

Flowable Hands-on Exercise: Timer Event

Scenario: Leave Request Approval with Escalation

An employee submits a **Leave Request**, and the manager is expected to approve it **within 2 days**. If the manager does not act within this time, the request is **automatically escalated** to HR.

This exercise will demonstrate how to:

- ✓ Use a **Boundary Timer Event** to set a deadline.
 - ✓ Escalate the process if the timer expires.
 - ✓ Configure different **Timer Event types** in Flowable.
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Step 1: Create a New BPMN Process in Flowable

1. Open **Flowable Modeler**.
 2. Create a new **BPMN Process Model** named **Leave Request Process**.
 3. Set **Process ID** as `leaveRequestProcess`.
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Step 2: Define the Process Flow

1 Start Event

- Drag a **Start Event** onto the canvas.
- Name it **Leave Request Submitted**.

2 User Task (Manager Approval)

- Drag a **User Task** and name it **Approve Leave (Manager)**.
- Assign it to `managers`.

3 Timer Boundary Event (Escalation)

- Drag a **Timer Boundary Event** onto the **Approve Leave (Manager)** task.
- Set the timer expression to `PT48H` (**48 hours timeout**).

4 Escalation to HR

- Drag a **User Task** named **Escalate to HR**.
- Assign it to `hr`.
- Connect the **Timer Boundary Event** to this task.

5 End Events

- Add an **End Event** for both:
 - **Approved** path (when the manager approves).
 - **Escalated** path (when the timer expires).

Step 3: Configure Timer Event

- Select the **Timer Boundary Event**.
- Set **Timer Definition Type** to **Duration**.
- Enter the value:

PT48H (ISO-8601 format for 48 hours)

Alternative timer formats:

- **Specific Date:** 2025-04-01T10:00:00Z
- **Recurring:** R3/PT24H (repeats 3 times, every 24 hours)

Step 4: Deploy and Test

1. Deploy the process in Flowable.
2. Start a new process instance with:

```
{
  "employeeName": "Alice",
  "leaveDays": 5
}
```

3. Observe the following behaviors:
 - If the **manager approves within 48 hours**, the process ends normally.
 - If **no action is taken**, the timer triggers, and the request is **escalated to HR**.

Expected Behavior

Scenario	Manager Action	Outcome
Approves within 48 hours	✓ Yes	Leave Approved
No response in 48 hours	✗ No	Request escalated to HR
