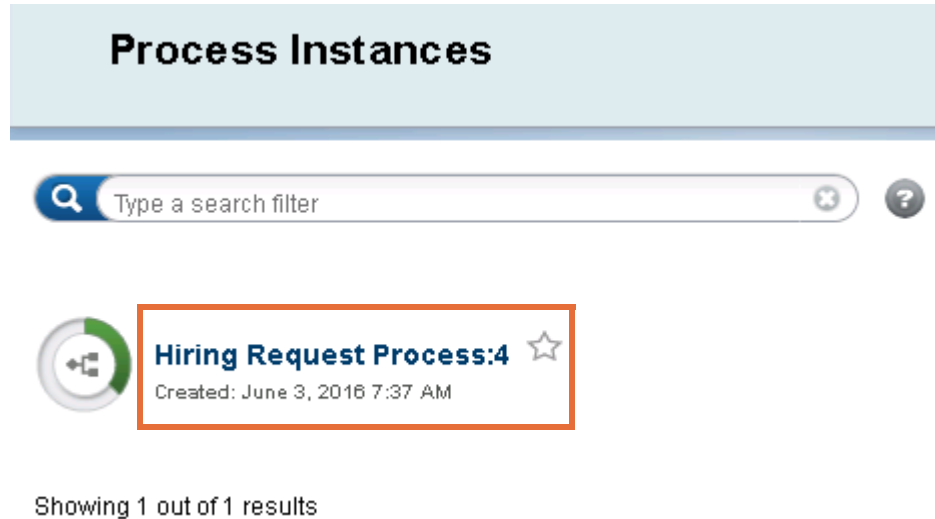
- ___ 3. Under **Work**, the **Submit Hiring Request** activity shows as an open task.



- ___ 4. In the Library menu, click **Processes**.



- ___ 5. The **Hiring Request Process** instance is listed. Click **Hiring Request Process** instance.



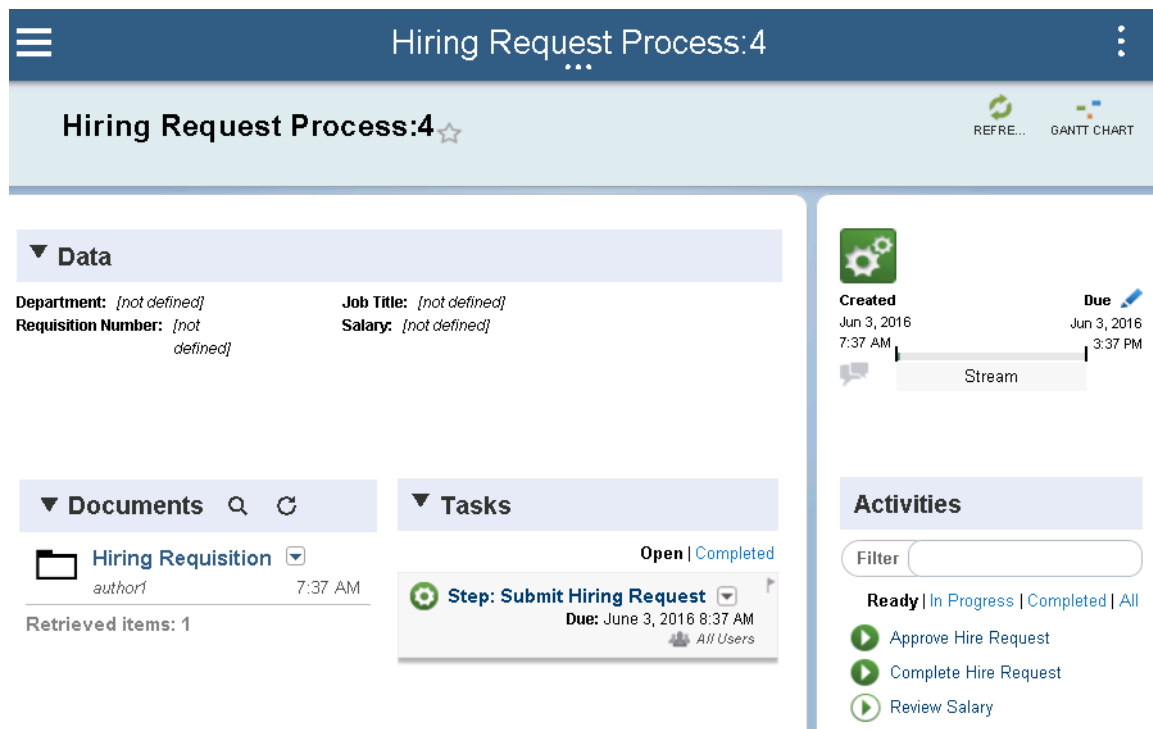
Process Instances

Type a search filter

Hiring Request Process:4 ☆
Created: June 3, 2016 7:37 AM

Showing 1 out of 1 results

- ___ 6. The process instance window lists the open and ad hoc tasks.



Hiring Request Process:4

Hiring Request Process:4 ☆

REFRE... GANTT CHART

▼ **Data**

Department: [not defined] Job Title: [not defined]
Requisition Number: [not defined] Salary: [not defined]

Created: Jun 3, 2016 7:37 AM Due: Jun 3, 2016 3:37 PM

Stream

▼ **Documents** 🔍 ↻

Hiring Requisition ▼
author1 7:37 AM

Retrieved items: 1

▼ **Tasks**

Open | Completed

Step: Submit Hiring Request ▼
Due: June 3, 2016 8:37 AM
All Users

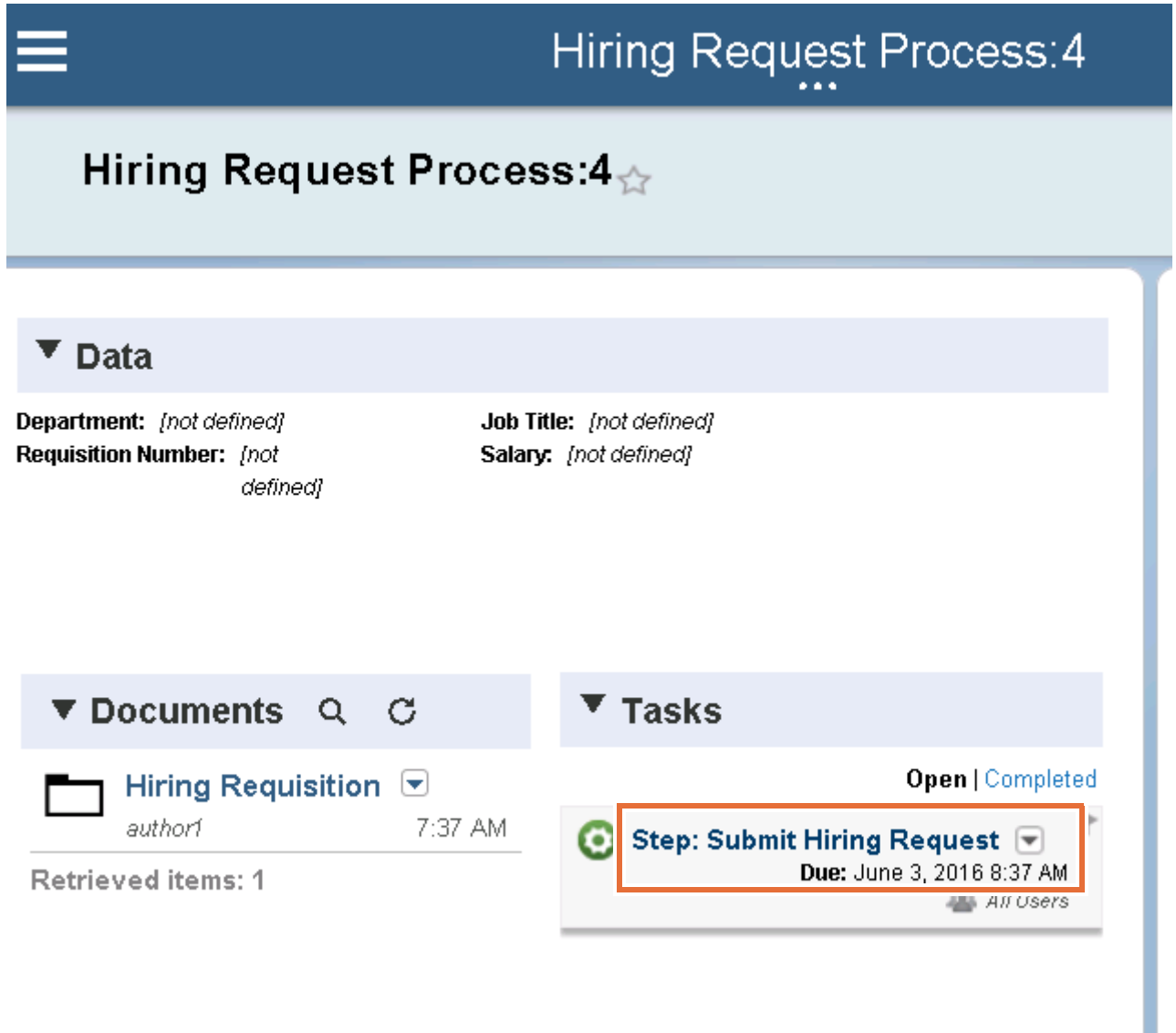
Activities

Filter

Ready | In Progress | Completed | All

- Approve Hire Request
- Complete Hire Request
- Review Salary

___ 7. Click **Step: Submit Hiring Request** under the Tasks section.




Hiring Request Process:4

Hiring Request Process:4 ☆

▼ **Data**


Department: [not defined] **Job Title:** [not defined]
Requisition Number: [not defined] **Salary:** [not defined]

▼ **Documents** 🔍 ↻

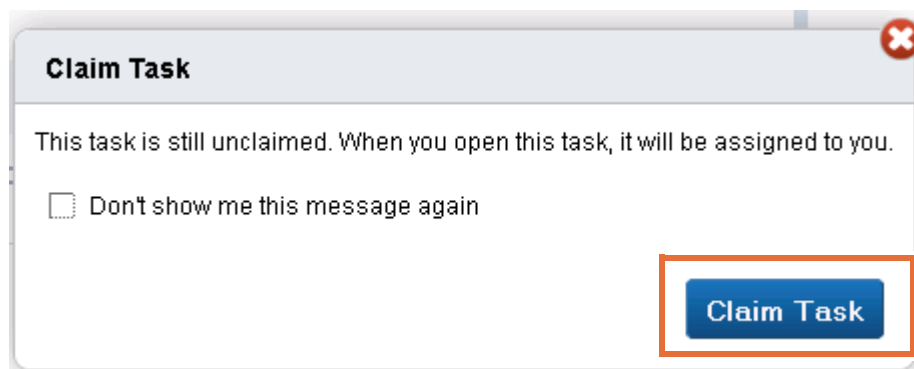
 **Hiring Requisition** ▼
 author1 7:37 AM

Retrieved items: 1

▼ **Tasks** Open | Completed

 **Step: Submit Hiring Request** ▼
 Due: June 3, 2016 8:37 AM
 All Users

___ 8. Click **Claim Task**.



Claim Task ✕

This task is still unclaimed. When you open this task, it will be assigned to you.

☐ Don't show me this message again

Claim Task

- ___ 9. The task is assigned to you and the default human service coach is shown. Click **Done** to complete the task.

Submit Hiring Request

Overview

Details

Section

This is a sample coach f

Step: Submit Hiring Reql

Done

Complete Later

- ___ 10. The task is completed. Click **Completed** to view the task in the completed tasks list.

▼ Tasks

Open | **Completed**

⚙ Step: Submit Hiring Request

Completed: July 1, 2016 8:48 AM
Completed by author1

Activities

Filter

Ready | In Progress | Compl

▶ Approve Hire Request

▶ Complete Hire Request

▶ Review Salary

- ___ 11. Click the ad hoc activity **Approve Hire Request**, which is in a Ready state on the right pane.

The screenshot displays the IBM BPM console interface. At the top, there is a green gear icon. Below it, the 'Created' timestamp is 'Jun 4, 2016 12:25 PM' and the 'Due' timestamp is 'Jun 4, 2016 8:25 PM'. A 'Stream' bar is visible. The main section is titled 'Activities' and includes a 'Filter' input field. Below the filter, there are tabs for 'Ready', 'In Progress', 'Completed', and 'All'. The 'Ready' tab is selected. Under the 'Ready' tab, three activities are listed: 'Approve Hire Request', 'Complete Hire Request', and 'Review Salary'. The 'Approve Hire Request' activity is highlighted with a red rectangular box.

___ 12. Click **Start** to start this task.

The screenshot displays a task management interface. At the top, there is a 'Created' section with a green gear icon, showing the date 'Jun 4, 2016' and time '12:25 PM'. Below this is a 'Stream' section with a speech bubble icon, showing the date 'Jun 4, 2016' and time '8:25 PM'. The main section is titled 'Activities' and contains a 'Filter' input field. Below the filter, there are tabs for 'Ready', 'In Progress', 'Completed', and 'All'. The 'Ready' tab is selected. Under the 'Ready' tab, there is a list of activities. The first activity, 'Approve Hire Request', is highlighted with a red box around its 'Start' button. Below this activity, there are two more activities: 'Complete Hire Request' and 'Review Salary'. The 'Approve Hire Request' activity has a description: 'This activity is **required** and will start a **single** task.'

- ___ 13. The **Approve Hire Request** task is created. Click **Open** to view this task in the open tasks list.

▼ Data


Department: HR Department

Requisition Number: 1234

Job Title: HR Manager

Salary: 2,500

▼ Documents



Hiring Requisition


author1

12:25 PM

Retrieved items: 1

▼ Tasks


Open | Completed



Step: Approve Hire Request

Due: June 4, 2016 1:45 PM

All Users




Created

Jun 4, 2016 12:25 PM


Activities

Filter

Ready | In Progress



Complete




Review

- ___ 14. Select the ad hoc activity **Complete Hire Request** in the right pane and click **Start** to start this task. It is also added in the open tasks list.


Activities


Filter

Ready | [In Progress](#) | [Completed](#) | [All](#)

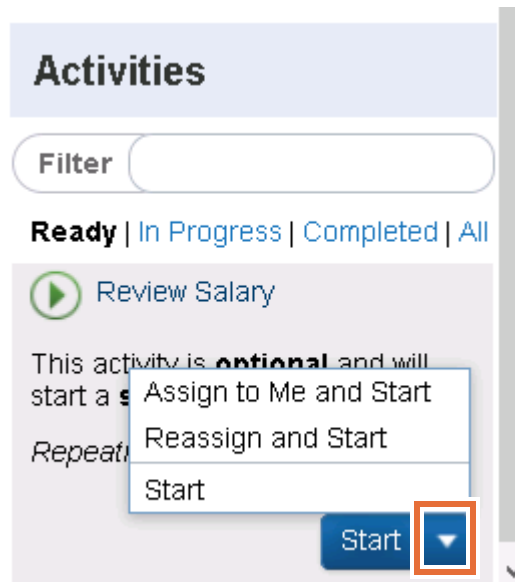
 [Complete Hire Request](#)

This activity is **required** and will start a **single** task.

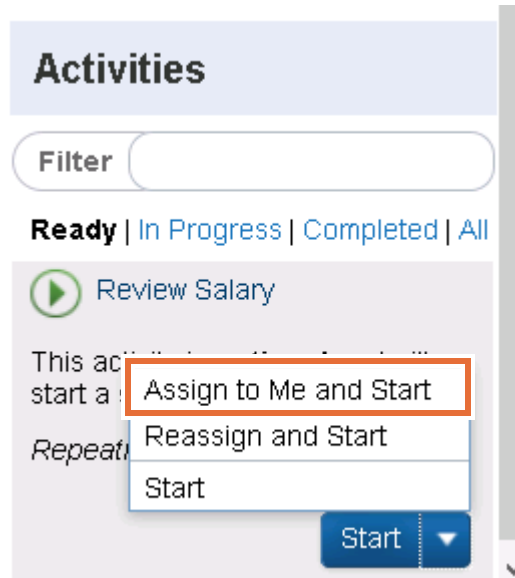
Start


 [Review Salary](#)


- ___ 15. Select the optional activity **Review Salary** in the right pane and open the **menu** next to the Start button.



- ___ 16. Select **Assign to Me and Start**.



- ___ 17. The task is assigned to you and the default human service coach is shown. Click **Done** to complete the task.

 **Step: Review Salary**

Review Salary

Overview

Details

Section

This is a sample coach for t

Step: Review Salary

Done

Complete Later

- ___ 18. Because the **Review Salary** activity is repeatable, it remains in the Ready (optional) state.

The screenshot displays two panels from the IBM BPM console. The **Tasks** panel on the left shows two tasks: 'Step: Approve Hire Request' and 'Step: Complete Hire Request'. Both tasks are assigned to 'All Users' and have due dates on June 4, 2016. The **Activities** panel on the right shows a filter dropdown and status tabs for 'Ready', 'In Progress', and 'Completed'. The 'Ready' tab is selected, and the 'Review Salary' activity is highlighted with a red rectangle.

- ___ 19. Complete the **Approve Hire Request** task.
- ___ a. Click the **Step: Approve Hire Request** link.
 - ___ b. Click **Claim Task**.

The screenshot shows a 'Claim Task' dialog box. It contains the text: 'This task is still unclaimed. When you open this task, it will be assigned to you.' Below this text is a checkbox labeled 'Don't show me this message again'. A red 'X' button is in the top right corner. A blue 'Claim Task' button is highlighted with a red rectangle in the bottom right corner.

- ___ c. Click **Done** to complete this task.

The screenshot shows a web interface for 'Step: Approve Hire Request'. The top navigation bar is dark blue with a hamburger menu icon on the left and the title 'Step: Approve Hire Request' in the center. Below this, there is a section header 'Approve Hire Request' in a dark blue bar. Underneath, there are two tabs: 'Overview' (which is active and highlighted in dark blue) and 'Details' (which is white with a dark blue border). The main content area has a dark blue bar labeled 'Section'. Below this, there are two boxes: 'This is a sample coach for t' and 'Step: Approve Hire Request'. At the bottom, there are two buttons: 'Done' (highlighted with an orange border) and 'Complete Later'.

- ___ 20. Complete the **Complete Hire Request** task.
- ___ a. Click the **Step: Complete Hire Request** link.
- ___ b. Click **Claim Task**.
- ___ c. Click **Done** to complete the task.

All the tasks are completed and the **Tasks** section is empty.

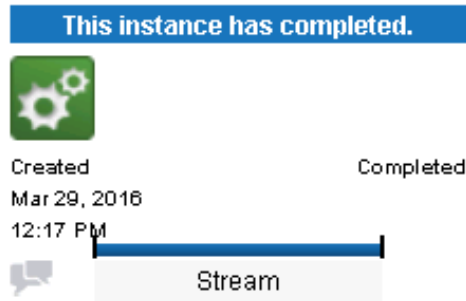
The screenshot shows the 'Hiring Request Process:4' interface. The top bar includes a menu icon, the title 'Hiring Request Process:4', and a refresh icon. Below the title bar, there's a section for 'Data' with fields: Department: HR, Job Title: HR Manager, Salary: 2,500, and Requisition Number: 1234. To the right, a status bar indicates 'This instance has completed.' with a green gear icon and a timeline showing 'Created Jun 4, 2016 12:25 PM' and 'Completed'. Below the Data section, there's a 'Documents' section with a folder icon and the text 'Hiring Requisition' and 'author1'. The 'Tasks' section is highlighted with a red box and shows 'Open | Completed' and 'No tasks were found.' The 'Activities' section on the right shows a filter dropdown and 'Ready | In Progress | Completed | All' with 'No activities were found.'

- ___ 21. After you complete all the activities, click **Completed** under the Tasks section to show the list of completed tasks.

The screenshot shows the 'Tasks' section with a list of completed steps. The 'Completed' filter is selected and highlighted with a red box. The list includes:

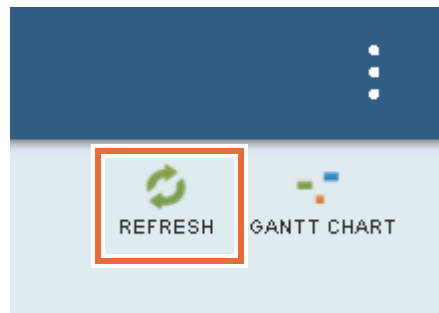
- Step: Complete Hire Request**
Completed: June 4, 2016 1:11 PM
Completed by author1
- Step: Approve Hire Request**
Completed: June 4, 2016 1:10 PM
Completed by author1
- Step: Review Salary**
Completed: June 4, 2016 1:02 PM
Completed by author1
- Step: Submit Hiring Request**
Completed: June 4, 2016 12:28 PM
Completed by author1

After the tasks status updates, the instance is completed. It might take up to 1 minute for the system to process the update.




Note

If you do not see the instance completed message, click the **Refresh** icon next to the GANTT CHART icon. All the tasks are complete, but the system needs time to update the instance status.



- ___ 22. Click the **Context menu** icon at the upper right corner of Process Portal and note that the details of the activities completed.



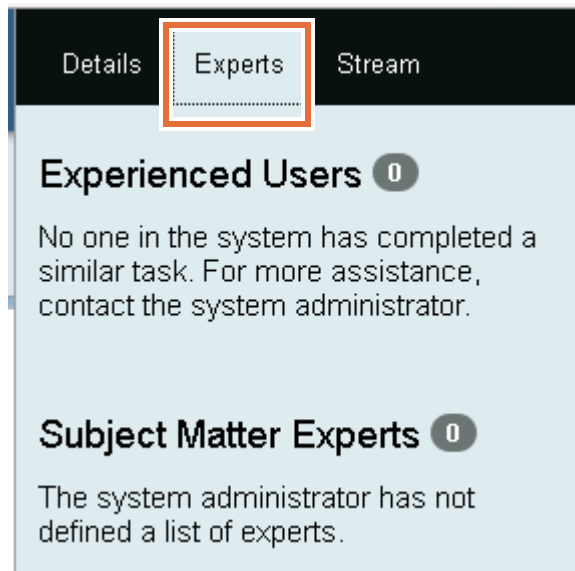
The screenshot shows the Process Portal interface. A context menu is open, displaying details for a hiring request process. The menu is titled "Hiring Request Process:4" and includes a star icon. The details section lists the following information:

- Due Date:** Jun 4, 2016 1:55 PM
- Department:** HR Department
- Job Title:** HR Manager
- Requisition Number:** 1234
- Salary:** 2500

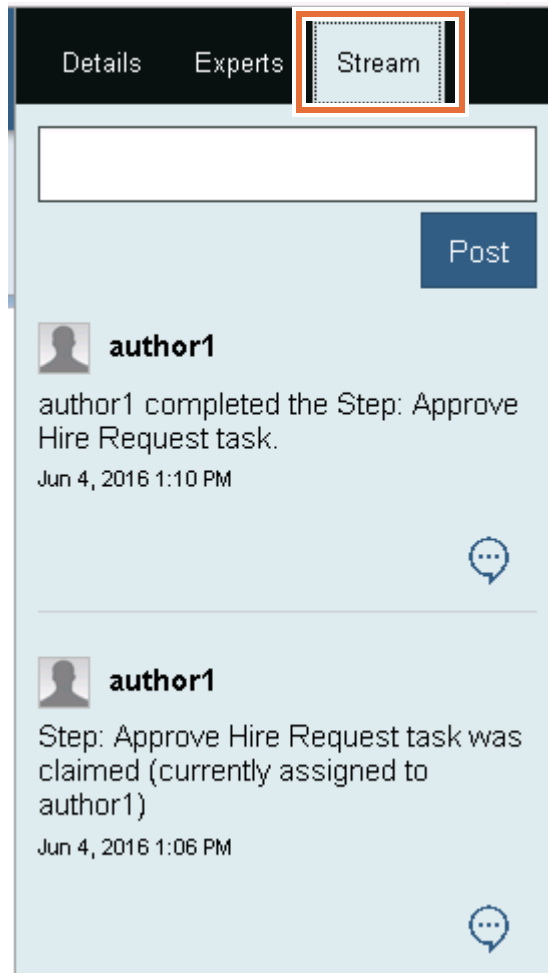
The "Tasks" section lists two completed steps:

- Step: Submit Hiring Request** (checked) by **author1** (Created: Jun 4, 2016 12:25 PM, Completed: Jun 4, 2016 12:28 PM)
- Step: Approve Hire Request** (checked) by **author1** (Created: Jun 4, 2016 12:45 PM, Completed: Jun 4, 2016 1:10 PM)

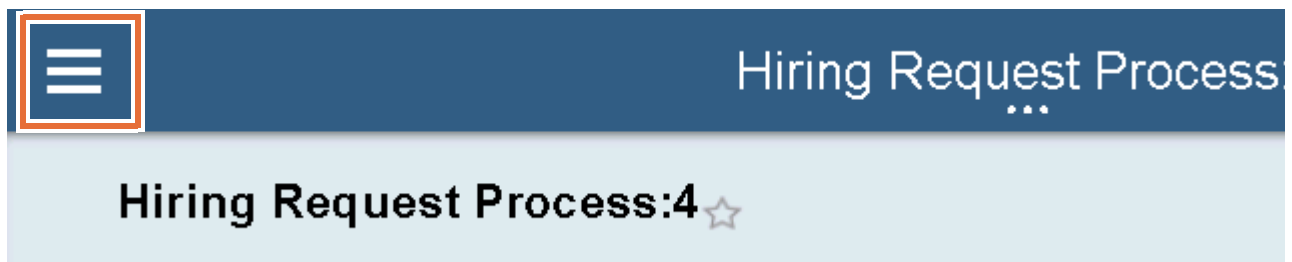
- ___ 23. Click the **Experts** tab. This lists the experienced users and subject matter experts in the system. Because you completed an instance of the task, you are added to the list once another user creates an instance of the process. This allows users to ask for assistance to complete tasks inside the portal.



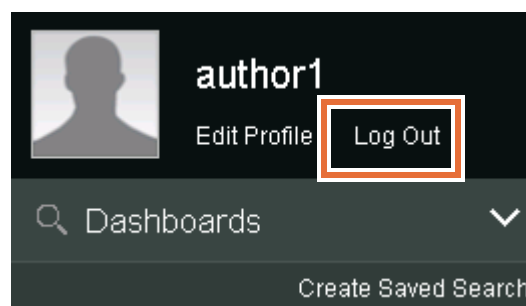
- ___ 24. Click the **Stream** tab. This shows the actions that occur for this instance. You can also post a comment to the stream that appears immediately in the stream. You add a comment to the stream in the later exercise.



- ___ 25. Click the **Library** icon on the left side of the window.



- ___ 26. Click **Log Out**.



- ___ 27. Close the Process Portal tab in the browser.
- ___ 28. Minimize the browser.

End of exercise

Exercise review and wrap-up

In the first part of this exercise, you created a process application and a process. Then, you also built ad hoc activities and tested the process instance in Process Portal.

Exercise 2. Playback 0: Creating a structured process

Estimated time

01:30

Overview

This exercise covers how to create a process application and a process in the Process Center, and model teams for the process. It also covers how to model task-type activities, create a linked process, and decompose a process into nested processes.

Objectives

After completing this exercise, you should be able to:

- Create a nested process
- Create the foundation for a process by adding the appropriate lanes to the default pool
- Translate business process workflow steps that are documented in the process discovery and analysis into process model tasks
- Model the expected process flow for the initial process model
- Decompose business process workflow steps that are documented in the process discovery and analysis into process model tasks
- Create a subprocess or a linked process

Introduction

To accomplish the task of creating a process model in a process in the IBM web Process Designer, you created a process application in the previous exercise to contain the model. You created an as-is process model by adding some ad hoc activities based on the detailed information that is provided by the Hiring Requisition process owner.

In this exercise, you create a to-be process model by enhancing the as-is process model you created in previous exercise. To accomplish the task of creating the initial process model, you define a pool, lanes, and flow objects such as activities, events, and nested processes. Based on the information that is provided, a process based on process discovery and analysis is created. Based on the information that is provided, model the teams.

In this exercise, you add activities to the appropriate lanes and use sequence flow to connect the activities. As mentioned in the unit, you model the happy path first. Gateways and various flows are presented in the next exercise.

Finally, you complete decomposition on your process and create subprocesses or linked processes where you see opportunities for them.

Remember that some processes might not need decomposition.

Requirements

None

Exercise instructions

Hiring Requisition process

The company is expanded from the simple (as-is) hiring process to a more detailed (to-be) hiring process. The detailed process now includes more information. The company also wants to move to reduce rework by introducing a more structured process for their Hiring Requisition process. The process that you are going to examine and model is called the Hiring Requisition Process, the foundation for which you created in the first exercise. This process covers a new job position through submission, approval, and completion so applicants can apply for the job position.

Core requirements

- 1.1: A Hiring Manager submits a hiring requisition to the HR Department. The request contains the following information:
 - Customer details:
 - Requisition number
 - Date of request
 - Requester
 - Date position available
 - Job title
 - Job description
 - Job level
 - Number of people managed
 - Division
 - Department
 - Salary to offer
 - Bonus amount
 - Hiring Manager comments
 - New position
- 2.1: If the answer to “New position” is Yes, the request is forwarded to a General Manager. After the General Manager receives the request, the General Manager indicates approval or disapproval.
- 2.2: If the request is not approved, the General Manager specifies a reason and the request is closed. If the request is approved, a salary compliance check is conducted.
- 2.3: The Hiring Manager is notified of the General Manager’s decision after the General Manager approval step.
- 2.4: After the requisition is submitted, an automated system checks for salary compliance. If the request meets salary compliance, the hiring request is automatically posted to the HR Positions database and made available for dissemination.

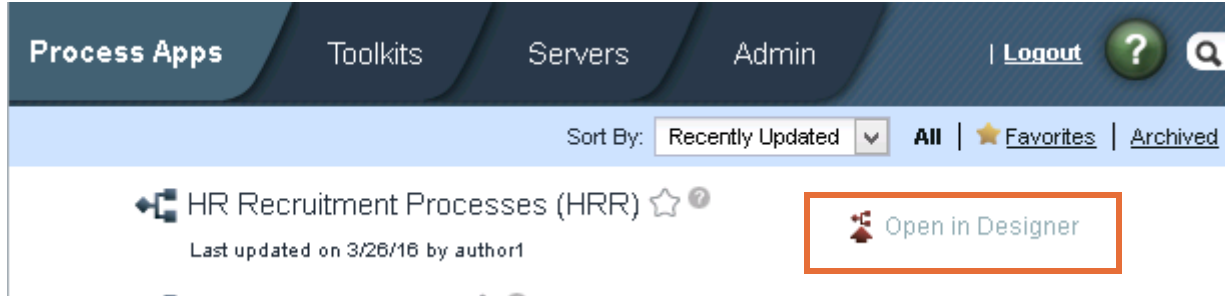
- 2.5: When a request violates the established salary guidelines of the company, the HR Administrator can approve or reject the requested salary override.
- 2.6: If the salary override is approved, the request is posted to the HR Positions database and made available for dissemination.
- 2.7: If the HR Administrator rejects the requested salary, the HR Administrator must provide comments for the violation, add a proposed salary, and send the request back to the Hiring Manager who originated the request.
- 2.8: When the Hiring Manager gets the request back because of a rejection, the Hiring Manager can negotiate an adjusted salary or can cancel the request. If the negotiation is successful, the request is resubmitted back to the same HR Administrator.
- 2.9: All hiring requests must be added to the HR Positions database regardless of the disposition at the end of the process during a finalization activity.
- 2.10: The HR Administrator has 4 hours to complete the review. If the review is not completed within 4 hours, an email is sent to the HR Administrator. The email notifies the HR Administrator of the missed deadline.

The process owner provides detailed information about the process and its current state to the IBM BPM analyst, who in turn documents the information and analyzes the process for improvement. The process discovery and initial analysis was already completed for you to proceed with the creation of to-be process model.

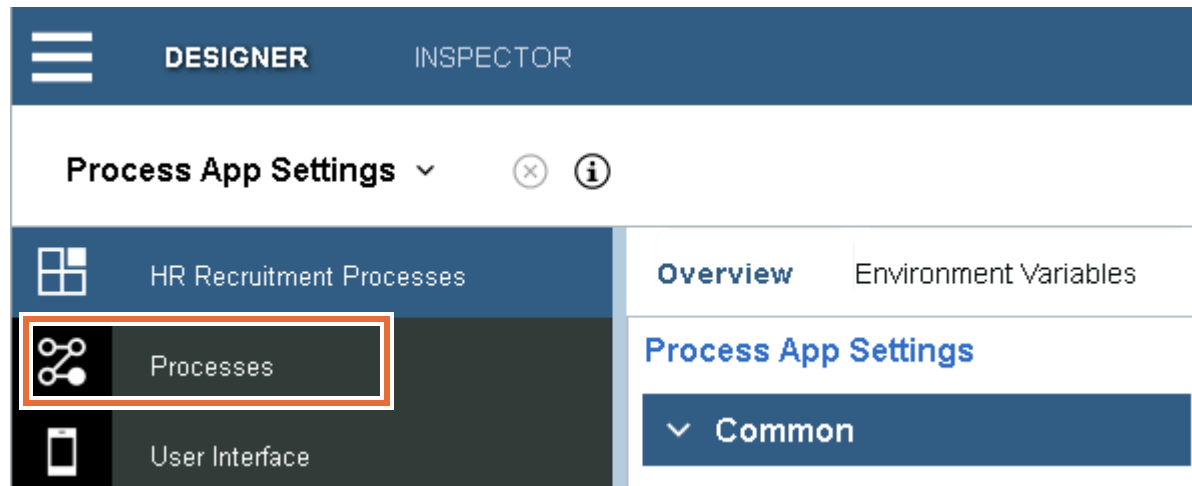
Part 1: Open the business process in Process Center

To enhance the previously created Hiring Request Process business process in IBM Business Process Manager web Process Designer, return to the web Process Designer window, which you minimized in the earlier exercise.

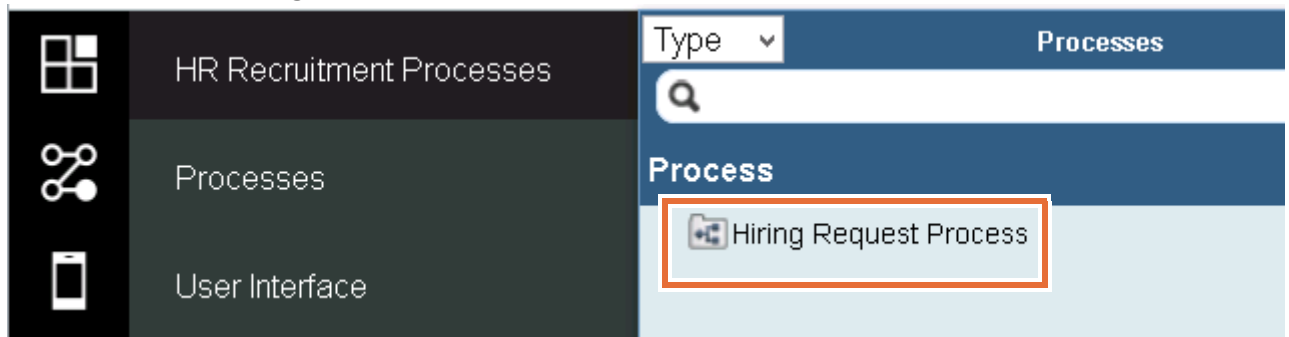
- ___ 1. Open the **HR Recruitment Processes (HRR)** process application if it is not already open.



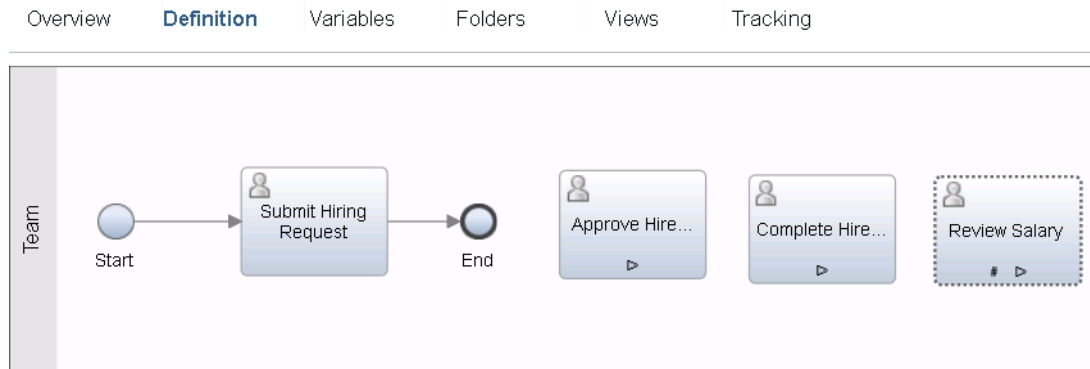
- ___ 2. Click **Processes**.



- ___ 3. Click the **Hiring Request Process**.



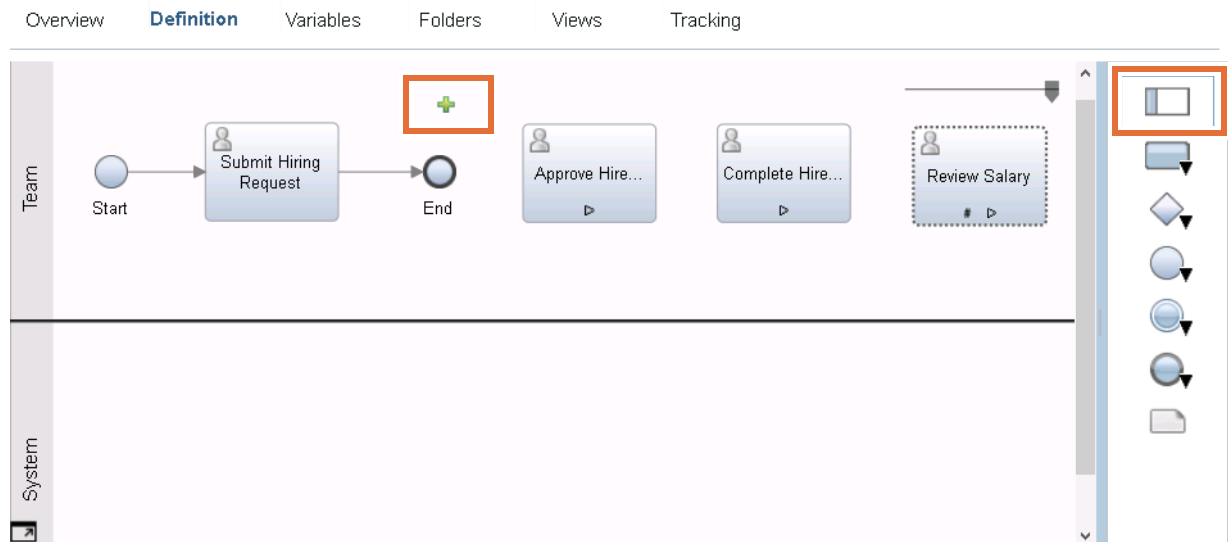
___ 4. The process opens in the web Process Designer editor.



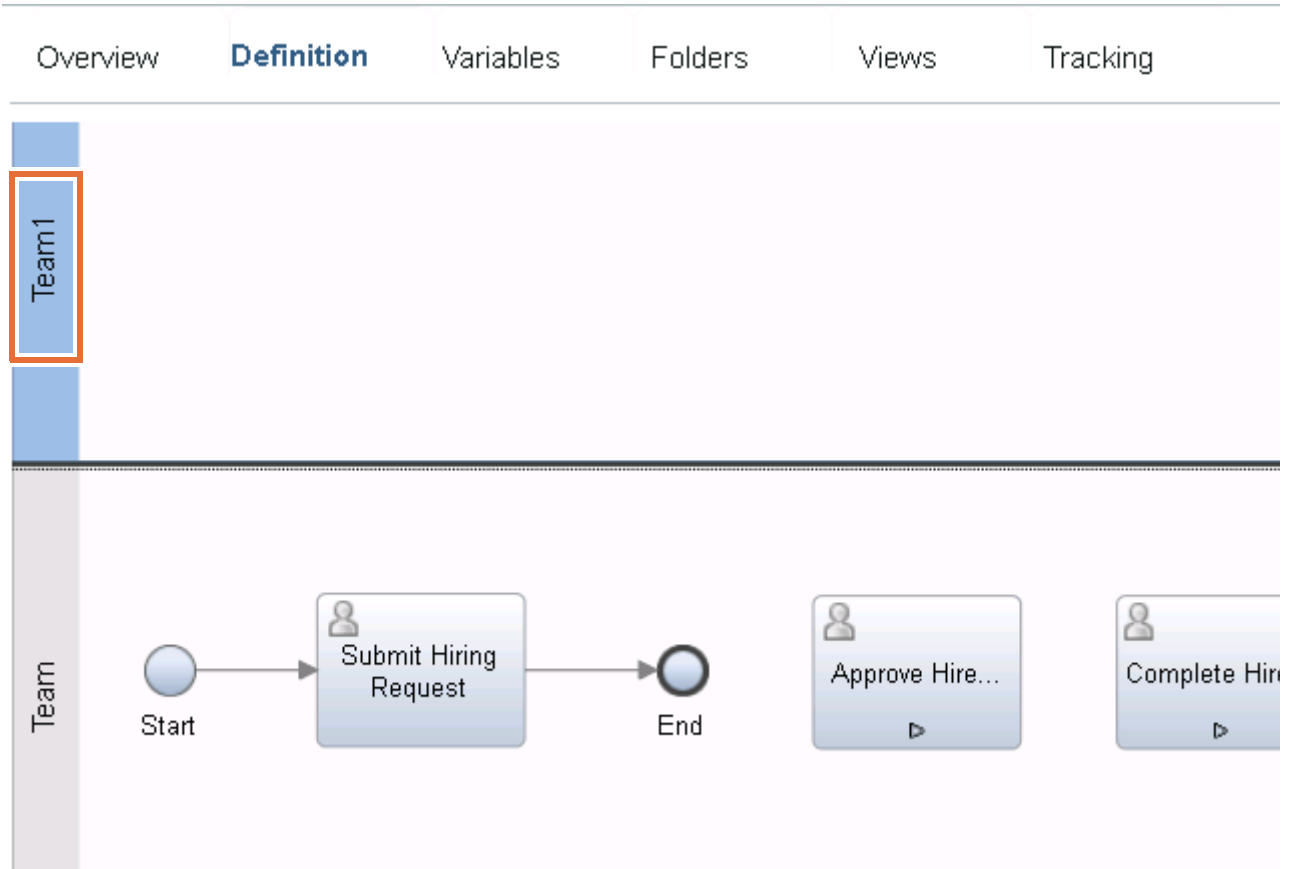
Part 2: Add lanes to the business process

The business process application has a process with some ad hoc activities. By default you have a process with a team lane, a system lane, a **Start** event, and an **End** event. In this section, you add the necessary team lanes to the two default lanes (team and system) and rename the lanes.

- ___ 1. Model the process teams.
 - ___ a. Read the core requirements in this exercise, pages 2-3 and 2-4, and identify the teams. In the process requirements, there are two teams in the main process: Hiring Manager and General Manager. There is also one System team for a total of three lanes.
 - ___ b. Click the **Lane** icon and drag one lane from the palette to the process above the Team lane unless you see the green (+) symbol.



- ___ c. A lane with name Team1 is added to the process.

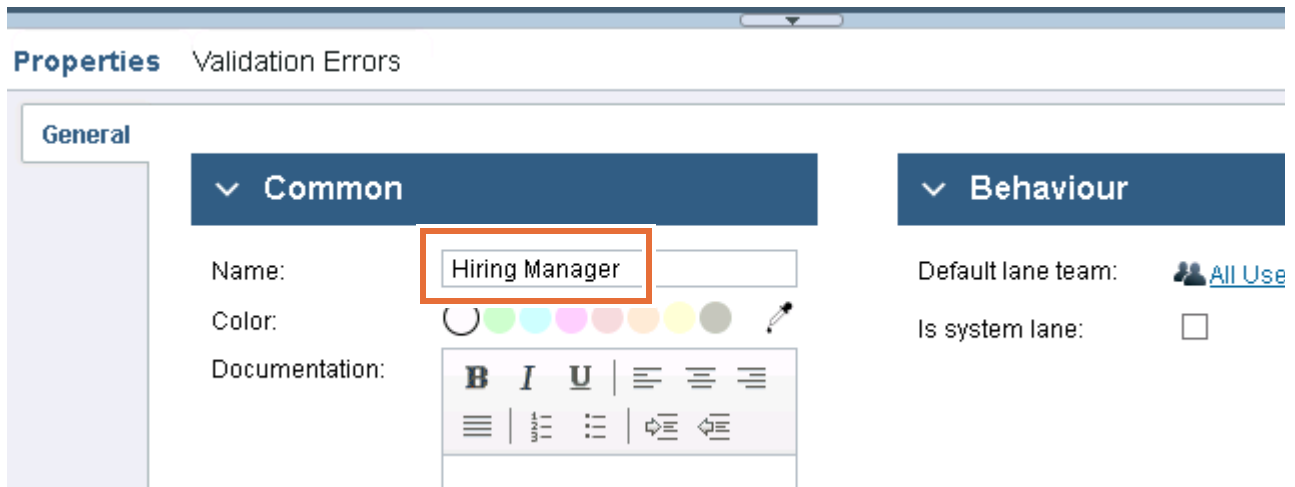


- ___ 2. Set the properties of the team lanes.

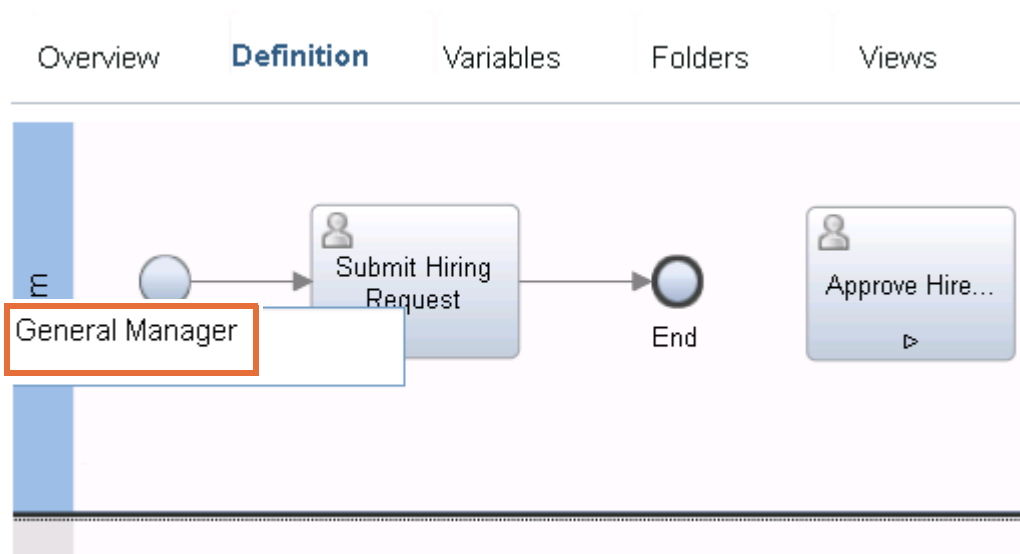
- ___ a. Click the top lane to select the entire lane. The **Properties** tab populates at the bottom of the screen.

The screenshot shows the BPMN Designer interface with the 'Definition' tab selected. The 'Team1' lane is highlighted with a red box. The 'Properties' tab is open at the bottom, showing the 'General' section. The 'Name' field is set to 'Team1'. The 'Default lane team' is set to 'All Users'. The 'Properties' tab also shows a 'Validation Errors' section.

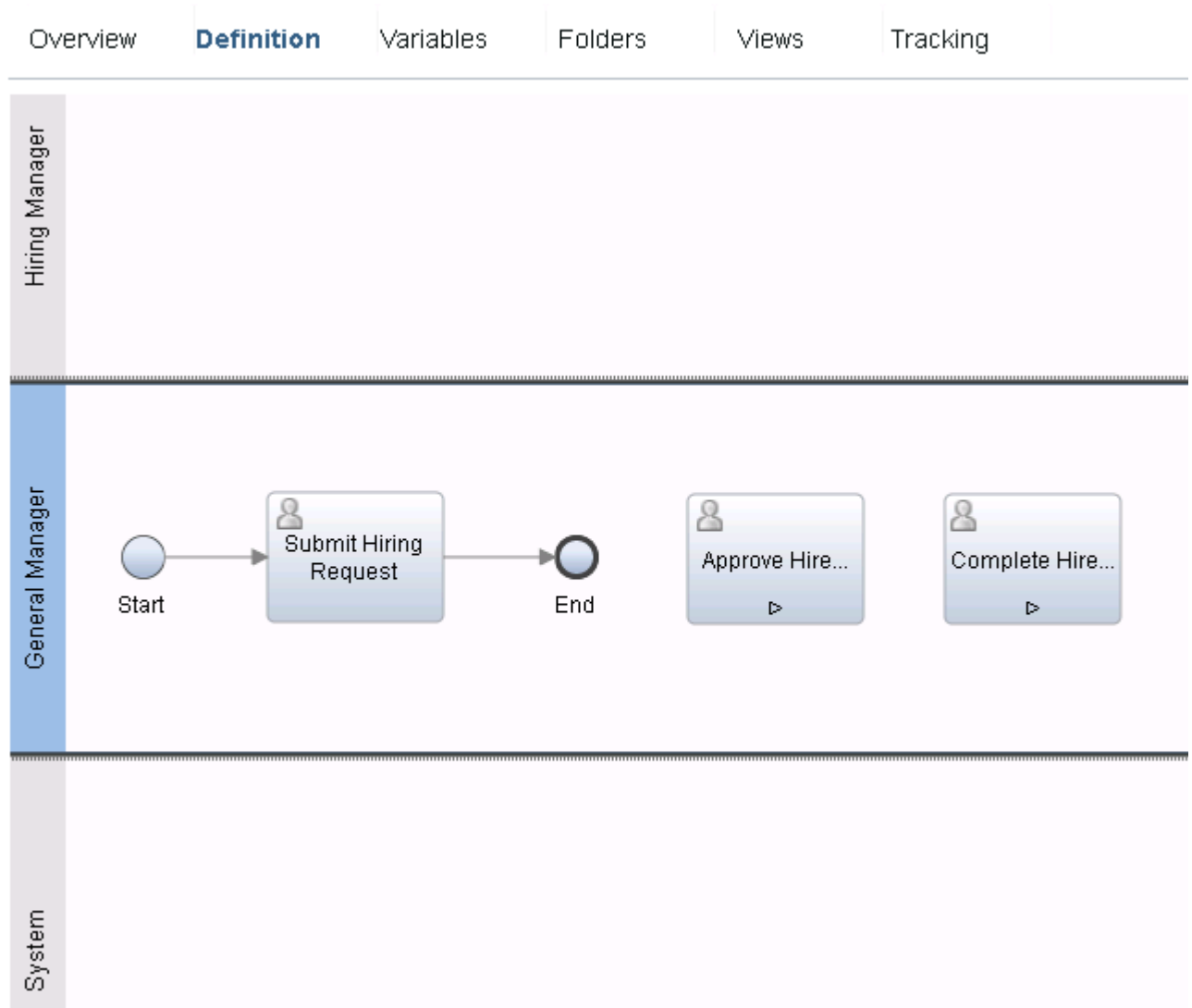
- ___ b. In the **Properties > General > Common** section, change the name of the top lane from the current name to: **Hiring Manager**



- ___ 3. Rename the second lane labeled **Team**.
- ___ a. Select the lane that is labeled **Team** and double-click the name.
- ___ b. Change the name of the second lane from **Team** to: **General Manager**



This step leaves the bottom lane as the System lane. It is a good practice to keep the System lane at the bottom of your process, even if there are no system lane activities.



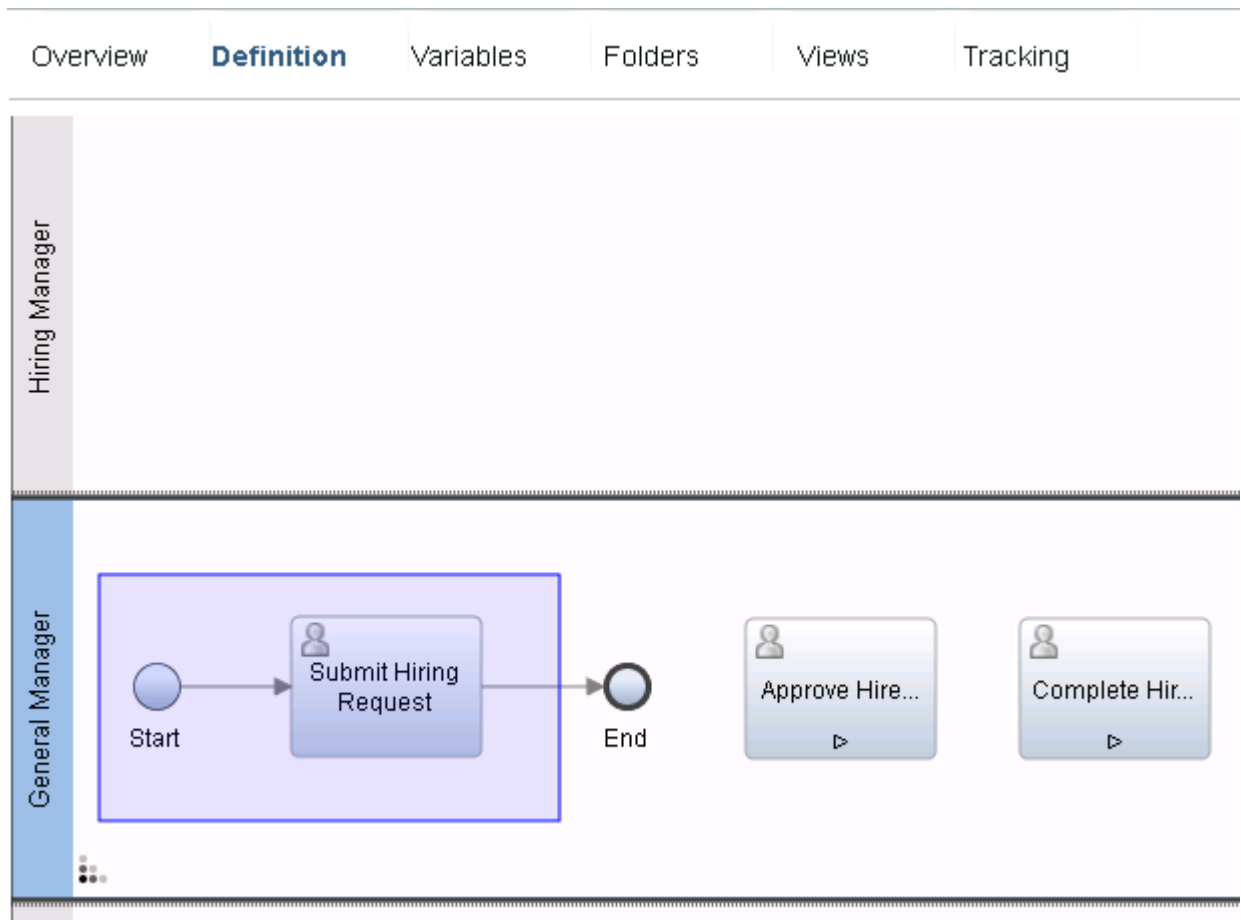
Part 3: Model the activities in the process

To accomplish the task of adding activities and more events to the process model, use the process requirements that are provided at the beginning of Exercise 2. Read the main process requirements and determine the activities from the requirements. Because the requirements were written down, it might be easier to write down the activities on paper before proceeding. Remember, activities use a verb-noun naming convention. If you read the requirements carefully, notice that the main process is described from item 2.1 through item 2.4. In the process requirements, there are four activities in the main process: Submit Hiring Request, Approve New Hire Request, Approve Hire Request, and Complete Hire Request.

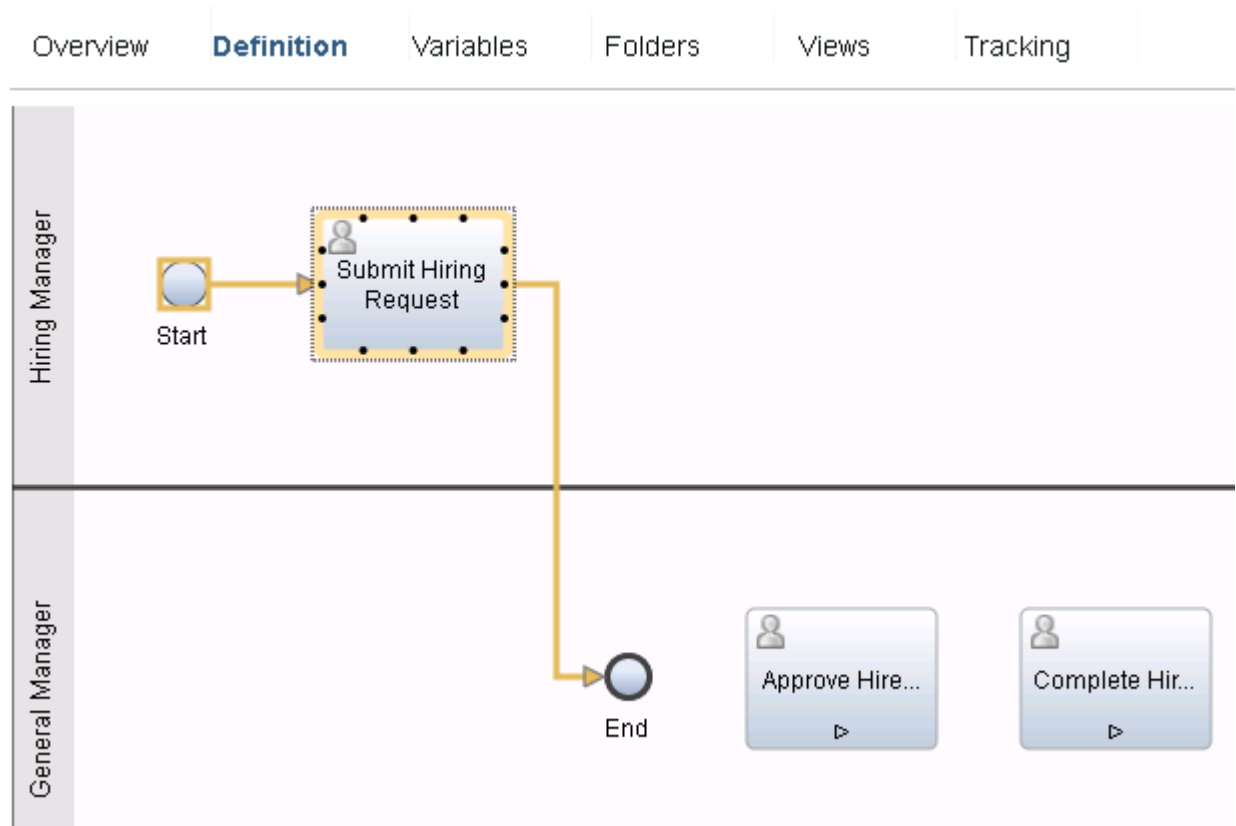
You identify the teams that are associated with the lanes instead of allowing all users to claim the tasks that are associated with each activity. Determine which teams conduct each of the four activities. From the process requirements, determine the following assignments:

- Hiring Manager (team): Submit Hiring Request
- General Manager (team): Approve New Hire Request
- System (team): Approve Hire Request and Complete Hire Request

- ___ 1. Arrange the activities to the team lanes to establish the correct process flow. Model the activities and set their properties.
 - ___ a. To drag the **Start** event and the **Submit Hiring Request** activity to the **Hiring Manager** lane, drag a box to select these two items in the process.

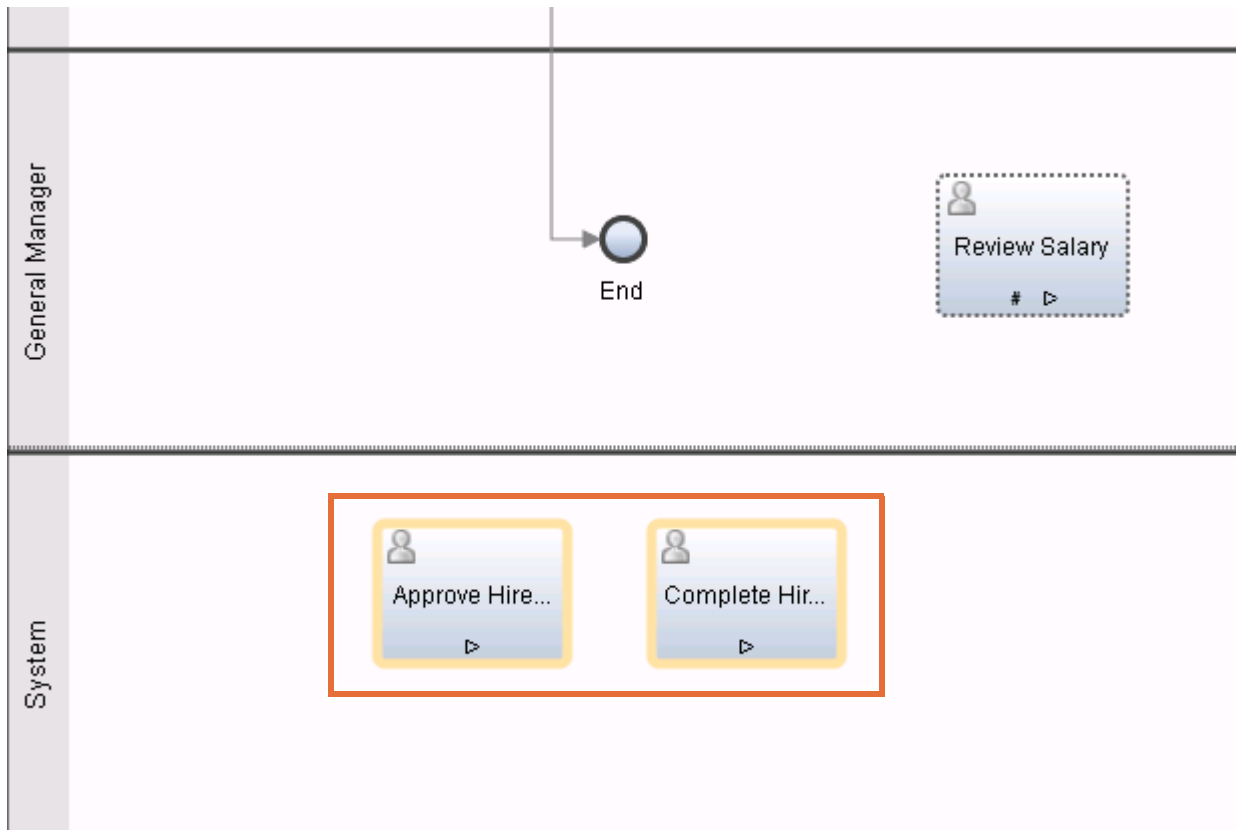


- ___ b. Drag the selected activities in the **Hiring Manager** lane.

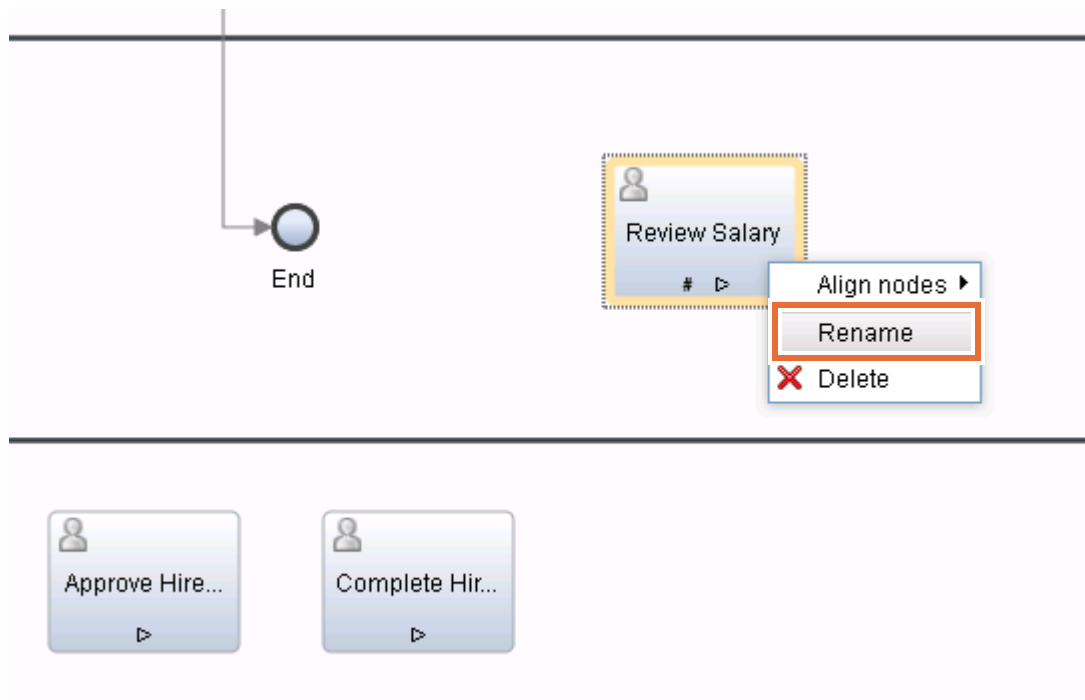


- ___ c. Drag a box to select the **Approve Hire Request** activity and the **Complete Hire Request** activity.

- ___ d. Drag both the activities to the **System** lane. Later in the exercise you rearrange this activity in a new lane: Approvers.



- ___ e. Right-click **Review Salary** activity and select **Rename**.



- ___ f. Enter the name: **Approve New Hire Request**.



Reminder

If the answer to “New position” is Yes, the request is forwarded to a General Manager. After the General Manager receives the request, the General Manager indicates approval or disapproval.

- ___ g. Select the **Approve New Hire Request** activity.
- ___ h. In the **Properties > General > Behavior** section, select the option: **Yes. The activity is required** to change this activity from optional to required.

Behavior

☒ The activity runs even though it does not have an inbound flow

How is the activity started?

☐ **Automatically** by the system

☒ **Manually** by the user

Does the activity have to be completed?

☒ Yes. The activity is **required**

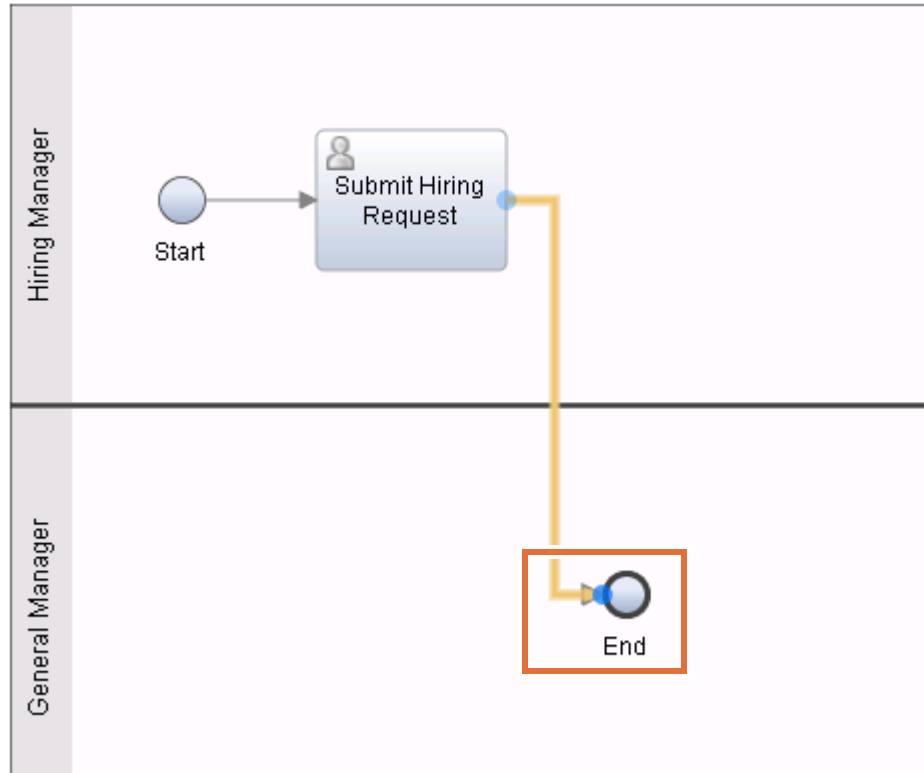
☐ No. The activity is **optional**

☒ **Repeatable.** The activity can be invoked multiple times ⓘ

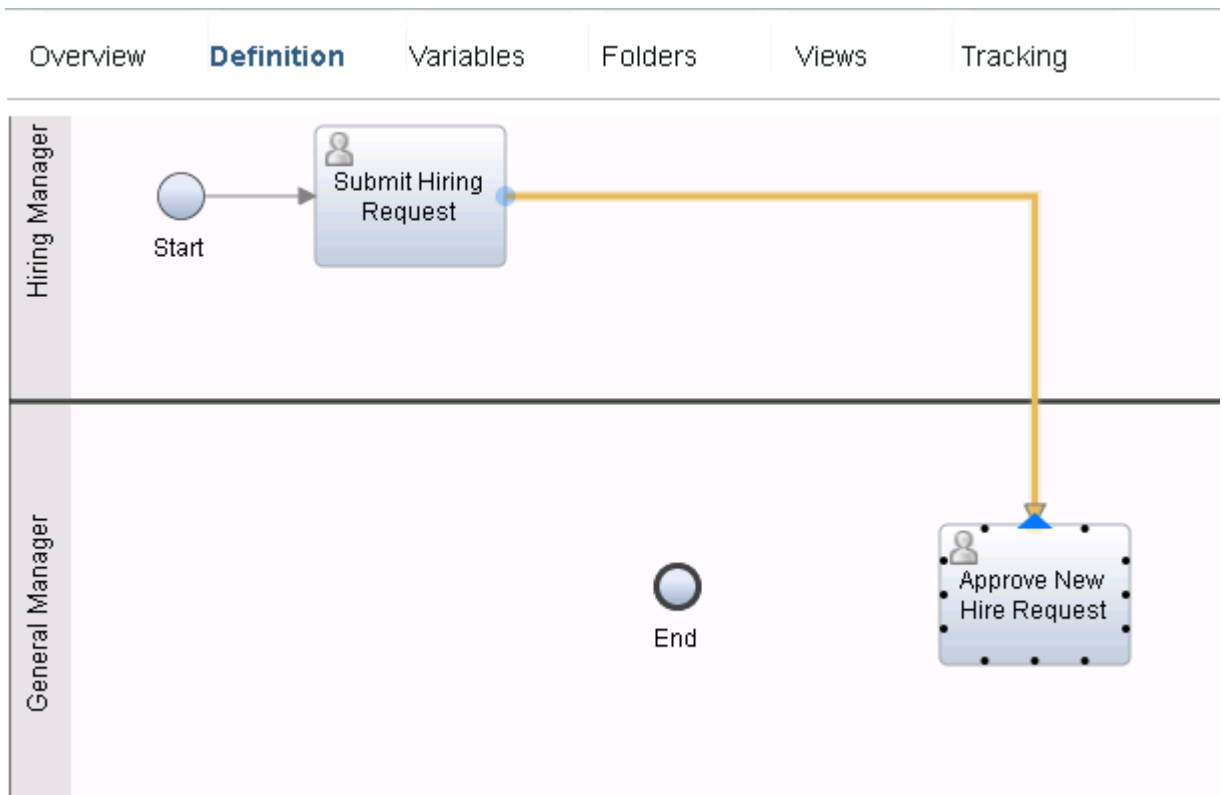
☐ **Hidden.** This is a background activity that users will not see

- ___ 2. Add sequence flow to the components in the diagram.
- ___ a. Select the sequence flow between **Submit Hiring Request** activity and the **End** event.

- ___ b. Hover over the edge of **End** event to see a blue end point of the sequence flow.

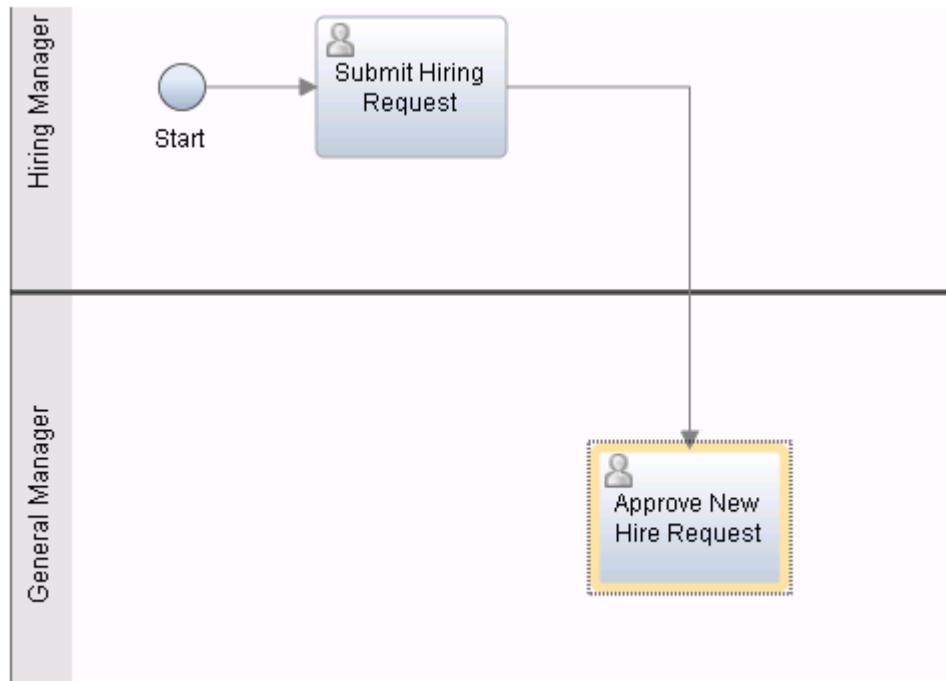


- ___ c. Hold this blue point and drag it to an anchor point on the **Approve New Hire Request** activity in the General Manager lane.



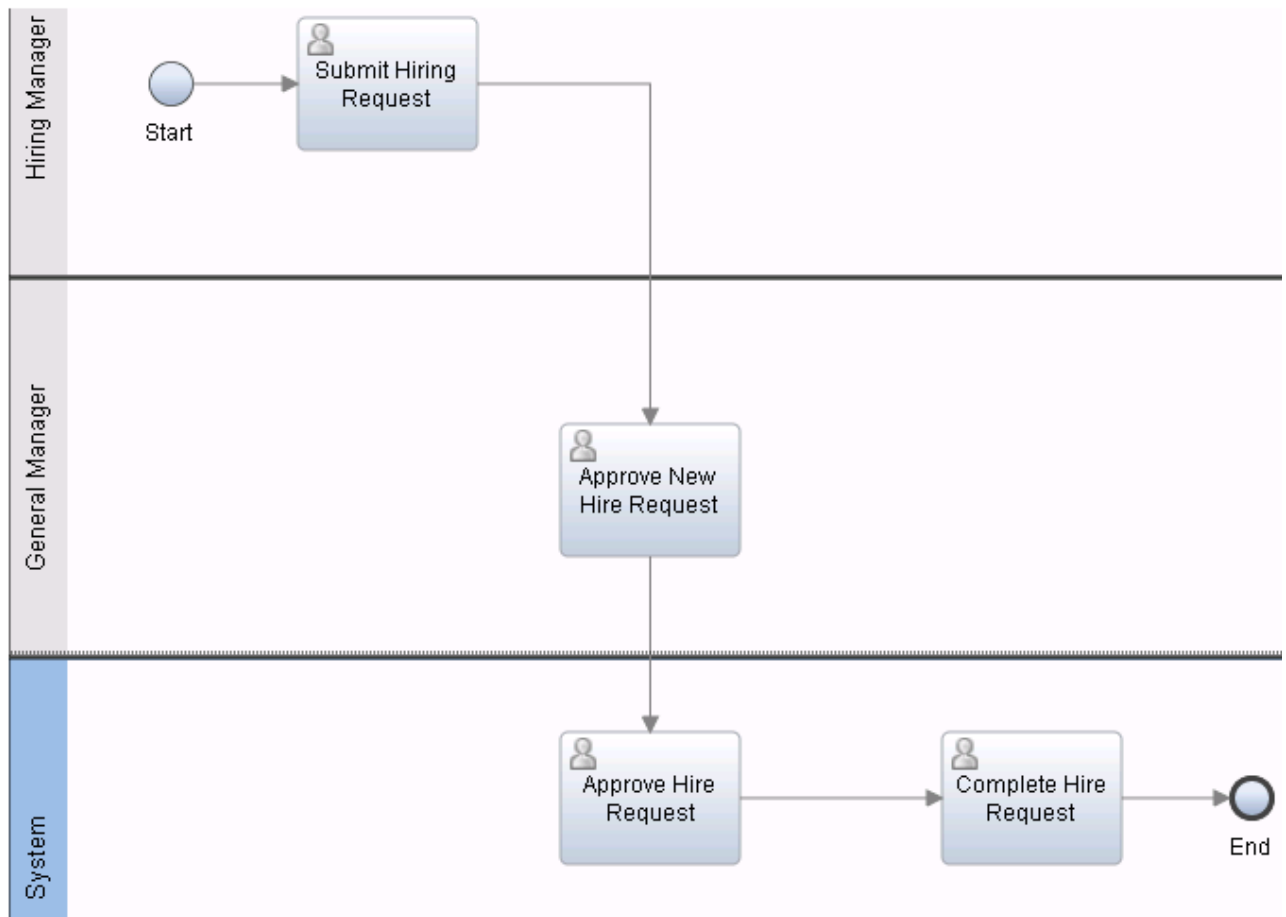
- ___ d. Drag the **End** event and place it next to the **Complete Hire Request** activity.

- ___ e. Select the **Approve New Hire Request** activity and drag it below the Submit Hiring Request activity to align the activities with straight flow lines in the process.



- ___ f. Connect the sequence flow between the **Approve New Hire Request** activity and **Approve Hire Request** activity in the System lane.
- ___ g. Connect the sequence flow between the **Approve Hire Request** activity and the **Complete Hire Request** activity.

- ___ h. Connect the sequence flow between **Complete Hire Request** activity and the **End** event.



- ___ i. Save your process. The first process is complete for this exercise. Next, you create another process, a nested process.

Part 4: Create a nested process

Determine whether any additional work is required for each activity and if so, what the work involves.

- **Submit Hiring Request:** Generally no rework is needed.
- **Approve New Hire Request:** Extra work that is required for the General Manager to record a rejection reason
- **Approve Hire Request:** Extra team work that the HR Administrator and the Hiring Manager require
- **Complete Hire Request:** Generally no rework is needed.

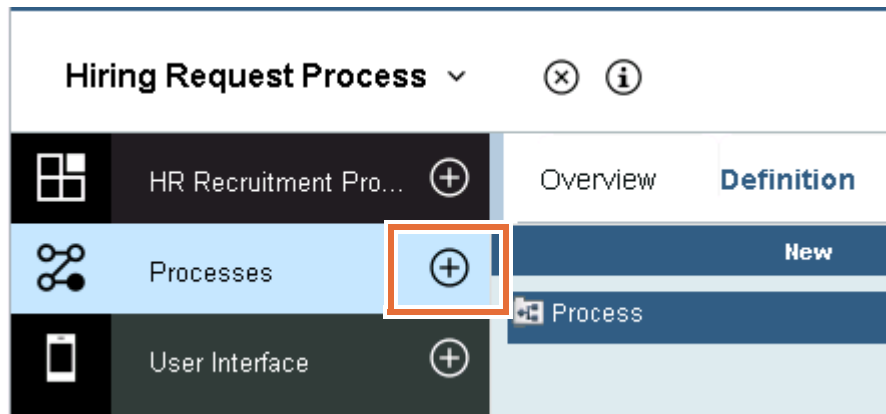
Because more than one team is involved in the **Approve Hire Request** activity, it is no longer a “task” but a nested process. The nested process has lanes, like System, HR Administrator, and Hiring Manager. Activities include Check Hire Request, Override Hire Request, and Negotiate Hire Request.

You must determine whether the nested process is a linked process or a subprocess as they are created differently. If you think your nested process might ever be reused, create a linked process. Otherwise, create a subprocess. There are benefits of using a subprocess as processing and development time can be faster, but it cannot be reused.

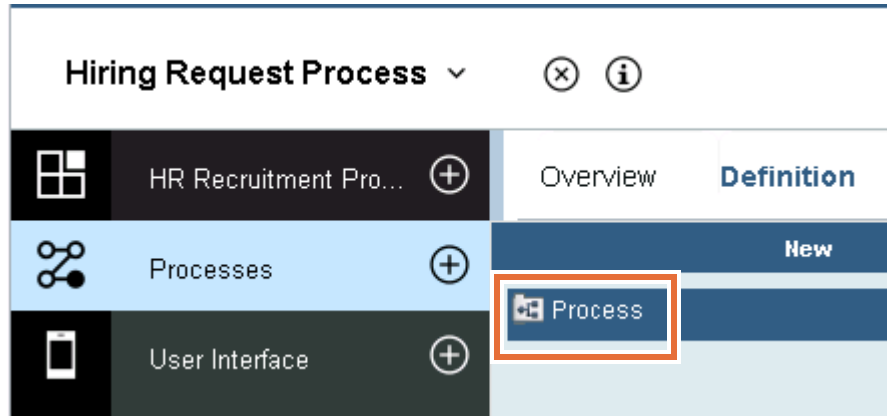
Approve Hire Request is a nested process and might be reused in other HR processes, so you create a linked process for this scenario.

___ 1. Create a process that is called **Approve Hire Request**.

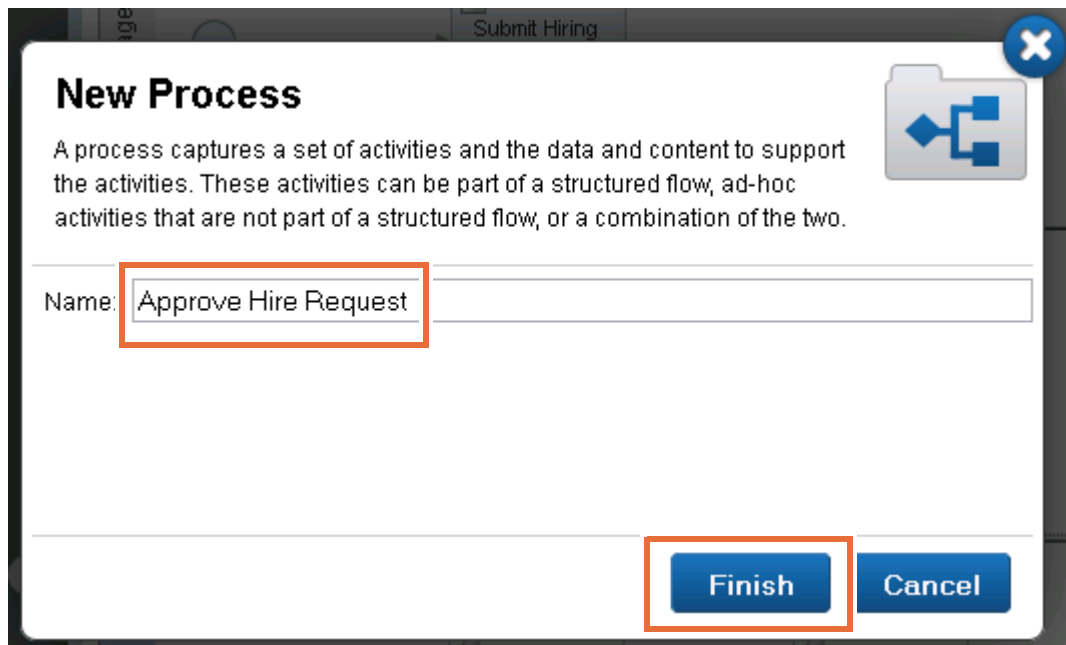
- ___ a. From the process library, use your mouse to hover over **Processes** and then click the **(+) plus sign**.



- ___ b. From the **New** menu, click **Process**.

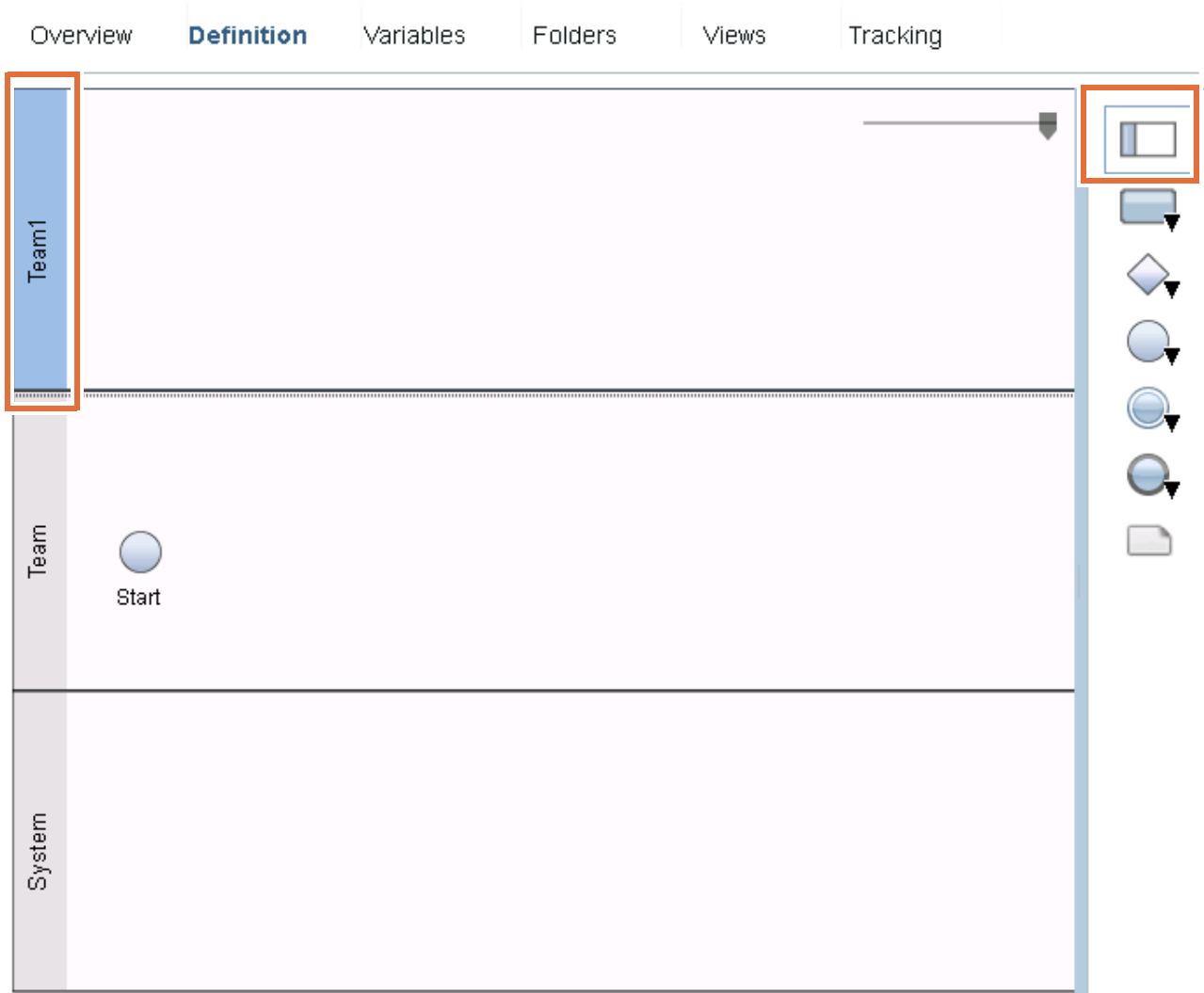


- ___ c. Enter *Approve Hire Request* for the **Name**.
- ___ d. Click **Finish**.

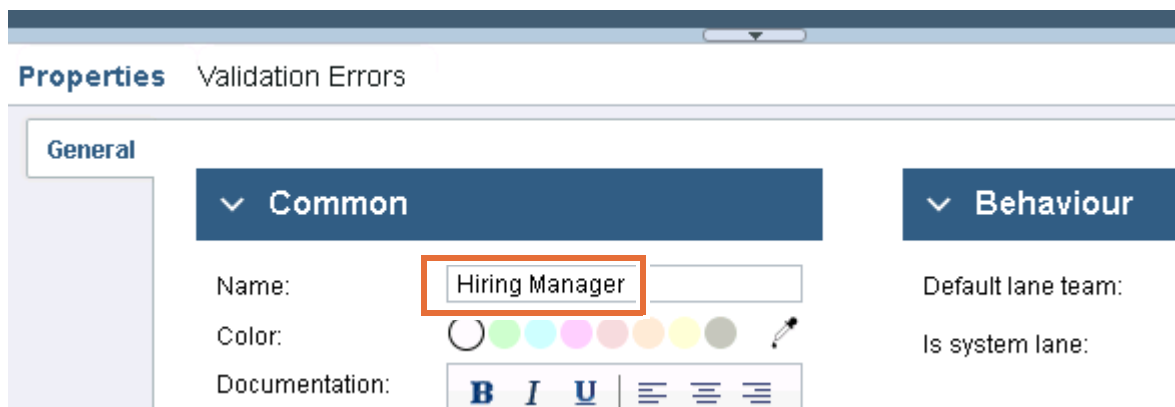


___ 2. Create the System, HR Administrator, and Hiring Manager lanes.

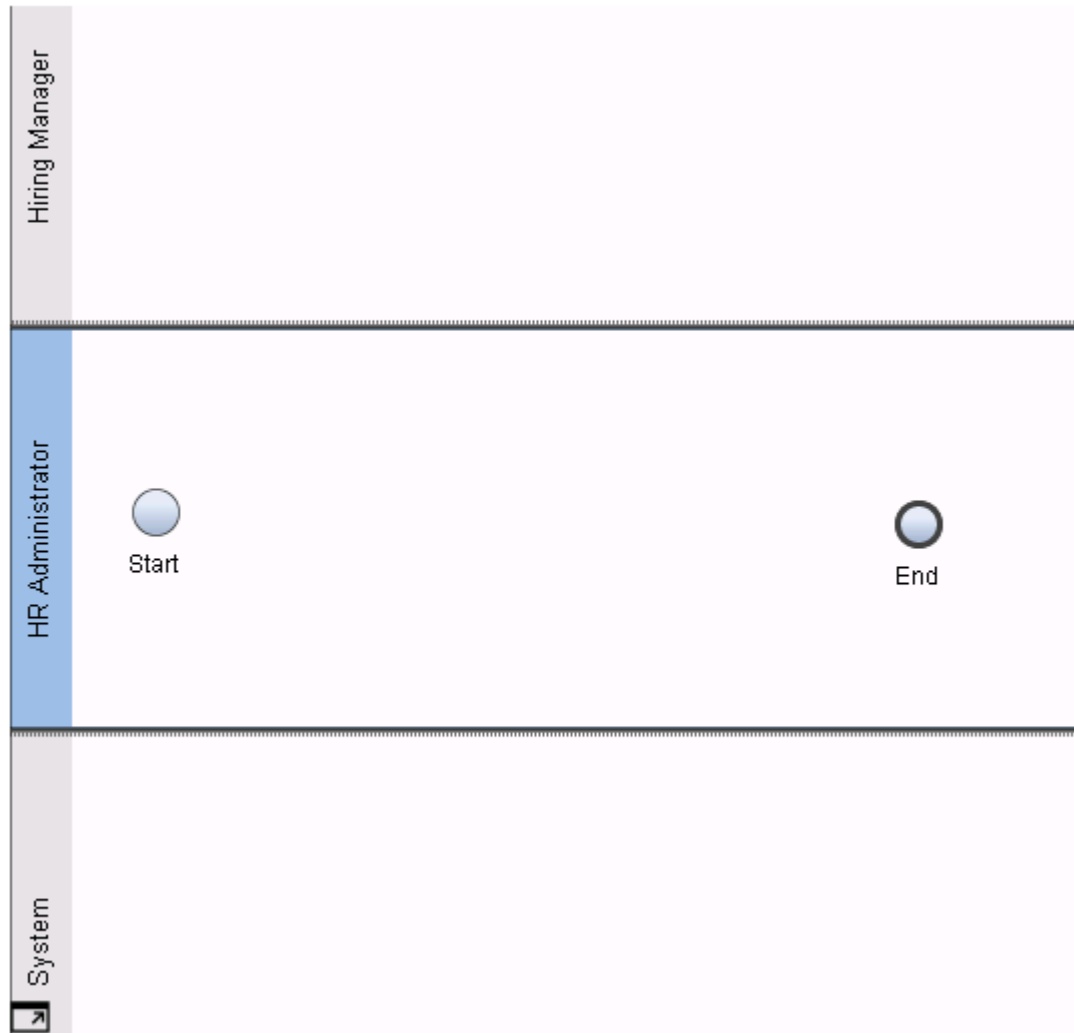
- ___ a. Click the **Lane** icon from the palette and drag one lane from the palette to the canvas above the default Team lane.



- ___ b. Click the **top lane** to select the entire lane. The Properties tab populates at the bottom of the screen.
- ___ c. In the **Properties > General > Common** section, change the name of the top lane from the current name to: Hiring Manager.



- ___ d. Select the second lane: Team and rename the lane to: HR Administrator.

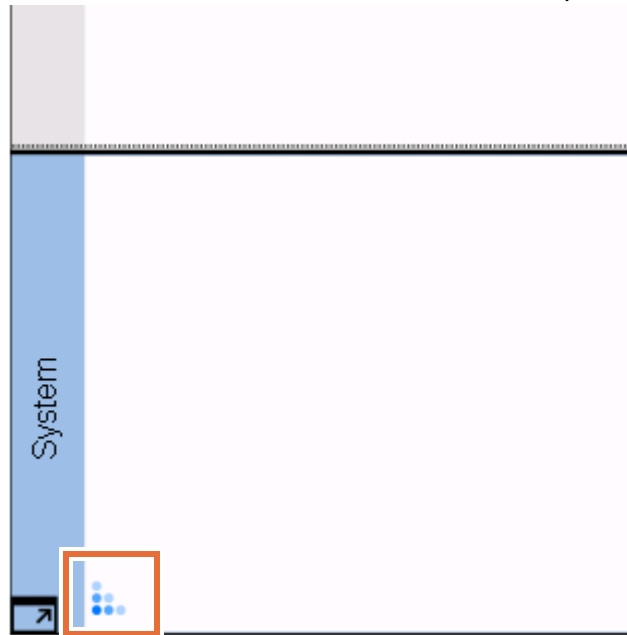


Reminder

You can double-click the lane name to rename it.

**Note**

You can resize the lanes by clicking and dragging the control point at the left border of the lane. Hover your mouse at the left border of the lane to see this control point.



- ___ 3. Create the Check Hire Request, Override Hire Request, and Negotiate Hire Request activities.
- ___ a. Drag an activity from the palette to the **Hiring Manager** lane.



- ___ b. Rename the activity to: Negotiate Hire Request.



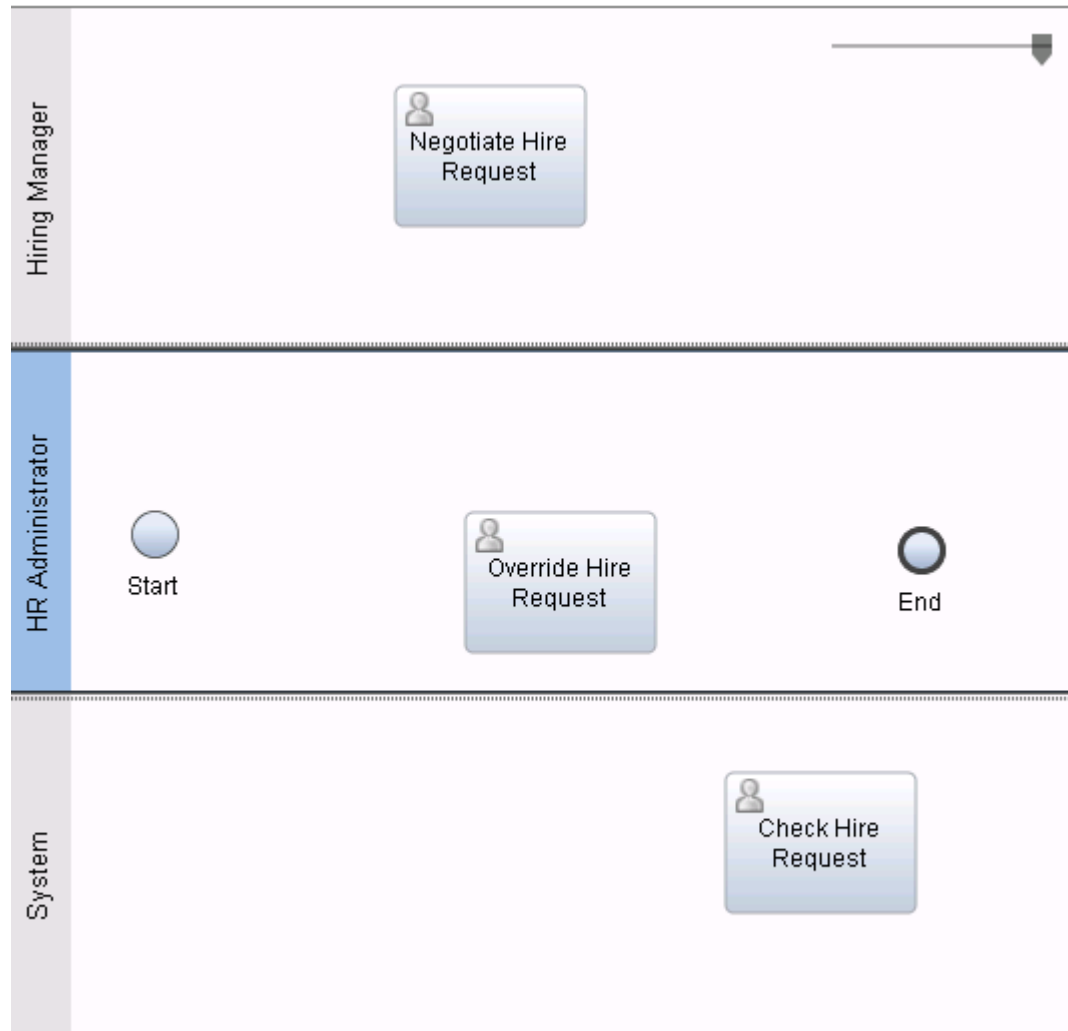
Reminder

You can double-click the activity name to rename it.

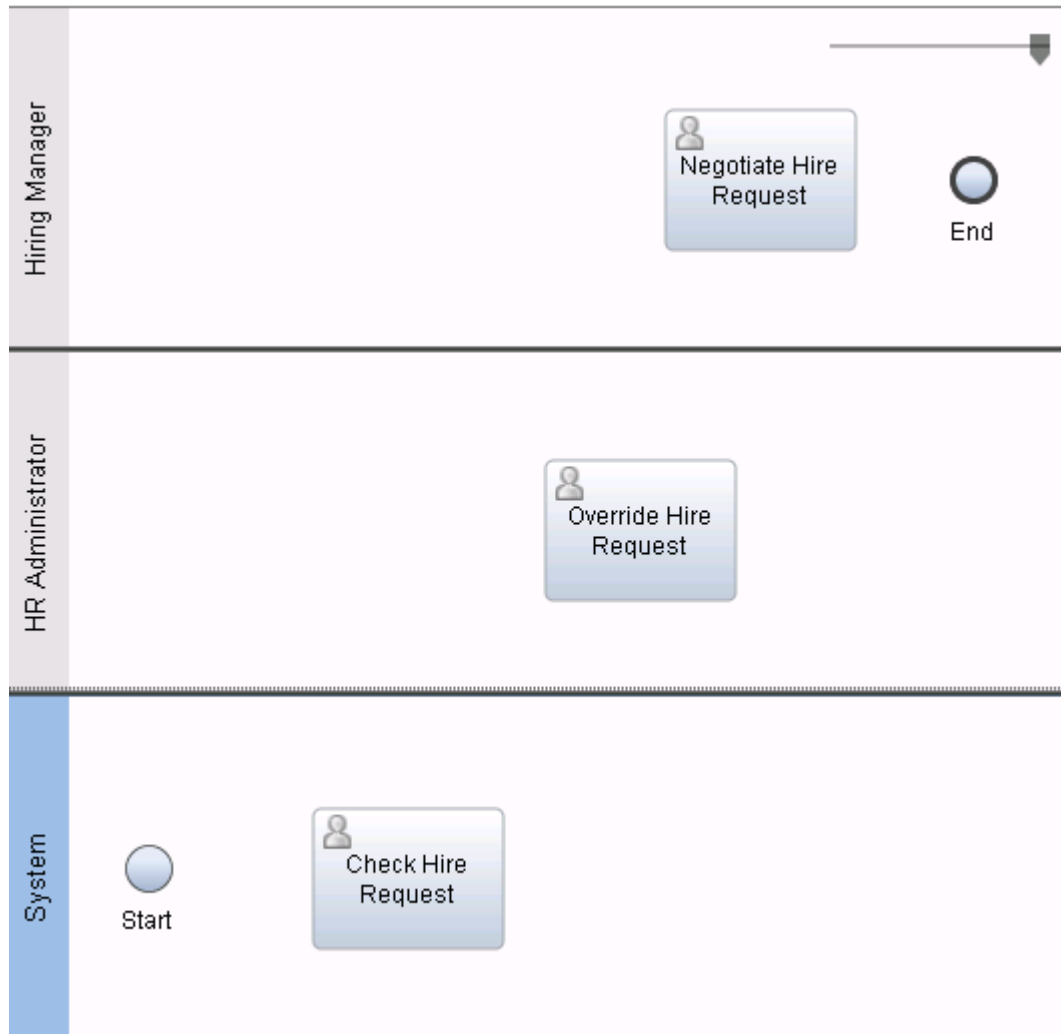
- ___ c. Repeat dragging two more activities to their corresponding lanes and changing the names until your process is complete and the locations of your activities match the nested diagram table:

Table 1. Nested diagram

Lane	Activities
Hiring Manager	Negotiate Hire Request
HR Administrator	Start event, Override Hire Request, End event
System	Check Hire Request



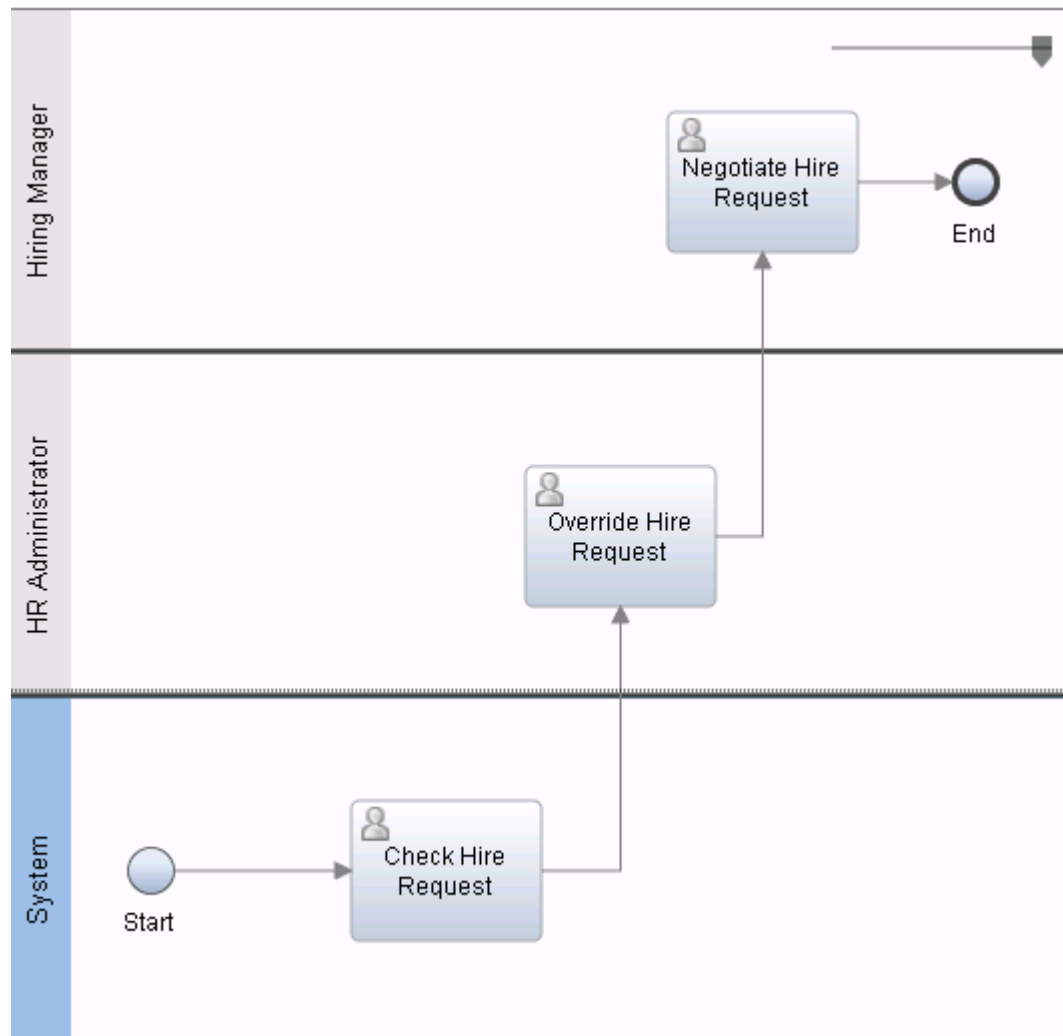
- ___ d. Move your **Start** event before the first activity, **Check Hire Request** in the System lane and the **End** event after the **Negotiate Hire Request** activity in the Hiring Manager lane; and arrange the activities in an upward diagonal line.



Note

Although the layout breaks the preferred left-to-right, top-to-bottom approach because the process starts in the system lane, most developers keep the system lane as the bottom lane. Communicating a clear, concise model is the most important goal, and even though this model breaks the preferred practice, it meets the readability goal.

- ___ e. Finally, create a sequence flow from **Start** event to **Check Hire Request**, **Check Hire Request** to **Override Hire Request**, **Override Hire Request** to **Negotiate Hire Request** and then from **Negotiate Hire Request** to the **End** event.



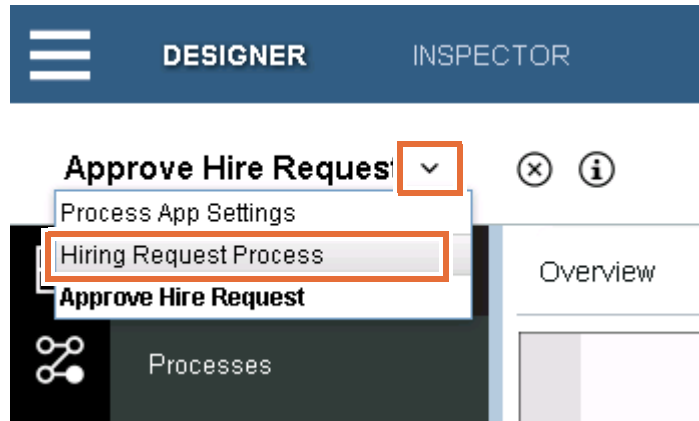
Reminder

You can align the activities by using the arrows keys on the keyboard or by selecting and dragging the activities in the desired positions so that all the sequence flows as straight lines.

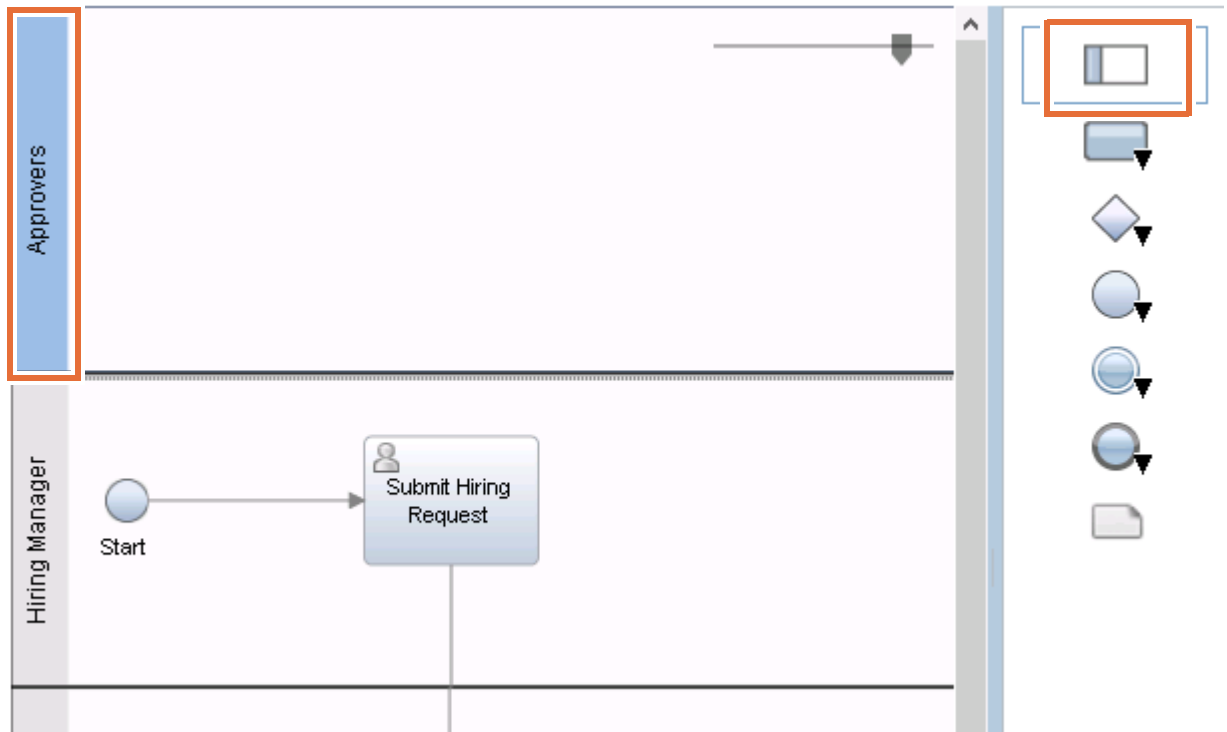
- ___ f. Save your process application.

Part 5: Attach the linked process

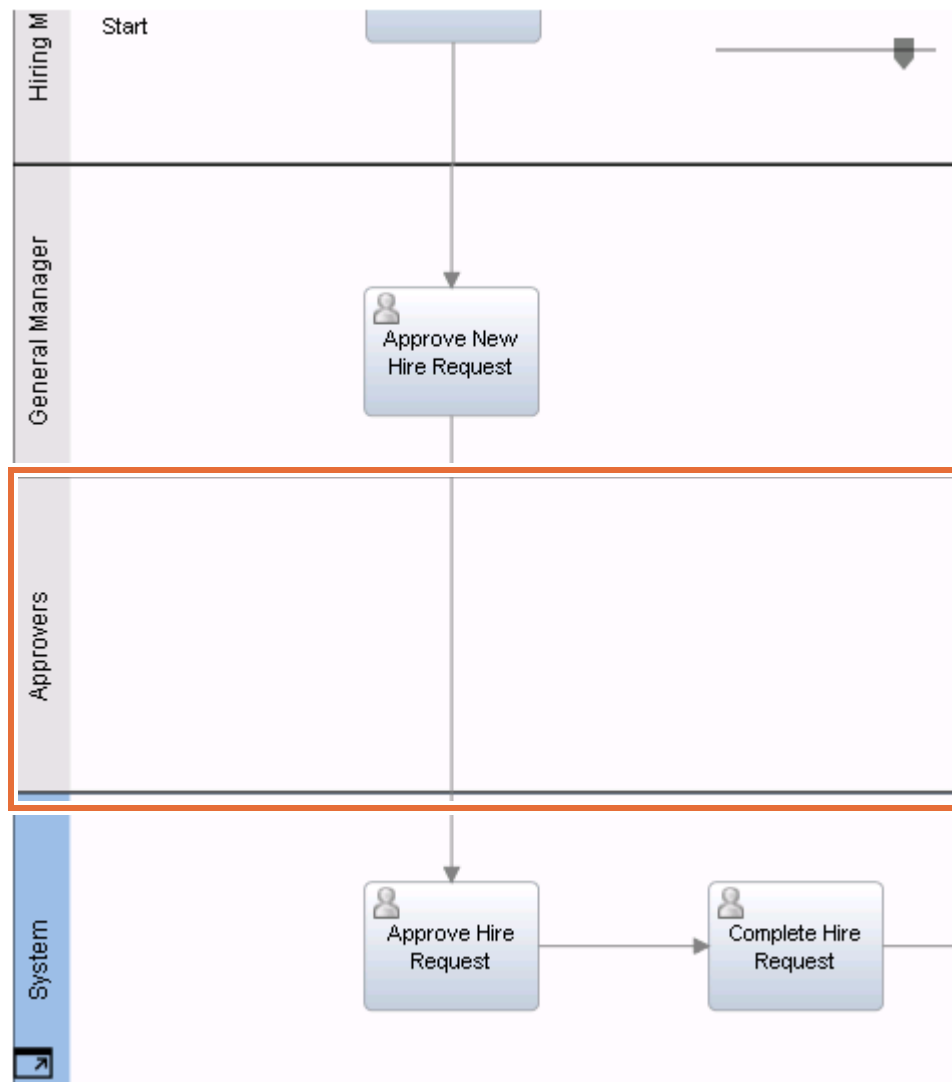
- ___ 1. Return to the Hiring Request Process by opening the **History** menu at the top and selecting **Hiring Request Process**.



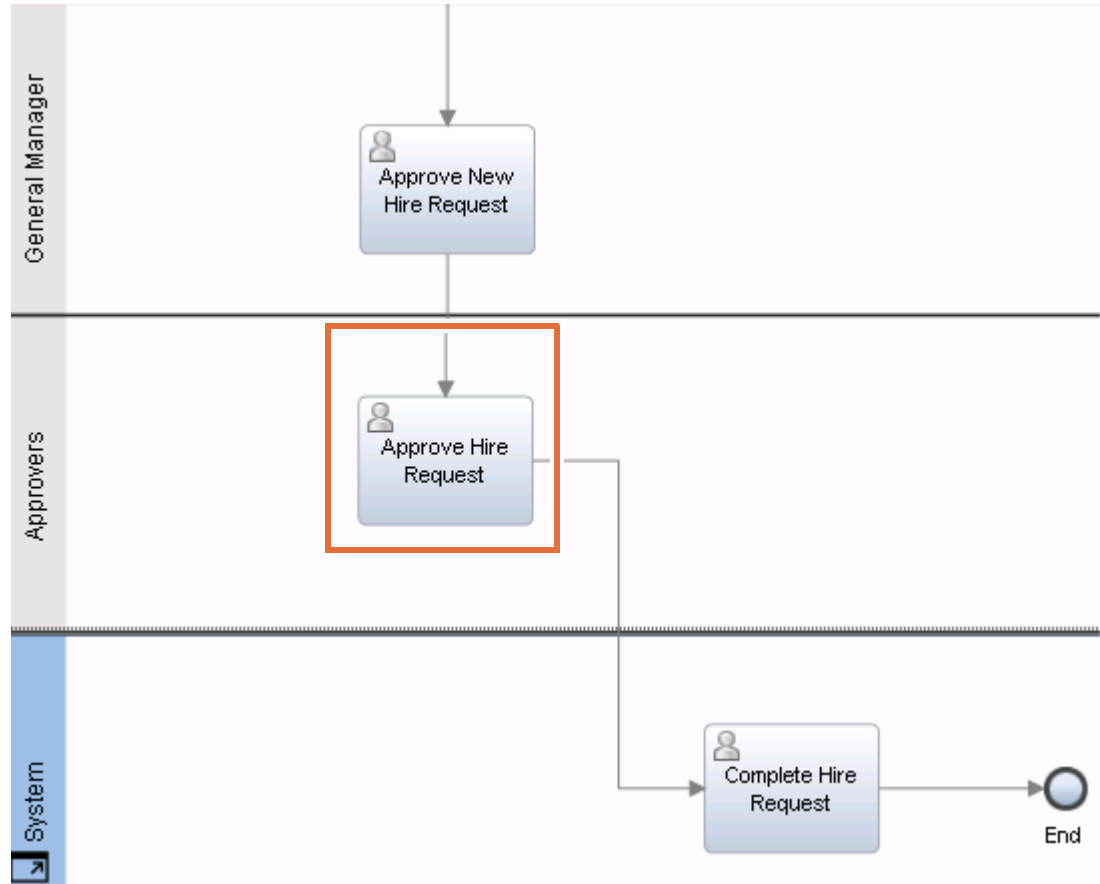
- ___ 2. Change the implementation of the existing **Approve Hire Request** activity to a nested process.
 - ___ a. Drag a new lane above the Hiring Manager lane in the diagram and name it: **Approvers**.



- ___ b. Select the **Approvers** lane and drag the lane down so that it is just above the **System** lane.



- ___ c. Drag the existing **Approve Hire Request** activity into the **Approvers** lane.



Reminder

Realign the activities in their respective lanes so that the sequence flow lines are always straight.

- ___ d. Select the **Properties > Implementation** menu.

Properties Validation Errors

General	Implementation
Implementation Data Mapping Assignments Pre & Post Tracking Conditions	<div>Activity Type</div> <div>Type: User Task</div> <div>Implementation</div> <div>Implementation: Default Responsive Human Service Responsive Coaches Self-Service</div>

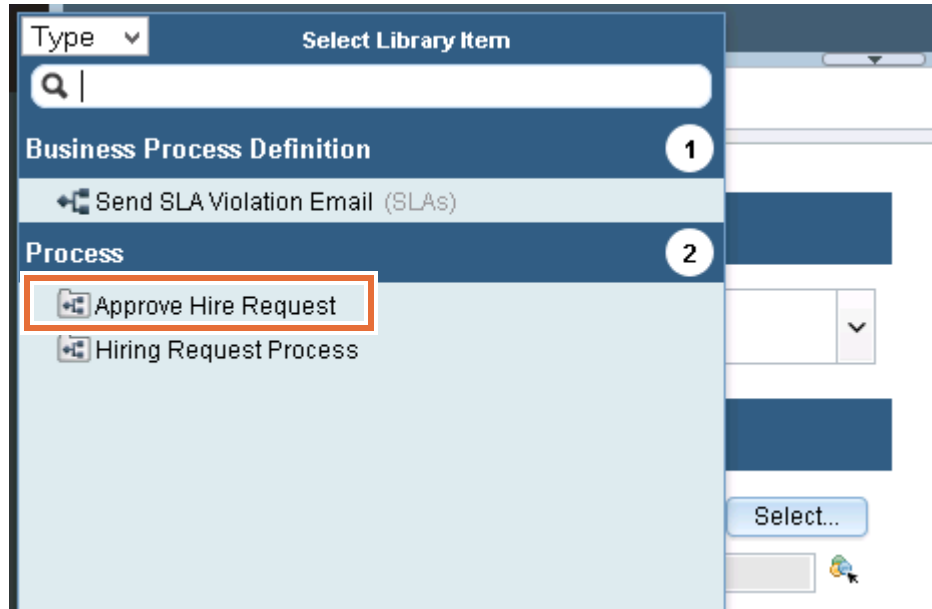
- ___ e. In the Activity Type section, select the Type as: **Linked Process**.

The screenshot shows the 'Properties' dialog box with the 'Activity Type' section expanded. The 'Type' dropdown menu is open, displaying a list of activity types. The 'Linked Process' option at the bottom of the list is highlighted with a red rectangular box.

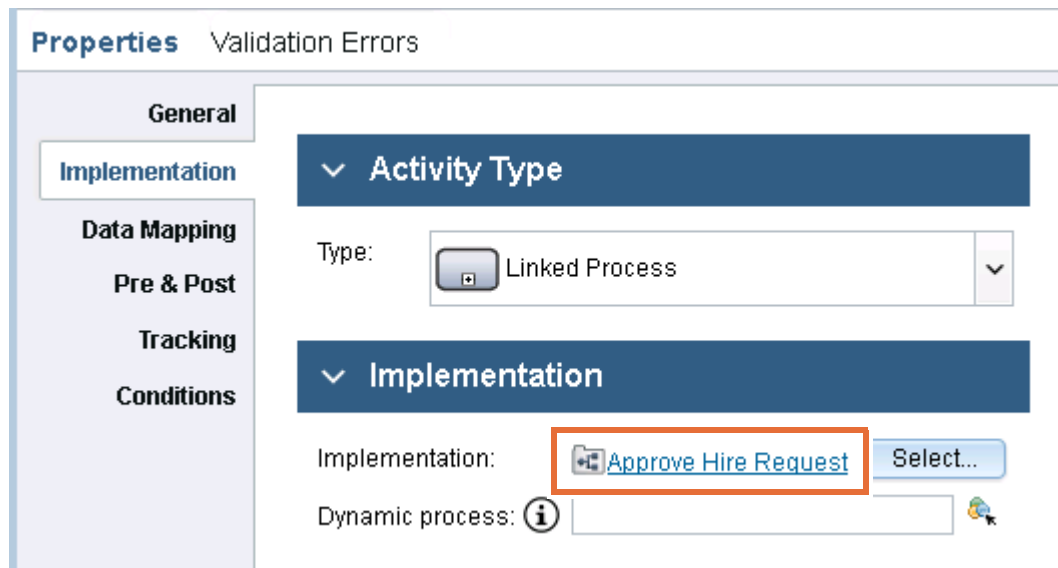
- ___ f. Under the Implementation section, click **Select.** next to Implementation.

The screenshot shows the 'Properties' dialog box with the 'Implementation' section expanded. The 'Implementation' field displays '<none>' and a 'Select...' button is highlighted with a red rectangular box. Below this, the 'Dynamic process' field is visible with an information icon and a text input area.

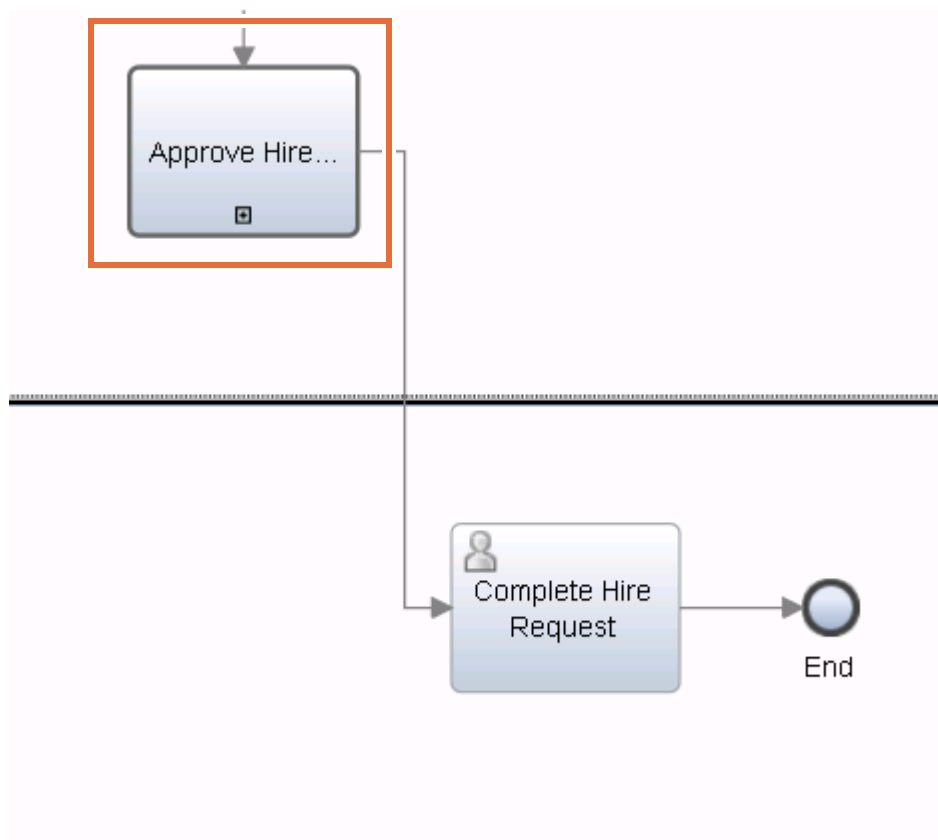
- ___ g. Select **Approve Hire Request** from the Process menu.



- ___ h. The process now shows **Approve Hire Request** as a Linked Process.



- ___ i. The Approve Hire Request activity is now changed to a Linked process. Save your process.



Important

You completed the following tasks:

- Created the foundation for a process by adding the appropriate lanes to the default pool
- Modeled the expected process flow for the initial process model
- Decomposed business process workflow steps that are documented in the process discovery and analysis into process model tasks
- Created a subprocess or a linked process

In the next exercise, you learn how to create gateways and timer intermediate events in the process.

End of exercise

Exercise review and wrap-up

In this exercise, you enhanced a process in a process application in the Process Center. You added swimlanes to the default pool. Then, you defined and modeled teams in the business process definition. Next, you converted business process workflow steps that are documented in the process discovery and analysis into process model tasks. Finally, you created the expected process flow for the initial process model, and decomposed a business process to create a linked process.

Exercise 3. Playback 0: Controlling process flow

Estimated time

01:30

Overview

This exercise covers how to create gateways in a process, and how to create timer intermediate events.

Objectives

After completing this exercise, you should be able to:

- Add gateways to a process
- Model the appropriate sequence flows for each gateway
- Add a timer intermediate event to a process based on business requirements
- Model an escalation path in a process with the web Process Designer
- Document details for the implementation team

Introduction

The purpose of this exercise is to add all the gateways necessary to model the flow control for the process.

In this exercise, add a timer intermediate event that helps satisfy newly identified requirements for the Hiring Requisition process. This action encompasses process flow control and more activities that are based on conditions by non-human interactions.

Requirements

Successful completion of the previous exercise is required.

Exercise instructions

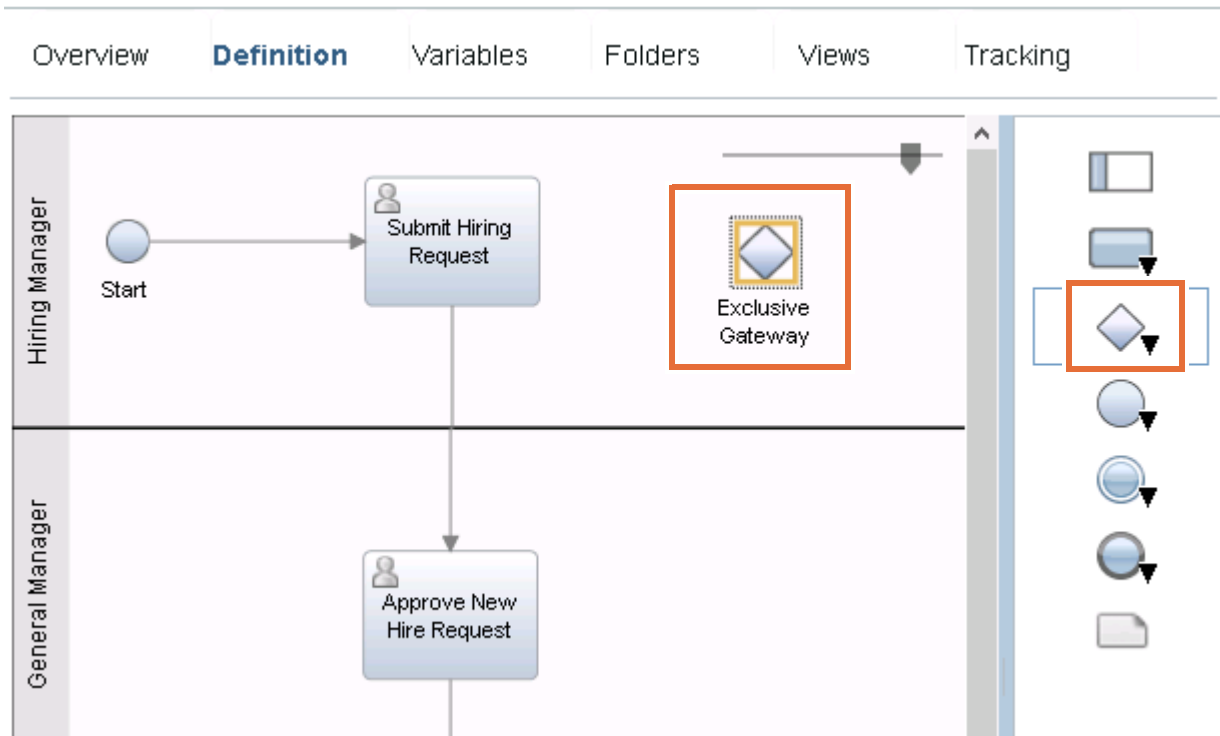
Part 1: Create gateways for parent process

Process flow controls are known as gateways. A gateway is represented as a diamond, and can be thought of as a question at a point in the process flow.

Gateways are added to the parent process, the **Hiring Request Process**. In this part of the exercise, you create a gateway that is called **Is Position New**.

In the Hiring Request Process, you need a gateway to direct the process for the **General Manager** to review the salary after the **Submit Hiring Request** activity.

- ___ 1. In the Hiring Request Process, drag a **Gateway** from the palette onto the canvas to the right of the **Submit Hiring Request** activity.



Note

You can reconnect the flows and align activities to make room for other components in the process. Make sure that the connecting nodes should remain the same.

___ 2. Select the **Gateway** and set the properties.

- ___ a. Select the gateway and in the **Properties > General > Common** section, enter **Is Position New** as the **Name**.

The screenshot shows the 'Properties' panel with the 'General' tab selected. Under the 'Common' section, the 'Name' field is highlighted with a red box and contains the text 'Is Position New'. The 'Documentation' field is empty. The 'Decision' tab is also visible in the left sidebar.

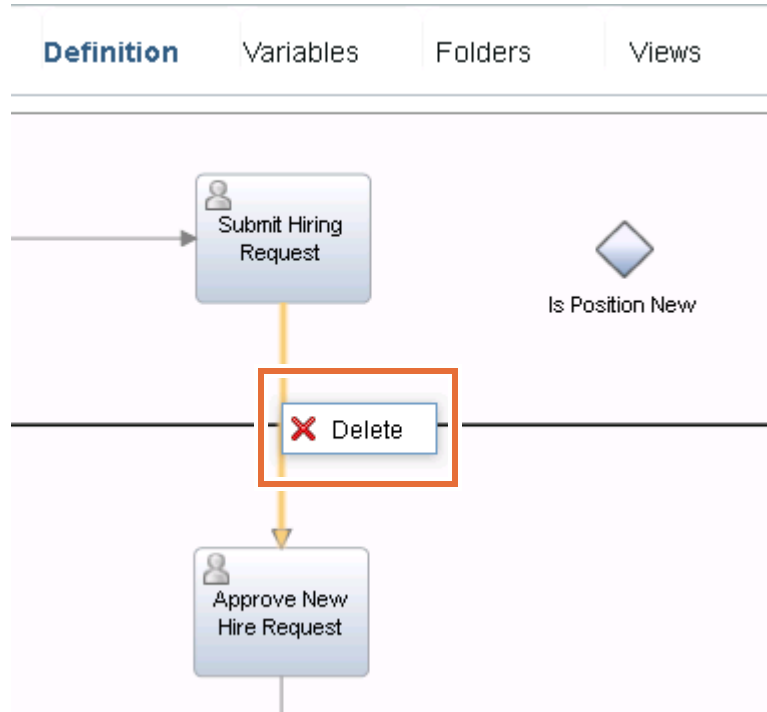
- ___ b. In the **Properties > General > Behavior** section, verify that **Exclusive Gateway** is the **Gateway type**.

The screenshot shows the 'Properties' panel with the 'Behaviour' section expanded. The 'Gateway type' dropdown is highlighted with a red box and shows 'Exclusive Gateway'. The 'Name' field is also visible and contains 'Is Position New'.

___ 3. Connect the gateway.

- ___ a. Select the sequence flow between **Submit Hiring Request** and **Approve New Hire Request**.

- ___ b. While selected, right-click the sequence flow and click **Delete**.



Note

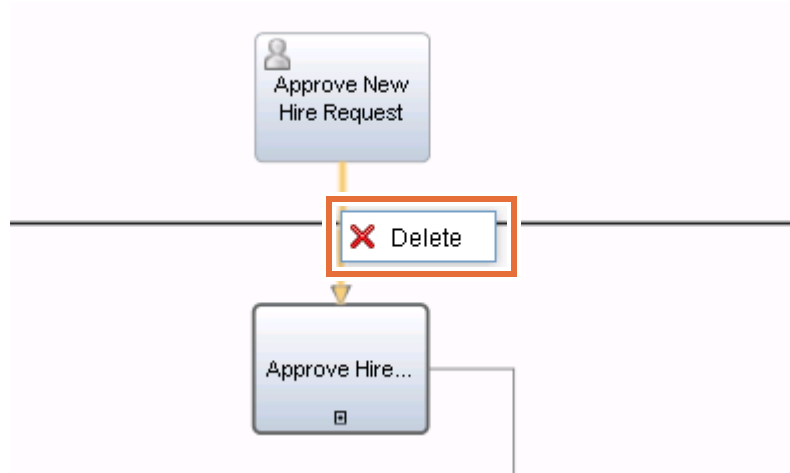
While selected, you can also delete the sequence flow by pressing the **Delete** key on the keyboard.

- ___ c. Connect the sequence flow between **Submit Hiring Request** and the **Is Position New** gateway.

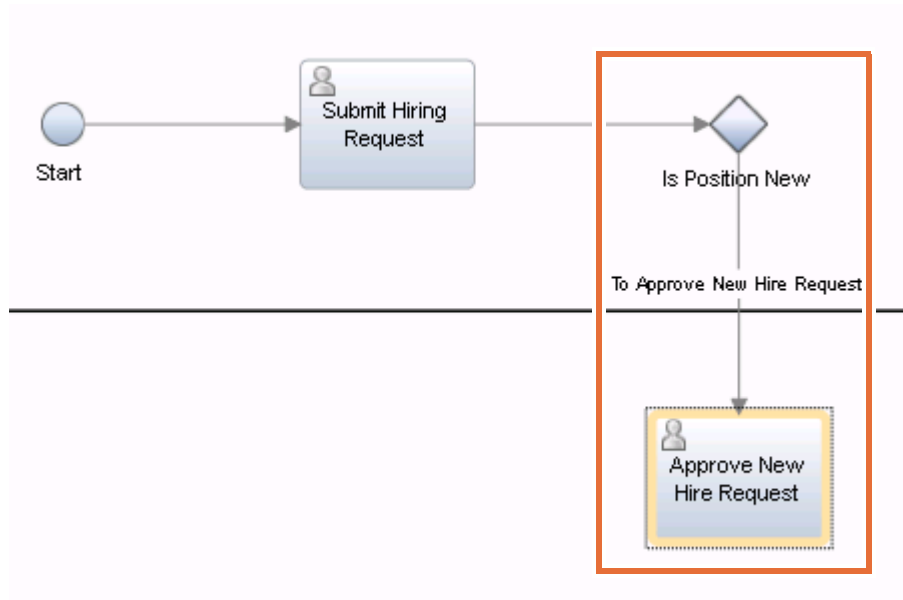


- ___ d. Select the sequence flow between **Approve New Hire Request** and **Approve Hire Request**

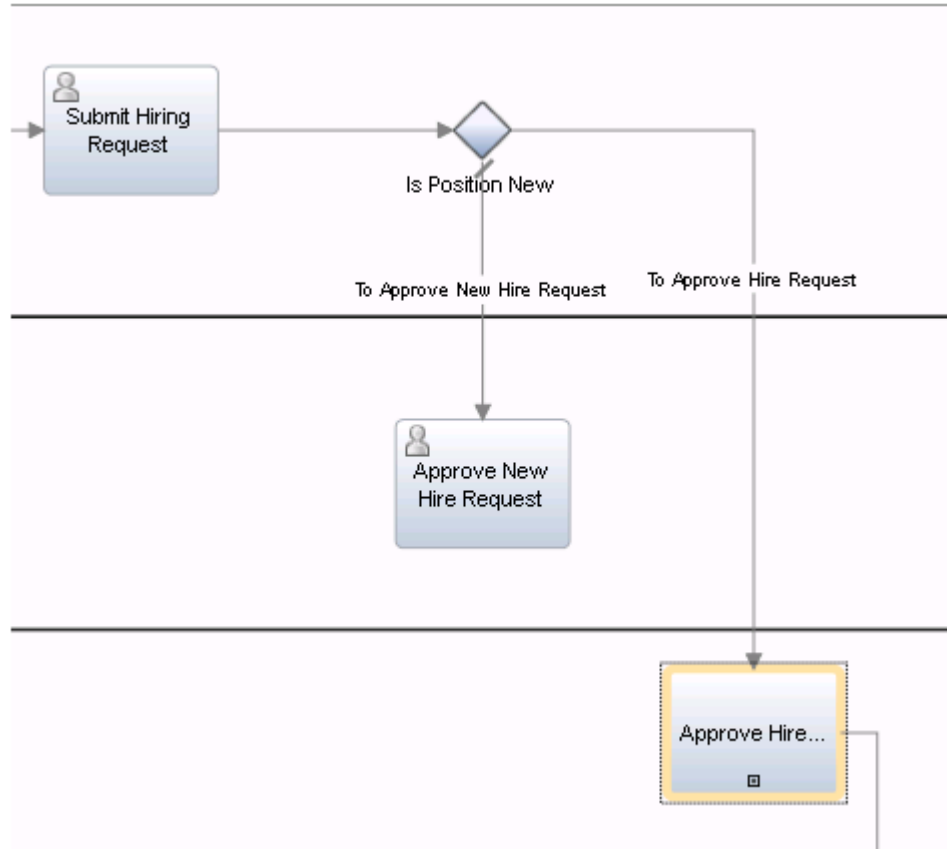
- ___ e. Right-click the flow and click **Delete**.



- ___ f. Connect the **Is Position New** gateway to the top of **Approve New Hire Request**.



- ___ g. Connect the **Is Position New** gateway to the top of **Approve Hire Request**.

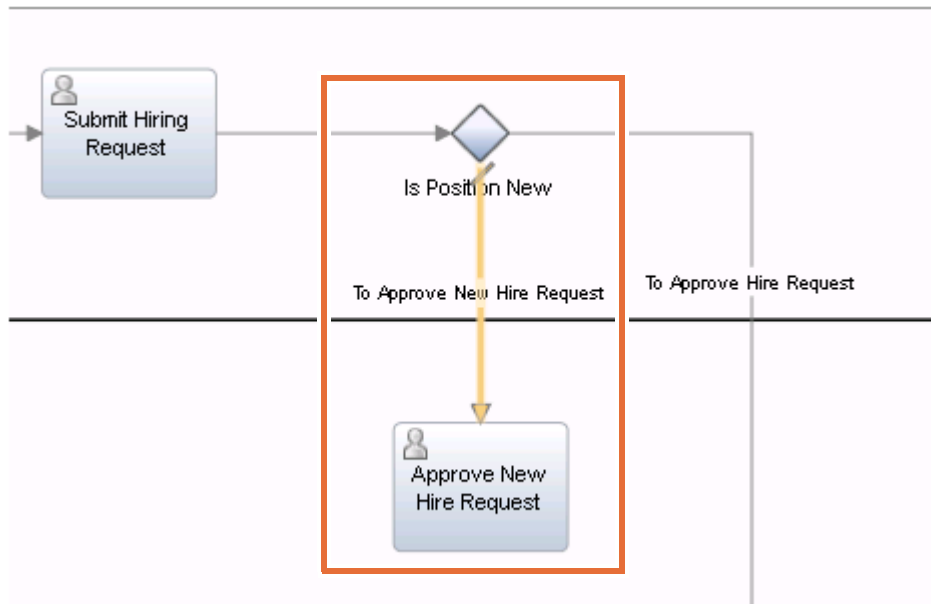


Important

Your sequence flows do not have to exactly match the exercise diagrams in this lab. The sequence flows change after implementation of the gateways. The flows become default or conditional (do or do not have a diagonal hash marker) according to the order you draw them, so your flows might vary from the diagrams in the labs. You learn how to set the default flow in a later exercise.

___ 4. Label the flows.

- ___ a. Select the flow between the **Is Position New** gateway and **Approve New Hire Request**.



- ___ b. In the **Properties > General > Common** section, enter **Review Needed** as the **Name** and select **Name visible**.

Properties Validation Errors

General

Implementation

Common

Name:

Name visible: ☒

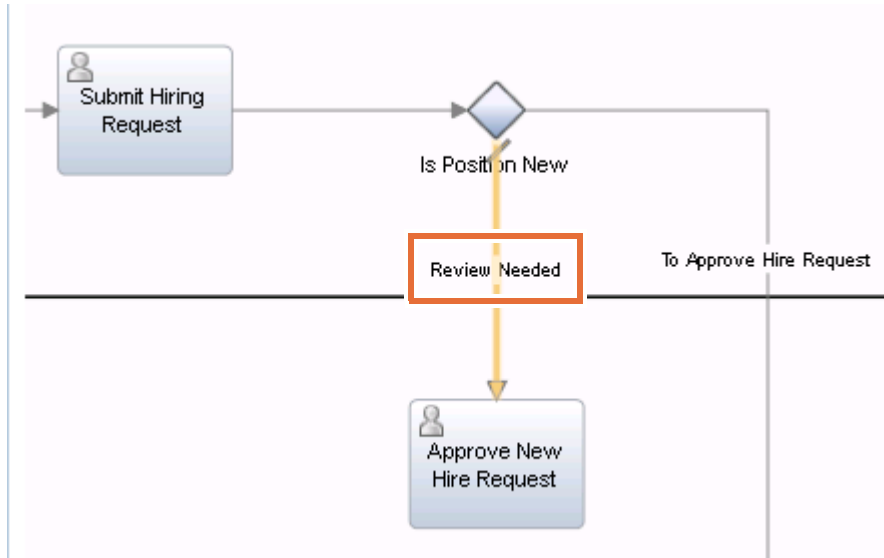
Documentation:

B I U |

|

|

The flow displays the label.



- ___ c. Select the flow between the **Is Position New** gateway and **Approve Hire Request**.
- ___ d. In the **Properties > General > Common** section, enter *Review Not Needed* as the Name and select **Name visible**.

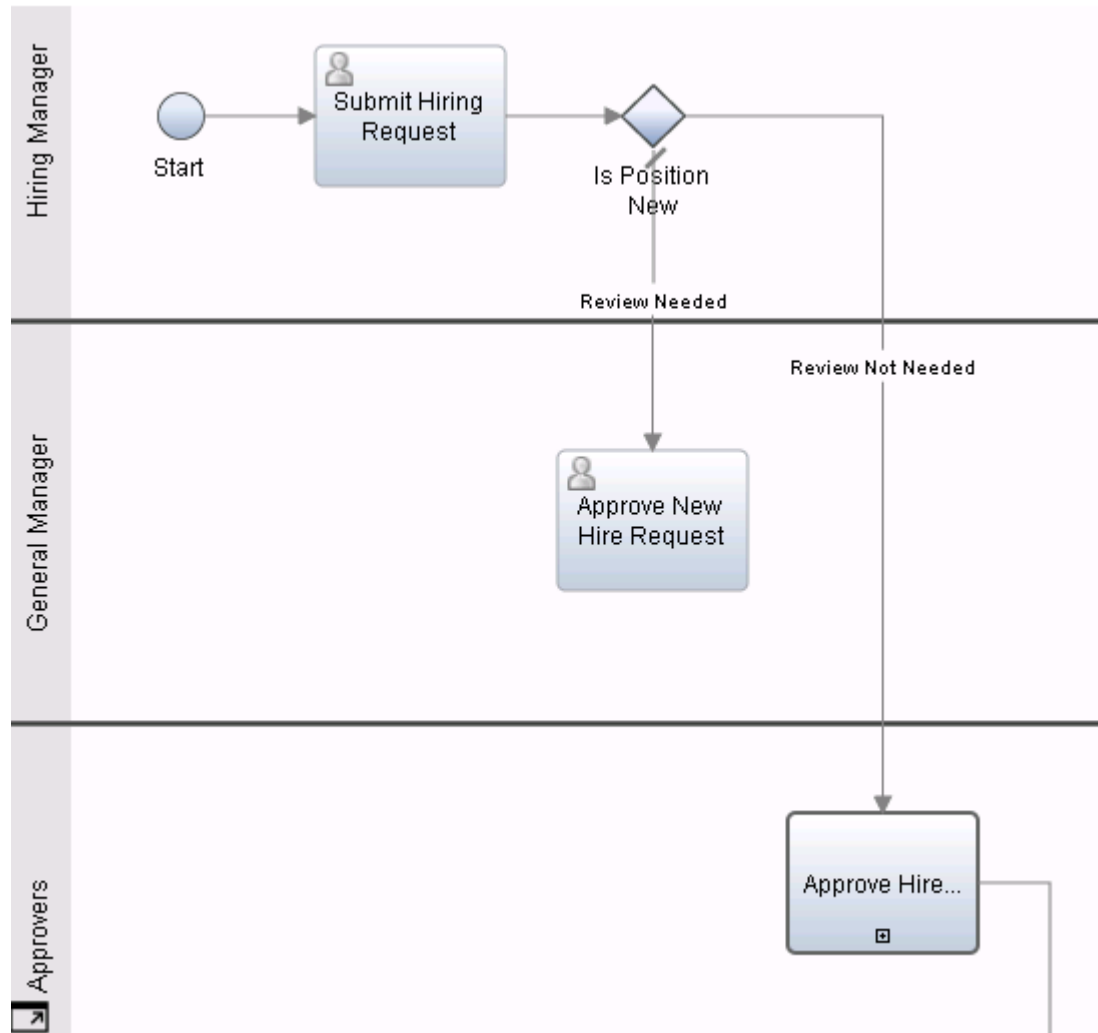
Properties Validation Errors

General
Implementation

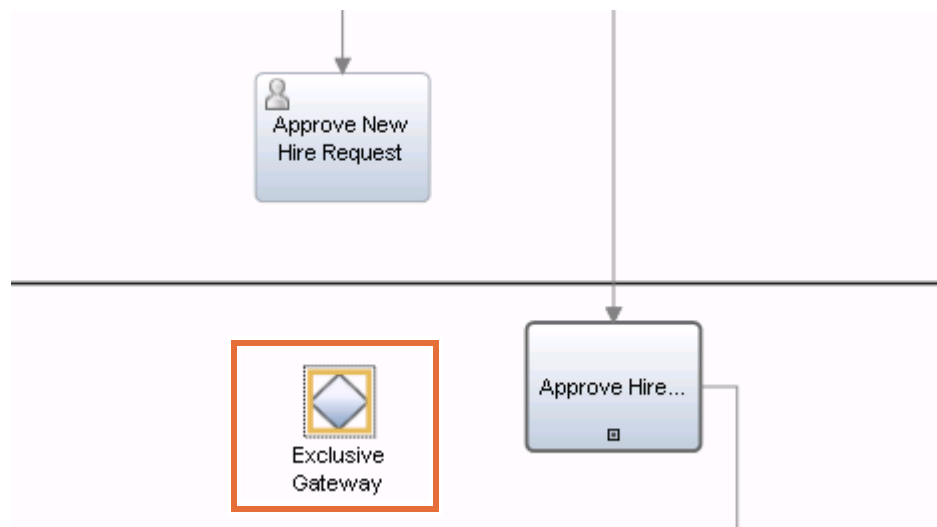
Common

Name: Review Not Needed
Name visible: ☒
Documentation:

__ e. Save your changes. The flow displays the label.

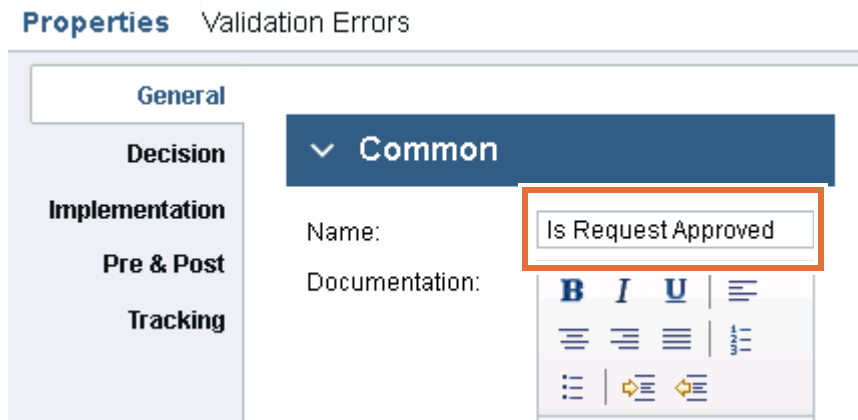


__ 5. Drag a **Gateway** from the palette onto the canvas to the left of the **Approve Hire Request** activity.



___ 6. Select the **Gateway** and set the properties.

- ___ a. Select the **Exclusive Gateway** and in the **Properties > General > Common** section, enter **Is Request Approved** as the Name.

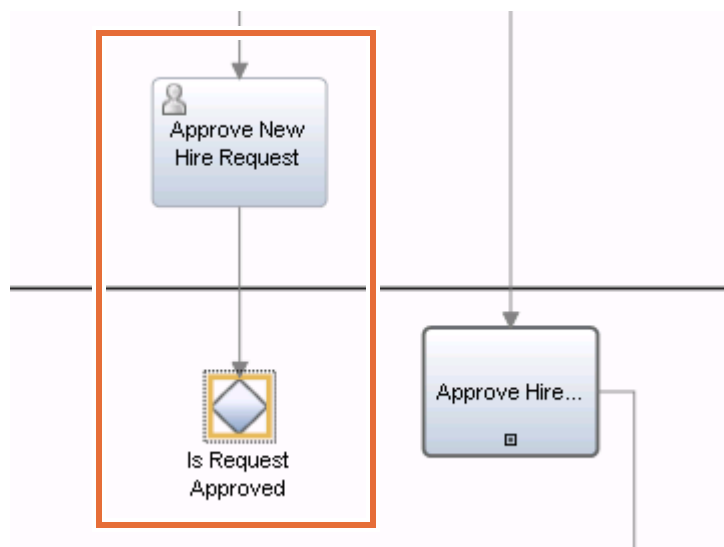


- ___ b. In the **Properties > General > Behaviour** section, verify **Exclusive Gateway** as the Gateway type.

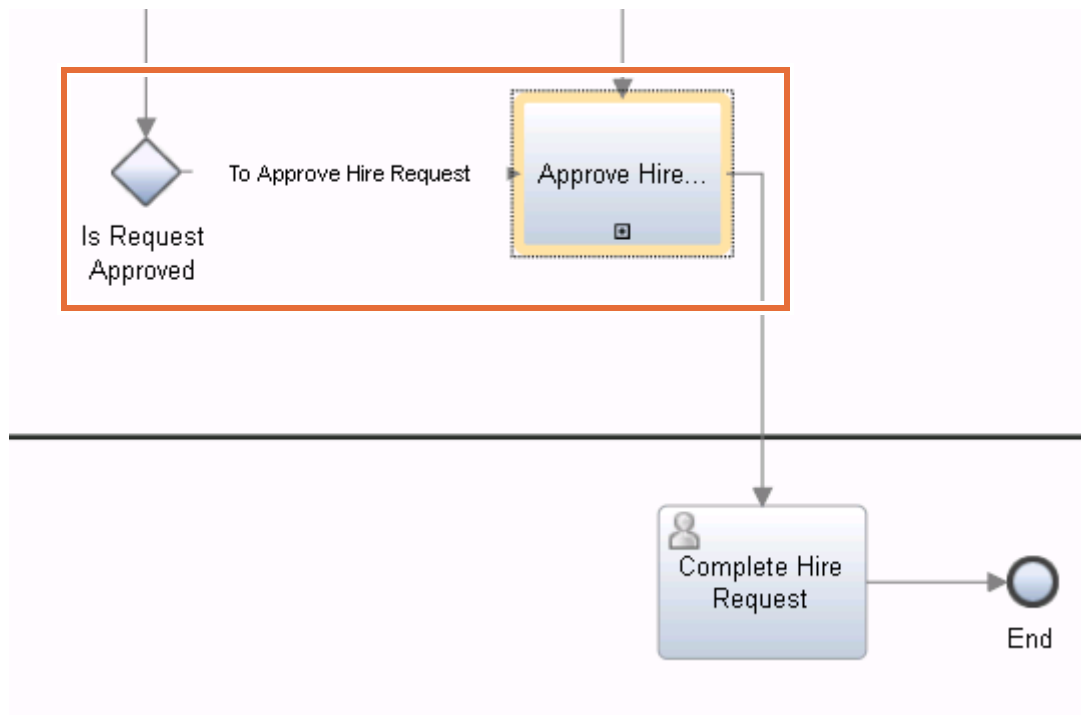


___ 7. Connect the gateway.

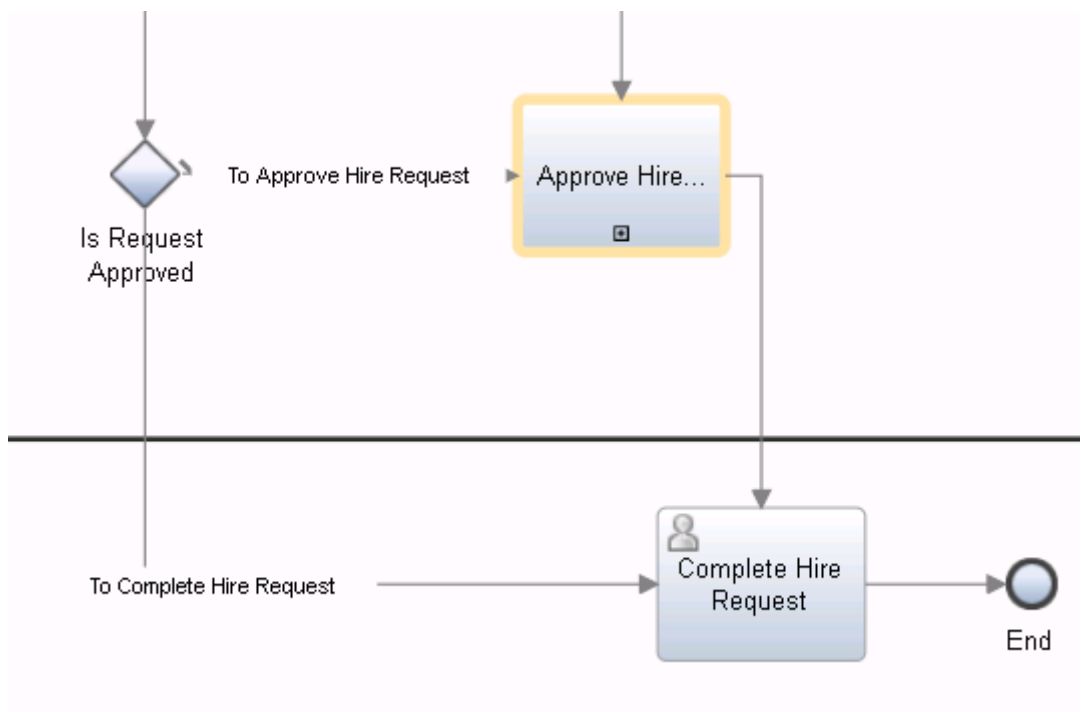
- ___ a. Connect the **Approve New Hire Request** to the top of the **Is Request Approved** gateway.



- ___ b. Connect the **Is Request Approved** gateway to the left anchor point of **Approve Hire Request**.



- ___ c. Connect **Is Request Approved** gateway to **Complete Hire Request** activity.



- ___ 8. Label the flows.

- ___ a. Select the flow between the **Is Request Approved** gateway and the **Approve Hire Request** linked process.

- ___ b. Name the flow `Approved` and select **Name visible**.

Properties Validation Errors




General

Implementation

Common

Name:

Name visible: ☒

Documentation: **B I U** |   

- ___ c. Select the flow between the **Is Request Approved** gateway and **Complete Hire Request**.
- ___ d. Name the flow `Not Approved` and select **Name visible**.

Properties Validation Errors



General

Implementation

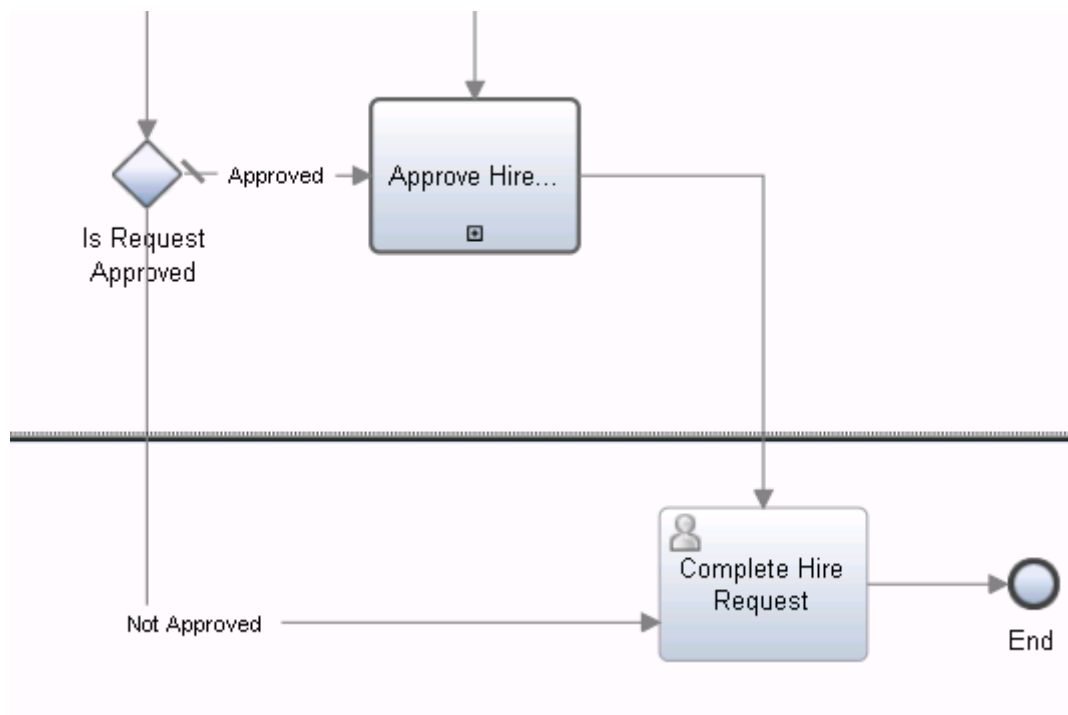
Common

Name:

Name visible: ☒

Documentation: **B I U** |  

The flow displays the label:

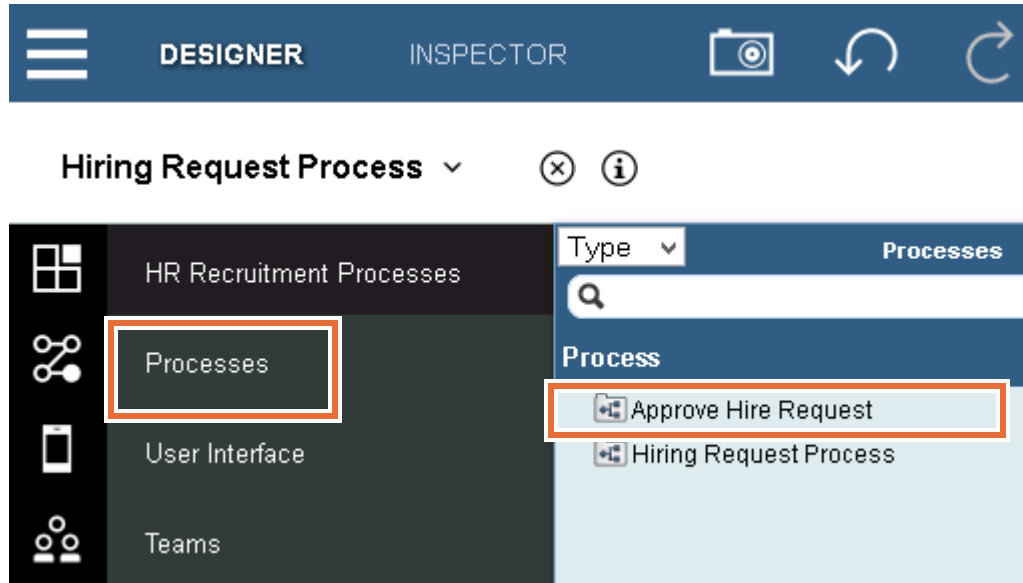


__ e. Click **Save** to save your process.

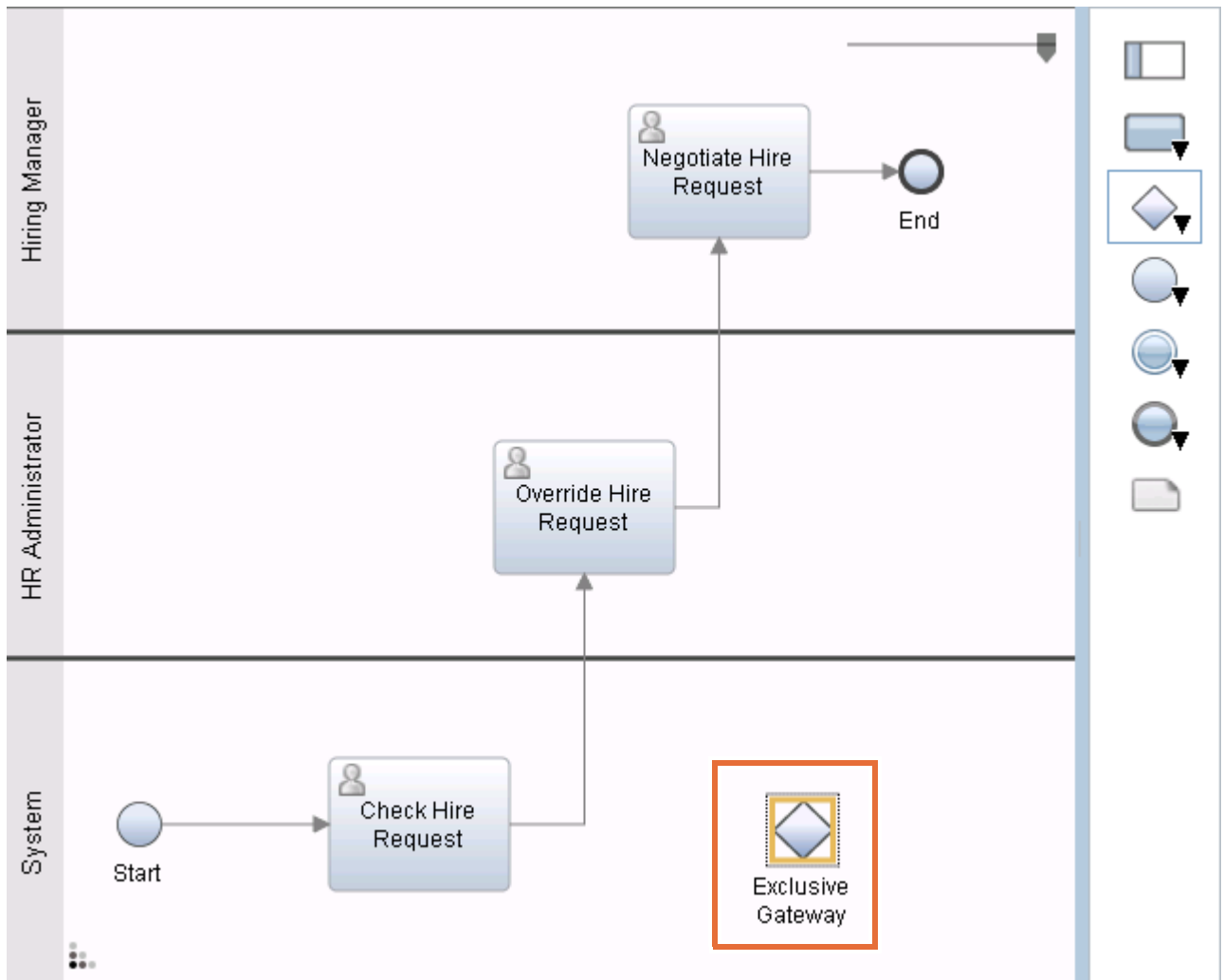
Part 2: Create gateways for the nested process

Add gateways to the nested process **Approve Hire Request**. In this part, create a gateway that is called **Is Salary Compliant**.

1. To open the **Approve Hire Request** process, click **Processes** in the library and click **Approve Hire Request** from the menu.

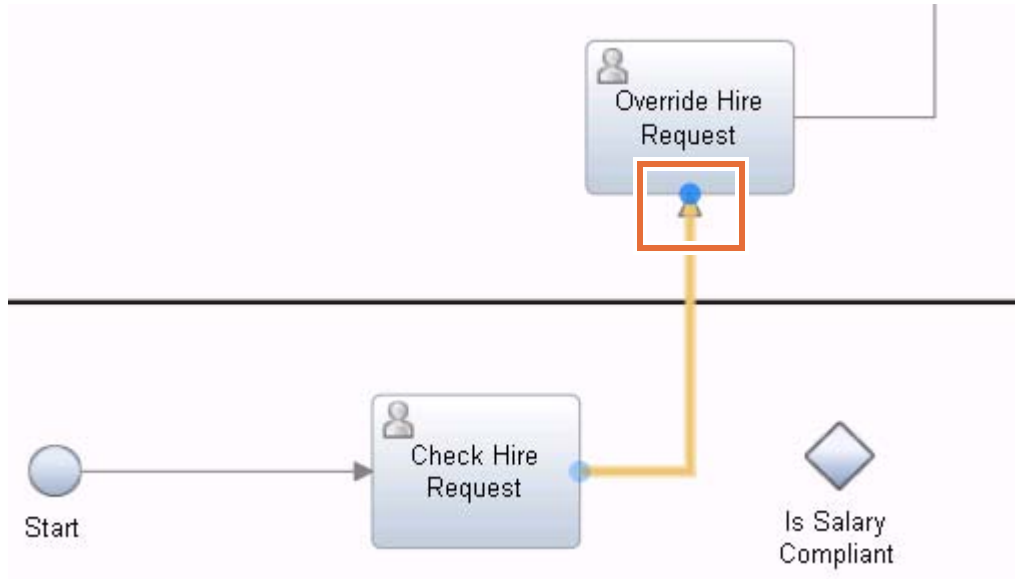


- ___ 2. Drag a **Gateway** from the palette onto the canvas to the right of the **Check Hire Request** activity.



- ___ 3. Rename the gateway to **Is Salary Compliant**
- ___ 4. Verify that the Gateway Type is **Exclusive Gateway**.
- ___ 5. Connect the gateway.
- ___ a. Select the sequence flow between **Check Hire Request** and **Override Hire Request**.

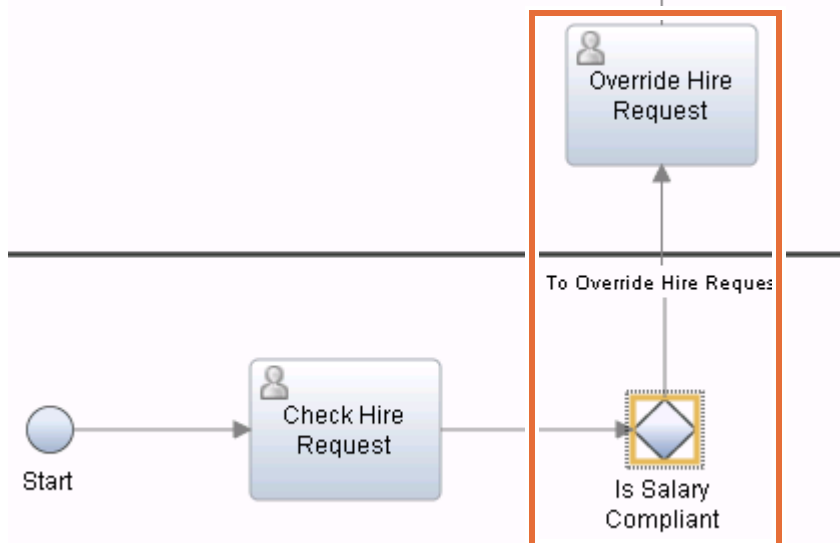
- ___ b. Hover over the tip of the sequence flow to see a blue point.



- ___ c. Select the blue point and drag the flow to connect **Check Hire Request** to the **Is Salary Compliant** gateway.

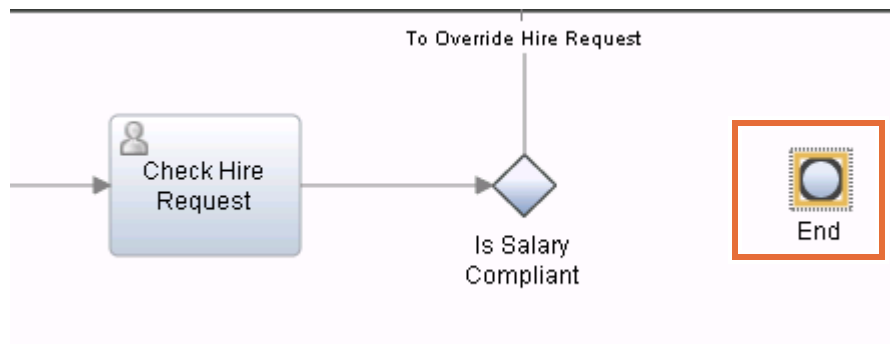


- ___ d. Connect **Is Salary Compliant** to the bottom of **Override Hire Request**.

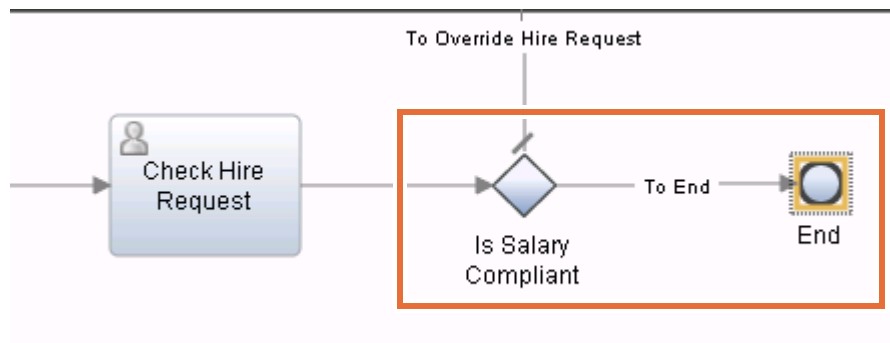


- ___ e. Remove the existing sequence flow between **Negotiate Hire Request** and the **End** event.

- ___ f. Move the **End** event from the top of the diagram and place it to the right of **Is Salary Compliant**.



- ___ g. Connect **Is Salary Compliant** to the left anchor point of the **End** event.



- ___ h. Save your changes.

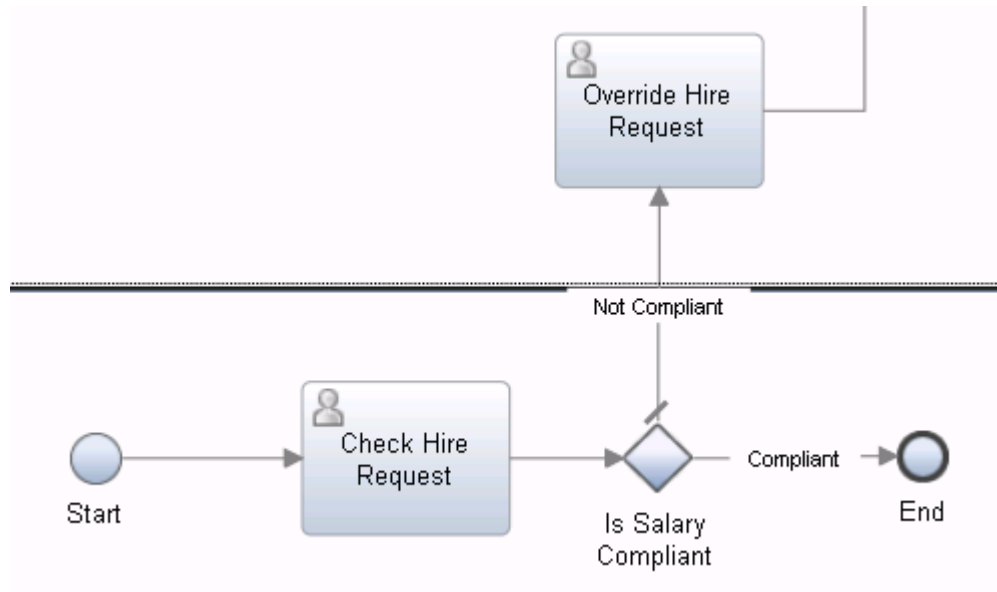
- ___ 6. Label and straighten the flows.

- ___ a. Select the flow between the **Is Salary Compliant** gateway and **Override Hire Request**.
- ___ b. Name the flow **Not Compliant**.
- ___ c. Select the flow between the **Is Salary Compliant** gateway and the **End** event.
- ___ d. In the **Properties > General > Common** section, name the flow **Compliant**.

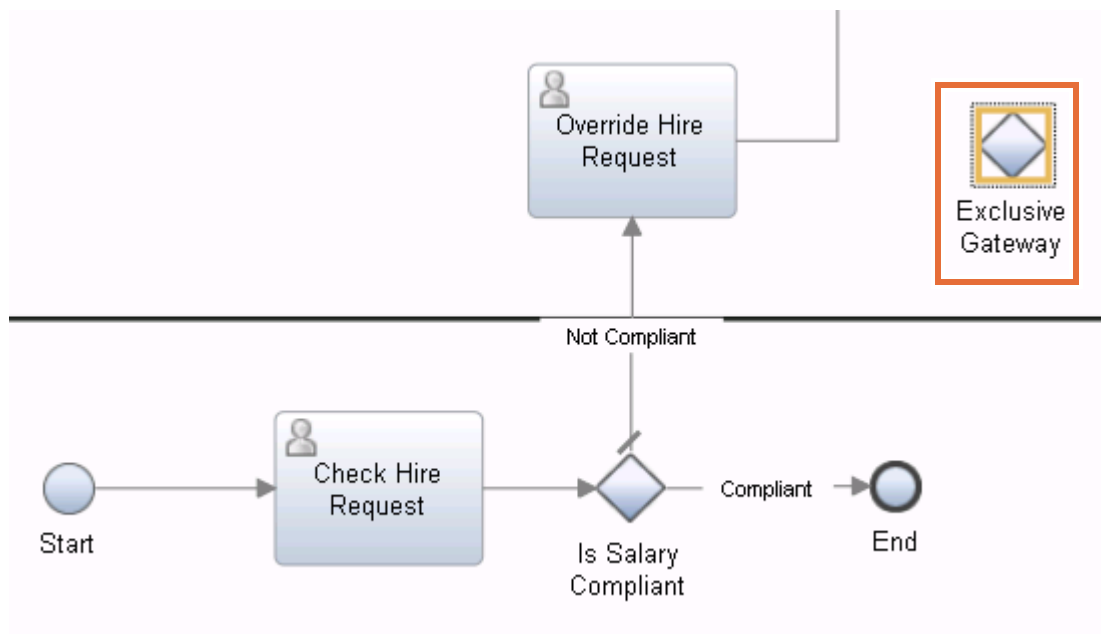
Properties Validation Errors

General	
Implementation	<div>Common</div> <div> Name: <input type="text" value="Compliant"/> </div> <div> Name visible: <input checked="" type="checkbox"/> </div> <div> Documentation: <div> B <i>I</i> <u>U</u> </div> <div> <div></div> <div></div> <div></div> </div> </div>

The flows display as follows:

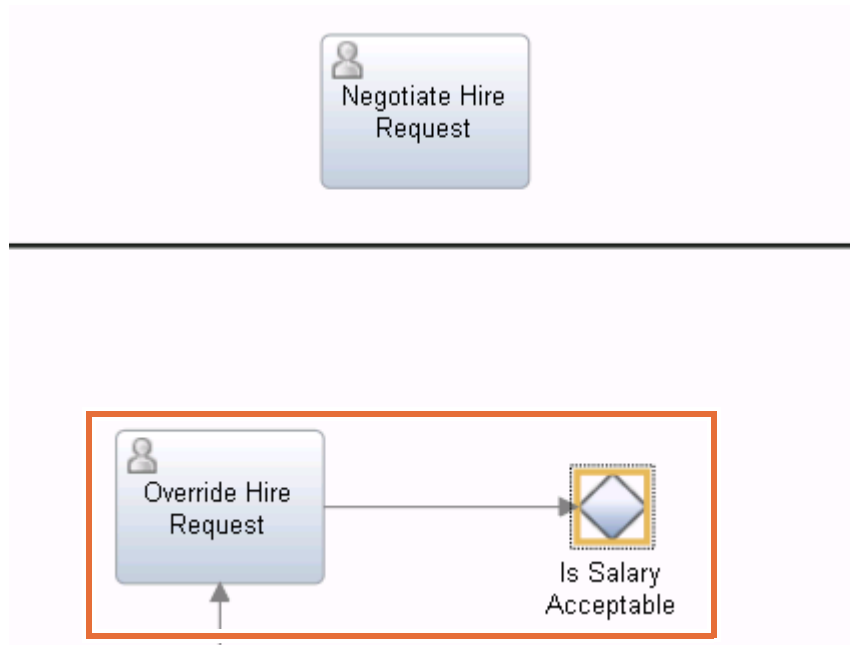


- ___ 7. Drag a **Gateway** from the palette onto the canvas to the right of the **Override Hire Request** activity.

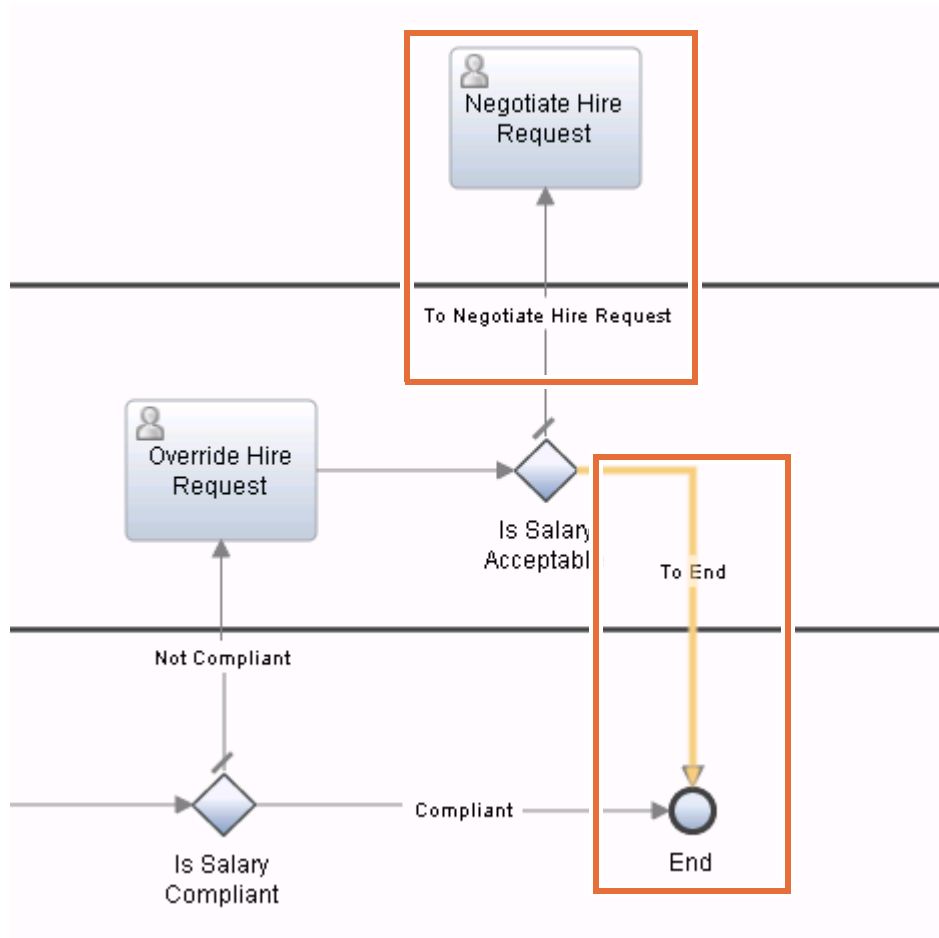


- ___ 8. Click the **Gateway** and set the properties.
- ___ a. In the Properties section set the gateway name to: Is Salary Acceptable
 - ___ b. Save your changes.
- ___ 9. Connect the gateway.
- ___ a. Delete the flow between **Override Hire Request** and **Negotiate Hire Request**.

- ___ b. Connect the **Override Hire Request** to the right anchor of the **Is Salary Acceptable** gateway.



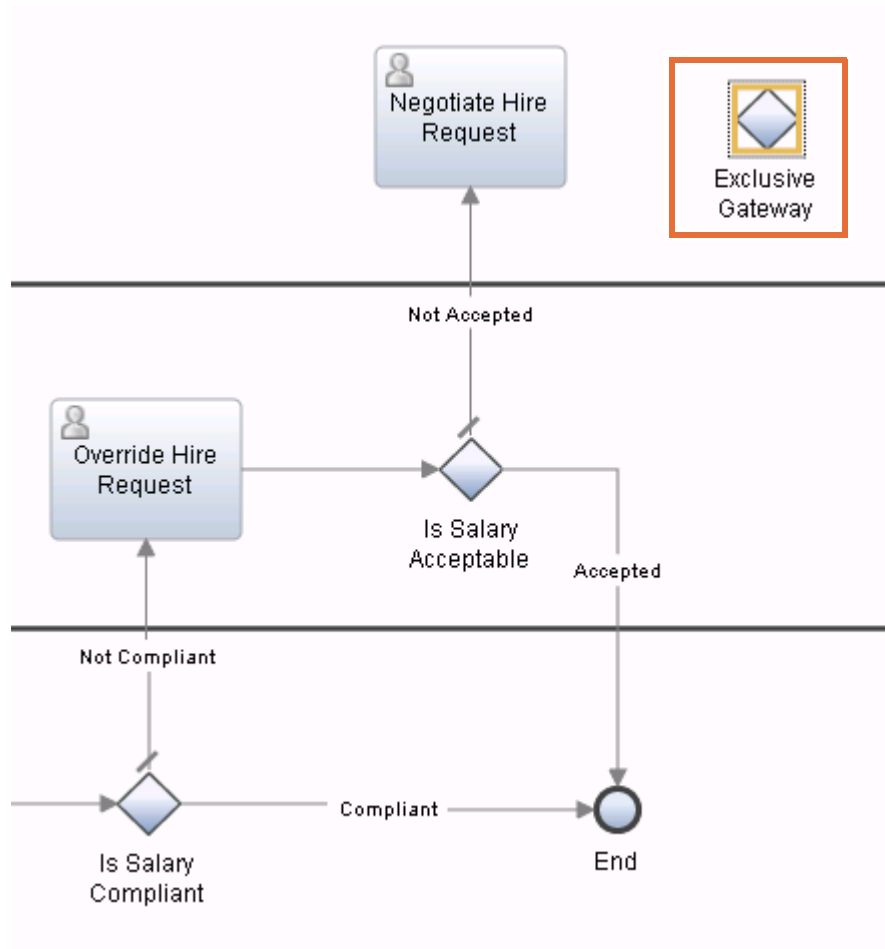
- ___ c. Connect the **Is Salary Acceptable** gateway to the bottom anchor of **Negotiate Hire Request** and to the top anchor of the **End** event.



___ 10. Label the flows.

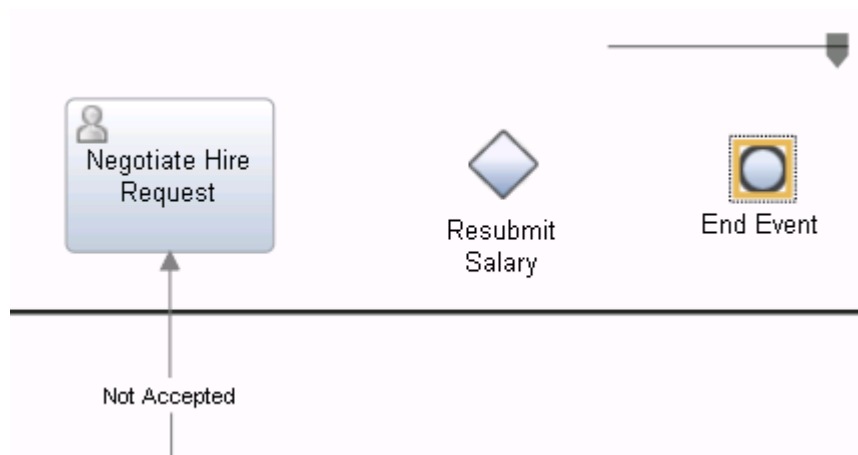
If the HR Administrator rejects the requested salary, the HR Administrator must provide comments for the violation, add a proposed salary, and send the request back to the Hiring Manager who originated the request. Label the flows as Accepted or Not Accepted.

- ___ a. Name the flow between the **Is Salary Acceptable** gateway and **Negotiate Hire Request** as **Not Accepted**.
 - ___ b. Name the flow between the **Is Salary Acceptable** gateway and the end event as **Accepted**.
- ___ 11. Drag a **Gateway** from the palette onto the canvas to the right of the **Negotiate Hire Request** activity.

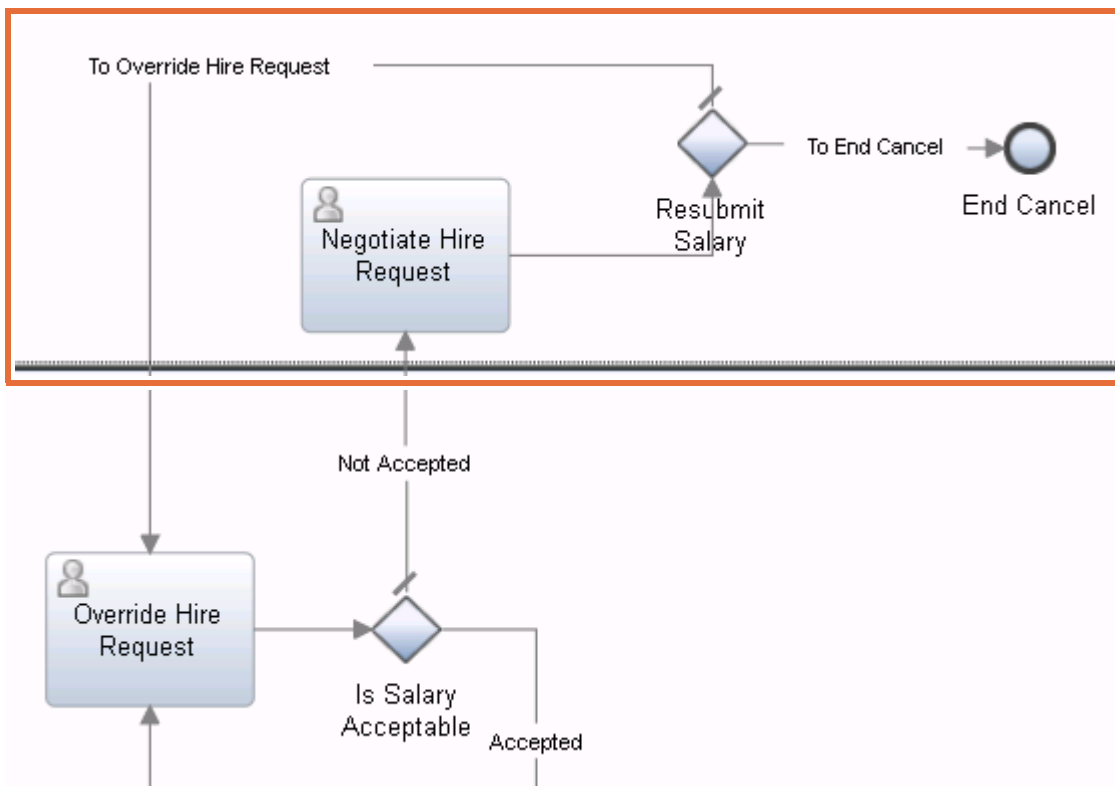


- ___ 12. Rename the gateway to **Resubmit Salary** and verify that the Gateway Type is **Exclusive Gateway**.

- ___ 13. Drag an **End event** from the palette onto the canvas to the right of the **Resubmit Salary** gateway.



- ___ 14. Rename the **End event** as: End Cancel
- ___ 15. Connect the gateway.
- ___ a. Connect **Negotiate Hire Request** to the **Resubmit Salary** gateway.
 - ___ b. Connect the **Resubmit Salary** gateway to the top of **Override Hire Request**.
 - ___ c. Connect **Resubmit Salary** gateway to the **End Cancel** event.



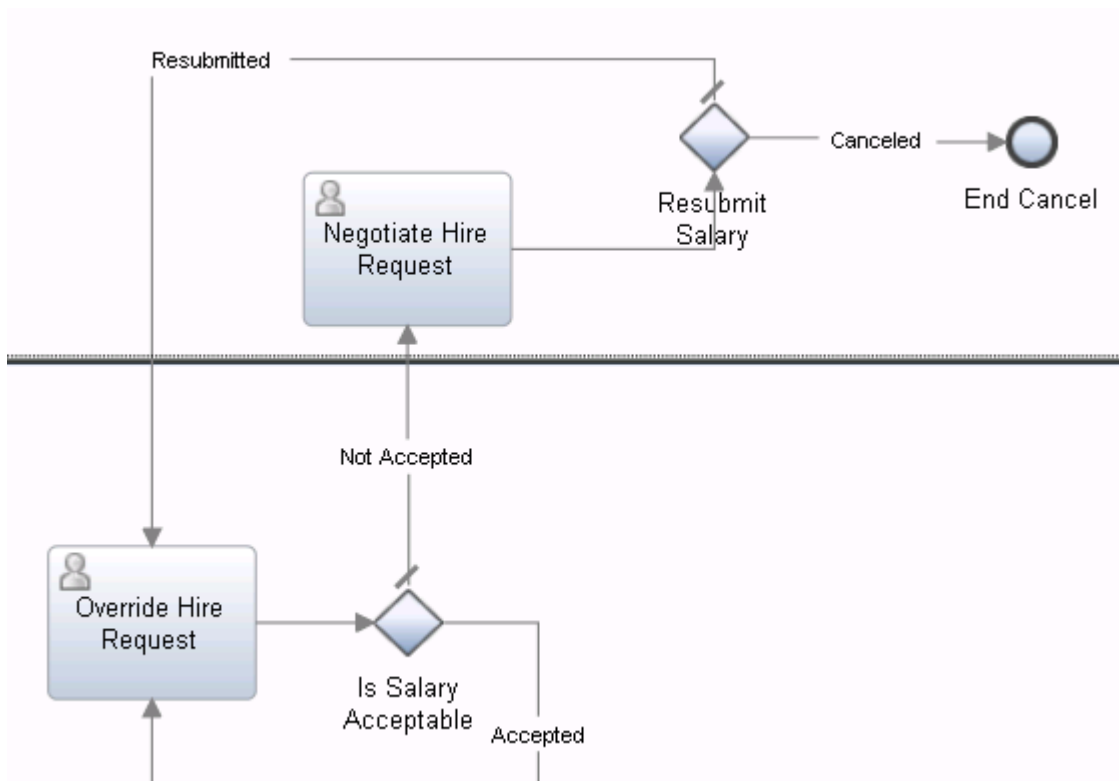


Important

Make sure that you create the flows to these elements in the correct directions. You can align the activities by selecting and dragging them in a location that allows you to see them better.

___ 16. Label the flows.

- ___ a. Name the flow between the **Resubmit Salary** gateway and **Override Hire Request** as **Resubmitted** and select **Name visible**.
- ___ b. Label the flow between the **Resubmit Salary** gateway and the **End** event as: **Canceled** and select **Name visible**.
- ___ c. The process has all the flows labeled.



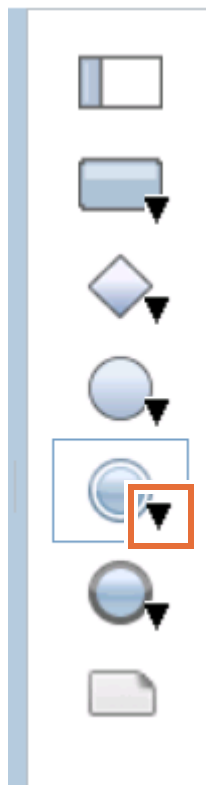
Part 3: Modeling timer intermediate events

Examine the process requirements and select the one that models an escalation.

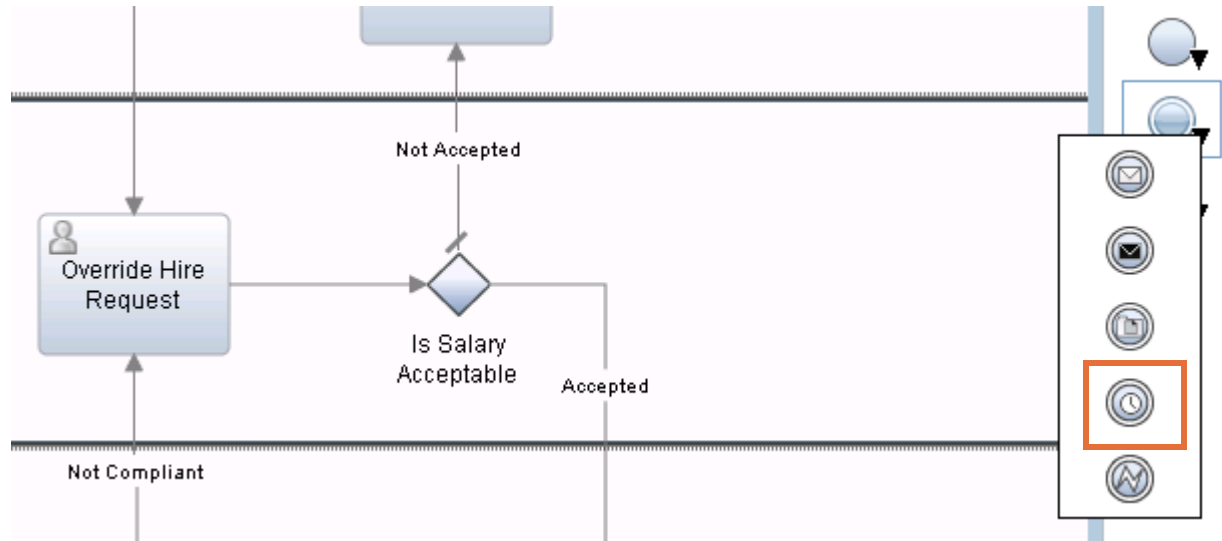
Refer to the core requirements for an escalation in 2.10 listed in Exercise 2. The HR Administrator has 4 hours to complete the review. If the review is not completed within 4 hours, an email is sent to the HR Administrator notifying the HR Administrator of the missed deadflow.

Use the timer implementation option to model escalation paths or delays in your processes. Using a timer intermediate event, you can specify a time interval after or before which some activity is conducted. The timer implementation option is available for events that are included in the process flow and events that are attached to an activity.

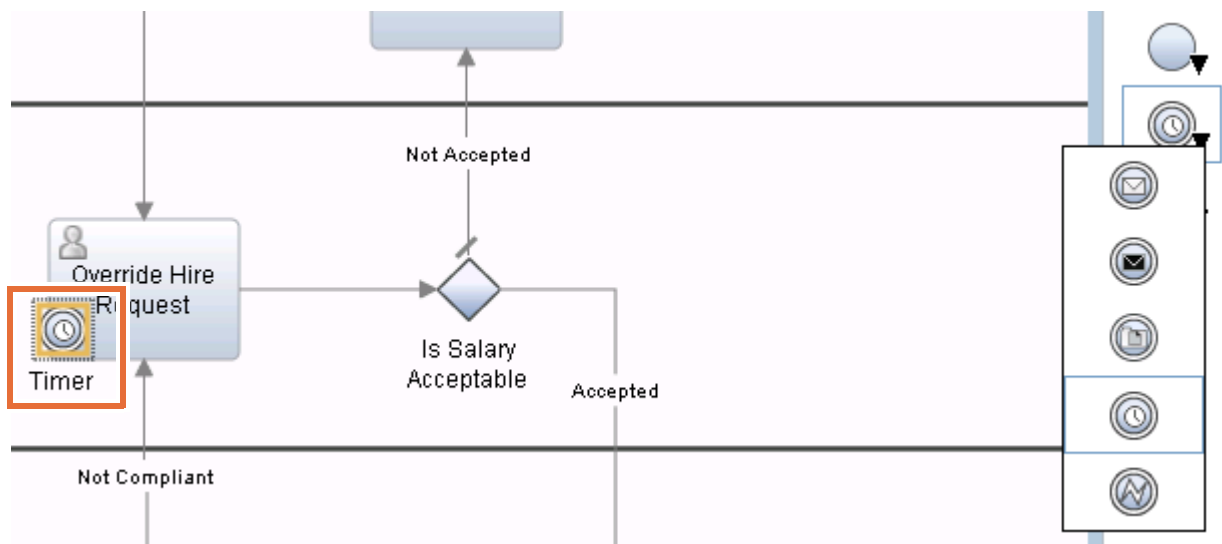
- ___ 1. In the **Approve Hire Request** process, select the **drop-down icon** beside the **Intermediate** event.



- ___ 2. Select the **Timer event** from the set of intermediate events.



- ___ 3. Drag the **Timer event** from the palette onto the lower left anchor of the **Override Hire Request** activity.



Important

For this exercise, make sure that you drag the **Timer** event onto the activity instead of to the left of the activity. In this case, you want a boundary or attached intermediate event instead of a sequence flow intermediate event.

- ___ 4. Click the **Intermediate** boundary event and set its properties.
- ___ a. Select the **Timer** event.

- ___ b. In the **Properties > General > Common** section, change the name to: 4 hour timer.

Properties Validation Errors

General

Implementation

Data Mapping

Pre & Post

Tracking

Common

Name: 4 hour timer

Documentation: **B I U** | ☰

- ___ c. Select the **Properties > Implementation** menu.
- ___ d. In **Boundary Event Type** section, make sure that the Timer boundary event is selected. Keep the remaining default properties that were set during implementation.

Properties Validation Errors


General

Implementation

Data Mapping

Pre & Post

Boundary Event Type

 Timer

Interrupt activity: ☒

Repeatable: ☐

Event Properties

Trigger on: After start of step

Custom date:

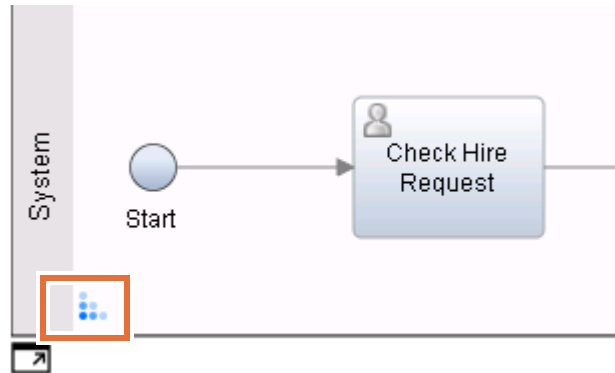
Before or after difference: 0

Tolerance interval: 0

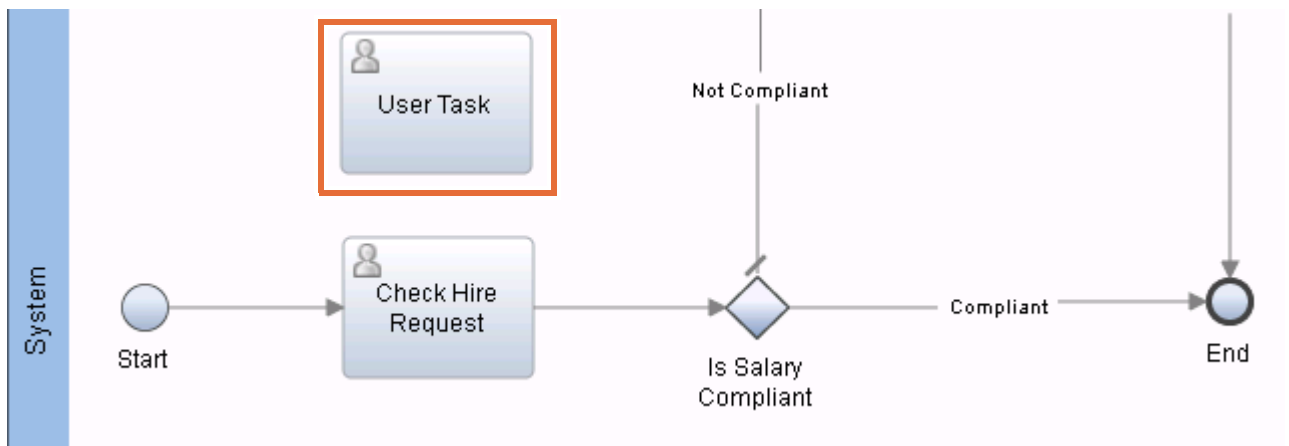
Use the activity work schedule: ⓘ ☐

__ 5. Add the Notify HR Administrator activity.

- __ a. Resize the **System** lane by clicking and dragging the control point next to System lane label to expand the lane.



- __ b. Drag an activity from the palette to the **System** lane. Place it above the **Check Hire Request** activity.

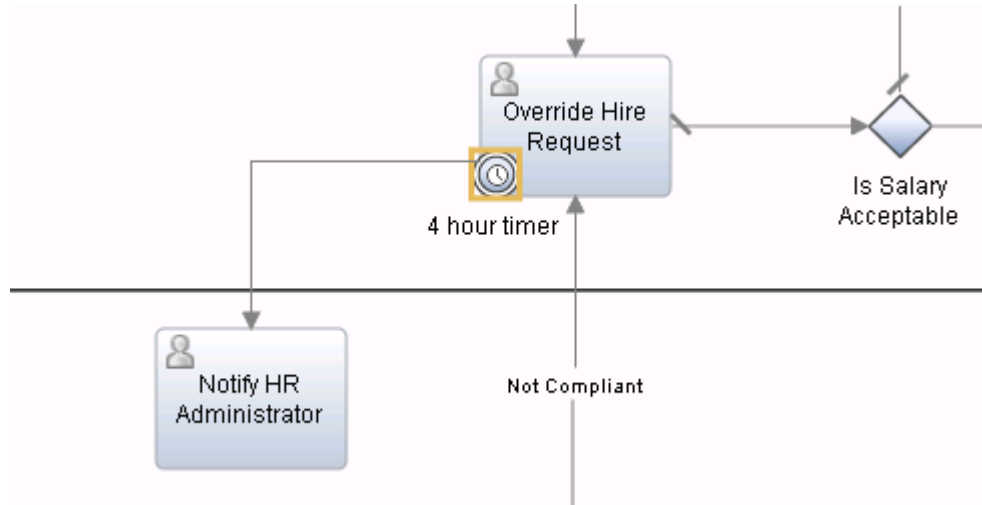


Hint

Drag a box to select the activities and gateway in System lane and move them together to make space for this new activity.

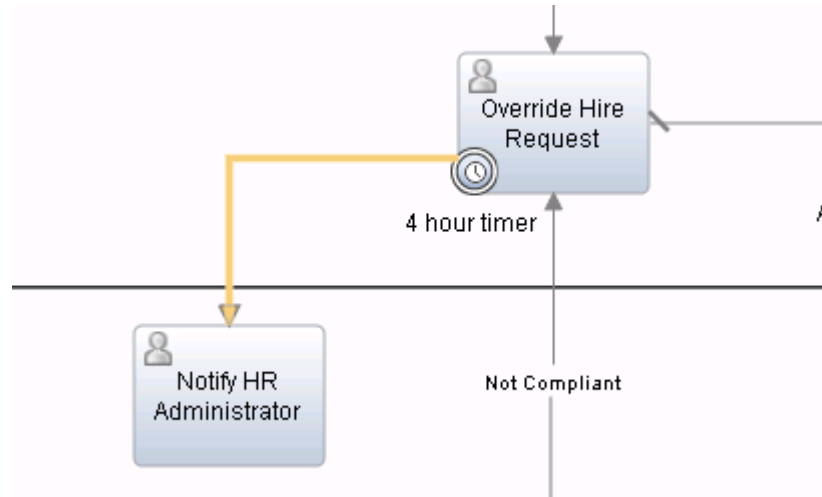
- __ c. Rename the activity to: Notify HR Administrator

- ___ 6. Connect the **Timer Intermediate Event** to the **Notify HR Administrator** activity.



- ___ 7. Label the flow.

- ___ a. Select the flow between the **Timer Intermediate Event** and **Notify HR Administrator**.



- ___ b. In **Properties > General > Common** section, name the flow as 4 Hours and select **Name visible**.

Properties Validation Errors

General

Implementation

Common

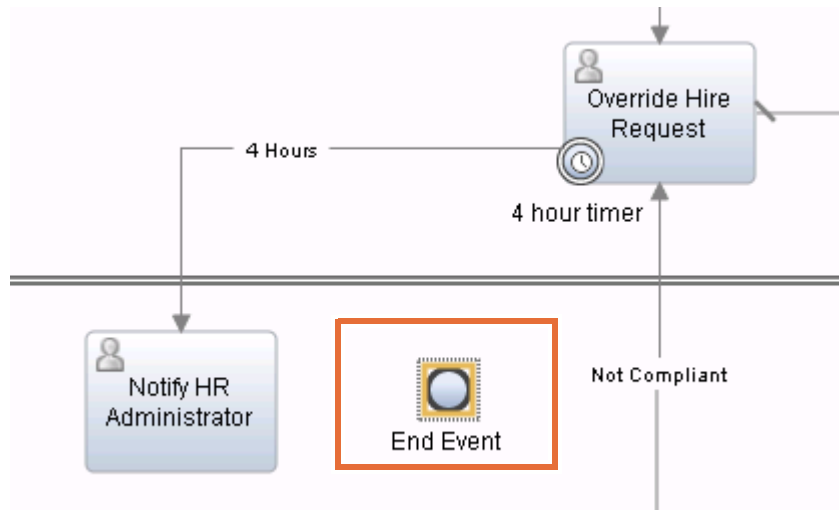
Name: 4 Hours

Name visible: ☒

Documentation: **B I U** [List of icons]

___ 8. Add an End Notification event.

- ___ a. Drag an **End event** icon from the palette onto the canvas to the right of **Notify HR Administrator**.



- ___ b. Rename the End event to End Notification.

Properties Validation Errors

General

Implementation

Data Mapping

Pre & Post

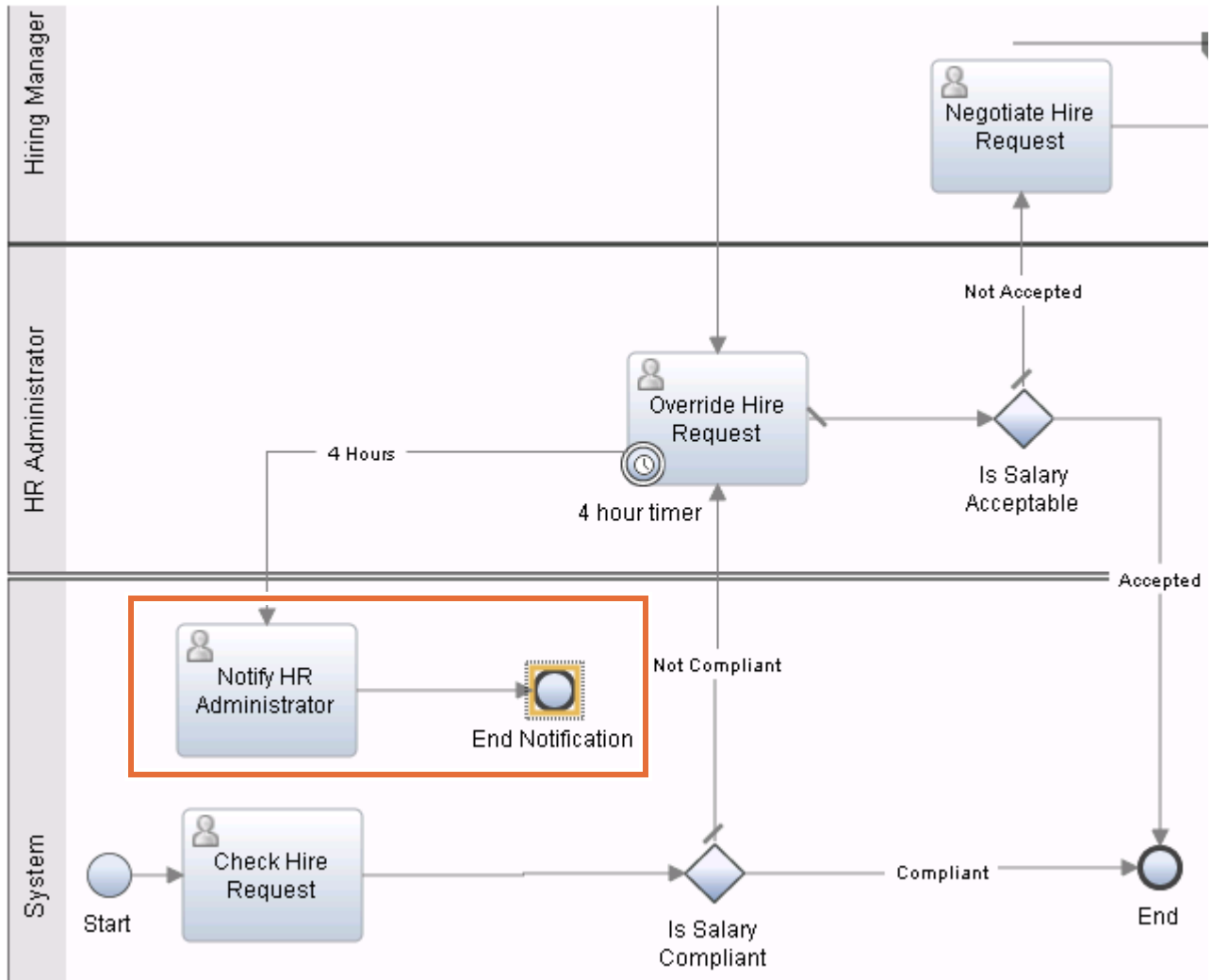
Tracking

Common

Name:

Documentation: **B I U**

___ 9. Connect the flow from **Notify HR Administrator** to the **End** event.



___ c. Click **Save** to save your work.



Important

You completed the following tasks:

- Added gateways to a process
- Modeled the appropriate sequence flows for each gateway
- Added a timer intermediate event to a process based on business requirements
- Modeled an escalation path in a process with IBM web Process Designer

In the next exercise, you learn how to validate your process model as this step is the final stage of Playback 0.

End of exercise

Exercise review and wrap-up

The first part of this exercise showed adding gateways to the process in IBM web Process Designer. Next, you modeled the appropriate sequence flows for each gateway. The last part of this exercise showed adding a timer intermediate event for a process requirement.

Exercise 4. Validating the process model

Estimated time

00:15

Overview

This exercise covers how to validate the business process.

Objectives

After completing this exercise, you should be able to:

- Validate that the business process reflects the intended requirements
- Implement the requirements with Playback feedback and new process requirements as input

Introduction

Before moving on to Playback 1, it is a good idea to verify your process in a final Playback meeting.

This action can build consensus among the different stakeholders as the model does not change much visually after Playback 0. Sometimes there is oscillation a few times between Playback 1 and Playback 0 until a team is firmly in the implementation phase of the Playbacks.

Requirements

Successful completion of the previous exercise is required.

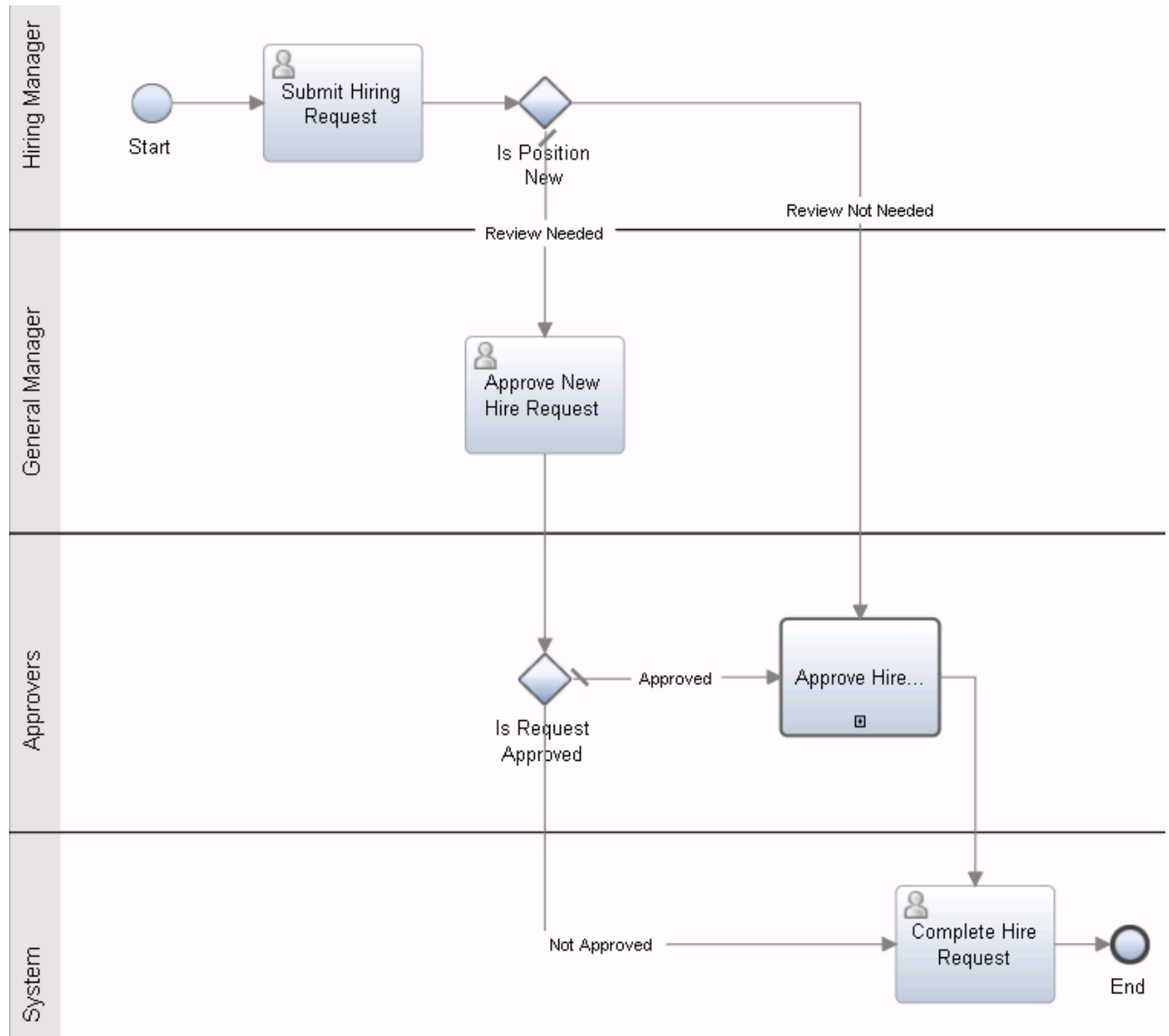
Exercise instructions

Part 1: Verify the process model

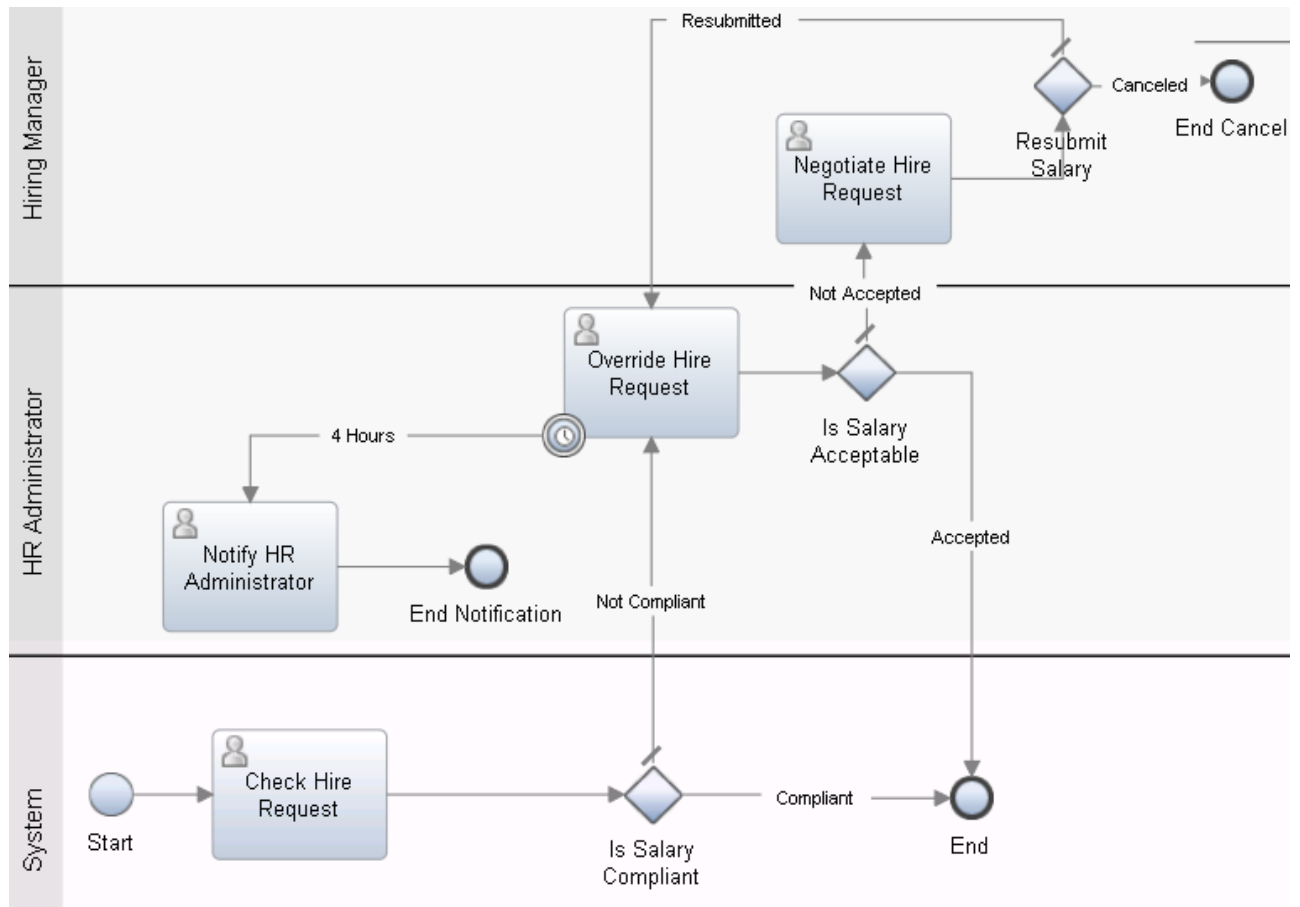
If you have a colleague or others nearby, see whether you can explain your new model to them to simulate a Playback. If not, examine your process in IBM web Process Designer and compare it to the diagrams.

Ensure that the **Hiring Request Process** and **Approve Hire Request** processes look similar to the diagrams before moving on:

___ 1. View the **Hiring Request Process**.



2. View the **Approve Hire Request** process.



Note

The flows out of the decision gateways might not match your screen because they are not yet implemented. You implement the gateway default flows in the next Playback.

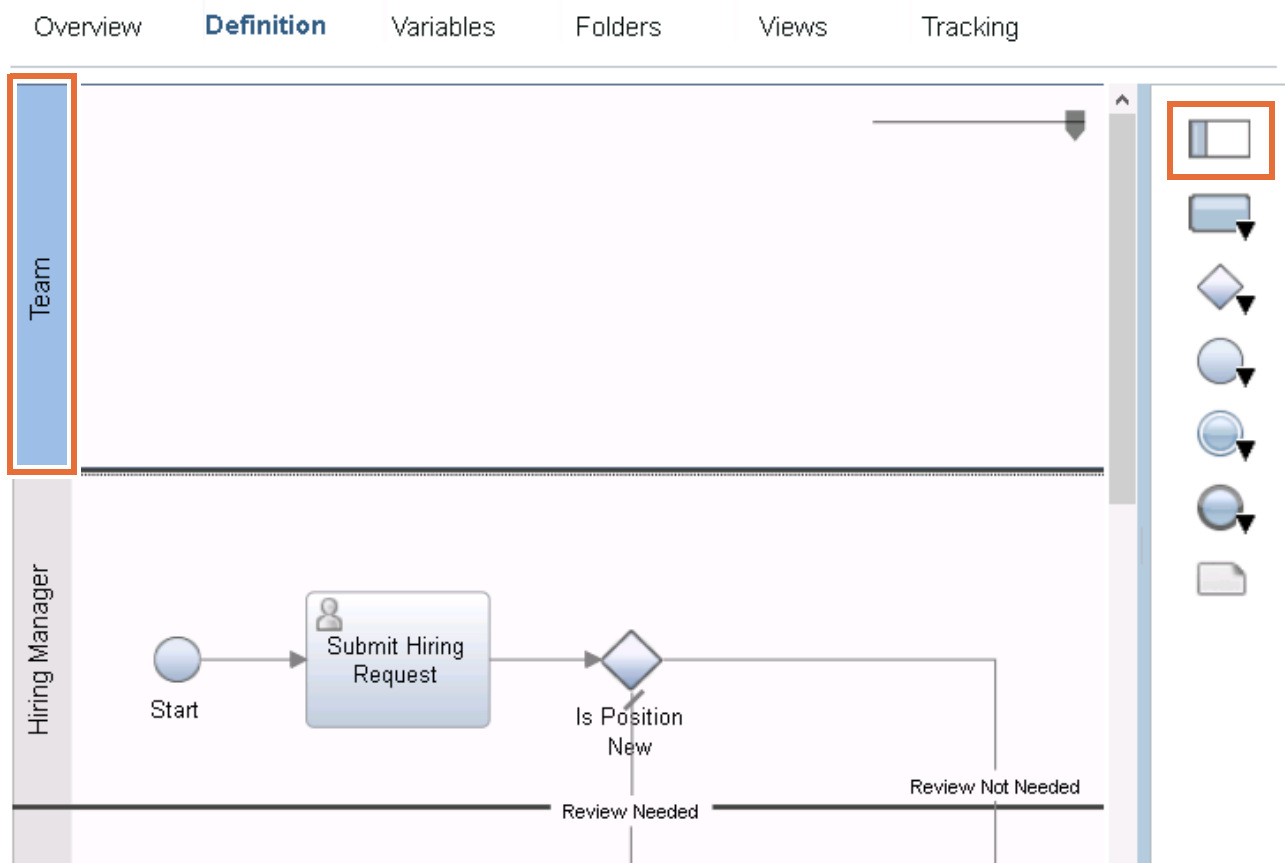
Part 2: Add new process requirements to the process

There are new process requirements. During Playback 0, the vice president mentions:

There are some recent issues with several job postings that contain wording that violates a new set of hiring laws. To address this issue, the vice president suggests that a lawyer must review every job post at some point before the job opening is released and posted to the public. The lawyer checks for legal compliance and edits if necessary.

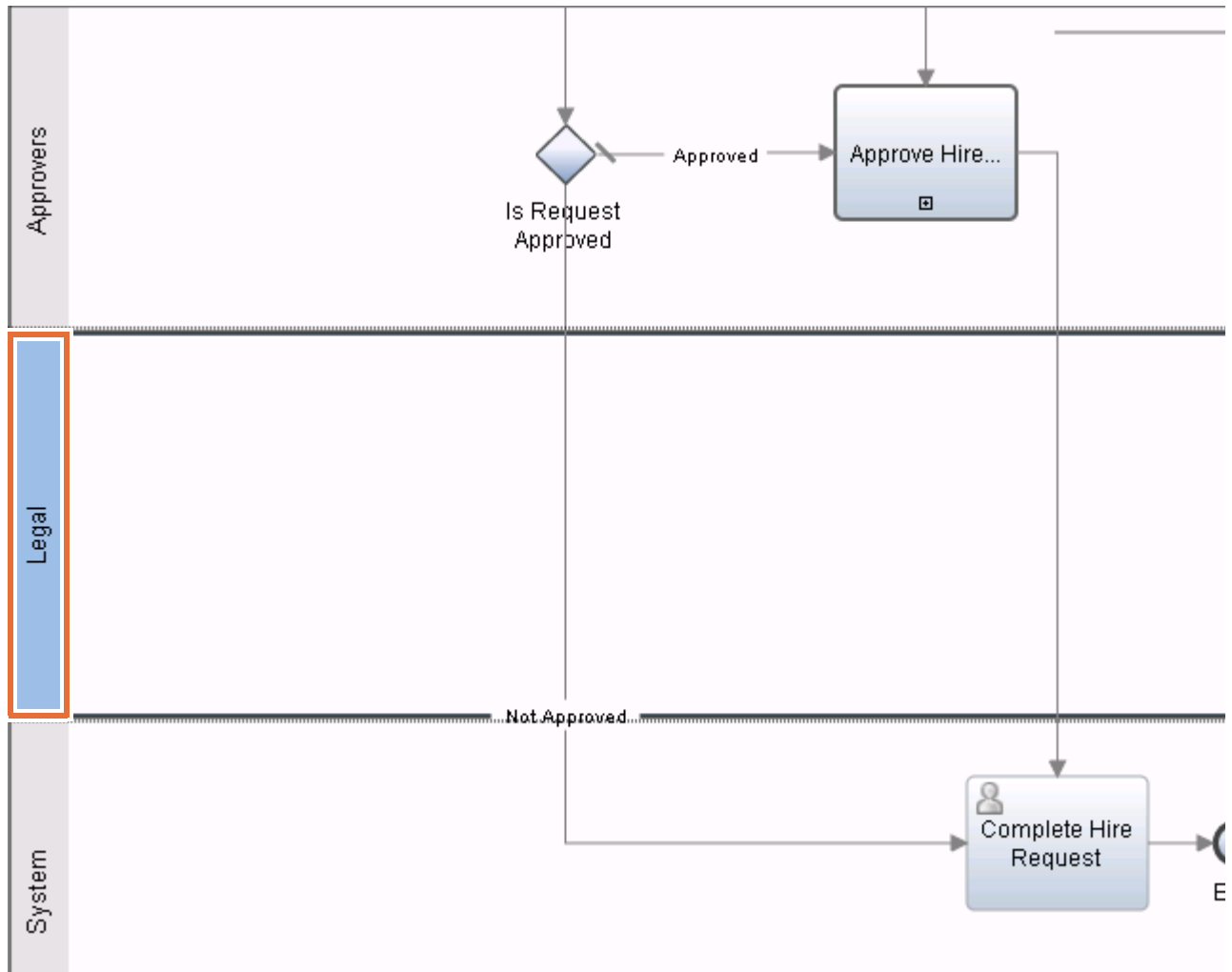
Examine the requirement and come up with the solution for this requirement.

- __ 1. Add a lane in the Hiring Request Process for the legal team.
 - __ a. Open the **Hiring Request Process**.
 - __ b. Click the **Lane** icon and drag it from the palette to the canvas above the Hiring Manager lane.



- __ c. Name the lane Legal.

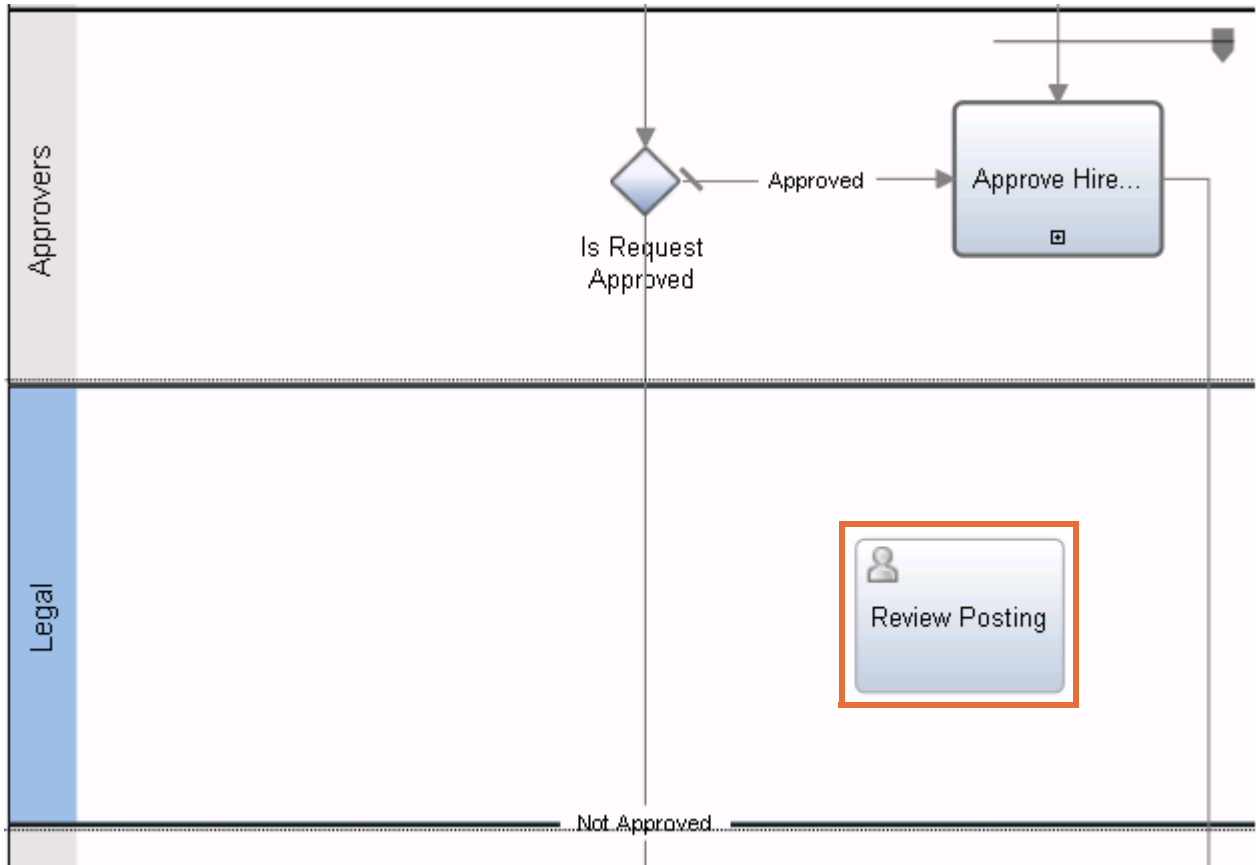
__ d. Drag the **Legal** lane between the **Approvers** and **System** lanes.



__ 2. Create an activity for a lawyer to review the hire request.

__ a. Drag an **Activity** from the palette to the **Legal** lane in the process.

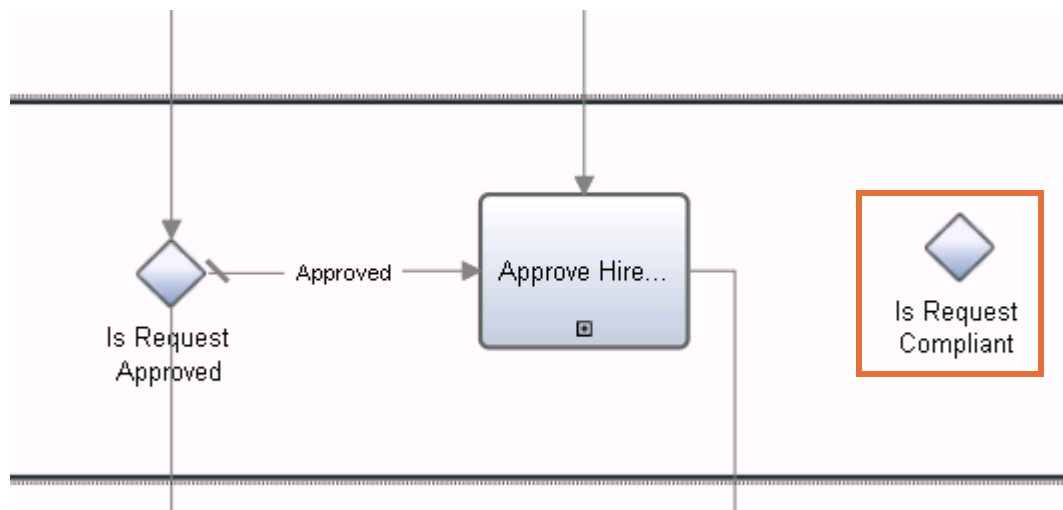
__ b. Name the activity: Review Posting.



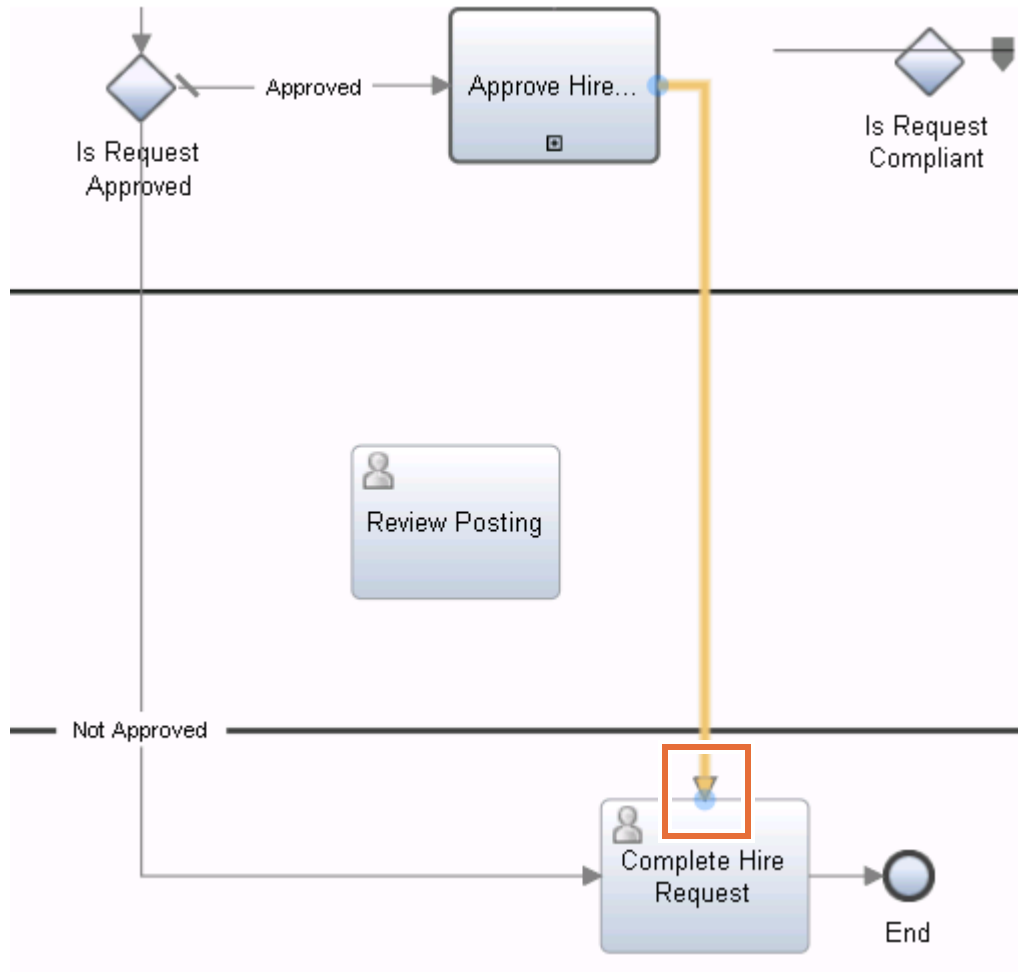
__ 3. Add a gateway to check the request compliance.

__ a. Drag a **Gateway** to the right of **Approve Hire Request**.

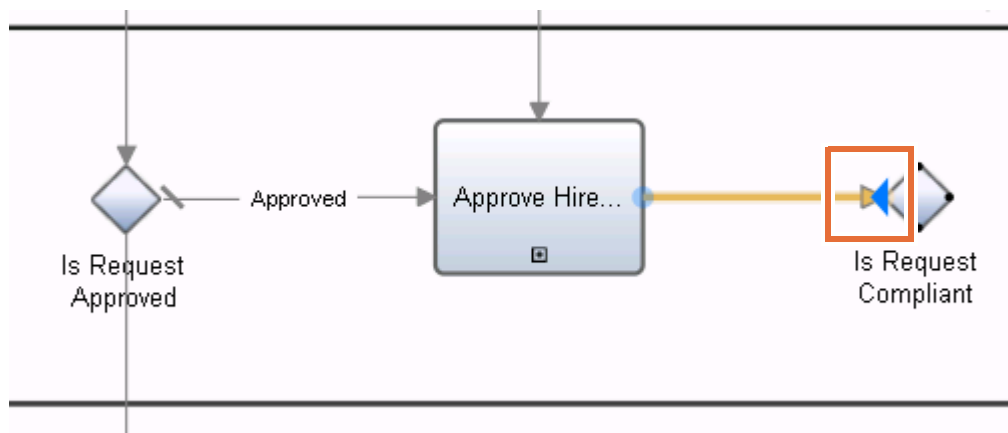
__ b. Rename the gateway to: Is Request Compliant.



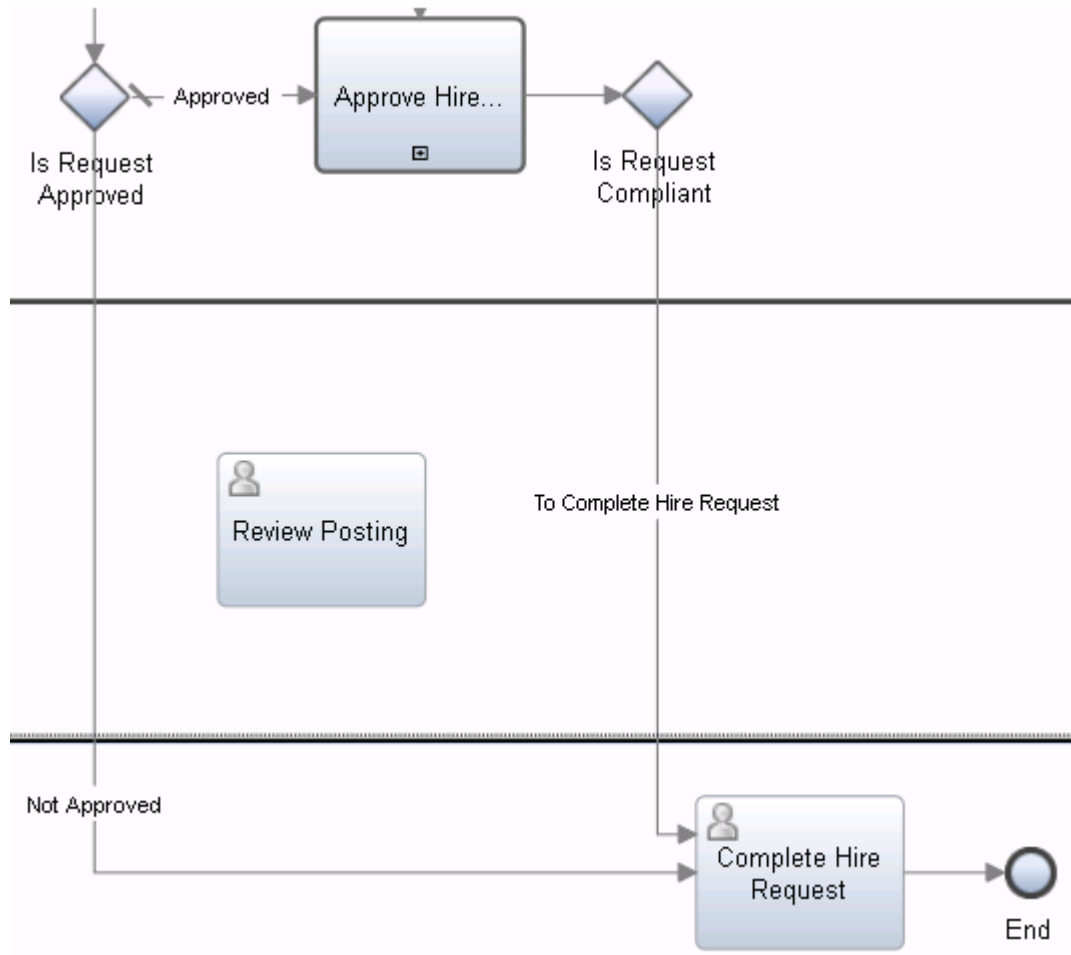
- ___ 4. Connect the **Review Posting** activity.
- ___ a. Select the sequence flow between **Approve Hire Request** and **Complete Hire Request** activities.



- ___ b. Drag the blue point that appears at the tip of the flow line at **Complete Hire Request** activity to the **Is Request Compliant** gateway.

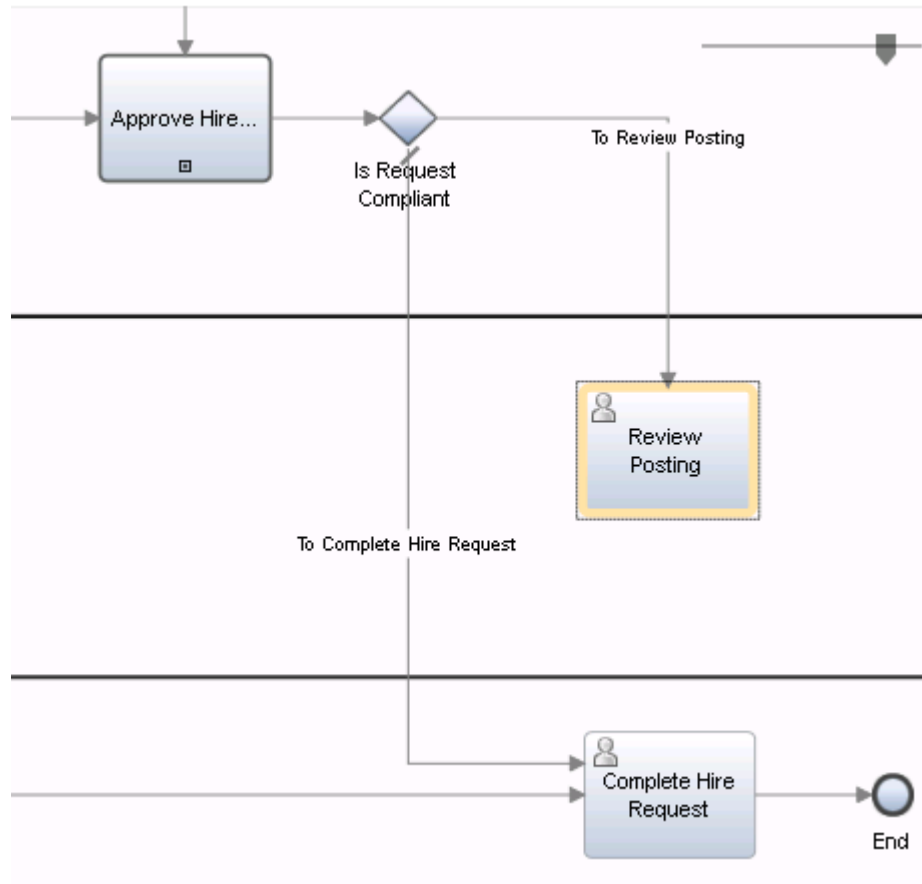


___ c. Connect the **Is Request Compliant** gateway to **Complete Hire Request**.

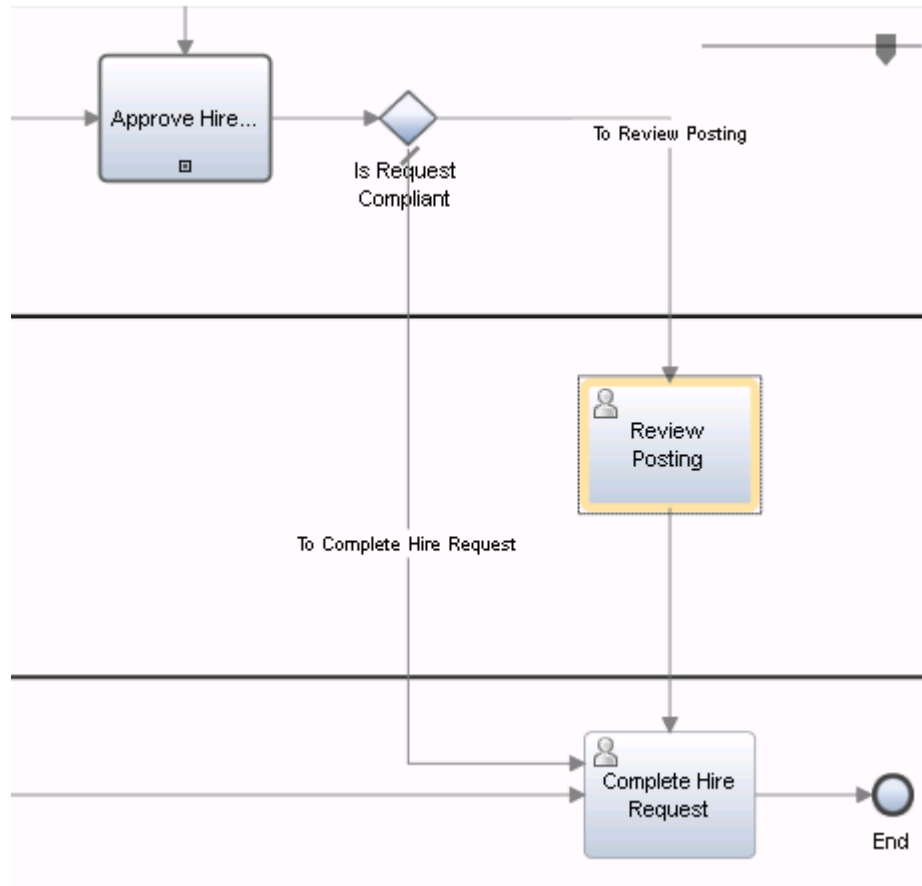


___ d. Drag the **Review Posting** activity on top of the **Complete Hire Request** activity.

- ___ e. Connect the **Is Request Compliant** gateway to **Review Posting**.

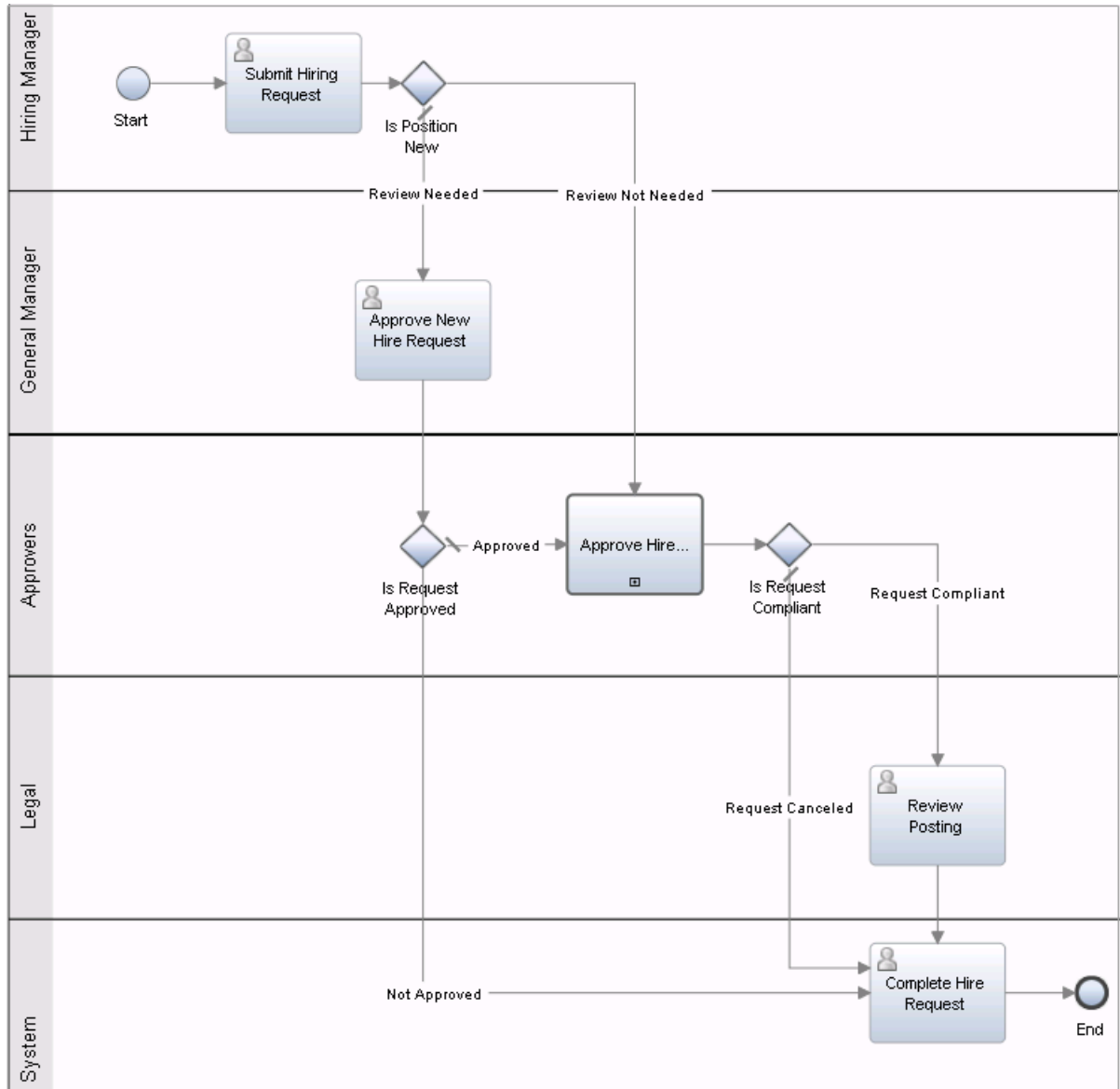


- ___ f. Create a flow from **Review Posting** to **Complete Hire Request**.



- ___ 5. Label the flow lines.
- ___ a. Rename the sequence flow between **Is Request Compliant** and **Complete Hire Request** as **Request Canceled**.
 - ___ b. Rename the sequence flow between **Is Request Compliant** and **Review Posting** as **Request Compliant**.

Your final process displays as follows:



___ 6. Save your work.



Important

After adding an element to your process, it is a good practice to verify the process a second time. When you encounter process problems while developing for the Playback 1 process phase, it is common to return to Playback 0 to correct the problems.

Playback 0 is complete.

If you need more information about conducting the Playback, consult the Appendix A: Conducting Playbacks for Playback 0.

End of exercise

Exercise review and wrap-up

In this exercise, you validated the business process, and you took the Playback feedback and added a requirement to the process. All the stakeholders agreed to the revised version of the process and the process owner along with the lead developer recommended the team transition to Playback 1.

Appendix A. Conducting playbacks

Overview

After the end of each playback in the development cycle, test your work in the Process Portal. Conducting a playback is a good time to demonstrate to business stakeholders how data flows in the process application.

Objectives

At the end of this exercise, you should be able to:

- Log on to the Process Portal
- Create an instance of a process
- Demonstrate the business data flow through coaches

Introduction

A playback between business and IT is a focused demonstration of a partially implemented process model at the designated development phase. The goal of a playback is to encourage discussion, build consensus, improve collaboration, and ultimately approve the process model. Playbacks thus enable the iterative agile development of the process application.

Playbacks provide early visibility and input from the business group on the process application functions. Often times, the perspective of the business group benefits development because they quickly identify adjustments to requirements well before the final product is implemented.

1. Log on to the Process Portal. The URL is:

`http://<server URL:port>/portal`

2. Demonstrate process flow. Complete a coach and submit the data.

Requirements

Completing the exercises for this course requires a lab environment that includes the exercise support files, the IBM Process Designer, and the IBM Business Process Manager Process Center development environment.

This exercise relies upon the `HR Recruitment Processes` process application.

Exercise instructions

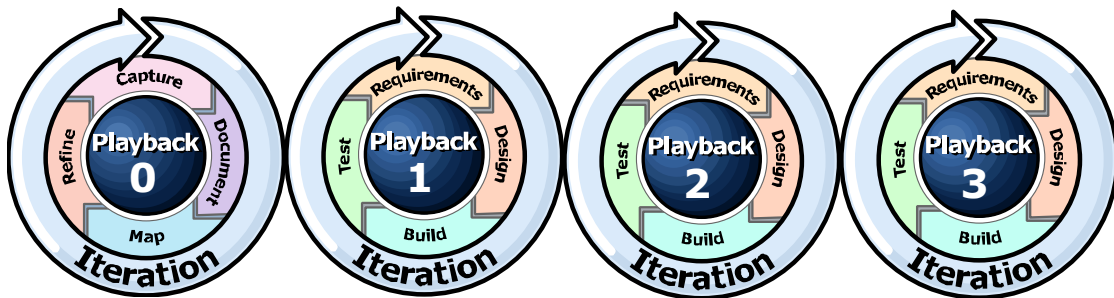
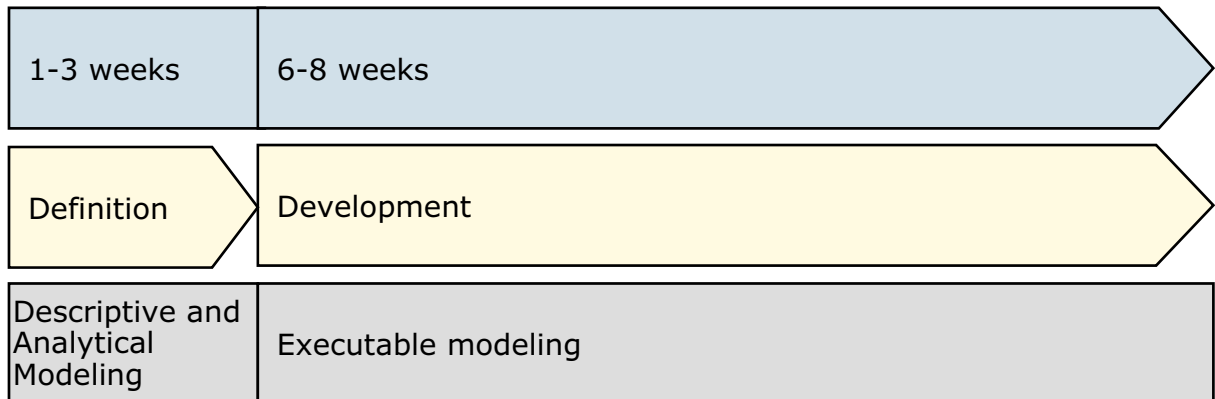
The ability to shift direction during each playback phase is key to reaching the ultimate BPM project target. The appreciably faster time to value that the BPM team and business realize with this approach sets the direction for future BPM project development.

Themed playbacks

Often playbacks are conducted as themed phases of development. The number of playbacks depends on the number of themes that the organization wants to use and the complexity of the business process needs. This guide can be used as a primer for just about any BPM project development effort.



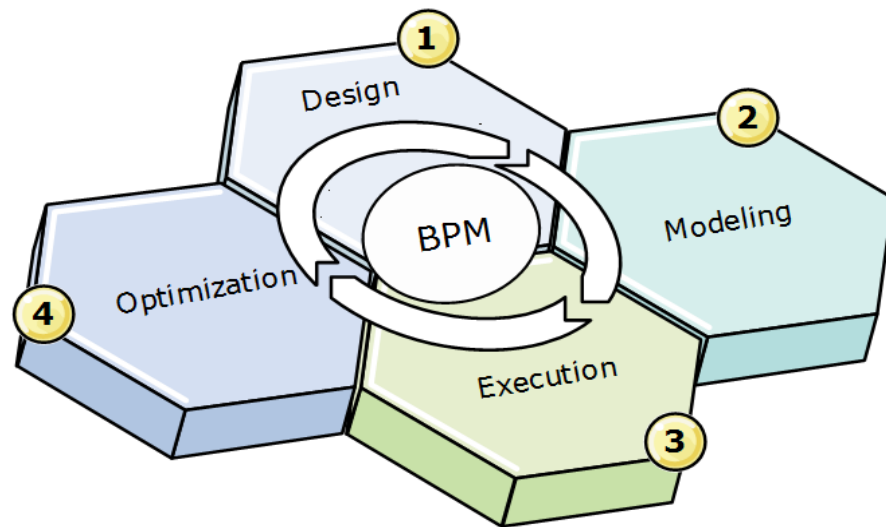
Playback cycles (themes)



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Project management and the BPM lifecycle

Completion of the project management means that a large portion of the BPM lifecycle is complete. After the project development is complete, which is 9 – 14 weeks, the process application is monitored during production. The process performance data is then evaluated and analyzed for more efficiency. Business goals can also be altered based on process performance at this stage of the lifecycle. After completion, the next iteration of the project is initiated, and the project development with playbacks begins again.

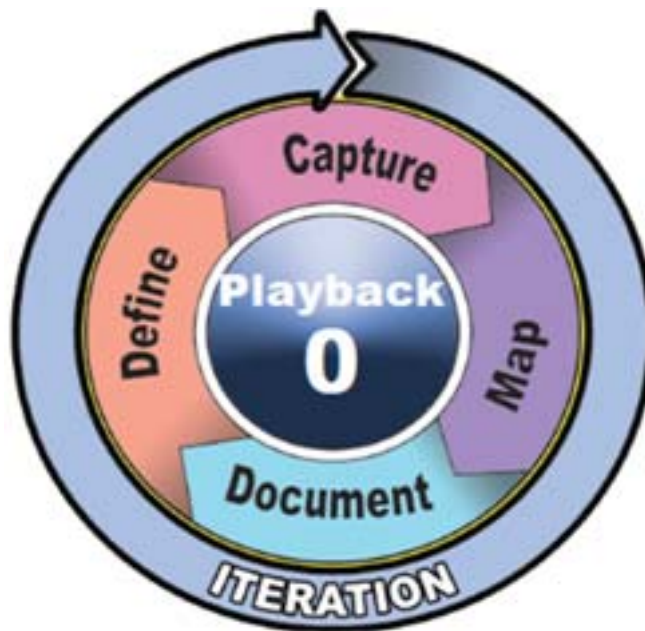
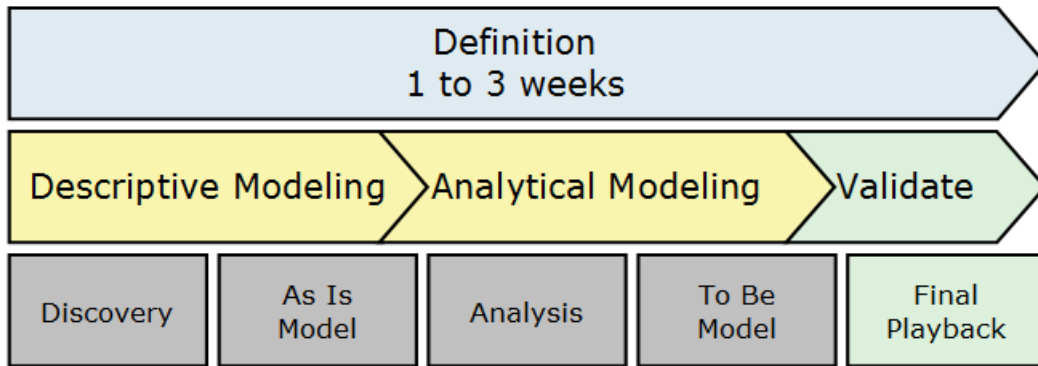


1. Design goals:
 - Capture executive vision
 - Process nomination
 - Process prioritization
 - Process discovery
 - Process analysis
2. Modeling goals:
 - Create a process model
 - Process adjustments
 - Process simulation
3. Execution goals:
 - Implement the process model as a process application
 - Adjust business process requirements as needed
 - Deploy and monitor the process application
4. Optimization goals:
 - Analyze and evaluate process performance data
 - Evaluate the business process ability to meet new business goals

Part 1: *Playback 0: Capture, describe, and model the process*

In Playback 0, documentation and process analysis set the correct framework for the process model creation, process automation, and process activity added value to gain efficiencies, visibility, and effectiveness for the business process. The entire Playback 0 stage typically takes 1 – 3 weeks to complete.









Playback 0








Appendix B. Modeling and implementation artifacts

The following pages contain the service types and what tools and components are available to build each service type.



Service type	Description
Client-side human service	Use a human service when you want to create an interactive service. A human service is the only type of service that can contain coaches and postpones. Human services generate tasks in IBM Process Portal. Note: A human service is the only type of service that can call other nested human services.
General system service	Use a general system service when it is necessary to coordinate with other nested services or to manipulate variable data. For example, if you want to implement data transformations or generate HTML for a coach, you can use a general system service. General system services cannot include Java or web service integrations directly. You can call a general system service from any other type of service, and a general system service can call other nested services.
Ajax service	Use an Ajax service when you want to include a control in a coach to implement dynamic data selection such as automatically populating lists and automatically completing edit boxes. An Ajax service can pull data dynamically from a connected data source, such as a database. You cannot call an Ajax service from other types of services, but an Ajax service can call other nested services.
Decision service	Use a decision service when you want a condition to determine the implementation that is started. For example, when a certain condition evaluates to true, IBM Business Process Manager implements the JavaScript expression that you provide. Decision services cannot include Java or web service integrations directly. You can call a decision service from any other type of service, and a decision service can call other nested services.
Integration service	Use an integration service when you want to integrate with an external system. An integration service is the only type of service that can contain a Java or web service integration. You can call an integration service from any other type of service, and an integration service can call other nested services.
Advanced Integration service	Use an Advanced Integration service when you want to integrate with a service created in IBM Business Process Manager Advanced.




Component icon	Available with...	Description
	All service types	Use to select and move components on the diagram.
	All service types	Use to connect service components to establish the order in which the steps in the service occur.
 Web Service Integration	Integration service only	Use to start an external web service. Use this component to supply a WSDL URI and then use any of the available services.
 Java Integration	Integration service only	Use to call methods from a Java class. You can use the methods to complete tasks like reading or writing files or sending SMTP mail.
 Coach	Human service only	Use to create the interfaces for your human services. You can use coaches to easily add the fields, buttons, and other controls to enable users to participate in a business process. For more information, see Building coaches .
 Server Script	All service types	Use when you want to write JavaScript to run on the Process Server in the service context. The Server Script component is useful for parsing through variables and running programmatic commands.
 Decision Table	Decision service only	Use to build conditions for your decision services.
 JRules Decision Service	Decision service only	Use to include decision services available on an ILOG JRules Rule Execution Server.

	Server Scriptlet	All service types	Use to bind blocks of formatted text (for example, HTML, XML, or XSLT) directly to a service variable. This type eliminates the necessity to store large blocks of text in default values for variables.
	Modify Task	Human service only	Use to change the priority, due date, status, or other aspects of a task; for example, if you want the status of a task to change to Closed each time that a user completes a task. Use this component to properly set the status and move the task into each Closed folder in IBM Process Portal.
	Postpone Task	Human service only	Use to halt processing without changing the status of a task.
	Decision Gateway	All service types	Use to model a point in the process execution where only one of several paths can be followed, depending on a condition.
		All service types	Use to end service execution. For services that contain multiple paths, each path requires its own end event. Note: An end event is automatically included each time that you create a service.
	Note	All service types	Use to add information about the overall service or each step in the service to the diagram. Adding notes helps other developers understand your design.
		All service types	Use to purposely produce an error and end processing. You might, for example, use a Throw Exception component if you return too many rows from a database (over a limit that is normal and would bog down the server).
	Invoke UCA	All service types	Use to start an undercover agent (UCA) from your service.
		All service types	Use to listen for exceptions from the service component to which it is attached.






	Intermediate Tracking Event	All service types	Use to indicate a point in a service at which you want IBM Business Process Manager to capture the runtime data for reporting purposes. For examples of how tracking events are implemented, see Creating a basic custom report and Creating a more advanced custom report .
	Nested Service	All service types	Use to incorporate other services in your current service. Nested services are generally defined to run specific, repeatable functions such as exception handling routines, integration with outside systems, or data manipulation. Nested services are often used in multiple process applications and likely exist in a toolkit. Note: Human and Ajax services cannot be nested.
	Send Alert	All service types	Use to send task-related alerts to IBM Process Portal.
	Content Integration	Integration service only	Use to integrate with an Enterprise Content Management system.



An ad hoc activity has no input wires and is started as required by knowledge workers or according to predefined preconditions, rather than by a predefined process flow. Such activities can be required or optional, and they can be defined as repeatable or to run at most once.

Ad hoc component Icon	Available with...	Description
	All service types	An ad hoc activity has no input wires and is started as required by knowledge workers or according to predefined preconditions, rather than by a predefined process flow. It can start automatically, as required, run once, or no precondition.
	All service types	This ad hoc activity must start manually.

	All service types	This ad hoc activity is optional.
	All service types	This ad hoc activity is manual and repeatable.
	All service types	This ad hoc activity has a precondition.

This table shows the state and its icon for each activity in Process Portal.

Status icon	Bucket name	Description	Option type
	Ready	Manual, required, not yet triggered, ready to be triggered.	Required
	Ready-Optional	Manual, optional, not yet triggered, ready to be triggered, does not have to be triggered.	Optional
	Working	Anything that is triggered but not yet completed.	Required/Optional
	Completed	Anything that is completed normally.	Required/Optional
	Waiting	Required, blocked on precondition. If manual, then go to Ready bucket; if automatic, then go to Working bucket.	Required

	Waiting-Optional	Optional, blocked on precondition. If manual, then go to Ready bucket; if automatic, then go to Working bucket.	Optional
	Failed	Go to Completed bucket, regardless of activity settings. If restarted, then all of the above apply.	Required/Optional

Appendix C. Data dictionary

Training database

The JNDI is `jdbc/TrainingDB`.

The training database that is used in the foundation courses uses the following database tables.

Part 1: Departments

Structure

Column	Type	Null allowed
departmentCode	varchar(5)	No
divisionCode	varchar(5)	No
departmentName	varchar(50)	Yes

Data

departmentCode	divisionCode	departmentName
101	201	Marketing
102	201	Finance
103	202	Engineering
104	202	Professional Services
105	203	HR

Part 2: Divisions

Structure

Column	Type	Null allowed
divisionCode	varchar(5)	No
divisionName	varchar(50)	Yes

Data

divisionCode	divisionName
201	APAC
202	US
203	EMEA

Part 3: JobLevels

Structure

Column	Type	Null allowed
--------	------	--------------

jobLevelCode	varchar(5)	No
jobLevelName	varchar(50)	Yes

Data

jobLevelCode	jobLevelName
5001	Jr Associate
5002	Associate
5003	Manager
5004	Sr Manager
5005	Director
5006	Vice President
5007	President

Part 4: Positions

Structure

Column	Type	Null allowed
id	integer	Yes
positionStatus	integer	Yes
jobTitle	varchar(50)	Yes
jobDescription	varchar(4000)	Yes
jobLevel	char(10)	Yes
numberOfDirectReports	integer	Yes
salaryToOffer	double	Yes
bonus	double	Yes
department	varchar(50)	Yes
departmentManager	varchar(50)	Yes
comments	varchar(4000)	Yes

Part 5: IncidentCategory

Structure

Column	Type	Null allowed
categoryID	varchar(5)	No
categoryName	varchar(50)	Yes

Data

categoryID	categoryName
1001	Collision
1002	Theft
1003	Natural Event or Disaster
1004	Other

Part 6: IncidentType

Structure

Column	Type	Null allowed
typeID	varchar(5)	No
categoryID	varchar(5)	No
typeName	varchar(100)	Yes

Data

typeID	categoryID	typeName
2001	1001	Collision with another vehicle
2002	1001	Collision with a stationary object
2003	1001	Collision with a cyclist
2004	1001	Collision with a pedestrian
2005	1001	Collision with an animal
2006	1002	Theft of entire vehicle
2007	1002	Theft of stereo
2008	1002	Theft of items in vehicle
2009	1002	Theft of part of vehicle, not listed above
2010	1003	Fire
2011	1003	Flood
2012	1003	Hail damage
2013	1003	Other storm damage
2014	1004	Glass damage
2015	1004	Pothole damage
2016	1004	Parking lot damage by shopping cart
2017	1004	Other



IBM Training

