# DMN Boundary Events Link Events Collections

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# AGENDA

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

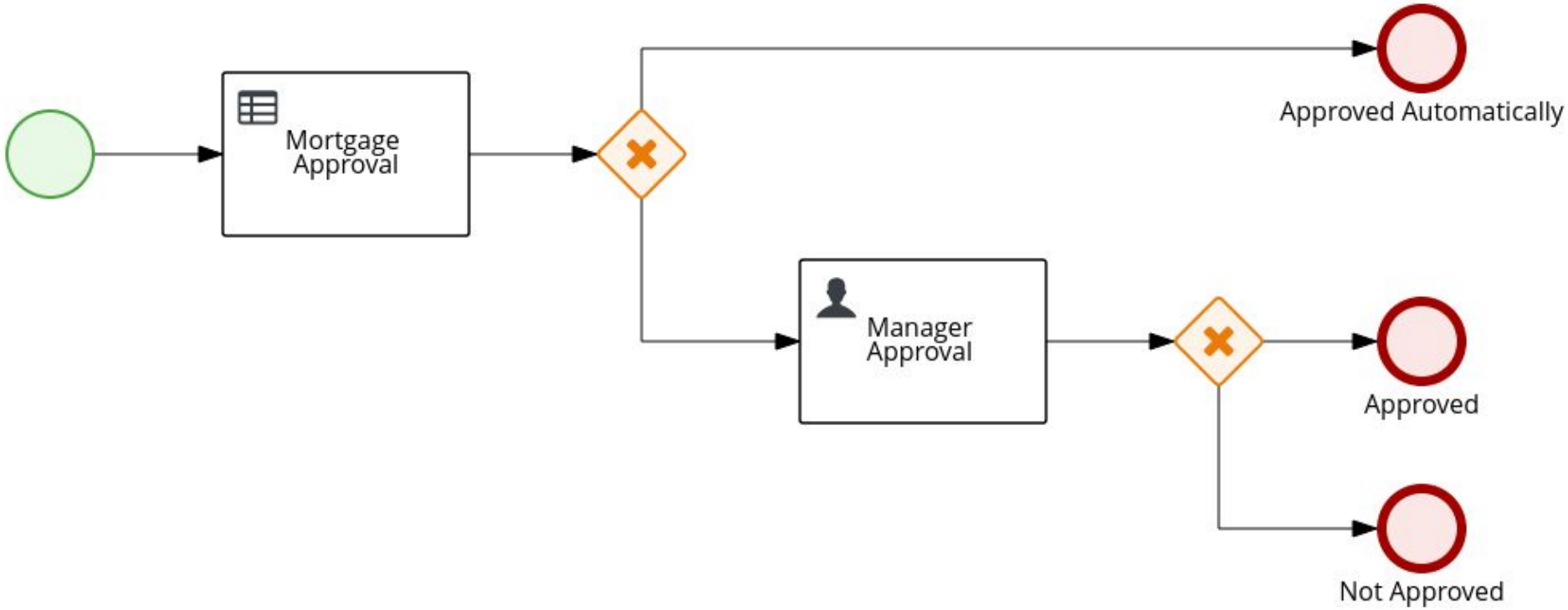
# VIDEO TUTORIALS

- jBPM Work Items and Timers
  - https://www.youtube.com/watch?v=tpVSWYcaICk
- Interprocess communication
  - https://www.youtube.com/watch?v=ixjxPlUq3Bs
- Slides from videos available in study materials

# DMN DEMO

## The Process

- In a new project, design the following process:



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# DMN DEMO

## Data Object Person

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




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# DMN DEMO

## Process variables

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

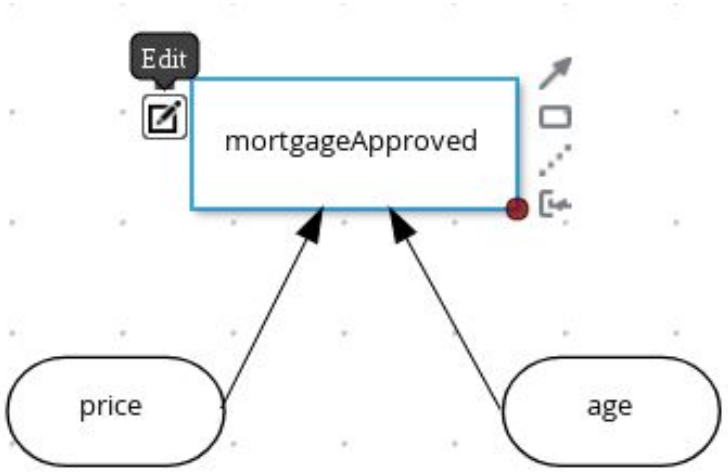
# DMN DEMO

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 | |



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# DMN DEMO

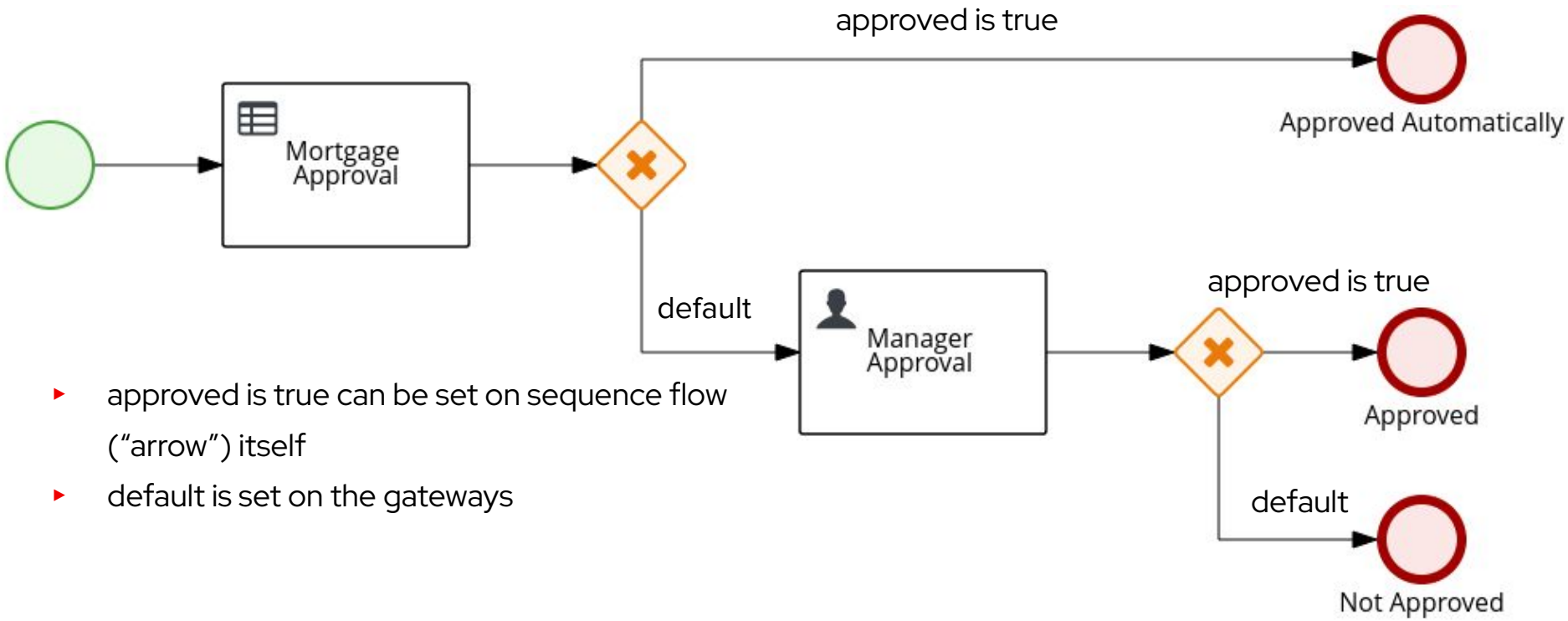
## Mortgage Approval Business Rule Task

- 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 | *Insert value* | 25 | 7000 | false |
| 2 | *Insert value* | 26 | 7000 | true |



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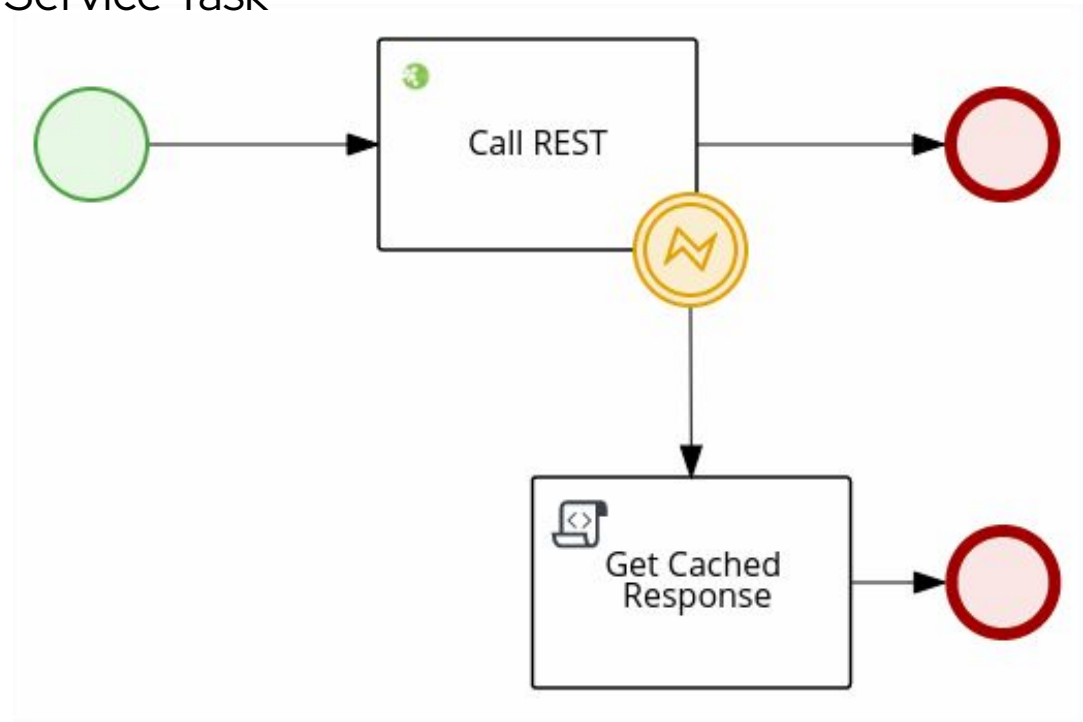
# BOUNDARY ERROR EVENTS

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



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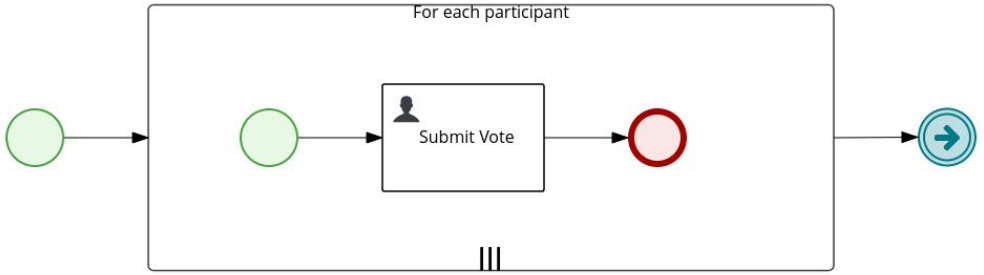
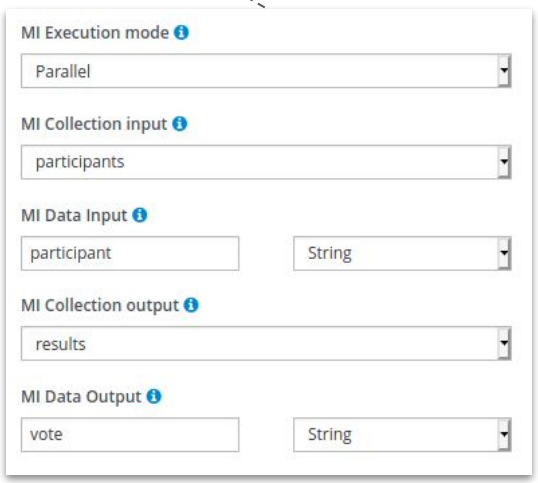
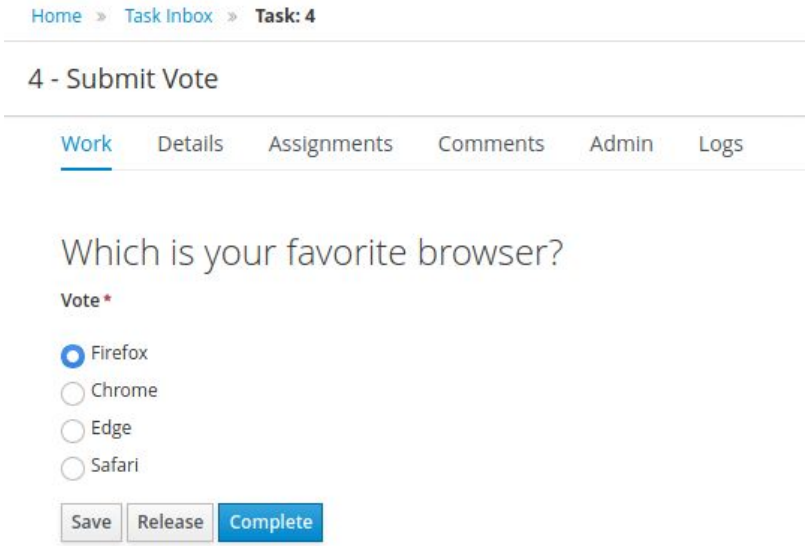
# POLL EXAMPLE – LINK EVENT AND COLLECTIONS

- 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





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