Lesson: Deadlines

Overview

Why is this lesson important to you?

You are designing an IBM FileNet BPM solution. You need to establish deadlines for the overall workflow process completion and for completion of individual steps. You want to notify a workflow participant when a deadline approaches for completion of a step. If a step deadline expires, you want the work to be escalated and sent to a manager for attention. You must test the workflow to verify the changes.

Activities

- Establish workflow and step deadlines: Challenge
- Establish workflow and step deadlines: Walkthrough

Requirements

The activities in this unit assume that you have access to the student system configured for these activities.

Virtual student system

Connect to your student system to complete these lab activities. See the Readme First file on the Materials tab if you need instructions to connect to the student system.

System startup and system check

IBM FileNet P8 software services on your student system must be started. If you have not already started the IBM FileNet P8 software on your system, do the procedures in *Appendix A: System startup and system check* before proceeding with the lessons in this unit.

Perform a system check whenever you start up an IBM FileNet P8 system or start working on a system that is in an unknown state. These activities assume that you have performed a system check when you begin an activity session.

Read this first

Before attempting these unit activities, you must successfully complete all procedures in Unit 2 *Workflow Infrastructure*, Lesson 2.1 Region structures. All remaining lessons in this course require specific region data structures to already be configured.

Important

If you already successfully completed Unit 2 Lesson 2.1 Region structures, skip the following steps and proceed with this unit.

If you did **not** successfully complete Unit 2 Lesson 2.1, do the following steps:

1. On your student Windows XP system, log in to FileNet Workplace XT using the p8admin user account listed in the "Lesson Overview" section.
2. In Workplace XT, click Tools > Administration > Process Configuration Console.
3. Double-click the PELoanRegion[8] node to connect to the region.
4. Click Action > Import from XML file.
5. Click Browse and open the following file: C:\Labs\F145\Solutions\Infrastructure\PELoanRegion8_ConfigStart.xml
6. Select the Overwrite option.
7. Click Import.
8. Click Yes in the confirmation window.
9. Click Close.
10. Click File > Exit and close the applet window.

- Log out of Workplace XT and close the browser.

User accounts

Type	User ID	Password
FileNet Workplace XT	p8admin	IBMFileNetP8

Note

Passwords are always case-sensitive. User names are not case-senitive. Many user names use only lowercase letters on the student system.

Establish workflow and step deadlines: Challenge

Challenge

Modify the Prepare Loan Map submap in a prepared workflow definition file. Add a workflow deadline and reminder to the workflow. Add a submap called Handle Escalation Map, which assigns an appropriate message to the status data field and contains a Handle Timeout and a Return step. Add a step deadline to the Get Rate and Payment step. If the deadline expires, processing goes to the Handle Escalation Map submap.

Use the data in the table to complete this activity.

Data

Item	Value
Prepared workflow definition file	C:\Labs\F145\TimeControl\Loan Processing - Deadline Start.pep
File name in the Object Store	LoanProcess > Workflows > Loan Processing Workflow - Deadlines
Handle Timeout step in Handle Escalation Map	• Step Name: `Handle Timeout` • Activity Type: LoanManager Work Queue • Instructions in Step Processor: `Deadline was missed. Complete information and expedite.` • Selected Parameters: - customer_name [Read] - interest_rate [R/W] - loan_amount [Read] - loan_document [Read] - monthly_payment [R/W] - status [R/W] • Routing Responses: - Retry - Skip • Assignment After Completion: - Name: retry_option - Expression: `if(F_Responses[1] > 0, true, false)`
Return step in Handle Escalation Map	Return Expression: `retry_option`

Verification

- You must launch and process the workflow through to completion.
- If the Get Rate and Payment step deadline expires, then the work item is sent to the Handle Timeout step for processing.
- Your Handle Escalation Map submap must look similar to the following diagram. This diagram includes the Handle Timeout and Return steps.

Establish workflow and step deadlines: Walkthrough

Introduction

This exercise gives you practice in establishing workflow and step deadlines.

Procedure 1: Add a workflow deadline and test

1. On your student Windows XP system, log in to FileNet Workplace XT using the p8admin user account listed in the "Lesson Overview" section.
2. Open a prepared workflow definition file.
   a. In Workplace XT, click Tools > Advanced Tools > Process Designer.
   b. Click File > Open.
   c. Locate and open the following file:
   d. C:\Labs\F145\TimeControl\Loan Processing - Deadline Start.pep
   e. Explore the workflow definition to familiarize yourself with the process flow and notice the following items:
      - This workflow is for loan processing and is similar to the one that you worked with in the previous unit, *Flow Control in Workflow*.
      - The Workflow map contains three submap steps.
      - The Process Loan and Complete Loan submap steps are assigned to the EMPTY MAP submap, which contains no steps. Therefore, the Process Loan Map and Complete Loan Map submaps are not executed. You work only with the Prepare Loan Map submap in this activity. This technique is used to save time when you test the workflow.
      - The workflow name property has the value Loan Processing - Time Control.
      - The p8admin user is assigned to the F_Trackers workflow group.
3. On the Workflow Properties Advanced tab, add the following Deadline properties:
   - Complete within: `2 Minute(s)`
   - Send reminder before deadline: `1 Minute(s)`

Note

In this procedure and in a workflow development environment, you use deadlines with very short time periods to expedite processing and testing your workflow. When a process is deployed in a business environment, deadlines are set with appropriate values.

4. Test the workflow deadline and reminder.
   a. Validate the workflow and correct validation errors, if any.

b. Click File > Launch Main Workflow.

c. When prompted, complete the "Save the workflow definition to an object store" wizard using the following information.

   - Object store: `LoanProcess > Workflows`
   - Document Title: `Loan Processing Workflow - Deadlines`
   - Security: <Accept default values.>

d. In the launch processor, do the following.

   i. In the Data Fields view, type values of your choice in the fields.

   ii. In the Attachments view, assign an attachment to loan_document using any document you wish.

   Tip: You can find sample loans in the LoanProcess > Loans folder.

   iii. Click Launch.

e. Minimize Process Designer.

f. In Workplace XT, click Tasks > Task Tracker.

g. Wait for approximately 1 minute and refresh the browser window.

h. Verify that the Status field contains the text string `Reminder Sent`.

i. Wait for approximately 1 more minute and refresh the browser window.

j. Verify that the Status field contains the text string `Overdue`.

k. Open the tracker item by clicking the Loan Processing name.

l. In Process Tracker, use the Properties pane to view the Workflow General properties and notice the Status field shows Overdue.

m. Use Process Tracker to complete processing of the remaining workflow steps.

   Tip: In Process Tracker, click Tasks > Complete Work to complete work at the current step.

   Tip: The last step in the workflow is the Set Loan Status step in the Terminate submap.

n. Close Process Tracker.

o. In Workplace XT, delete the completed tracker item:

   - In Task Tracker view, click the Information icon next to the item name.
   - Under Actions, click Delete.
   - Click Delete.

Procedure 2: Add a step deadline and deadline submap

In this procedure, you add a deadline to the Get Rate and Payment step. If the deadline expires, the Handle Escalation Map submap is called and a loan manager expedites the loan.

1. Remove the workflow deadline and reminder.
   a. Return to Process Designer.
   b. In the Workflow Properties Advanced tab, clear both Deadline properties.

Note

You are removing the workflow deadline and reminder in order to simplify testing of the step deadline and submap that you define next.

2. Create a new submap for handling deadlines.
   a. On the map toolbar, click Create Map.
   b. Under Map Type, verify that Create new map is selected.
   c. Type `Handle Escalation Map` in the Name field.
   d. Click OK.
3. Define map steps and routes.
   a. Drag an Activity step from the BPM palette onto the map and place it to the right of StartStep.

b. Define the following step properties for the new step.

- Step Name: `Handle Timeout`
- Activity Type: LoanManager Work Queue
- Instructions in Step Processor: `Deadline was missed. Complete information and expedite.`
- Selected Parameters:
  - customer_name [Read]
  - interest_rate [R/W]
  - loan_amount [Read]
  - loan_document [Read]
  - monthly_payment [R/W]
  - status [R/W]
- Routing Responses:
  - Retry
  - Skip
- Assignment After Completion:
  - Name: retry_option
  - Expression: `if(F_Responses[1] > 0, true, false)`

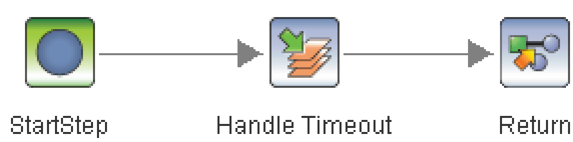
c. Draw a route from the StartStep to the Handle Timeout step.

d. Drag a Return system step from the General System palette onto the map and place it to the right of the Handle Timeout step.

e. Type the following in the Return Expression field: `retry_option`

f. Draw a route from Handle Timeout to Return.

g. Verify that your Handle Escalation Map submap looks similar to the following diagram. This diagram includes the Handle Timeout and Return steps.



4. Add a deadline to the Get Rate and Payment step.

a. On the map toolbar, select the Prepare Loan Map submap.

b. Select the Get Rate and Payment step.

c. Click the Deadline tab.

d. Add a deadline using the following information:

- Complete within: `2 Minutes(s)`
- Send reminder before deadline: `1 Minute(s)`
- Deadline Submap: Handle Escalation Map

Procedure 3: Test the step deadline and deadline submap

1. Launch and save the workflow definition to the object store.
   a. Validate the workflow and correct validation errors, if any.
   b. Click File > Launch Main Workflow.
   c. Complete the “Checkin Workflow Definition” wizard using the following information.
      - Document Title: `Loan Processing Workflow - Deadlines`
      - Security: <Accept default values.>
2. Complete the Launch Step processor.
   a. In the Launch Step window, click Data Fields.
   b. In the Data Fields view, type the following values in the fields.
      - customer_name: `Karen Kane`
      - down_payment: `6000.`
      - loan_date: <a future date and time>
      - loan_id: `K123`
      - loan_term: `15`
      - purchase_price: `85000.`
   c. In the Attachments view, assign an attachment of your choice to loan_document.
   d. Click Launch.
3. Use Process Administrator to locate the work item.
   a. In Process Designer, click Tools > Process Administrator.
   b. Construct and execute a filtered search of LoanRoster by using the loan_id exposed field and the data in the following table.

Search criteria	Value
Look for	Work Items
In	Workflow Roster
Select one	LoanRoster
Search mode	Edit (all fields)
Criteria	`loan_id = ‘K123’`

   c. Verify that your work item appears in the results pane and is in the Inbox(0) queue assigned to oscar. Notice that there is also an item in Tracker(0) queue.
4. Verify that the step reminder is sent and the deadline expires.
   a. Wait for approximately one minute and click Find Now to refresh the results pane.
   b. Verify that the deadline status column contains a reminder notice (bell symbol) for the work item.

Tip: Hover your mouse pointer over the alarm clock symbol and the tool tip contains the value "`Work item has a reminder notice.`"

c. Wait for approximately 1 more minute and refresh the browser.

d. Verify that the work item is now in the LoanManager queue and the reminder symbol no longer appears.

Note

The Get Rate and Payment step deadline has expired, and the Handle Timeout Map submap is called. The work item is now in the LoanManager queue and is waiting at the Handle Escalation step.

5. Complete the Handle Escalation step.
   a. In the results pane, select the row containing the work item in the LoanManager queue.
   b. Click Open Step Processor on the results pane toolbar.
   c. Type the following text in the status field: `Loan is overdue. Process immediately.`
   d. Select the Retry response.
   e. Click Complete.

Note

Because you selected the Retry response, the Return Expression of the Return step is assigned the value true. Processing returns to the calling map, the Prepare Loan Map, and the work item is queued for the Get Rate and Payment step.

6. Complete the Get Rate and Payment step from the Prepare Loan Map submap.
   a. In Process Administrator, click Find Now to reexecute the roster search.
   b. Verify that your work item is in the Inbox(0) queue and notice that the deadline status column contains an overdue symbol (exclamation point) for the item.

      Tip: Hover your mouse pointer over the exclamation point symbol (!) and the tool tip contains the value "`Work item is overdue.`"
   c. In the results pane, select the row containing the work item in the Inbox(0) queue.
   d. Click Open Step Processor on the results pane toolbar.
   e. In the Get Rate and Payment step processor, notice the Deadline Overdue message.

   f. Type values of your choice in the interest_rate and monthly_payment fields.
   g. Click Complete.
7. Complete the Confirm Rate and Payment step from the Prepare Loan Map submap.
   a. In Process Administrator, click Find Now to reexecute the roster search.
   b. In the results pane, select the row containing the work item in the LoanCustomer queue.
   c. Click Open Step Processor on the results pane toolbar.
   d. Click Complete.
8. Complete the Set Loan Document Status step from the Terminate submap.
   a. In Process Administrator, click Find Now to reexecute the roster search.
   b. In the results pane, select the row containing the work item in the LoanUnderwriter queue.
   c. Click Open Step Processor on the results pane toolbar.
   d. Verify that the status field contains the following text: `"Karen Kane confirms rate and payment."`
   e. Click Complete.
   f. In Process Administrator, click Find Now to reexecute the roster search.
   g. Verify that the work item is no longer listed in the results pane.
9. Use the skills that you have learned to launch the workflow again and test the Skip response in the Handle Timeout step.
10. Delete obsolete tracker items and close all applications.
   a. In Process Administrator, select the rows containing completed tracker items.

      Tip: A completed tracker item contains a check mark in the column labeled with the exclamation (!) symbol and the tool tip contains the following text: Work item is completed.
   b. Click Tasks > Delete Work.
   c. Click OK in the Delete Work window.
   d. Close Process Administrator.
   e. Return to Process Designer.
   f. If you have not already done so, check in your final version of the workflow definition. Otherwise, cancel the checkout.
   g. Exit Process Designer.
   h. Log out of Workplace XT and close the browser.