

PUBLIC

Deep dive into SAP Business Technology Platform Workflow Management –Modularize Workflow steps using Reference Subflow

DEV-264

Exercises / Solutions
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SAP Business Technology Platform Workflow enables developers to modularize and reuse workflows using Reference Sub flow feature. It is a standard concept in BPMN and helps reusability of workflow steps in business process applications.

REFERENCE SUBFLOW

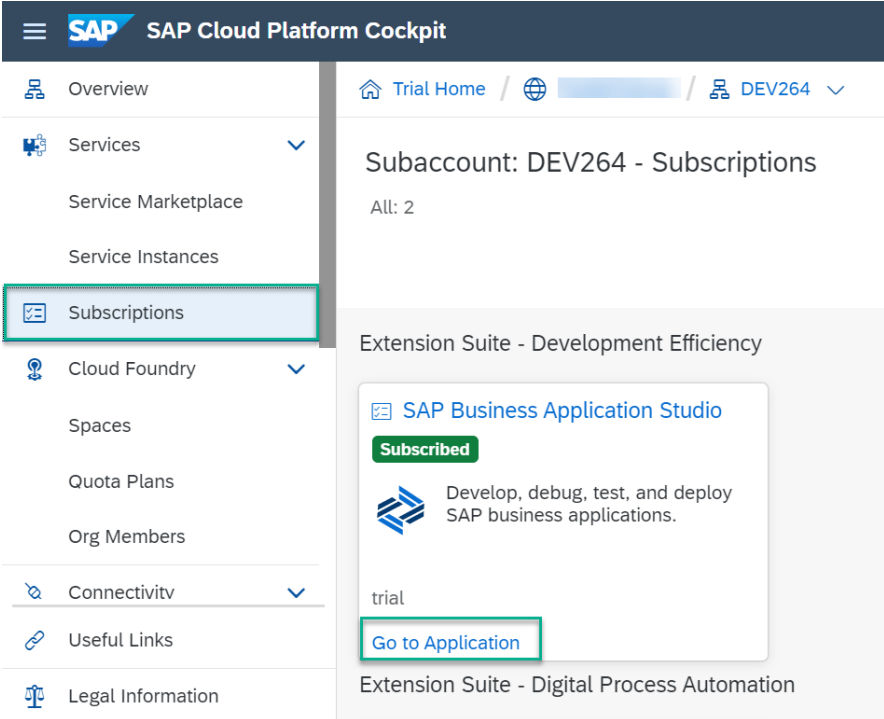
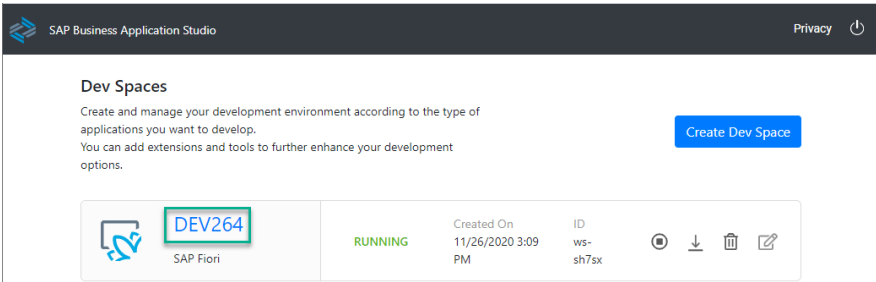
Reference Subflow is a workflow model and it can be referenced from another workflow model. A developer needs to model input and output mapping while adding reference subflow. The parent workflow wait until the Referenced Workflow has completed. Please see [SAP Business Technology Platform Workflow](#) help to see more about Reference Subflow.

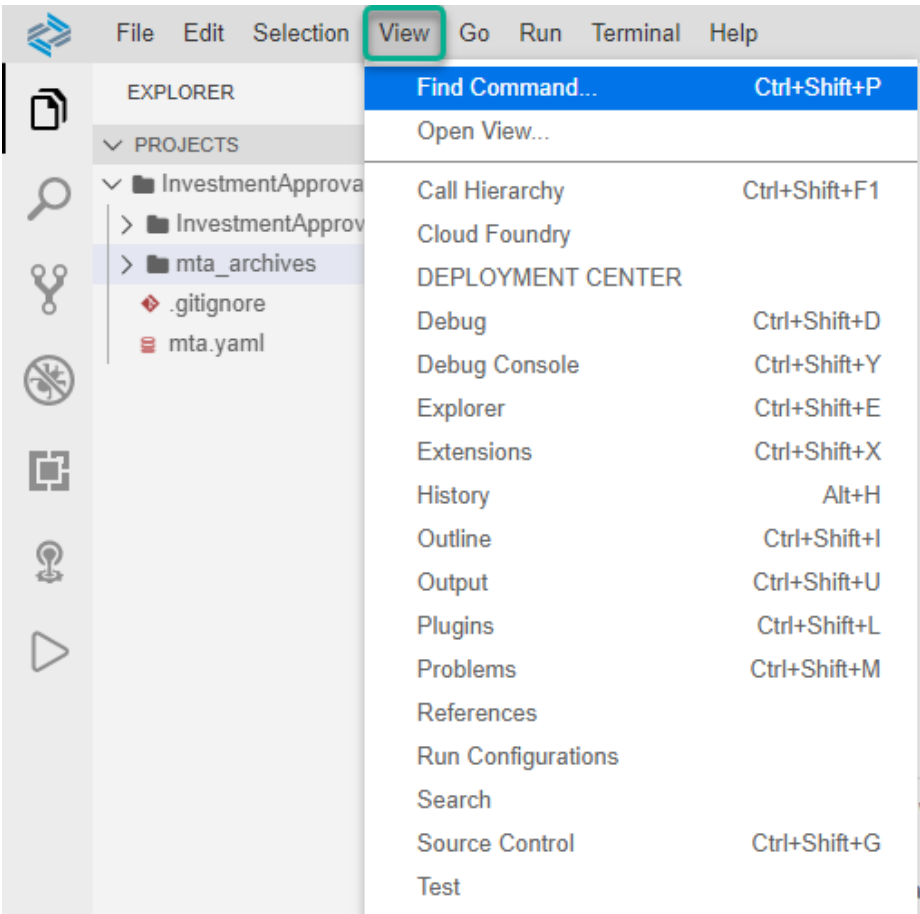
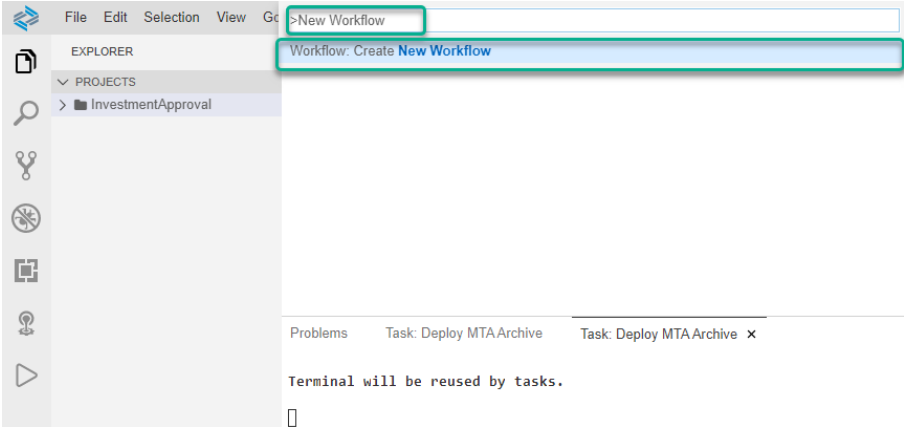
Scenario

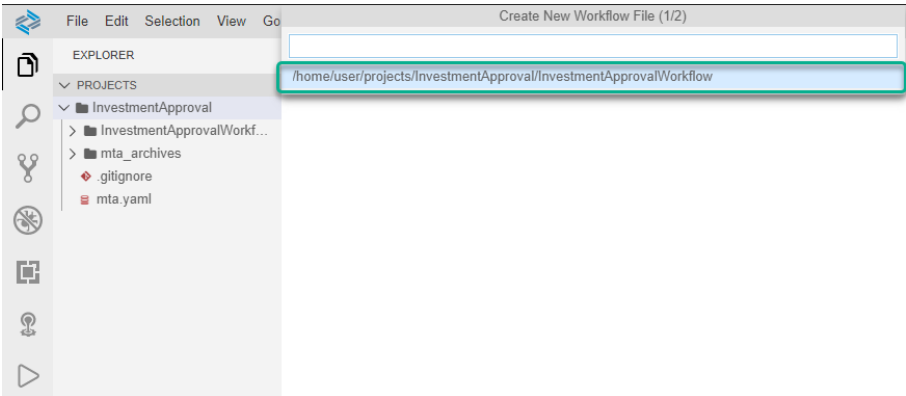
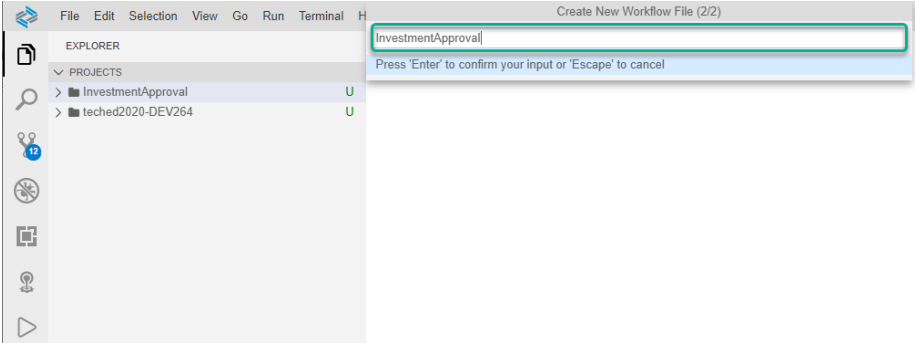
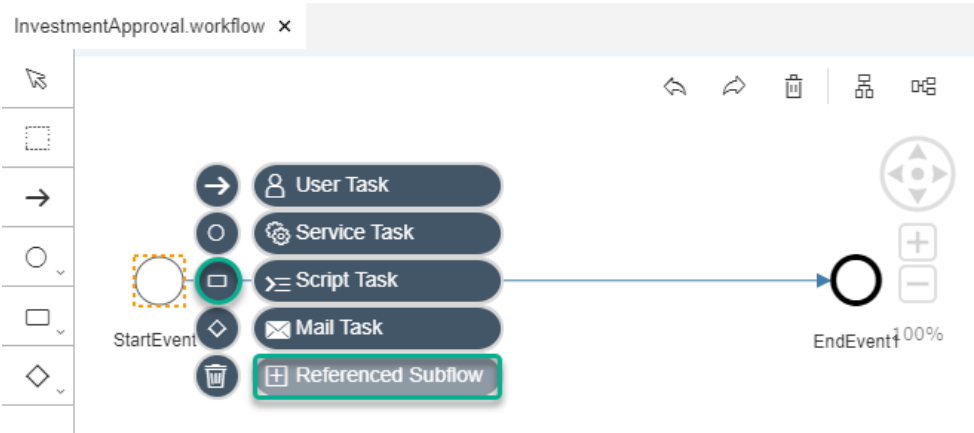
In Exercise 1 you have developed a Cost Center Owner Approval Workflow. You can reuse this model to have multiple cost center owner approvals in an Investment approval use case.

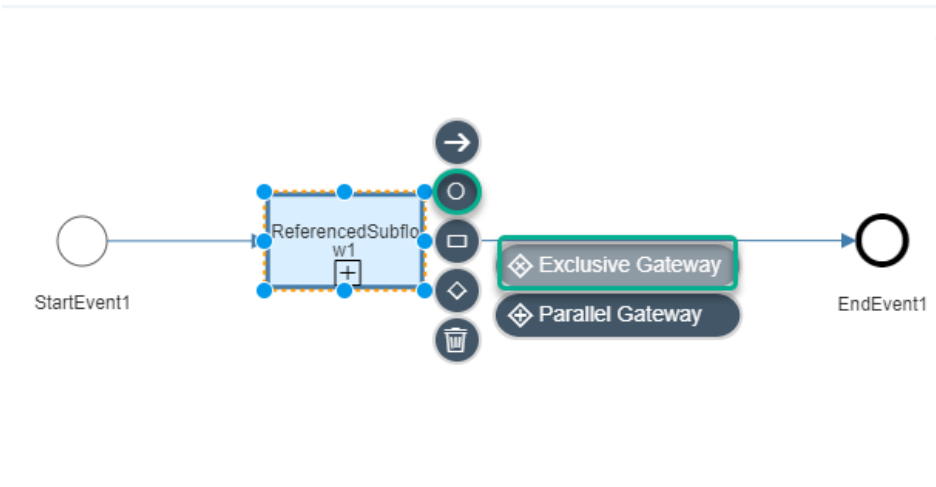
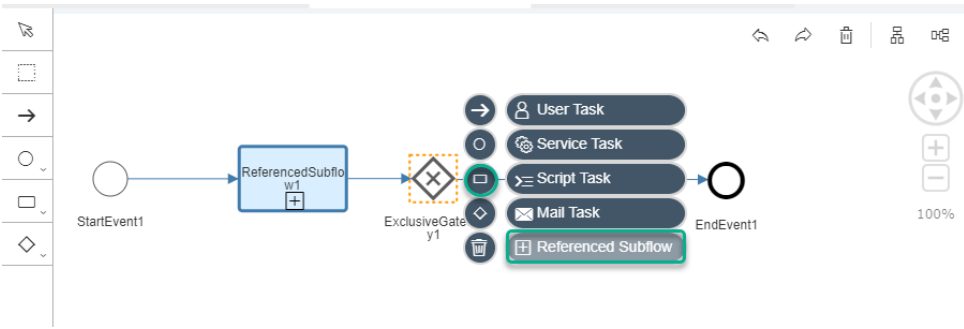
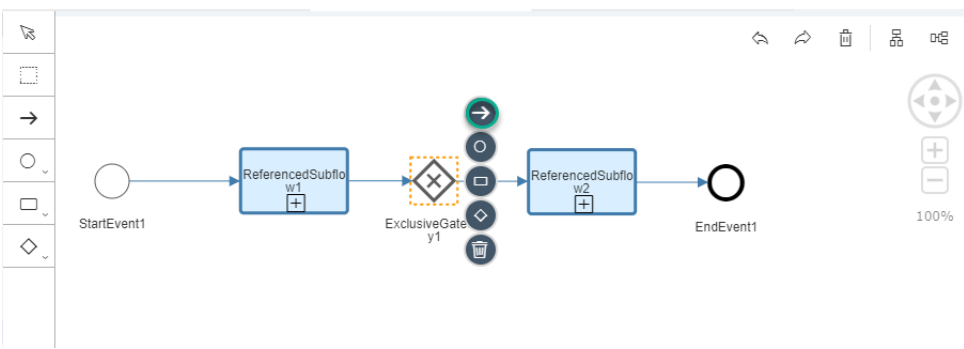
Prerequisite

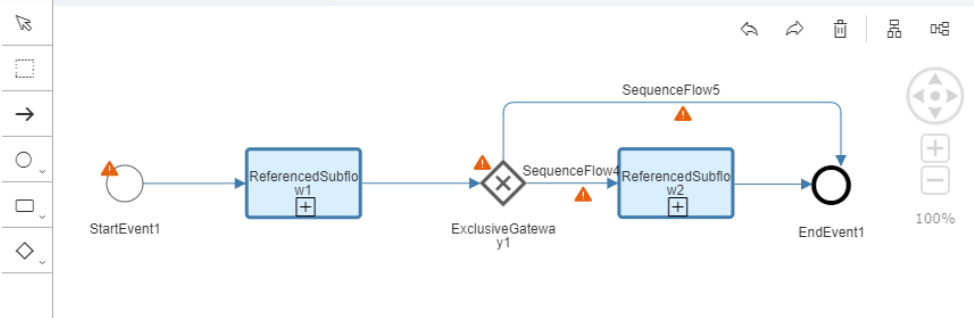
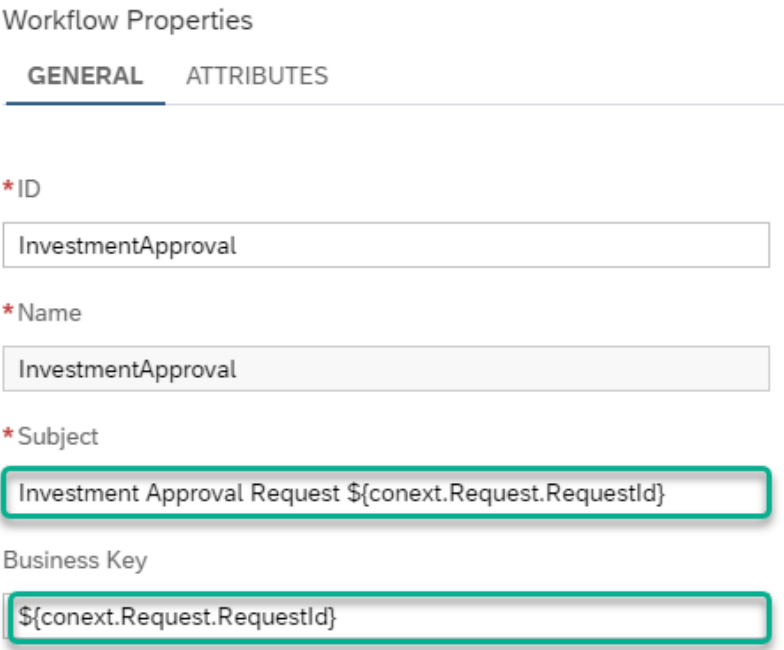
You have completed exercise 1 – [Model Investment Approval Workflow](#)

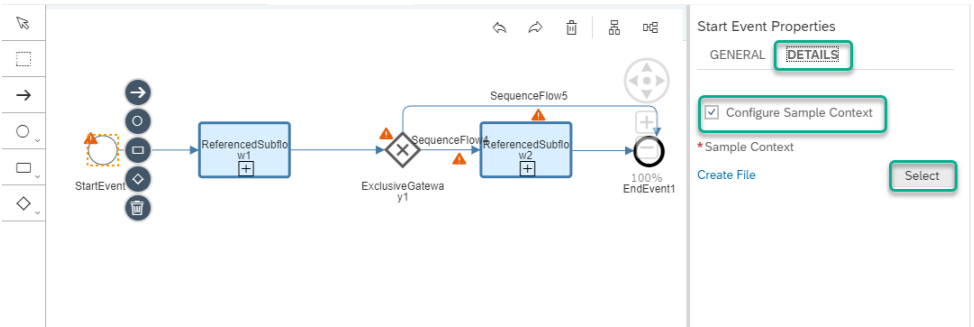
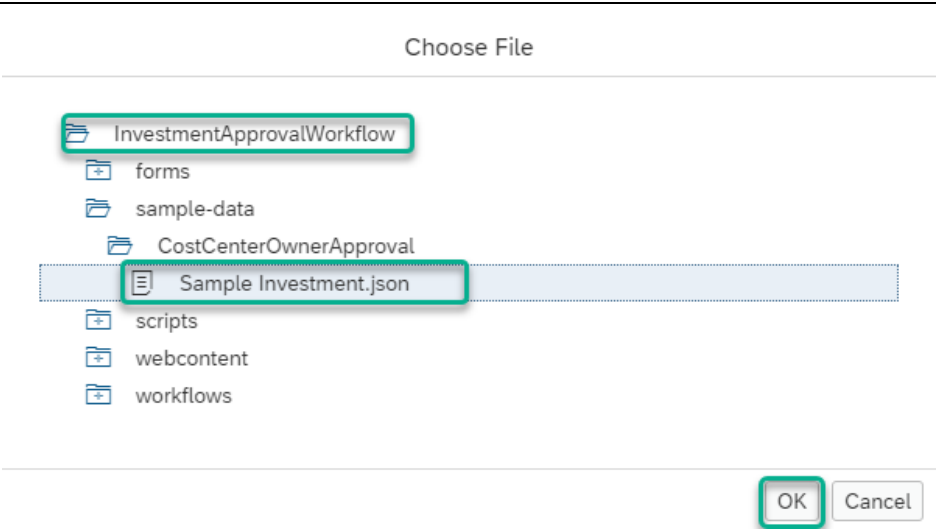
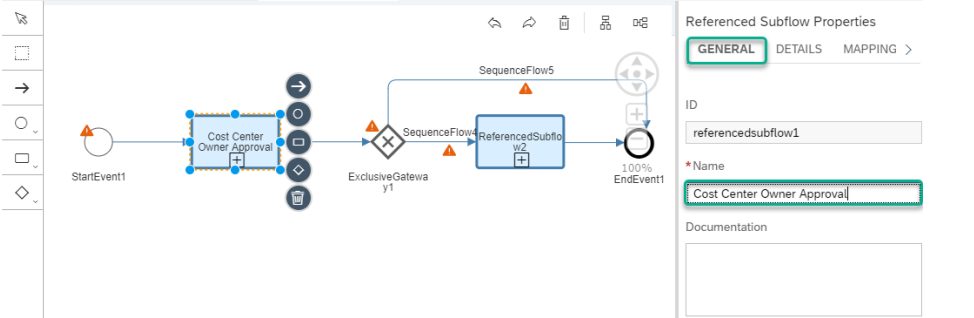
Explanation	Screenshot
<ol style="list-style-type: none"> 1. Select Subscriptions in your Sub Account and you see the subscribed applications. 2. Select SAP Business Application Studio and click Go to Application. <p>SAP Business Technology Platform Business Application Studio will be opened in new browser window.</p>	 <p>The screenshot shows the SAP Cloud Platform Cockpit interface. The left sidebar contains a menu with items: Overview, Services, Subscriptions (highlighted with a red box), Cloud Foundry, Connectivity, Useful Links, and Legal Information. The main content area displays 'Subaccount: DEV264 - Subscriptions' with 'All: 2' items. Under the 'Extension Suite - Development Efficiency' section, there is a card for 'SAP Business Application Studio' with a 'Subscribed' status and a 'Go to Application' button highlighted with a red box. Below this, there is a section for 'Extension Suite - Digital Process Automation'.</p>
<ol style="list-style-type: none"> 3. Click your Dev Space. 	 <p>The screenshot shows the SAP Business Application Studio interface. The top bar includes the SAP logo and 'SAP Business Application Studio' text. Below the header, there is a section titled 'Dev Spaces' with a description: 'Create and manage your development environment according to the type of applications you want to develop. You can add extensions and tools to further enhance your development options.' A 'Create Dev Space' button is visible. Below this, there is a table of Dev Spaces. One Dev Space is listed: 'DEV264' (highlighted with a red box) with a status of 'RUNNING'. Other details include 'Created On: 11/26/2020 3:09 PM' and 'ID: ws-sh7sx'.</p>

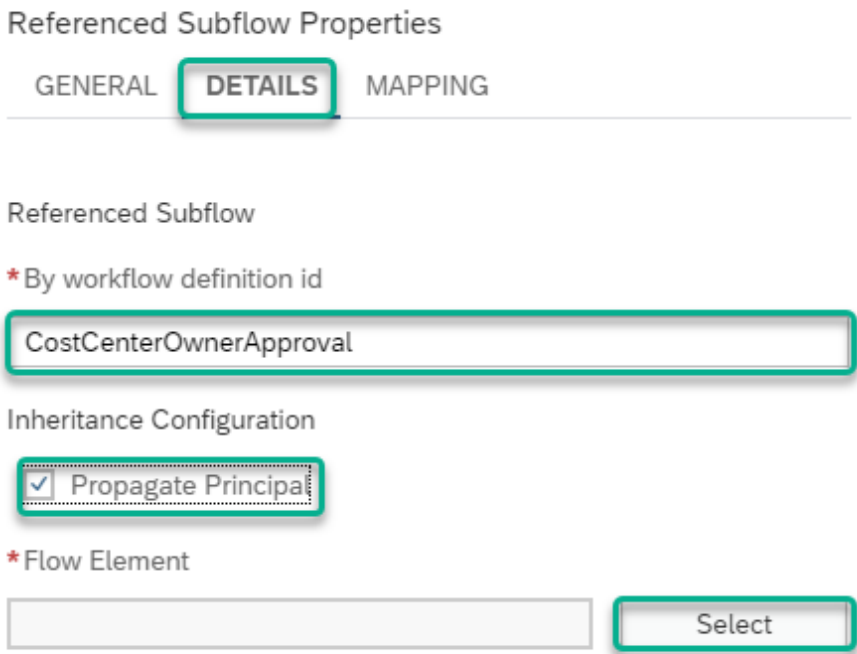
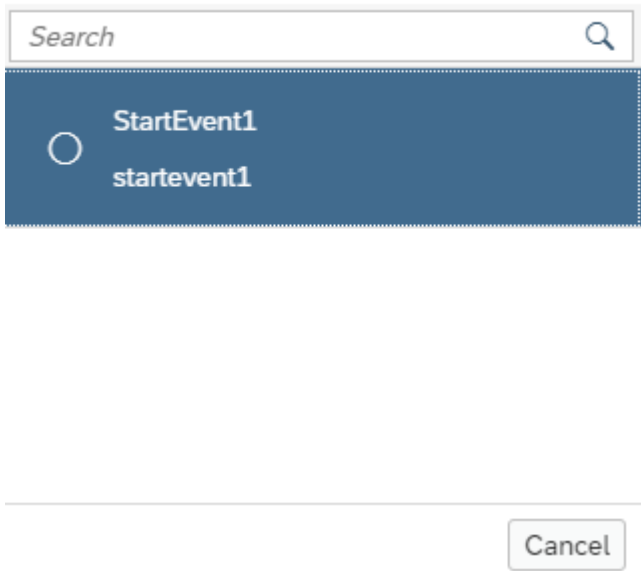
Explanation	Screenshot
4. Click View on the menu and select Find Command .	 <p>The screenshot shows the Visual Studio Code interface. The 'View' menu is open, and 'Find Command...' is highlighted. The Explorer sidebar on the left shows a project structure with folders 'InvestmentApproval' and 'mta_archives', and files '.gitignore' and 'mta.yaml'. The 'View' menu lists various views and their keyboard shortcuts, including 'Find Command...' (Ctrl+Shift+P), 'Open View...', 'Call Hierarchy' (Ctrl+Shift+F1), 'Cloud Foundry', 'DEPLOYMENT CENTER', 'Debug' (Ctrl+Shift+D), 'Debug Console' (Ctrl+Shift+Y), 'Explorer' (Ctrl+Shift+E), 'Extensions' (Ctrl+Shift+X), 'History' (Alt+H), 'Outline' (Ctrl+Shift+I), 'Output' (Ctrl+Shift+U), 'Plugins' (Ctrl+Shift+L), 'Problems' (Ctrl+Shift+M), 'References', 'Run Configurations', 'Search', 'Source Control' (Ctrl+Shift+G), and 'Test'.</p>
5. Search for New Workflow . 6. Select Workflow: Create New Workflow	 <p>The screenshot shows the Visual Studio Code interface. The search bar at the top right contains the text '>New Workflow'. Below the search bar, a dropdown menu is open, showing the option 'Workflow: Create New Workflow'. The Explorer sidebar on the left shows a project structure with a folder 'InvestmentApproval'. The bottom of the interface shows the 'Problems' panel and the 'Task: Deploy MTA Archive' task.</p>

Explanation	Screenshot
7. Select the folder name.	
8. Enter new Workflow name as InvestmentApproval . A new workflow has created and opened in the editor. 9. Drag and drop the EndEvent towards right to add other workflow artifacts.	
10. Select Start Event and use speed button select Referenced Subflow .	

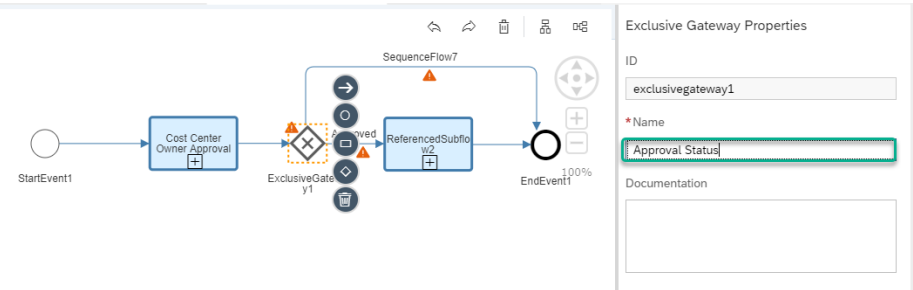
Explanation	Screenshot
11. Select ReferencedSubflow1 and use the speed button ,select Exclusive Gateway .	 <p>The screenshot shows a BPMN diagram with a start event 'StartEvent1' connected to a task 'ReferencedSubflow1 w1'. A context menu is open over the task, showing options like 'Exclusive Gateway' and 'Parallel Gateway'. The 'Exclusive Gateway' option is highlighted with a green border.</p>
12. Select ExclusiveGateway and use the speed button,choose Referenced Subflow .	 <p>The screenshot shows the BPMN diagram with the 'ExclusiveGateway y1' selected. A context menu is open, and the 'Referenced Subflow' option is highlighted with a green border. The diagram shows 'StartEvent1' connected to 'ReferencedSubflow w1', which is then connected to 'ExclusiveGateway y1', and finally to 'EndEvent1'.</p>
13. Select Exclusive Gateway and use the speed button,choose the Sequence Flow .	 <p>The screenshot shows the BPMN diagram with the 'ExclusiveGateway y1' selected. A context menu is open, and the 'Sequence Flow' option is highlighted with a green border. The diagram shows 'StartEvent1' connected to 'ReferencedSubflow w1', which is then connected to 'ExclusiveGateway y1', and finally to 'ReferencedSubflow w2', and finally to 'EndEvent1'.</p>

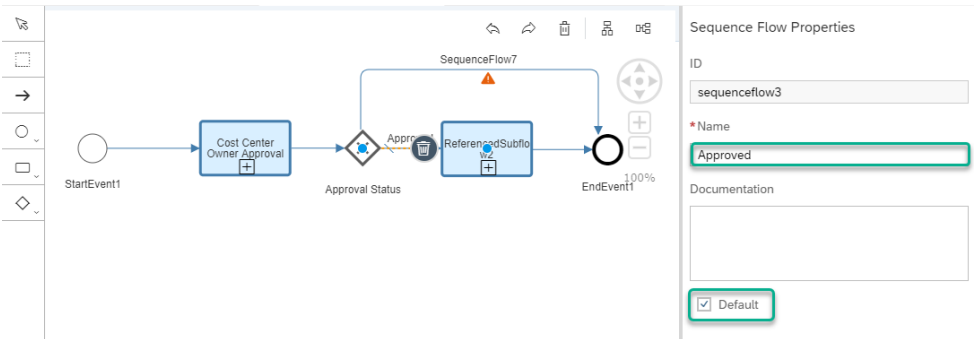
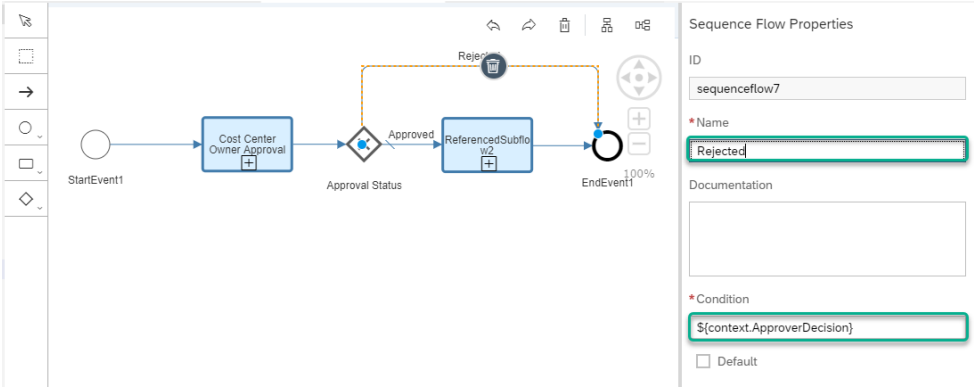
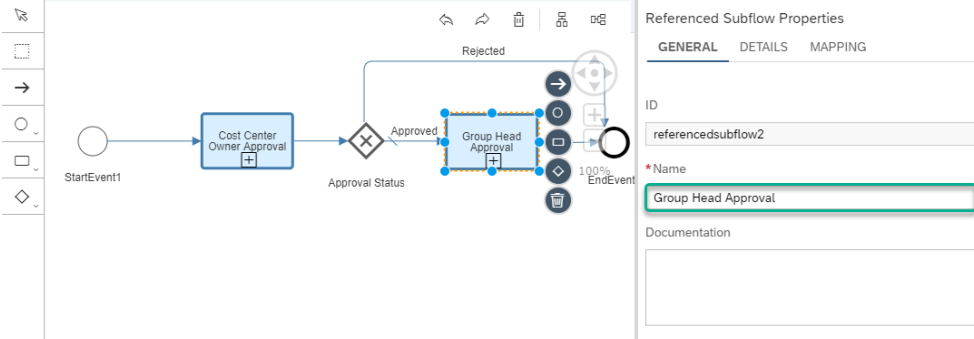
Explanation	Screenshot
<p>14. Drag and drop the Sequence Flow to the EndEvent.</p> <p>Format the Workflow model.</p>	 <p>The screenshot shows a BPMN diagram in a design tool. The diagram includes a StartEvent1 (thin circle), a ReferredSubflow w1 (rounded rectangle), an ExclusiveGateway y1 (diamond with an 'X'), a ReferredSubflow w2 (rounded rectangle), and an EndEvent1 (thick circle). SequenceFlow4 connects the gateway to subflow w2. SequenceFlow5 is being added from the gateway to the end event. A toolbar on the left shows various BPMN symbols, and a right toolbar shows navigation and zoom controls. The zoom level is set to 100%.</p>
<p>15. Update Workflow Properties.</p> <p>Subject: Investment Approval Request \${conext.Request.RequestId}</p> <p>Business Key: \${conext.Request.RequestId}</p>	 <p>The screenshot shows the 'Workflow Properties' dialog box with the 'GENERAL' tab selected. The fields are as follows:</p> <ul style="list-style-type: none">ID: InvestmentApprovalName: InvestmentApprovalSubject: Investment Approval Request \${conext.Request.RequestId}Business Key: \${conext.Request.RequestId} <p>The 'Subject' and 'Business Key' fields are highlighted with a green border.</p>

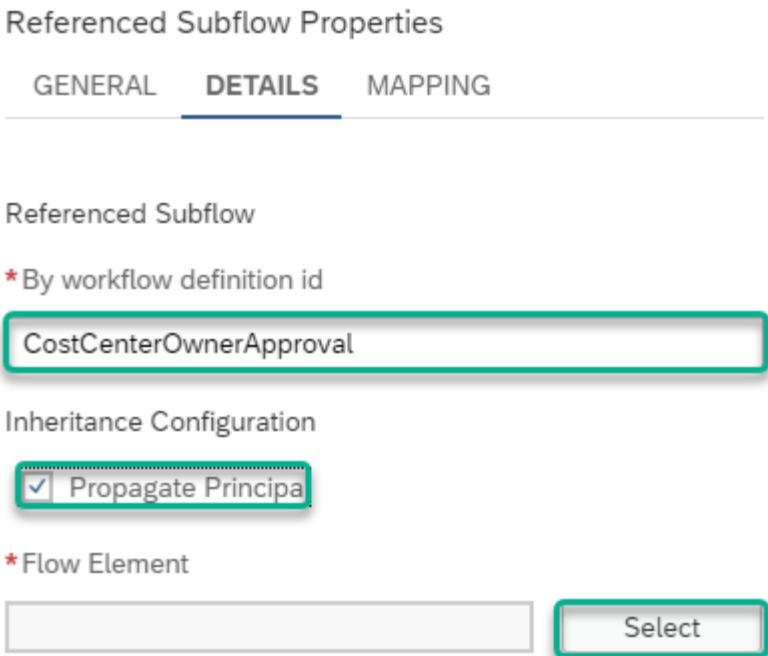
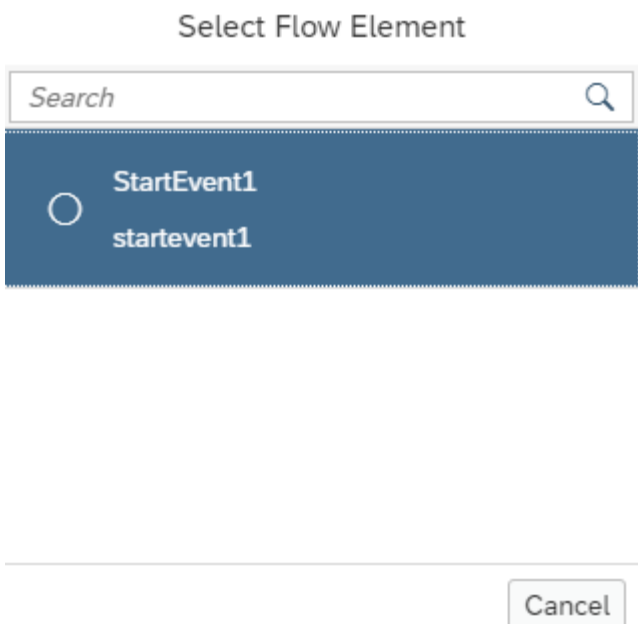
Explanation	Screenshot
<p>Configure Sample Context</p> <p>16. Select the Start event and Select DETAILS section of Start Event properties.</p> <p>17. Check Configure Sample Context.</p> <p>18. Click Select.</p>	
<p>19. Select InvestmentApprovalWorkflow -> Sample Investment.json.</p> <p>20. Click OK button.</p>	
<p>21. Select ReferenceSubflow1 and change the name as Cost Center Owner Approval.</p>	

Explanation	Screenshot
<p>22. Select DETAILS tab.</p> <p>23. Enter CostCenterOwnerApproval as Workflow definition id.</p> <p>24. Check Propagate Principal</p> <p>Enabling Principal Propagation will use a user context to start the Referenced Subflow.</p> <p>25. Click Select to choose a flow Element.</p>	 <p>Referenced Subflow Properties</p> <p>GENERAL DETAILS MAPPING</p> <p>Referenced Subflow</p> <p>* By workflow definition id</p> <p>CostCenterOwnerApproval</p> <p>Inheritance Configuration</p> <p><input checked="" type="checkbox"/> Propagate Principal</p> <p>* Flow Element</p> <p>Select</p>
<p>26. Select StartEvent1 as flow element.</p>	 <p>Select Flow Element</p> <p>Search</p> <p><input type="radio"/> StartEvent1 startevent1</p> <p>Cancel</p>

Explanation	Screenshot												
<p>27. Select MAPPING tab.</p> <p>28. Click Add button.</p> <p>29. Enter the following as Source and Target Context Path</p> <p><code>\${context.Approver}</code></p> <p><code>\${context.Investment}</code></p> <p><code>\${context.Request}</code></p> <p>Input Mapping define the input data structure needs to pass from the parent workflow (InvestmentApproval) context to child or Reference Subflow (CostCenterOwnerApproval) as start payload.</p> <p>Both InvestmentApproval and CostCenterOwnerApproval Workflow have the same JSON Elements as workflow context.</p> <p>Hence, we use the same in source and target context path. It is possible to have different context elements in source and target context path.</p>	<p>Referenced Subflow Properties</p> <p>GENERAL DETAILS MAPPING</p> <p>Input Mapping</p> <p>Add Delete</p> <table><thead><tr><th><input type="checkbox"/></th><th>Source Context Path</th><th>Target Context Path</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td><code>\${context.Approver}</code></td><td><code>\${context.Approver}</code></td></tr><tr><td><input type="checkbox"/></td><td><code>\${context.Investment}</code></td><td><code>\${context.Investment}</code></td></tr><tr><td><input type="checkbox"/></td><td><code>\${context.Request}</code></td><td><code>\${context.Request}</code></td></tr></tbody></table>	<input type="checkbox"/>	Source Context Path	Target Context Path	<input type="checkbox"/>	<code>\${context.Approver}</code>	<code>\${context.Approver}</code>	<input type="checkbox"/>	<code>\${context.Investment}</code>	<code>\${context.Investment}</code>	<input type="checkbox"/>	<code>\${context.Request}</code>	<code>\${context.Request}</code>
<input type="checkbox"/>	Source Context Path	Target Context Path											
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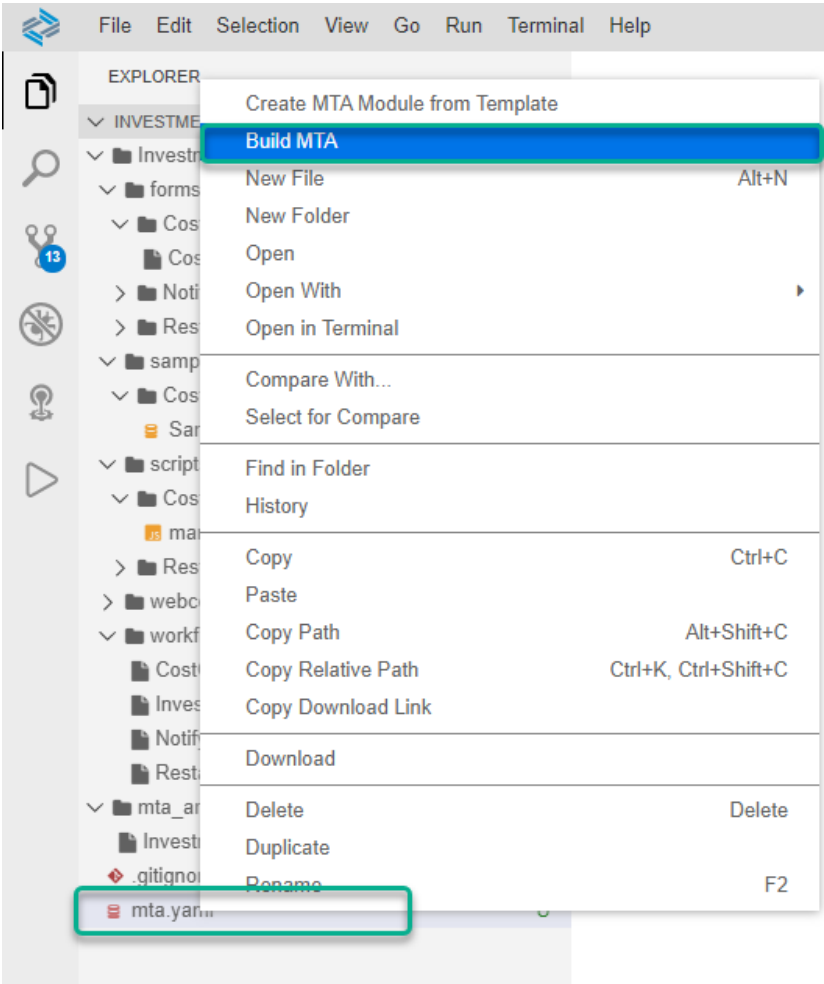
Explanation	Screenshot														
<p>30. Select Mapping and click Add button under Output Mapping.</p> <p>Source Context Path</p> <p><code>\${context.Decision}</code> <code>\${context.Comments}</code></p> <p>Target Context Path</p> <p><code>\${context.ApproverDecision}</code> <code>\${context.Comments}</code></p> <p>In output mapping Source Context is Reference Subflow (CostCenterOwnerApproval) workflow context. Target Context Path is Parent Workflow (InvestmentApproval) context.</p> <p>Output mapping enable to merge the response from the Reference Subflow to the parent Subflow. In this use case the decision and comments from Cost Center Owner Approver.</p>	<p>Referenced Subflow Properties</p> <p>GENERAL DETAILS MAPPING</p> <p>Input Mapping</p> <p>Add Delete</p> <table><thead><tr><th>Source Context Path</th><th>Target Context Path</th></tr></thead><tbody><tr><td><input type="checkbox"/> <code>\${context.Approver}</code></td><td><code>\${context.Approver}</code></td></tr><tr><td><input type="checkbox"/> <code>\${context.Investment}</code></td><td><code>\${context.Investment}</code></td></tr><tr><td><input type="checkbox"/> <code>\${context.Request}</code></td><td><code>\${context.Request}</code></td></tr></tbody></table> <p>Output Mapping</p> <p>Add Delete</p> <table><thead><tr><th>Source Context Path</th><th>Target Context Path</th></tr></thead><tbody><tr><td><input type="checkbox"/> <code>\${context.Decision}</code></td><td><code>\${context.ApproverDecision}</code></td></tr><tr><td><input type="checkbox"/> <code>\${context.Comments}</code></td><td><code>\${context.Comments}</code></td></tr></tbody></table>	Source Context Path	Target Context Path	<input type="checkbox"/> <code>\${context.Approver}</code>	<code>\${context.Approver}</code>	<input type="checkbox"/> <code>\${context.Investment}</code>	<code>\${context.Investment}</code>	<input type="checkbox"/> <code>\${context.Request}</code>	<code>\${context.Request}</code>	Source Context Path	Target Context Path	<input type="checkbox"/> <code>\${context.Decision}</code>	<code>\${context.ApproverDecision}</code>	<input type="checkbox"/> <code>\${context.Comments}</code>	<code>\${context.Comments}</code>
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<input type="checkbox"/> <code>\${context.Comments}</code>	<code>\${context.Comments}</code>														
<p>31. Select Exclusive Gateway1 and update Name as Approval Status.</p>	 <p>The screenshot shows a BPMN diagram with the following elements: StartEvent1, Cost Center Owner Approval task, ExclusiveGateway1 (named 'Approval Status'), ReferencedSubflow w2, and EndEvent1. A SequenceFlow7 connects the Exclusive Gateway to the Referenced Subflow. The Exclusive Gateway Properties panel on the right shows the ID 'exclusivegateway1' and the Name 'Approval Status'.</p>														

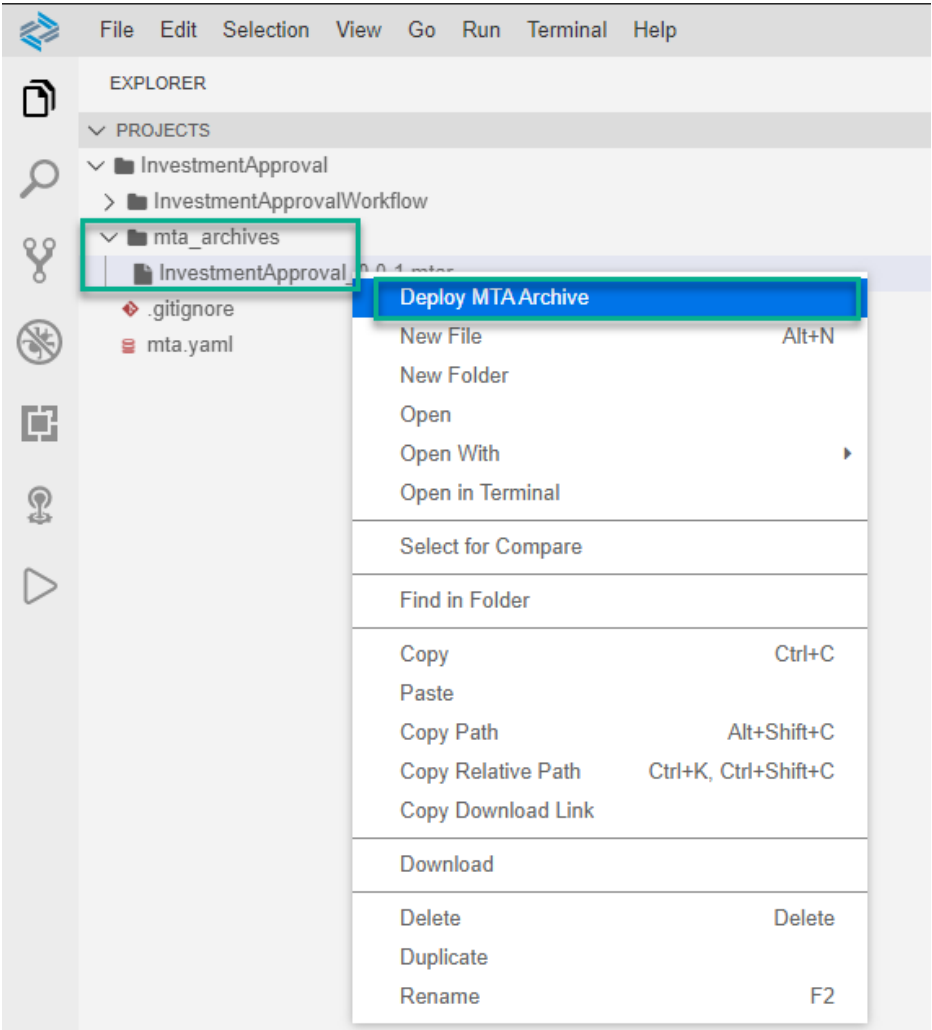
Explanation	Screenshot
<div>32. Select sequence flow between Exclusive Gateway (Approval Status) and Reference Subflow2.</div> <div>33. Update Name as Approved.</div> <div>34. Check the Default check box.</div>	
<div>35. Select sequence flow between Exclusive Gateway (Approval Status) and EndEvent1.</div> <div>36. Update Name as Rejected.</div> <div>37. Set Condition as <code>\${context.ApproverDecision == "reject"}</code></div>	
<div>38. Select ReferenceSubflow2 and change the name as Group Head Approval.</div>	

Explanation	Screenshot
<p>39. Select DETAILS tab.</p> <p>40. Enter CostCenterOwnerApproval as Workflow definition id.</p> <p>41. Check Propagate Principal</p> <p>42. Click Select to choose a flow Element.</p>	 <p>Referenced Subflow Properties</p> <p>GENERAL DETAILS MAPPING</p> <p>Referenced Subflow</p> <p>*By workflow definition id</p> <p>CostCenterOwnerApproval</p> <p>Inheritance Configuration</p> <p><input checked="" type="checkbox"/> Propagate Principa</p> <p>*Flow Element</p> <p>Select</p>
<p>43. Select StartEvent1 as flow element.</p>	 <p>Select Flow Element</p> <p>Search</p> <p>StartEvent1 startevent1</p> <p>Cancel</p>

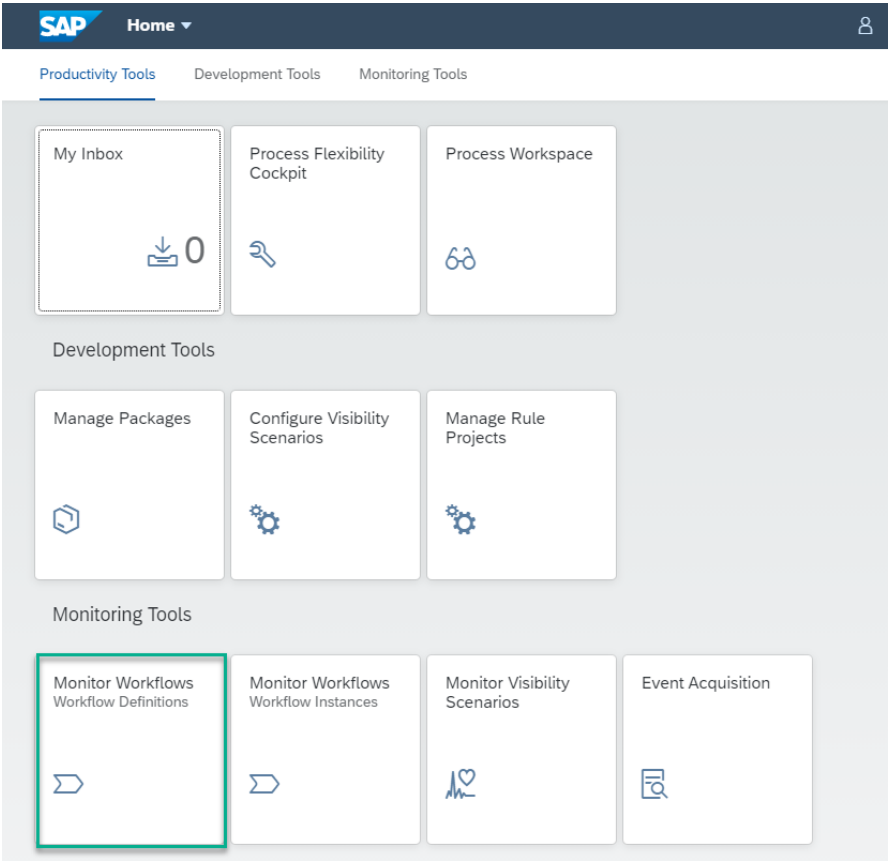
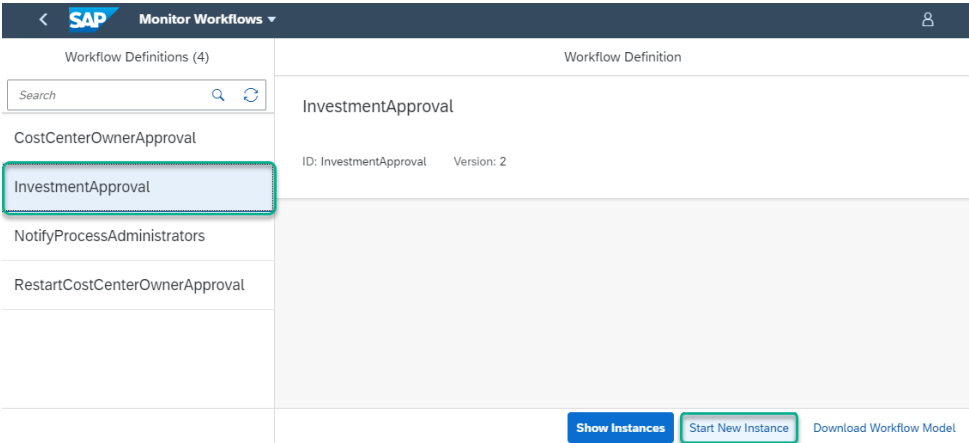
Explanation	Screenshot
<div>44. Select MAPPING tab.</div> <div>45. Click Add button.</div> <div>46. Enter the following as Source and Target Context Path</div> <div><code>\${context.Comments}</code></div> <div><code>\${context.Approver}</code></div> <div><code>\${context.Investment}</code></div> <div><code>\${context.Request}</code></div>	<div><div>Referenced Subflow Properties</div><div><div>GENERAL</div><div>DETAILS</div><div>MAPPING</div></div><div>Input Mapping</div><div><div>Add</div><div>Delete</div></div><div><div><div><div><input type="checkbox"/></div><div>Source Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Comments}</code></div></div><div><div><input type="checkbox"/></div><div>Target Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Comments}</code></div></div></div><div><div><div><input type="checkbox"/></div><div>Source Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Approver}</code></div></div><div><div><input type="checkbox"/></div><div>Target Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Approver}</code></div></div></div><div><div><div><input type="checkbox"/></div><div>Source Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Investment}</code></div></div><div><div><input type="checkbox"/></div><div>Target Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Investment}</code></div></div></div><div><div><div><input type="checkbox"/></div><div>Source Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Request}</code></div></div><div><div><input type="checkbox"/></div><div>Target Context Path</div></div><div><div><input type="checkbox"/></div><div><code>\${context.Request}</code></div></div></div></div><div>Output Mapping</div><div><div>Add</div><div>Delete</div></div><div><div><div><div><input type="checkbox"/></div><div>Source Context Path</div></div><div><div><input type="checkbox"/></div><div>Target Context Path</div></div></div></div></div>

Explanation	Screenshot
<p>47. Select Mapping and click Add button under Output Mapping.</p> <p><u>Source Context Path</u></p> <p><code>\${context.Decision}</code> <code>\${context.Comments}</code></p> <p><u>Target Context Path</u></p> <p><code>\${context.ApproverDecision}</code> <code>\${context.Comments}</code></p>	<div><div>Referenced Subflow Properties</div><div><div>GENERAL</div><div>DETAILS</div><div>MAPPING</div></div><div><div><div><div></div></div></div><div><div>Source Context Path</div><div>Target Context Path</div></div><div><div><div><div></div></div></div><div><div><code>\${context.Approver}</code></div><div><code>\${context.Approver}</code></div></div></div><div><div><div><div></div></div></div><div><div><code>\${context.Investment}</code></div><div><code>\${context.Investment}</code></div></div></div><div><div><div><div></div></div></div><div><div><code>\${context.Request}</code></div><div><code>\${context.Request}</code></div></div></div><div><div><div><div></div></div></div><div><div><code>\${context.Comments}</code></div><div><code>\${context.Comments}</code></div></div></div></div><div><div>Output Mapping</div><div><div><div>Add</div><div>Delete</div></div><div><div><div><div></div></div></div><div><div>Source Context Path</div><div>Target Context Path</div></div><div><div><div><div></div></div></div><div><div><code>\${context.Decision}</code></div><div><code>\${context.ApproverDecision}</code></div></div></div><div><div><div><div></div></div></div><div><div><code>\${context.Comments}</code></div><div><code>\${context.Comments}</code></div></div></div></div></div></div></div>

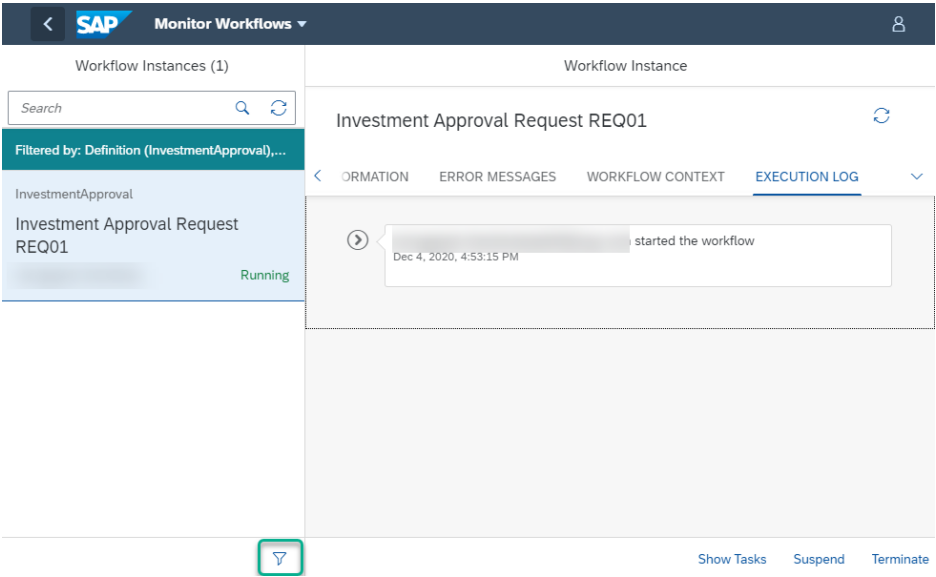
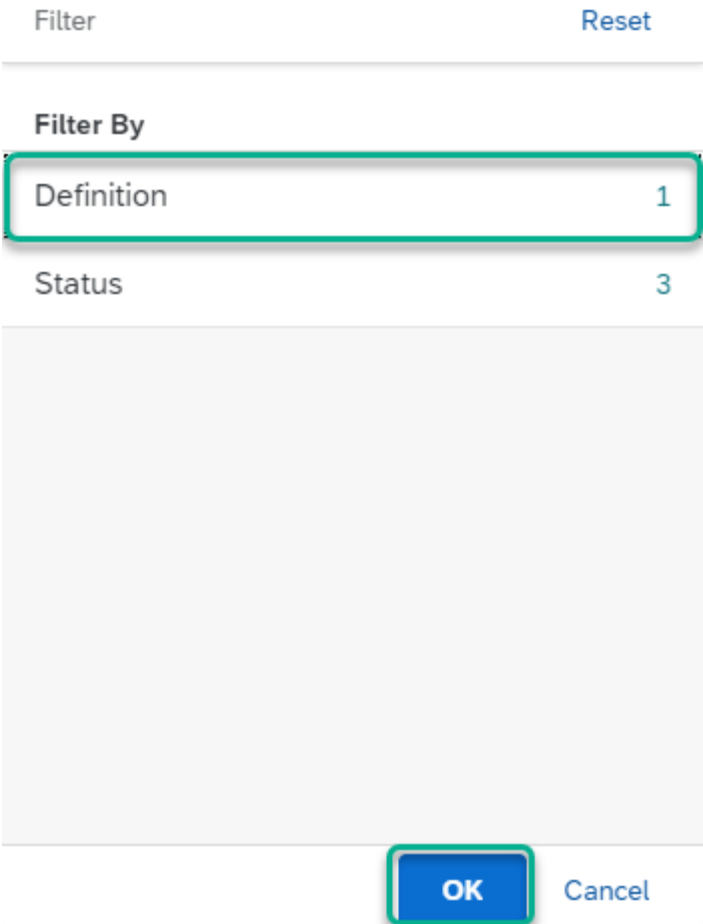
Explanation	Screenshot
<p>Build and Deploy</p> <p>48. Right click on mta.yaml file.</p> <p>49. Select Build MTA.</p> <p>This will start the MTA build and it may take a few seconds to create the mta archive under the folder mta_archives.</p>	 <p>The screenshot shows the SAP Business Studio Explorer interface. The Explorer pane on the left displays a project structure with folders like 'INVESTMENT', 'Investment', 'forms', 'Costs', 'Notifications', 'Resources', 'Samples', 'Scripts', 'Workflows', and 'mta_archives'. The 'mta.yaml' file is selected in the 'mta_archives' folder. A right-click context menu is open over the file, listing various actions. The 'Build MTA' option is highlighted in blue. Other options include 'Create MTA Module from Template', 'New File', 'New Folder', 'Open', 'Open With', 'Open in Terminal', 'Compare With...', 'Select for Compare', 'Find in Folder', 'History', 'Copy', 'Paste', 'Copy Path', 'Copy Relative Path', 'Copy Download Link', 'Download', 'Delete', 'Duplicate', and 'Rename'. The 'mta.yaml' file name is also visible at the bottom of the Explorer pane.</p>

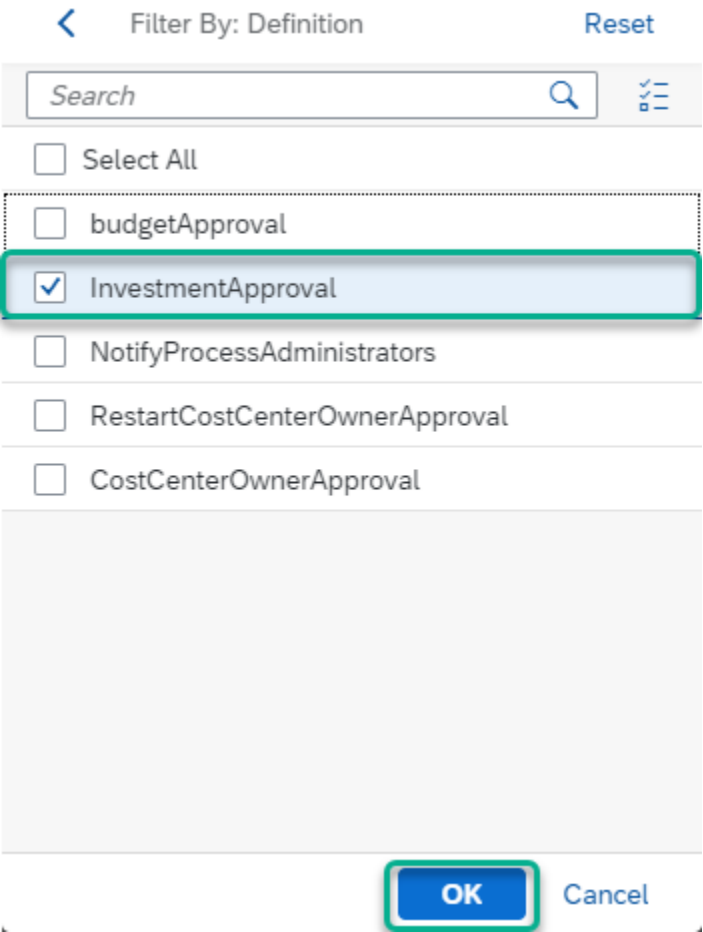
Explanation	Screenshot
<div>50. Successful build will create a new folder mta_archives and a .mtar file.</div> <div>51. Select the .mtar file and right click.</div> <div>52. Click Deploy MTA Archive.</div>	 <p>The screenshot shows the Visual Studio Code Explorer sidebar. The 'PROJECTS' section is expanded, showing a folder named 'InvestmentApprovalWorkflow'. Inside this folder, there is a sub-folder named 'mta_archives'. A right-click context menu is open over the 'mta_archives' folder. The menu items include 'New File', 'New Folder', 'Open', 'Open With', 'Open in Terminal', 'Select for Compare', 'Find in Folder', 'Copy', 'Paste', 'Copy Path', 'Copy Relative Path', 'Copy Download Link', 'Download', 'Delete', 'Duplicate', and 'Rename'. The 'Deploy MTA Archive' option is highlighted in blue at the top of the menu.</p>

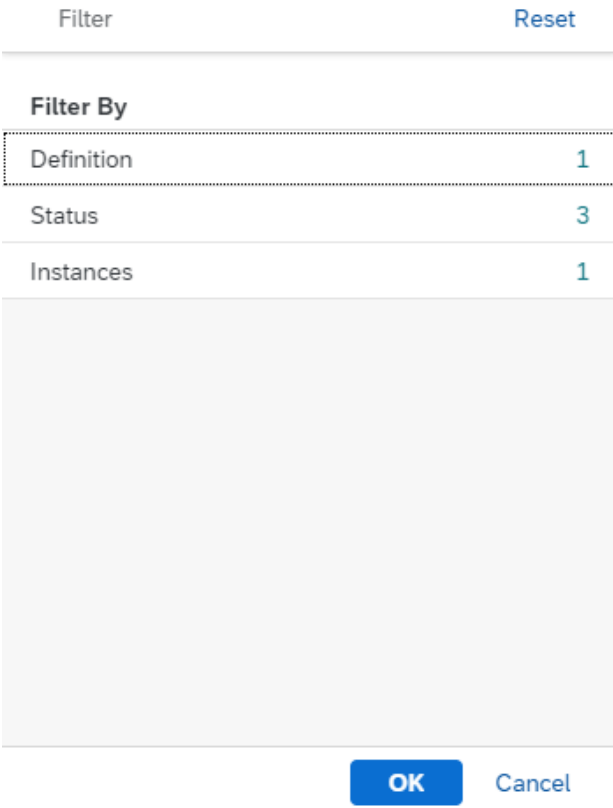
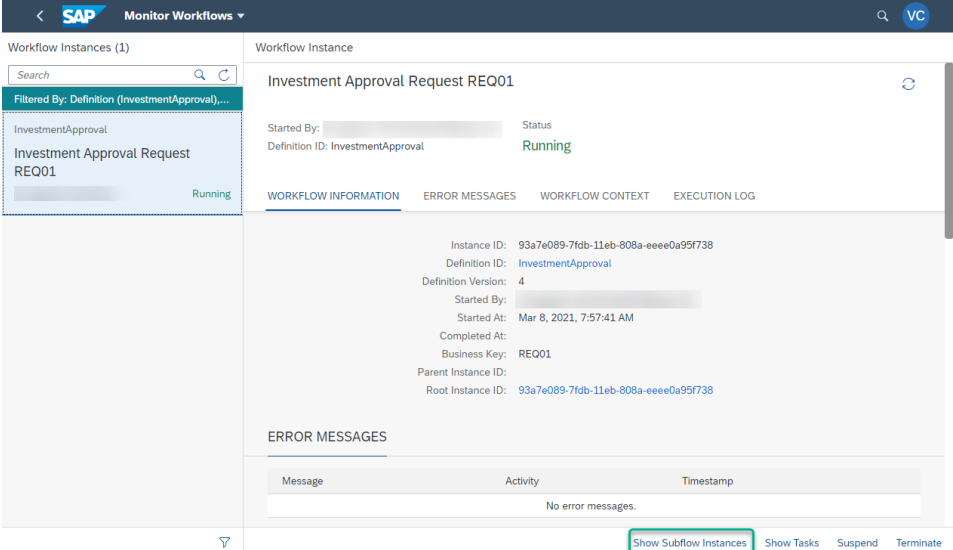
Explanation	Screenshot
<p>Execute and Monitor Workflow</p> <p>53. Select Subscriptions from your Business Technology Platform Subaccount.</p> <p>54. Search Workflow Management and click the link Go to Application.</p> <p>A new browser window is opened, and Workflow Management Fiori Launch Pad is available.</p>	<p>The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, a navigation menu lists 'Overview', 'Services', 'Subscriptions' (highlighted with a red box), 'Cloud Foundry', 'Connectivity', 'Security', 'Entitlements', and 'Usage Analytics'. The main content area displays 'Subaccount: DEV264 - Subscriptions' with 'All: 2'. Below this, two extension suites are shown: 'Extension Suite - Development Efficiency' featuring 'SAP Business Application Studio' (Subscribed, trial, with a 'Go to Application' link) and 'Extension Suite - Digital Process Automation' featuring 'Workflow Management' (Subscribed, with a 'Go to Application' link highlighted by a red box).</p>

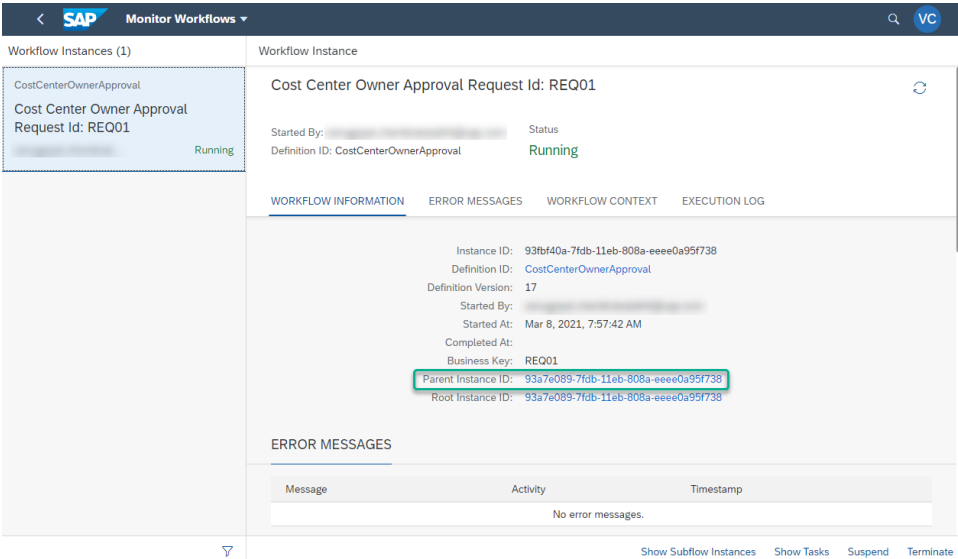
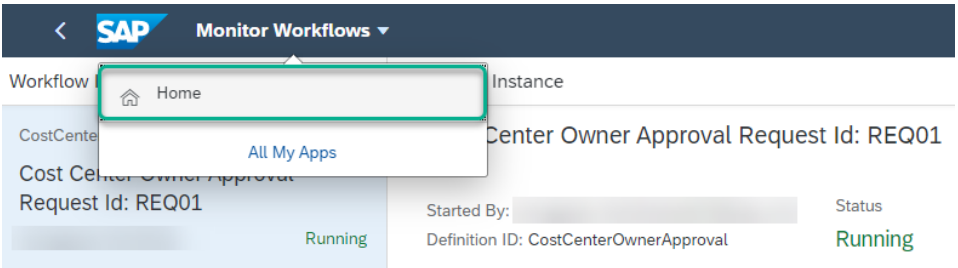
Explanation	Screenshot
55. Under Monitoring Tools, Select Monitor Workflows – Workflow Definitions .	 <p>The screenshot shows the SAP Home dashboard. At the top, there's a navigation bar with 'SAP' logo, 'Home' dropdown, and a user profile icon. Below the navigation bar, there are three tabs: 'Productivity Tools', 'Development Tools', and 'Monitoring Tools'. The 'Monitoring Tools' tab is active. Under this tab, there are four cards: 'My Inbox' (with a download icon and '0'), 'Process Flexibility Cockpit' (with a magnifying glass icon), 'Process Workspace' (with a link icon), and 'Monitor Workflows Workflow Definitions' (with a right-pointing arrow icon). The 'Monitor Workflows Workflow Definitions' card is highlighted with a green border. Below these cards, there are three more cards: 'Monitor Workflows Workflow Instances' (with a right-pointing arrow icon), 'Monitor Visibility Scenarios' (with a heart and pulse icon), and 'Event Acquisition' (with a magnifying glass icon).</p>
56. Select InvestmentApproval Workflow. 57. Click Start New Instance button.	 <p>The screenshot shows the SAP Monitor Workflows page. At the top, there's a navigation bar with 'SAP' logo, 'Monitor Workflows' dropdown, and a user profile icon. Below the navigation bar, there are two tabs: 'Workflow Definitions (4)' and 'Workflow Definition'. The 'Workflow Definitions (4)' tab is active. Under this tab, there is a search bar and a list of workflow definitions: 'CostCenterOwnerApproval', 'InvestmentApproval' (highlighted with a green border), 'NotifyProcessAdministrators', and 'RestartCostCenterOwnerApproval'. To the right of the list, there is a 'Workflow Definition' section for 'InvestmentApproval'. It shows 'ID: InvestmentApproval' and 'Version: 2'. At the bottom right of the page, there are three buttons: 'Show Instances', 'Start New Instance' (highlighted with a green border), and 'Download Workflow Model'.</p>

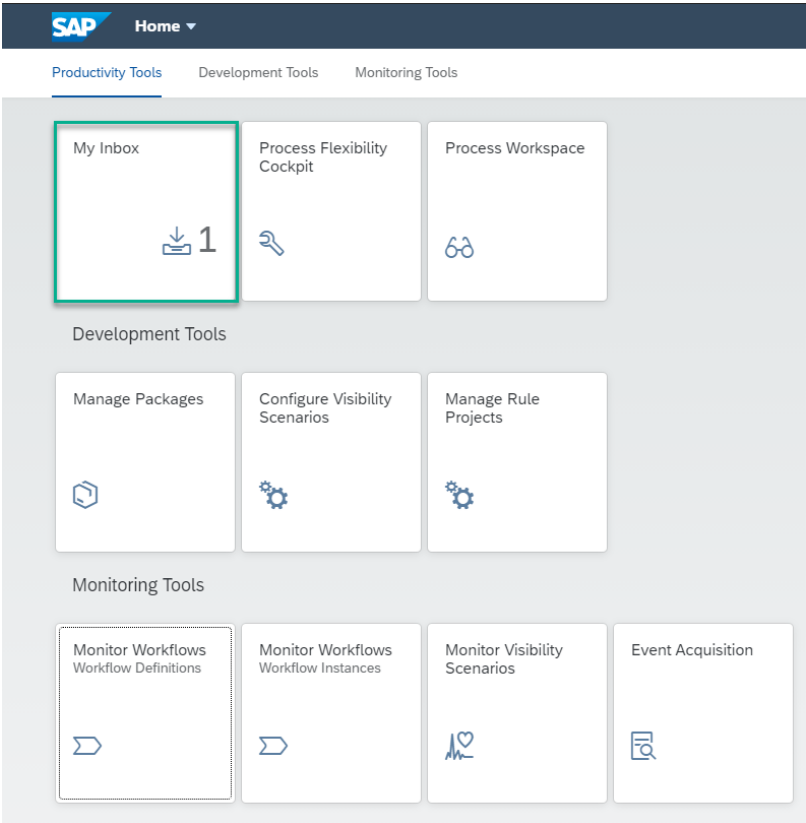
Explanation	Screenshot
58. The sample workflow context is available and click Start New Instance and Close .	<div><div>Start New Instance</div><div>Enter the JSON context with which to start the new instance:</div><div><pre>{ "Request": { "RequestId": "REQ01", "FirstName": "Venugopal", "LastName": "Chembrakalathil", "Email": " ", "UserId": " ", "Comments": "Please approve the request" }, "Investment": {</pre></div><div><div>Start New Instance</div><div>Start New Instance and Close</div><div>Cancel</div></div></div>
59. Click Show Instances button.	<div><div><div><div>< SAP Monitor Workflows</div><div>Workflow Definitions (4)</div><div>Search</div><div>CostCenterOwnerApproval</div><div>InvestmentApproval</div><div>NotifyProcessAdministrators</div><div>RestartCostCenterOwnerApproval</div></div><div><div>Workflow Definition</div><div>InvestmentApproval</div><div>ID: InvestmentApproval Version: 4</div><div></div><div><div>Show Instances</div><div>Start New Instance</div><div>Download Workflow Model</div></div></div></div></div>

Explanation	Screenshot
<div>60. You can see the main workflow has created and execution log shows an entry. In this version Manage Workflow Application is not showing the Reference Subflow, but it is planned to include in the future.</div> <div>61. Click Filter button to add the reference Subflow.</div>	 <p>The screenshot shows the SAP Monitor Workflows interface. On the left, under 'Workflow Instances (1)', there is a search bar and a filter dropdown set to 'Definition (InvestmentApproval)'. Below the filter, 'InvestmentApproval' and 'Investment Approval Request REQ01' are listed, with 'REQ01' marked as 'Running'. On the right, the 'Workflow Instance' section for 'Investment Approval Request REQ01' is shown, with tabs for 'FORMATION', 'ERROR MESSAGES', 'WORKFLOW CONTEXT', and 'EXECUTION LOG'. The 'EXECUTION LOG' tab is active, displaying a log entry: 'started the workflow' at 'Dec 4, 2020, 4:53:15 PM'. At the bottom right of the instance view are buttons for 'Show Tasks', 'Suspend', and 'Terminate'. A green box highlights the filter icon at the bottom of the left pane.</p>
<div>62. Click Definition to include CostCenterOwnerApproval workflow.</div> <div>63. Click OK button.</div>	 <p>The screenshot shows a 'Filter' dialog box with a 'Reset' button at the top right. Under 'Filter By', there are two items: 'Definition' with a count of '1' and 'Status' with a count of '3'. The 'Definition' item is highlighted with a green box. At the bottom of the dialog are 'OK' and 'Cancel' buttons, with the 'OK' button highlighted by a green box.</p>

Explanation	Screenshot
<div>64. Select CostCenterOwnerApproval workflow definition.</div> <div>65. Click OK button.</div>	 <p>The screenshot shows a dialog box titled "Filter By: Definition" with a "Reset" link in the top right. Below the title is a search bar with the placeholder text "Search" and a magnifying glass icon. To the right of the search bar is a list icon. Below the search bar is a "Select All" checkbox. Below that is a list of workflow definitions, each with a checkbox: "budgetApproval", "InvestmentApproval" (which is checked and highlighted with a green border), "NotifyProcessAdministrators", "RestartCostCenterOwnerApproval", and "CostCenterOwnerApproval". At the bottom right of the dialog are "OK" and "Cancel" buttons, with the "OK" button highlighted with a green border.</p>

Explanation	Screenshot
66. Click OK button.	
67. You can see the Main Workflow in Running status. 68. Chick Show Subflow Instances to see Reference Subflow instance.	

Explanation	Screenshot
<p>69. To navigate back to parent, click the link Parent Instance ID.</p> <p>Show Tasks will show the related user tasks.</p> <p>Root Instance ID navigate to the root parent. It is possible to multiple levels in reference subflow.</p>	
<p>70. Click Home to navigate back to the main page.</p>	

Explanation	Screenshot
<p>71. Click My Inbox to complete the task.</p>	 <p>The screenshot displays the SAP Fiori Home dashboard. At the top, there is a dark blue header bar with the SAP logo and a 'Home' dropdown menu. Below the header, three tabs are visible: 'Productivity Tools' (selected), 'Development Tools', and 'Monitoring Tools'. The main content area is divided into three sections. The first section, 'Productivity Tools', contains three tiles: 'My Inbox' (highlighted with a red border and showing a download icon with the number 1), 'Process Flexibility Cockpit' (showing a wrench icon), and 'Process Workspace' (showing a pair of glasses icon). The second section, 'Development Tools', contains three tiles: 'Manage Packages' (showing a cube icon), 'Configure Visibility Scenarios' (showing a gear icon), and 'Manage Rule Projects' (showing a gear icon). The third section, 'Monitoring Tools', contains four tiles: 'Monitor Workflows Workflow Definitions' (showing a chevron icon), 'Monitor Workflows Workflow Instances' (showing a chevron icon), 'Monitor Visibility Scenarios' (showing a heart rate icon), and 'Event Acquisition' (showing a magnifying glass icon).</p>

Explanation	Screenshot								
72. Enter Comment "approved".									
73. Click Approve button to complete the task.									
You will get another task from the second Reference Subflow now. Refresh My Inbox and see the new task.	<p>Cost Center Owner</p> <p>Investment Request REQ01</p> <p>Request Investment Approver Comment Comments History</p> <p>Business Unit: Manufacturing</p> <p>Type: Building</p> <p>Country: Germany</p> <p>CAPEX: 1000000</p> <p>OPEX: 10000</p> <p>Total Cost: 1010000</p> <p>Currency: EURO</p> <p>Approver Comment</p> <p>Comment: approved</p> <p>Comments History</p> <p>Comments</p> <table><tr><th>User</th><th>Role</th><th>Decision</th><th>Comment</th></tr><tr><td colspan="4">No items available.</td></tr></table> <p>Approve Reject Show Log Claim</p>	User	Role	Decision	Comment	No items available.			
User	Role	Decision	Comment						
No items available.									

Explanation	Screenshot
74. You can see the comment from the previous approval task.	
75. Enter Comment Approved.	
76. Click Approve Button to complete task.	

Cost Center Owner

Investment Request REQ01

Request

Investment

Approver Comment

Comments History

type:

Building

Country:

Germany

CAPEX:

1000000

OPEX:

10000

Total Cost:

1010000

Currency:

EURO

Approver Comment

Comment:

Approved

Comments History

Comments

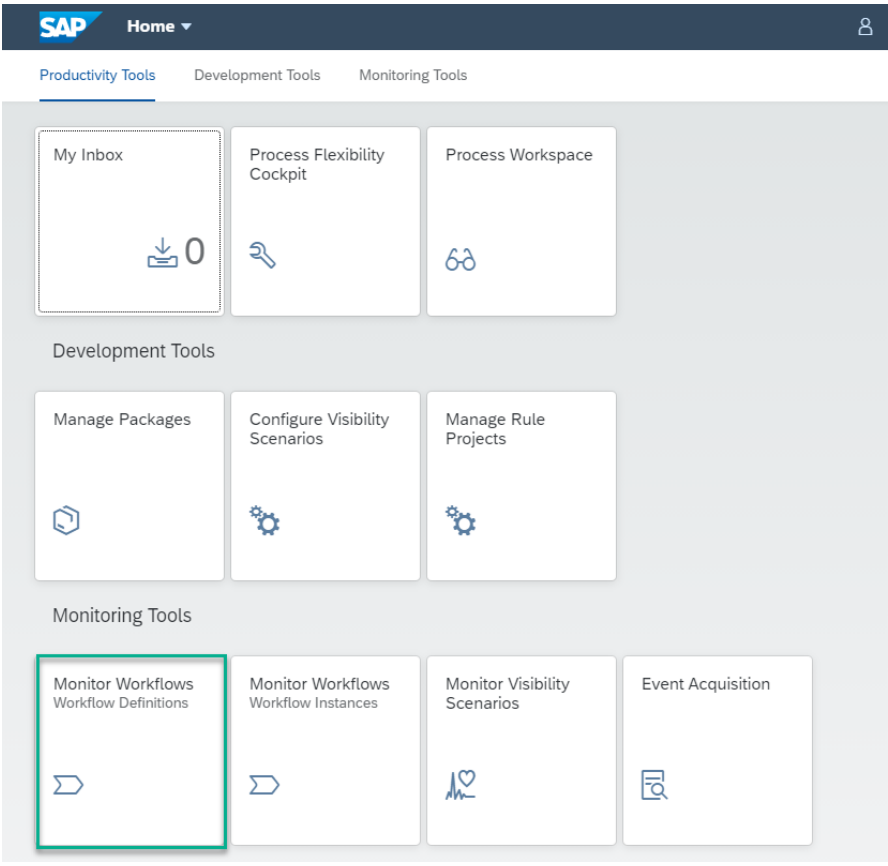
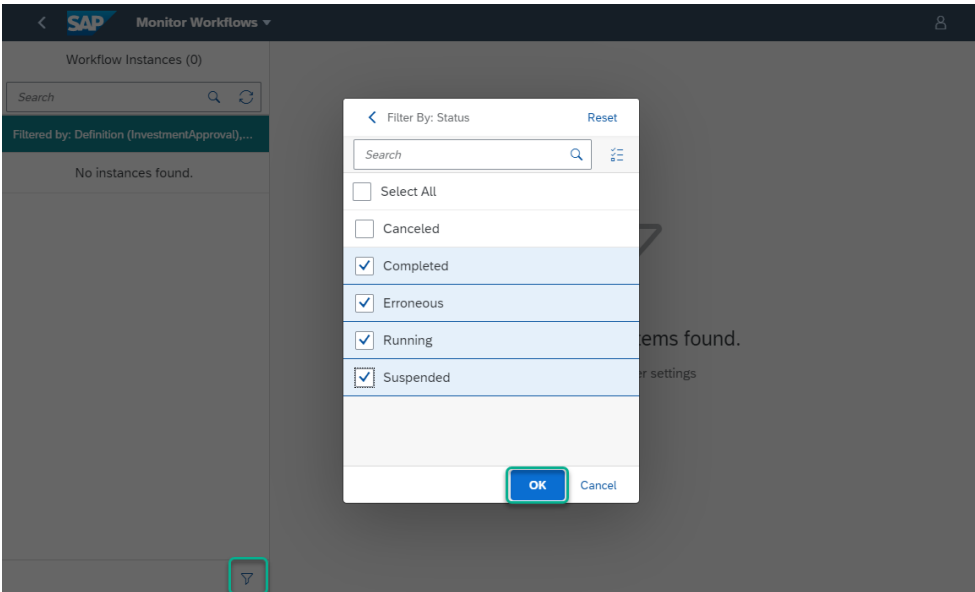
User	Role	Decision	Comment
venugopal.chembrakalathil@sap.com	Cost Center Approver	approve	approved

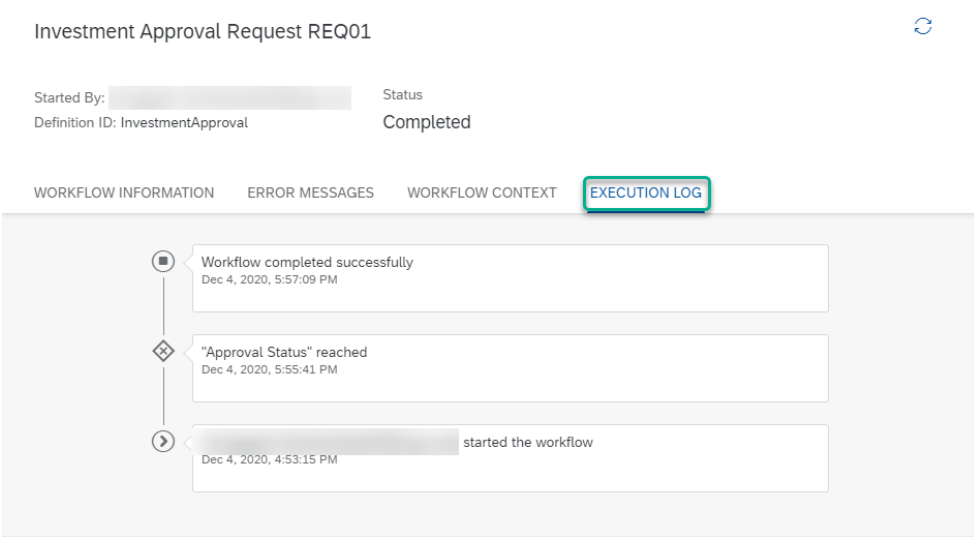
Approve

Reject

Show Log

Claim

Explanation	Screenshot
77. Select Monitor Workflows-Workflow Definitions to see the status of the Investment Approval Workflow.	 The screenshot shows the SAP Home dashboard. At the top, there's a navigation bar with 'SAP' logo, 'Home' dropdown, and a user profile icon. Below this are three tabs: 'Productivity Tools', 'Development Tools', and 'Monitoring Tools'. The 'Monitoring Tools' section contains four tiles: 'Monitor Workflows Workflow Definitions' (highlighted with a green box), 'Monitor Workflows Workflow Instances', 'Monitor Visibility Scenarios', and 'Event Acquisition'. The 'Development Tools' section contains three tiles: 'Manage Packages', 'Configure Visibility Scenarios', and 'Manage Rule Projects'. The 'Productivity Tools' section contains two tiles: 'My Inbox' and 'Process Flexibility Cockpit'.
78. Click filter button and include status Completed . 79. Click OK button.	 The screenshot shows the SAP Monitor Workflows - Workflow Instances screen. The main area displays 'Workflow Instances (0)' and a search bar. A filter dialog is open, titled 'Filter By: Status', with a search bar and a list of status options: 'Select All', 'Canceled', 'Completed', 'Erroneous', 'Running', and 'Suspended'. The 'Completed' status is selected with a checkmark. At the bottom of the dialog are 'OK' and 'Cancel' buttons. The 'OK' button is highlighted with a green box. In the background, the 'Filter' button is also highlighted with a green box.

Explanation	Screenshot
80. You can see the Investment approval workflow has completed.	 <p>The screenshot displays the 'Investment Approval Request REQ01' workflow execution log. At the top, it shows 'Started By:' followed by a redacted name and 'Status: Completed'. Below this, the 'Definition ID: InvestmentApproval' is listed. A navigation bar includes tabs for 'WORKFLOW INFORMATION', 'ERROR MESSAGES', 'WORKFLOW CONTEXT', and 'EXECUTION LOG', with the latter being the active tab. The execution log shows a vertical timeline of three events: 1. 'Workflow completed successfully' at 'Dec 4, 2020, 5:57:09 PM' with a square icon. 2. '"Approval Status" reached' at 'Dec 4, 2020, 5:55:41 PM' with a diamond icon. 3. 'started the workflow' at 'Dec 4, 2020, 4:53:15 PM' with a circle icon, where the user name is redacted.</p>

Summary

In this Exercise you have reused a workflow for multiple approvals using Reference Subflow feature. Please see [SAP Business Technology Platform Workflow](#) help to see more about Reference Subflow.

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