

# DMN

## Boundary Events

## Link Events

## Collections

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# AGENDA

- ▶ Video tutorials
- ▶ DMN demo
- ▶ Boundary Error Events
- ▶ Link
- ▶ Collection parameters

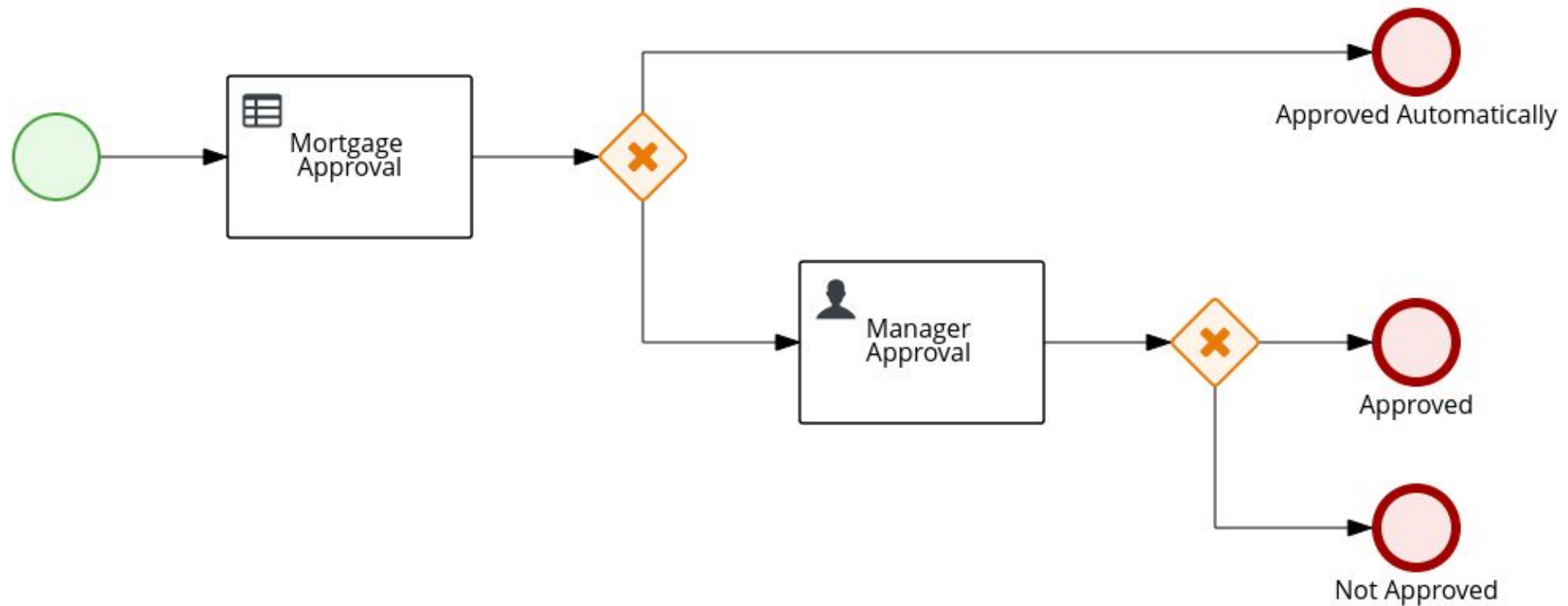
# VIDEO TUTORIALS

- ▶ jBPM Work Items and Timers
  - <https://www.youtube.com/watch?v=tpVSWYcalCk>
- ▶ Interprocess communication
  - <https://www.youtube.com/watch?v=ixjxPIUq3Bs>
- ▶ Slides from videos available in study materials

# DMN DEMO

## The Process

- ▶ In a new project, design the following process:



# DMN DEMO

## Data Object Person

- ▶ Create this type using Data Object asset.
- ▶ Add field **age** of type **Integer** to it.

Person.java - Data Objects ▾

Model Overview Source

Person

+ add field

Identifier	Label	Type	
age		Integer	Delete

# DMN DEMO

## Process variables

- ▶ Create 3 process variables:
  - **price** of type **Integer**
  - **approved** of type **Boolean**
  - **person** of type **Person**

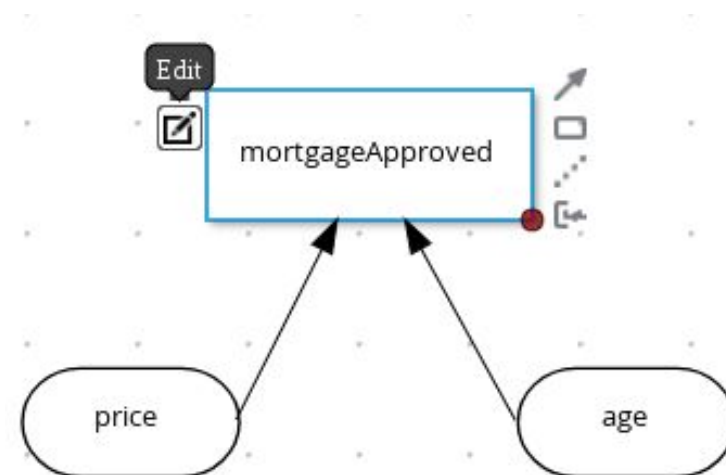
# DMN DEMO

DMN model

- ▶ Create a DMN asset.
- ▶ Add 2 DMN Input Data nodes:
  - **price** of type **number**
  - **age** of type **number**
- ▶ Add **mortgageApproved** DMN Decision node of type boolean and click on a small edit icon near the node.
- ▶ Click on Select expression and choose Decision Table. Configure it like on the picture.
- ▶ Save your DMN.

mortgageApproved (Decision Table)

F	price (number)	age (number)	mortgageApproved (boolean)	Description
1	<5000	-	true	Everybody can have 5000
2	<10000	> 25	true	Only age 26 and up can have up to 10000
3	-	-	false	



# DMN DEMO

## Mortgage Approval Business Rule Task

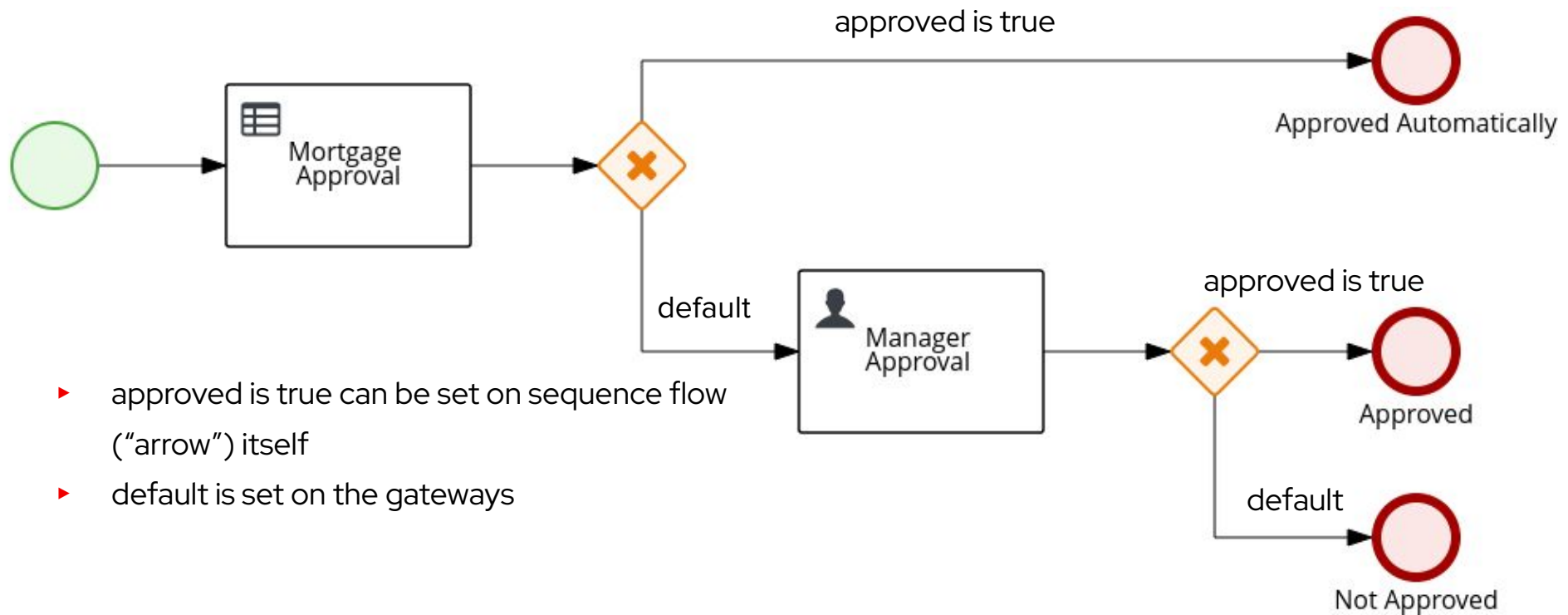
- ▶ Open properties of **Mortgage Approval** Business Rule Task in your process definition.
- ▶ Select **DMN** as **Rule Language**.
- ▶ Fill in the namespace, it can be found when clicking on DMN canvas and then on Diagram properties.
- ▶ Decision Name is **mortgageApproved**.
- ▶ DMN Model Name is the name of your DMN file (without .dmn extension).
- ▶ Configure data assignments:
  - Inputs:
    - **price** of type **Integer** from source **price**.
    - **age** of type **Integer** from source **#{person.age}**.
  - Outputs:
    - **mortgageApproved** of type **Boolean** with target **approved**.



# DMN DEMO

## Gateways

- ▶ Configure the gateways as on the picture:



- ▶ approved is true can be set on sequence flow ("arrow") itself
- ▶ default is set on the gateways

# DMN DEMO

## Manager Approval Human Task

- ▶ Configure data assignments:
  - Inputs:
    - **price** of type **Integer** from source **price**.
    - **person** of type **Person** from source **person**.
  - Outputs:
    - **approved** of type **Boolean** with target **approved**.
- ▶ Assign the task to the actor **wbadmin**.

# DMN DEMO

## Run the Process

- ▶ Congratulations! You can now run your process and verify that it works.
- ▶ If you have spare time, you can try to fine-tune the forms:
  - Process form shouldn't have **approved** field visible.
  - **price** and **age** should be required fields.
  - Manager Approval task has **price** and **person** as an input (data assignment) which means they will be available for manager to review when completing the task. These two fields are read-only automatically as they are set just as inputs. The only output is the **approved** variable which means this is the only field a manager can write to.

# DMN DEMO

## Test Scenario

- ▶ If you want, you can try creating **Test Scenario** asset.
  - Add Asset of type **Test Scenario**.
  - Select Source type of DMN.
  - Choose your DMN asset.
- ▶ Fill your test data and expected results.
- ▶ Run your test scenario using the play button.

testScenario.scesim - Test Scenarios

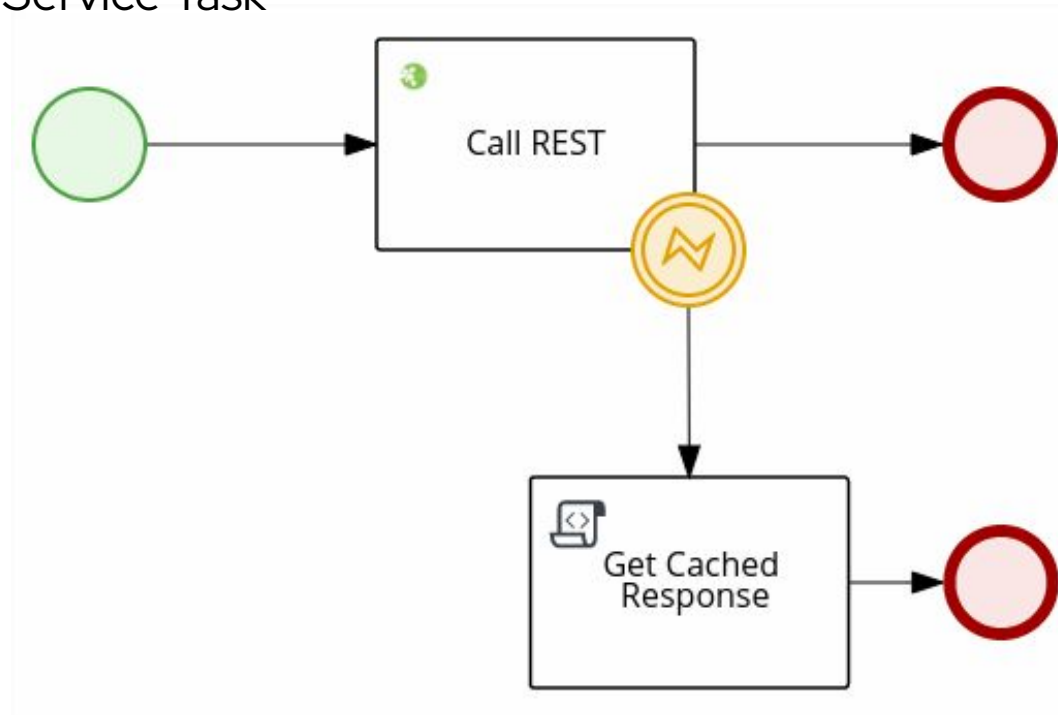
Save Delete Rename Copy ▶ ↺ ↻ ⬇️ Latest Version ▾ View Alerts ↗ ✕

Model Overview

#	Scenario description	GIVEN		EXPECT
		age	price	mortgageApproved
		value	value	value
1	<i>Insert value</i>	25	7000	false
2	<i>Insert value</i>	26	7000	true

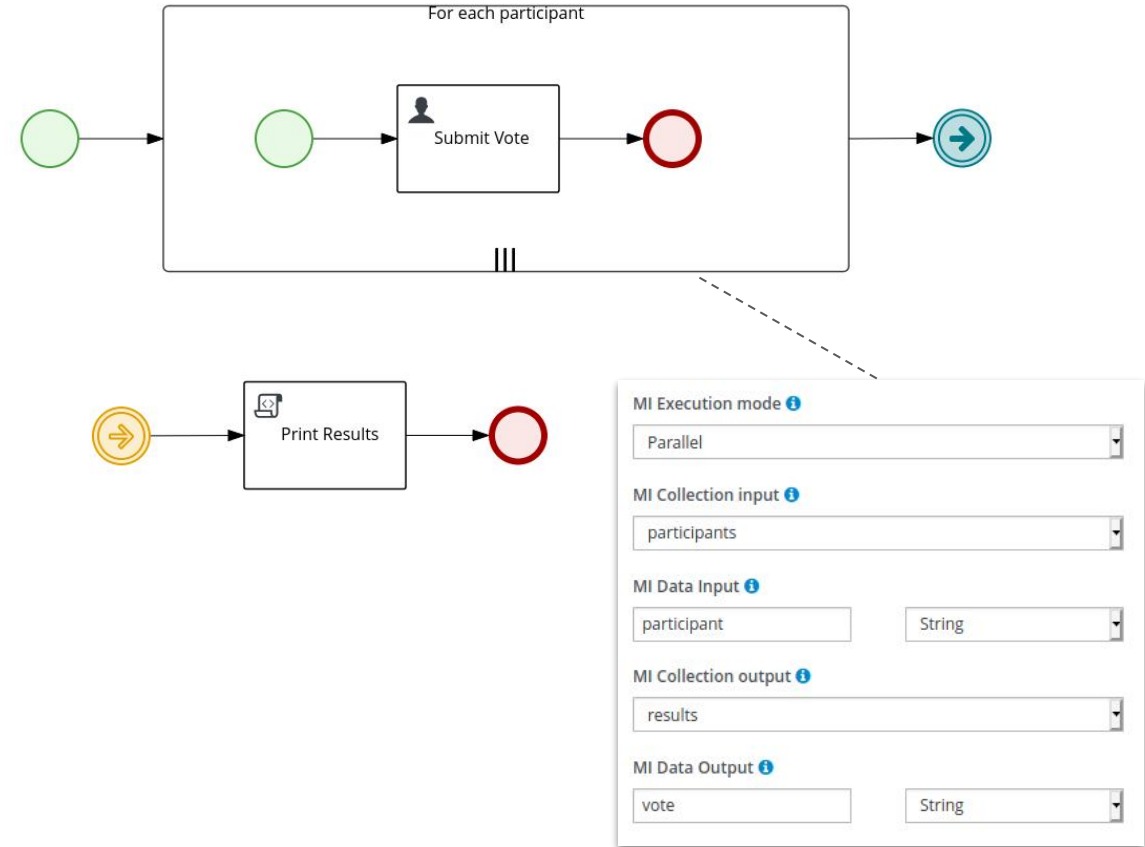
# BOUNDARY ERROR EVENTS

- ▶ Handling of business exceptions explicitly by the process definition
- ▶ Requires **HandleResponseErrors** parameter set to **true** on the REST Service Task



# POLL EXAMPLE - LINK EVENT AND COLLECTIONS

- ▶ Participants and Results as `java.util.ArrayList`
- ▶ Actor of Submit Vote task is `#{participant}`
- ▶ Multi-instance subprocess "For each participant"
- ▶ Link events - set link id, works like signals



Home > Task Inbox > Task: 4

### 4 - Submit Vote

Work Details Assignments Comments Admin Logs

Which is your favorite browser?

Vote \*

Firefox  
 Chrome  
 Edge  
 Safari

Save Release Complete

# Thank you!



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