

Sample Applications

Conditional & Parallel Approval

In many processes, the same people will approve all requests, or some may only approve higher-value requests, but there will also be processes where not every person will need to approve every request.

Consider the following example of a Repair Request in a medical establishment.

Stakeholders:

- Department Head (Will approve all requests for their department)
- Hospital Administrator (Will approve all requests over \$5,000)
- Chief Financial Officer CFO (Will approve all requests over \$50,000 and some over \$5,000)
- Chief Executive Officer CEO (Will approve all requests over \$50,000)
- Chief Medical Officer CMO (Will approve some requests of any value and some over \$5,000)
- Head of Engineering (Will approve all Diagnostic Imaging & Radiotherapy requests)
- Head of Surgery (Will approve some over \$5,000 and some over \$50,000)

Department	Up to \$5,000	\$5,000 to \$50,000	Over \$50,000
		< plus	<< plus
Accident & Emergency (1)	Department Head	Hospital Administrator CMO CFO	CEO
Anaesthetics (2) Ophthalmology (3) Physiotherapy (4) Urology (5)	Department Head	Hospital Administrator	CFO & CEO
Cardiology (6)	Department Head	Hospital Administrator CMO Head of Surgery	CFO & CEO
Diagnostic Imaging (7) Radiotherapy (8)	Department Head Head of Engineering	Hospital Administrator CFO	CEO
Ear, Nose & Throat (9) Gastroenterology (10) Nephrology (11) Neurology (12) Rheumatology (13)	Department Head CMO	Hospital Administrator	CFO & CEO
General Surgery (14)	Department Head	Hospital Administrator CMO	CFO & CEO Head of Surgery
Gynaecology (15) Maternity (16) Neonatal (17)	Department Head	Hospital Administrator CMO	CFO & CEO

There are seven potential approvers, but requests from different departments might be approved by a minimum of one or two people and a maximum of four to six people depending on the request value.

As well as demonstrating **conditional approvals** this example also uses the **parallel approval** method, which means that all approvers are notified at the same time; after the initial submission of the request, but it won't move on to be approved until all of the required approvers have approved. If, however, any of the approvers reject the request, then it is rejected straight away.

Conditional & Parallel Approval

Sample Applications

The main issue with this type of process is that we have seven potential approvers, not all of them will be involved, but all must approve before the request is approved.

To manage this, we have to determine which approvers are expected to make a decision based on the department and value and then auto-approve for any that are not expected to make a decision. By doing this, we can use the condition of 'All approvers have approved' as the trigger to approve the request as a whole.

The important elements of the sample are listed below.

On the (hidden) Helper page

Helper Page

Not visible to the app users

Authorizers	
<input type="checkbox"/> Hospital Administrator	<input type="checkbox"/> Chief Medical Officer
<input type="checkbox"/> Head of Engineering	<input type="checkbox"/> Chief Financial Officer
<input type="checkbox"/> Head of Surgery	<input type="checkbox"/> Chief Executive Officer

FUNCTION - Uncheck all approvers

FUNCTION - Determine Approvers

A checkbox group for the six conditional approvers (Department Head always approves, so is excluded here) The checkboxes are checked using behavior once the department and value are known (see below) and drive the workflow notifications.

Two text fields

FUNCTION – Uncheck all approvers

FUNCTION – Determine approvers

Looking at the 'text is clicked' events on both text fields, you will see the logic attached. The critical point here is that because these are situated on a hidden page, it's never possible for these 'text is clicked' behaviors to be triggered directly. You will see later, however, that we can start these behaviors using the Run Behavior command.

FUNCTION – Uncheck all approvers

A behavior chain that will re-set all the approver checkboxes above to un-checked (a start point)

FUNCTION – Determine approvers

This logic will set the hidden approver checkboxes based on the value and the department.

Initially, it determines if the Hospital Administrator (HA) and Chief Executive (CEO) will need to approve; that's based solely on the value and not the department.

Conditional & Parallel Approval

Sample Applications

Then it runs through each department to check which approvers are required based on the department and the value of the request.

Note that this logic is based on the 'value' of the Department drop-down. (See next section)

On the Request page:

Check the department drop-down object and note that each department has a corresponding unique value. *That same value is displayed in the stakeholders chart near this document's start.*

Check the Department Changes behavior event and see that the Run Behavior commands are used to initially clear the approvers (Function = Uncheck all approvers) and then to determine the approvers (Function = Determine approvers)

Check the Total Cost changes behavior event and see that the same is triggered there too. The reason to do this is so that it doesn't matter in which order the department and value fields are entered or modified.

We are now in the position where when the request is submitted, the approver checkboxes on the helper page will be set correctly to determine who needs to approve that specific request.

On the Workflow Diagram:

On the pathway between the 'New Request > Authorization' stages, note the behavior that will notify the Department Head and inspect each approver checkbox on the hidden page. A notification is sent if an approver is expected to approve (i.e., their checkbox is checked). If an approver is not expected to approve, then their 'Approved' radio-button caption on the Authorization page is changed to N/A, and the radio button is checked. They will not receive a notification.

On the pathway between the 'Authorization > Approved' stages, note the condition that all of the seven 'Approved' checkboxes are checked. As a result of this condition being true, a notification is sent to the requester.

On the pathway between the 'Authorization > Rejected' stages note the conditions which check if one of the seven rejected radio buttons is checked. If one is checked, a notification is sent to the requester confirming who has rejected the request and including their comments. The comments are checked as mandatory on the Submit button pressed logic.

A single rejection by any decision-maker will result in the request being rejected, but all required approvals will be needed to result in the request being approved.

Conditional & Parallel Approval

Sample Applications

Note about testing:

In this sample, the workflow logic is defined so that all notifications for approvals will go to the email address entered into the 'Department Head Email' field; this is done so that the sample only needs to be imported and published before it is ready to test.

If, however, you wanted to utilize this sample as an actual working application, it would be necessary to re-direct the different notification emails to the right people.

To do this, you will need to open the workflow area.

In the Workflow Properties panel on the right, select, in turn, all of the different roles and re-link them to specific email addresses, users, or positions set up within your system.

The image shows a workflow editor interface. On the left is a flowchart on a grid background. The flow starts with a 'New Request' task, followed by a 'New Request Submitted' event, then an 'Authorization' task. From 'Authorization', the flow branches into two paths: 'All Approved' leading to an 'Authorized' task, and 'First Rejection' leading to a 'Rejected' task. On the right is the 'Properties' panel for the workflow. It has tabs for 'Settings' and 'Summary'. Under 'Settings', there is a 'Roles' section with a table:

Name	Default Person
Requester	Requester Email
Department Head	Department Head Email
Head of Engineering	Department Head Email
Head of Surgery	Department Head Email
Hospital Administrator	Department Head Email
CMO	Department Head Email

Below the table are 'Add', 'Remove', and 'Edit' buttons. Above the table, there is an 'Attributes' section with a 'Status' dropdown menu set to 'OK'.

Conditional & Parallel Approval