

PUBLIC

Deep dive into SAP Cloud Platform Workflow Management – Model Investment Approval Workflow

DEV-264

Exercises / Solutions
Venugopal Chembrakalathil / SAP SE

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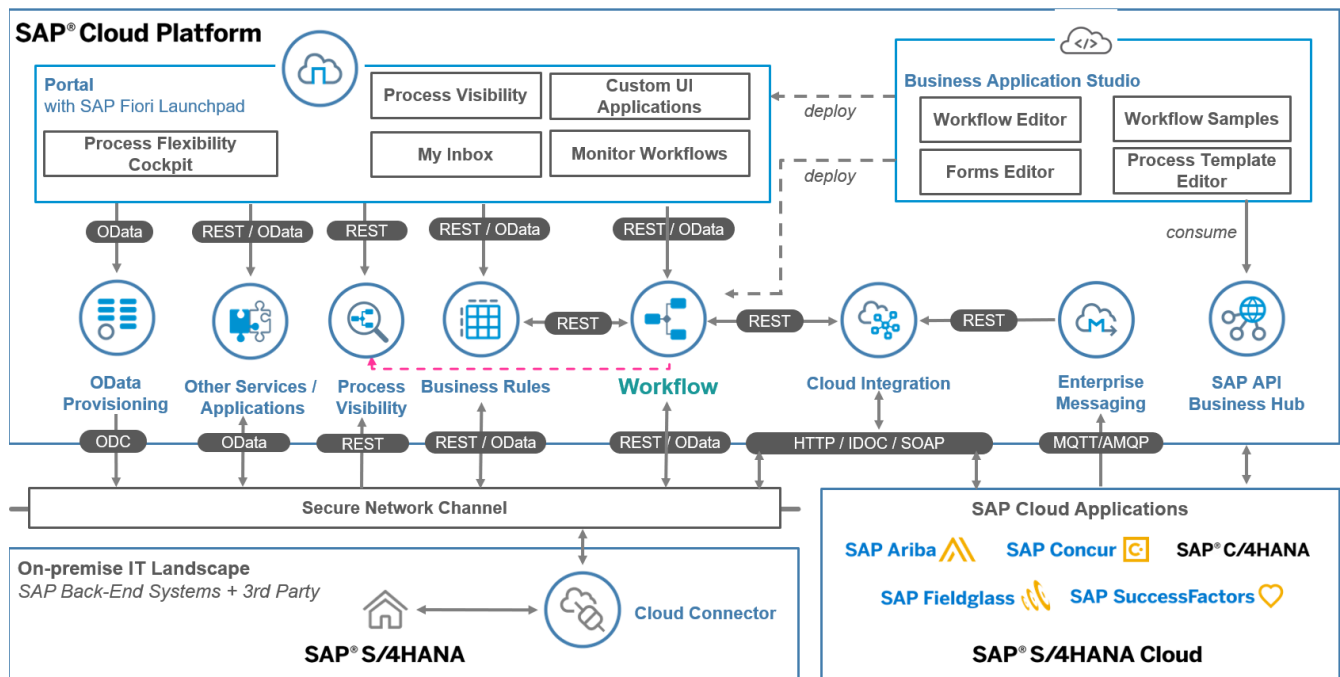
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SUMMARY32

SAP Cloud Platform Workflow Management has Workflow capability enable developers to model workflow based on BPMN 2.0 using SAP Cloud Platform Business Application Studio and deploy to Cloud platform accounts. A workflow consists of different activities, events and gateways. It provides fine granular REST/oData APIs to integrate with different line of business applications.

SAP Cloud Platform Workflow – the bigger picture



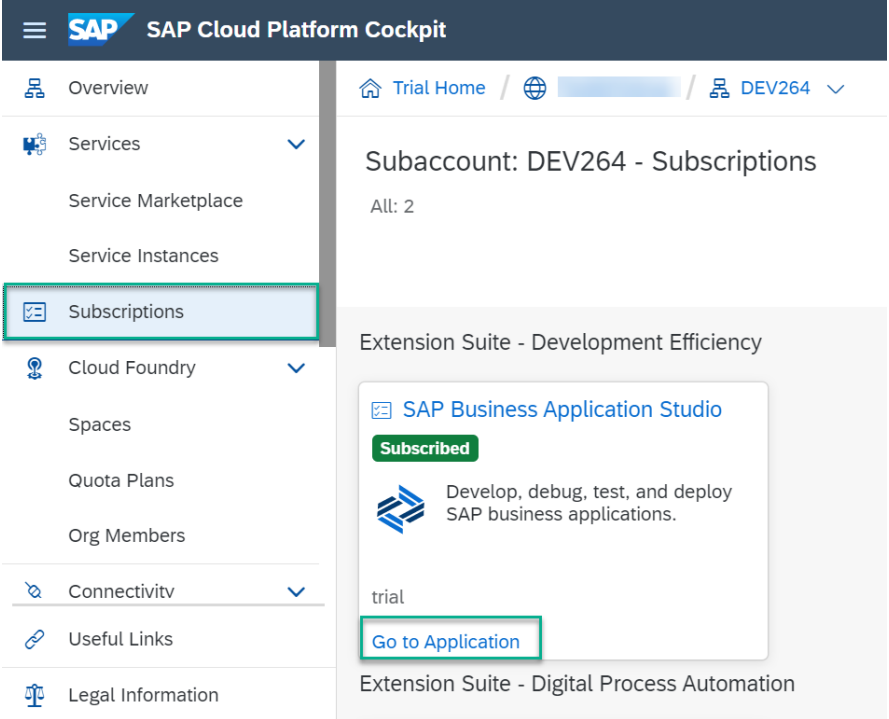
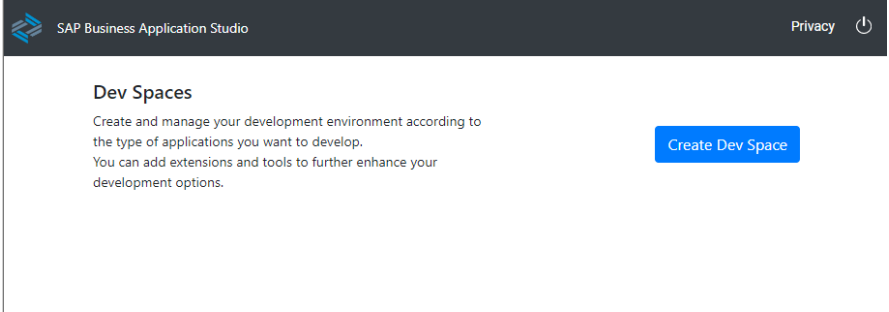
SCENARIO

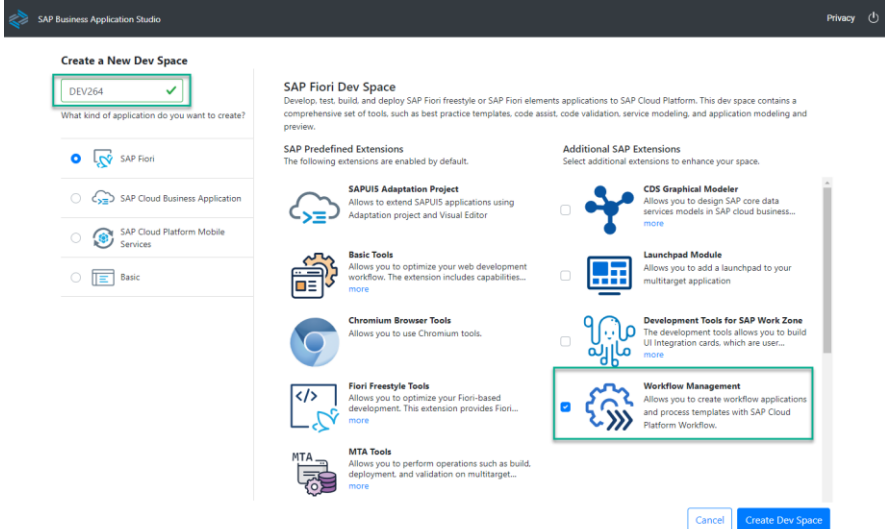
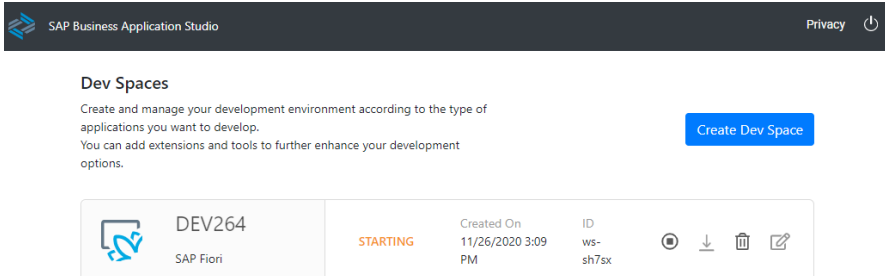
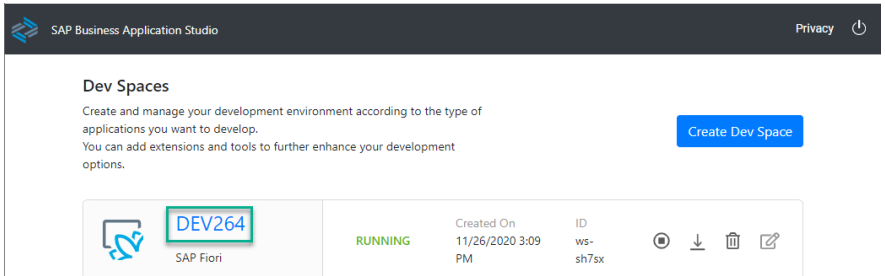
The scenario is an Investment Approval Workflow. A requestor creates a request for approval and Approver can decide Approve or Reject. A rejection enables the requestor to modify the request and submit or cancel the request.

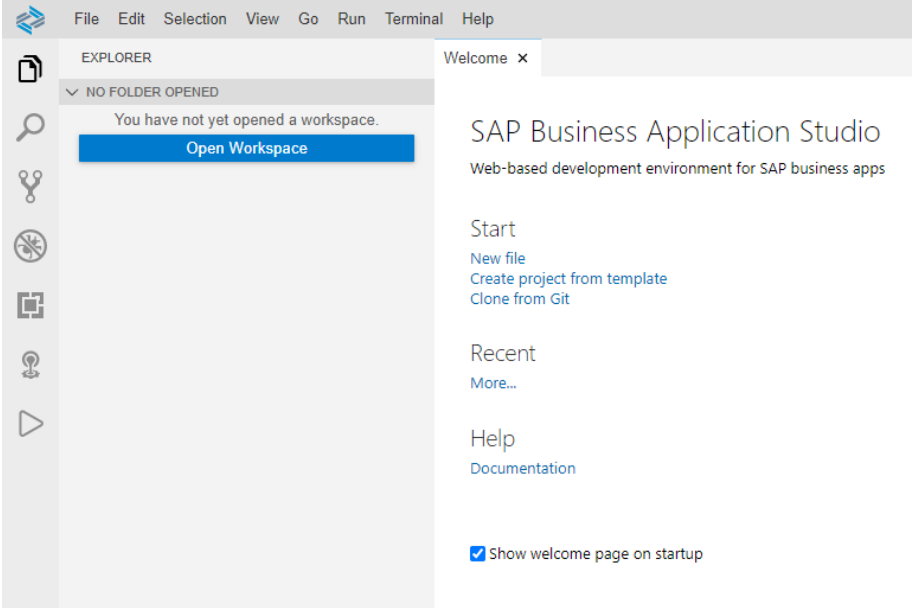
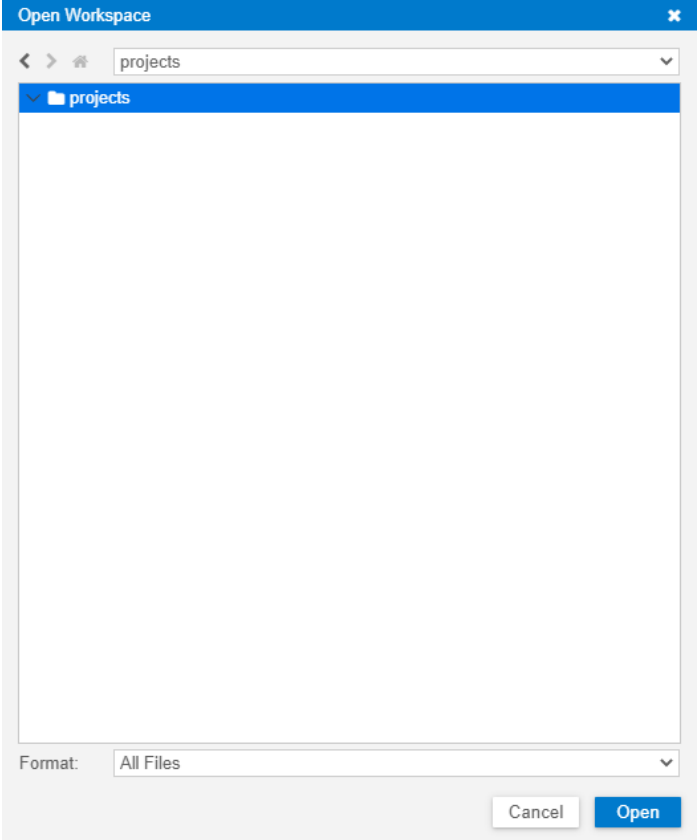
Prerequisite

Please setup your SAP Cloud Platform Trial account using [setup guide](#).

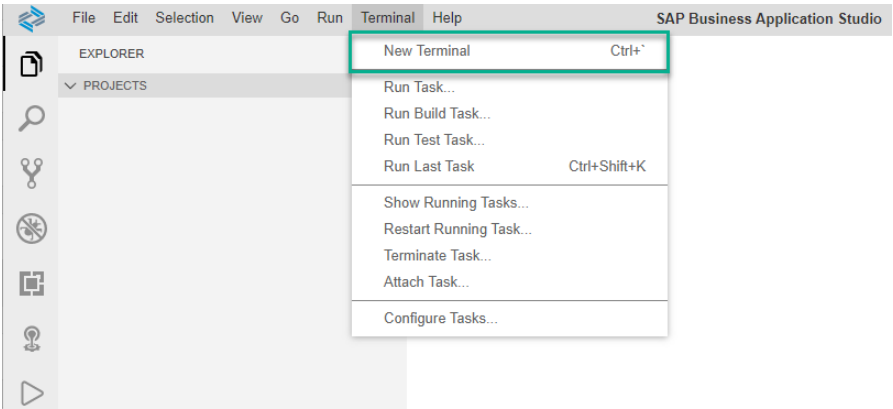
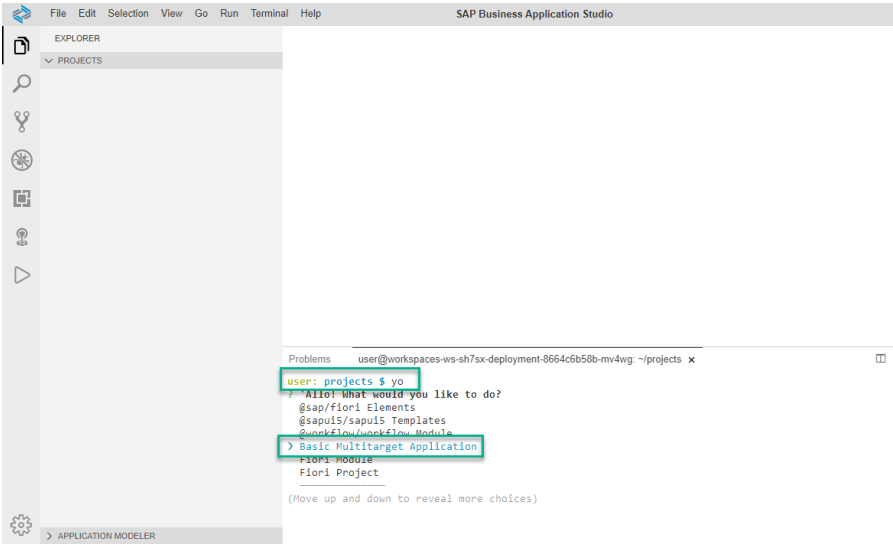

MODEL WORKFLOW – INVESTMENT APPROVAL WORKFLOW

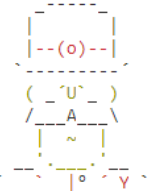
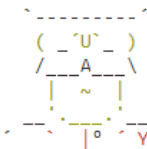
Explanation	Screenshot
<ol style="list-style-type: none"> 1. Select Subscriptions in your Sub Account and you see the subscribed applications. 2. Select SAP Business Application Studio and click Go to Application. <p>SAP Cloud Platform Business Application Studio will be opened in new browser window.</p> <p>Skip steps 3 to 7 If you have already created a dev space with Workflow Management extension.</p>	
<p>Create Workspace</p> <ol style="list-style-type: none"> 3. Click Create Dev Space button. 	


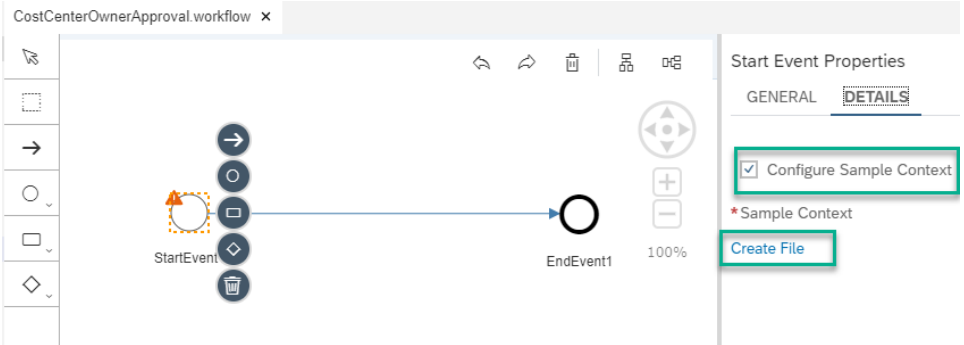
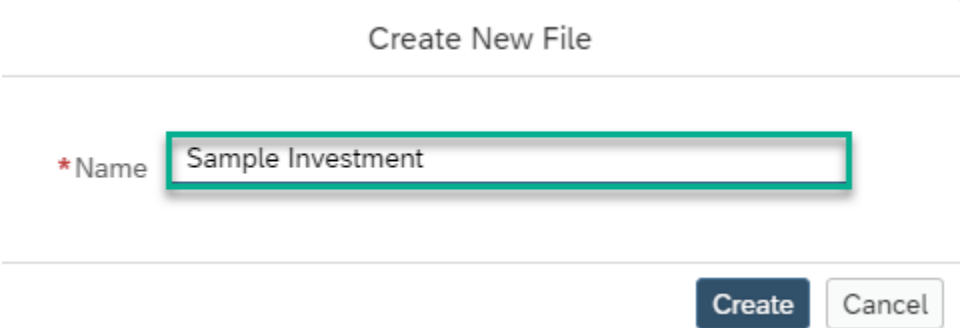
Explanation	Screenshot
<div>4. Enter Dev Space</div> <div>5. Select Workflow Management from Additional SAP Extensions.</div> <div>6. Click Create Dev Space</div>	
<div>7. Setting up the Dev Space will take couple of minutes and show the status as STARTING. Wait until the status changing to RUNNING.</div>	
<div>8. Click your Dev Space.</div>	

Explanation	Screenshot
9. Click Open Workspace .	 <p>The screenshot shows the SAP Business Application Studio interface. The Explorer view on the left displays 'NO FOLDER OPENED' and a message 'You have not yet opened a workspace.' with a blue 'Open Workspace' button. The main area shows the 'Welcome' page with options to 'Start' (New file, Create project from template, Clone from Git), 'Recent' (More...), and 'Help' (Documentation). A checkbox 'Show welcome page on startup' is checked.</p>
10. Select Projects and click Open button.	 <p>The screenshot shows the 'Open Workspace' dialog box. The 'projects' folder is selected in the file list. The 'Format' dropdown is set to 'All Files'. The 'Open' button is highlighted in blue.</p>

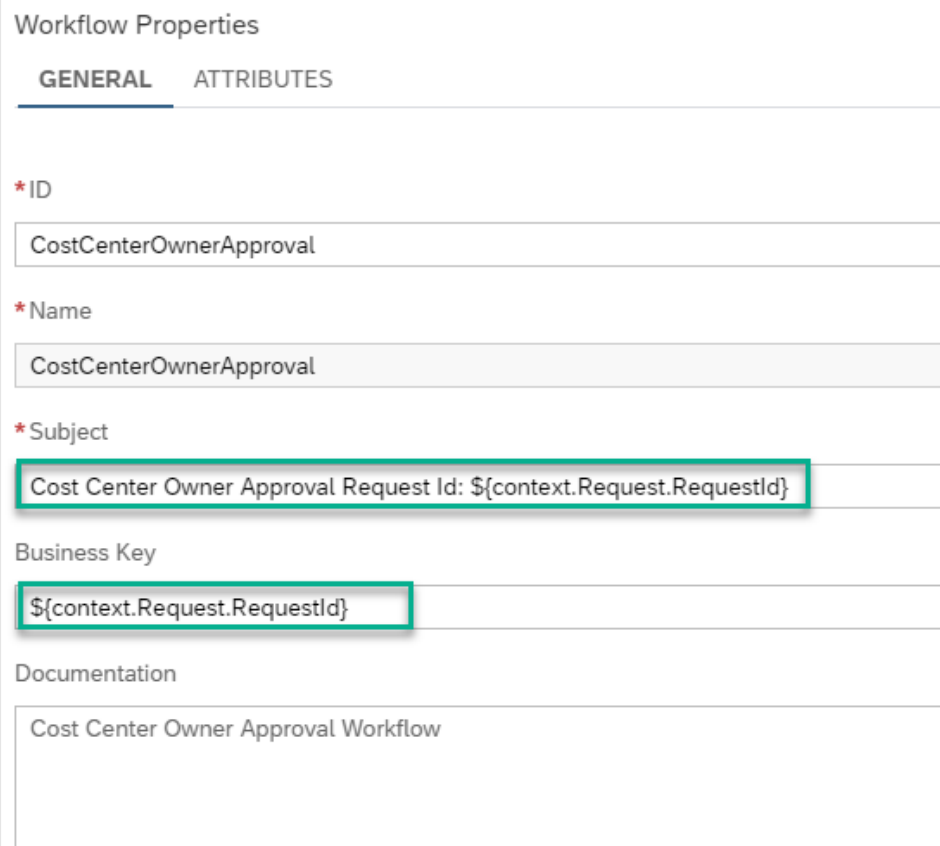
Explanation	Screenshot
<p>Configure Cloud Foundry End Point</p> <p>11. Click the message in the bottom to configure the endpoint for deployment.</p>	
<p>12. Select the Cloud Foundry Endpoint.</p> <p>The url might vary depends on which data center you are using.</p> <p>Europe -eu10 US – us10 Singapore – ap21</p>	
<p>12. Enter your e-mail address used as your user in in Cloud Platform.</p> <p>13. Subsequently enter your password, Cloud Platform Trial Sub account and Cloud Foundry Space.</p>	

Explanation	Screenshot
<p>Create Multi Target Application Project</p> <p>14. Select Terminal → New Terminal</p>	 <p>The screenshot shows the SAP Business Application Studio interface. The 'Terminal' menu is open, and 'New Terminal' is highlighted with a red box. The keyboard shortcut 'Ctrl+`' is also visible next to it.</p>
<p>15. In the Terminal make sure you are in the projects directory.</p> <p>16. Type yo and press enter key.</p> <p>17. Select project type as Basic Multitarget Application by using up/down arrow key.</p>	 <p>The screenshot shows the terminal output of the 'yo' command. The prompt is 'user: projects \$ yo'. The output shows a list of project types, with 'Basic Multitarget Application' highlighted by a red box. The prompt is followed by 'Allo! What would you like to do?' and a list of options: '@sap/flori Elements', '@sapui5/sapui5 Templates', and '@sapui5/sapui5 Modules'. The 'Basic Multitarget Application' option is selected.</p>
<p>18. Enter the project name for eg: InvestmentApproval.</p>	 <p>The screenshot shows the terminal output of the 'yo' command. The prompt is 'user: projects \$ yo'. The output shows a list of project types, with 'Basic Multitarget Application' highlighted by a red box. The prompt is followed by 'Allo! What would you like to do?' and a list of options: '@sap/flori Elements', '@sapui5/sapui5 Templates', and '@sapui5/sapui5 Modules'. The 'Basic Multitarget Application' option is selected. Below the list, it says 'Make sure you are in the directory you want to scaffold into. This generator can also be run with: yo basic-multitarget-application'. The prompt is followed by 'Enter a project name' and the project name 'InvestmentApproval' is entered, highlighted by a red box.</p>

Explanation	Screenshot
<div>19. Use cd InvestmentApproval to move the new project directory.</div> <div>20. Type yo again in the newly created project directory.</div>	<div>Problems user@workspaces-ws-sh7sx-deployment-8664c6b58b-mv4wg: ~/projects/InvestmentApproval x</div> <div>? Enter a project name InvestmentApproval The project will be generated in the /home/user/projects/InvestmentApproval directory. create InvestmentApproval/.gitignore The project has been generated.</div> <div> <div>Bye from us! Chat soon. Yeoman team http://yeoman.io</div></div> <div>user: projects \$ cd InvestmentApproval user: InvestmentApproval \$ yo</div>
<div>21. Select @workflow/workflow Module from the list using up/down arrow keys.</div>	<div>Problems user@workspaces-ws-sh7sx-deployment-8664c6b58b-mv4wg: ~/projects/InvestmentApproval x</div> <div> <div>Yeoman team http://yeoman.io</div></div> <div>user: projects \$ cd InvestmentApproval user: InvestmentApproval \$ yo ? 'Allo! What would you like to do? @adaptation Project/adaptation Project Deployment @sap/fiori Elements @sapui5/sapui5 Templates > @workflow/workflow Module Fiori Module Fiori Project (Move up and down to reveal more choices)</div>

Explanation	Screenshot
<p>22. Enter the following</p> <p>Module Name: InvestmentApprovalWorkflow</p> <p>Workflow Name: CostCenterOwnerApproval</p> <p>Workflow Description: Cost Center Owner Approval Workflow</p> <p>Overwrite mta.yaml: y</p>	 <pre> Problems user@workspaces-ws-sh7sx-deployment-8664c6b58b-mv4wg: ~/projects/InvestmentApproval x user: projects \$ cd InvestmentApproval user: InvestmentApproval \$ yo ? 'Allo! What would you like to do? @workflow/workflow Module Make sure you are in the directory you want to scaffold into. This generator can also be run with: yo @workflow/workflow-module ? Module Name InvestmentApprovalWorkflow ? Workflow Name CostCenterOwnerApproval ? Workflow Description Cost Center Owner Approval Workflow conflict mta.yaml ? Overwrite mta.yaml? (ynaxdH) y >> overwrite </pre>
<p>Configure Sample Context</p> <p>23. The new workflow is opened in the workflow editor.</p> <p>24. Select the Start event and Select DETAILS section of Start Event properties.</p> <p>25. Check Configure Sample Context.</p> <p>26. Click link Create File.</p>	
<p>27. Enter Name as Sample Investment</p> <p>A new file is opened a default sample context.</p>	

Explanation	Screenshot
<p>28. Copy and paste the content from the file Sample Investment.json shared in the Git repository.</p> <p>Please replace FirstName, LastName, Email, UserId with your details. User Id is your cloud platform trial user id.</p> <p>The context has three Elements.</p> <p>Request: Requestor info including Request Id</p> <p>Investment: Details about the investment</p> <p>Approver: Cost Center Approver details.</p>	<pre> 1 { 2 "Request": { 3 "RequestId": "REQ01", 4 "FirstName": "Venugopal", 5 "LastName": "Chembrakalathil", 6 "Email": " ", 7 "UserId": " ", 8 "Comments": "Please approve the request" 9 }, 10 "Investment": { 11 "Description": "New Building", 12 "Type": "Building", 13 "BusinessUnit": "Manufacturing", 14 "Country": "Germany", 15 "CAPEX": 1000000, 16 "OPEX": 10000, 17 "TotalCost": 1010000, 18 "Currency": "EURO" 19 }, 20 "Approver": { 21 "FirstName": "", 22 "LastName": "", 23 "Email": "", 24 "UserId": "", 25 "Decision": "", 26 "Comment": "" 27 }, 28 "Comments": [29 30] 31 } 32 </pre>

Explanation	Screenshot
<p>29. Select the GENERAL Tab from Workflow Properties.</p> <p>30. Enter the following</p> <p>Subject: Cost Center Owner Approval Request Id: \${context.Request.RequestId}</p> <p>Business Key: \${context.Request.RequestId}</p>	 <p>Workflow Properties</p> <p>GENERAL ATTRIBUTES</p> <p>* ID</p> <p>CostCenterOwnerApproval</p> <p>* Name</p> <p>CostCenterOwnerApproval</p> <p>* Subject</p> <p>Cost Center Owner Approval Request Id: \${context.Request.RequestId}</p> <p>Business Key</p> <p>\${context.Request.RequestId}</p> <p>Documentation</p> <p>Cost Center Owner Approval Workflow</p>

Explanation

Screenshot

31. Select **ATTRIBUTES** and add the following Attributes.

Please copy the Context Path of each of this attribute from the attached [Workflow Context Attributes](#) JSON file.

32. Click **Add** button to add an attribute.

Workflow Properties

GENERAL

ATTRIBUTES

Add

Delete

Move Up

Move Down

☐

ID

Label

Type

Value

☐

ApproverEmail

Approver Email

String

▼

\${context.Approv...

☐

Decision

Decision

String

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\${context.Decision}

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Currency

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TotalCost

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BusinessUnit

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First Name

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RequestId

Request ID

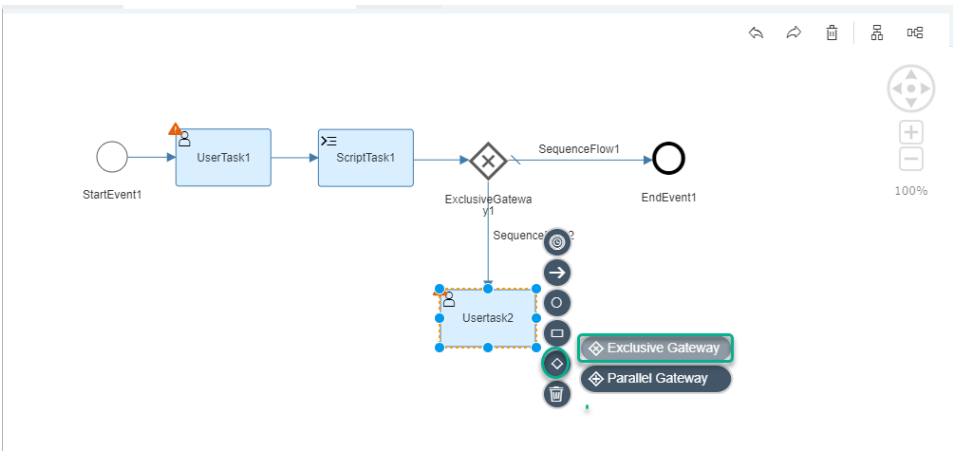
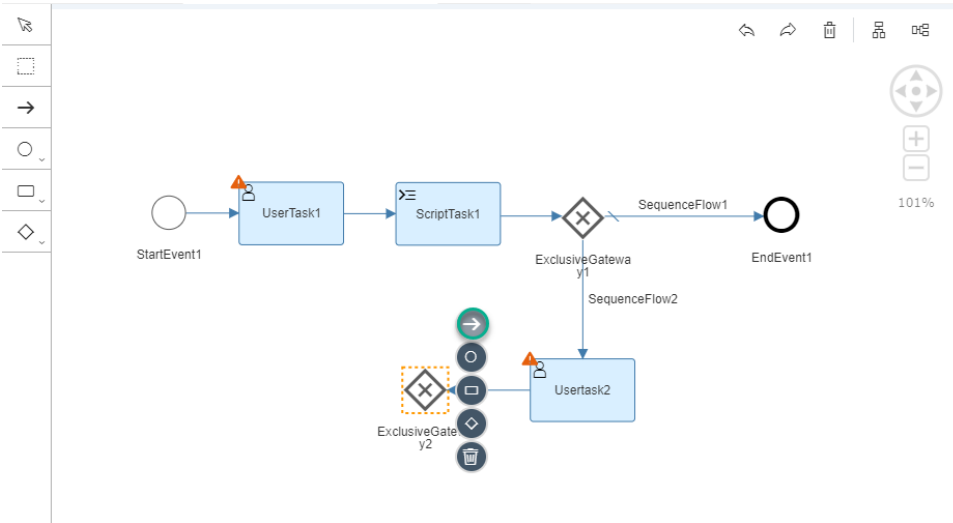
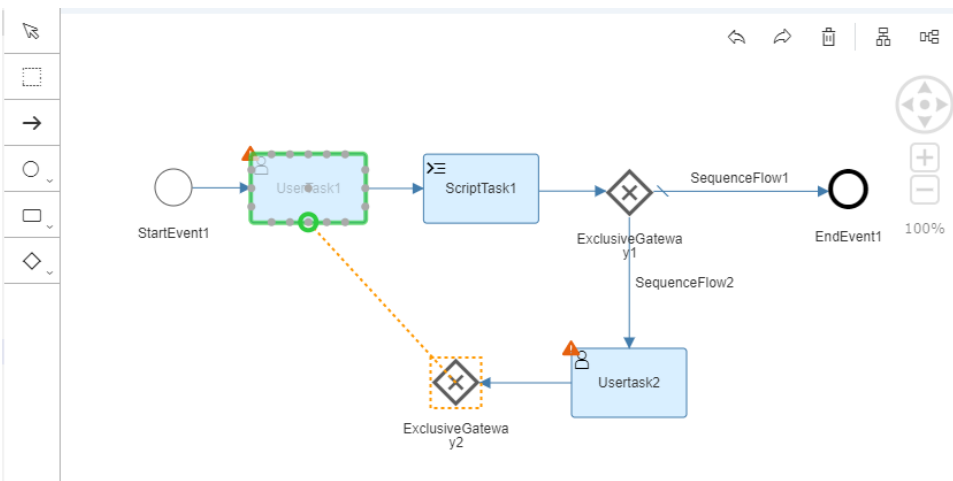
String

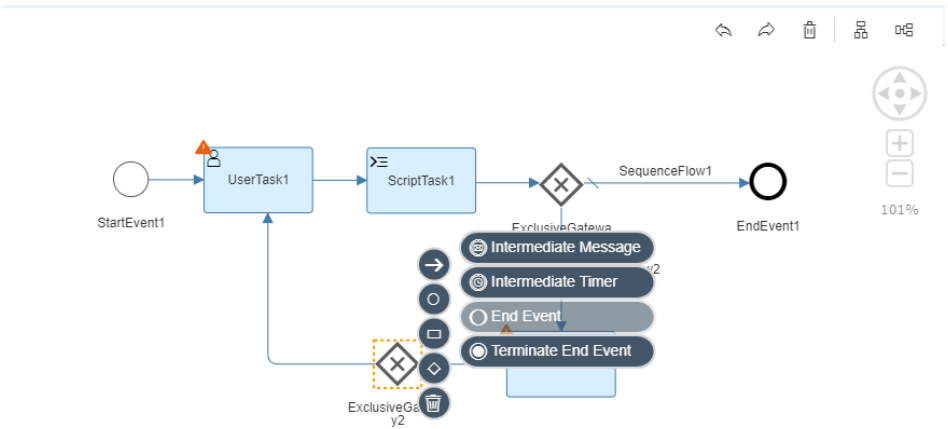
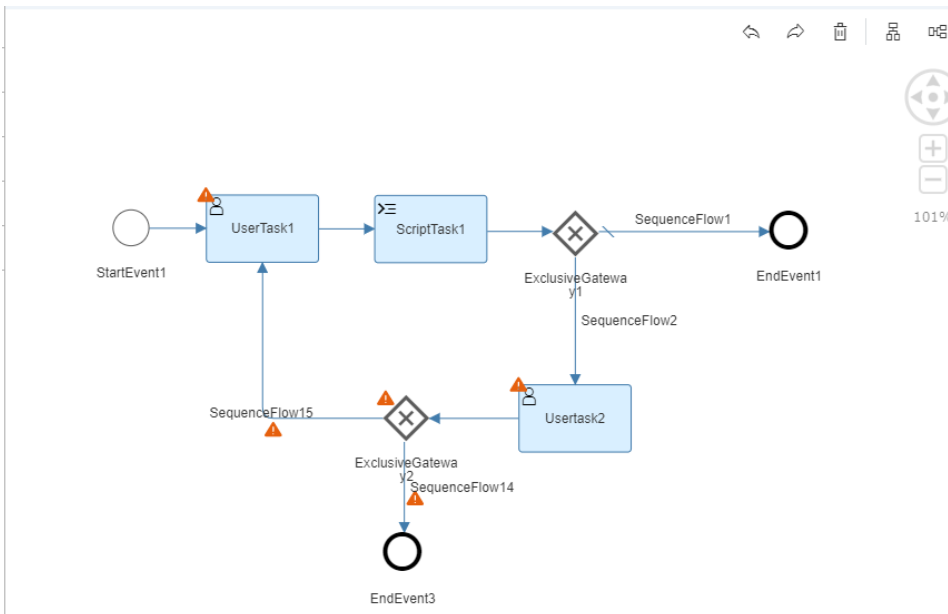
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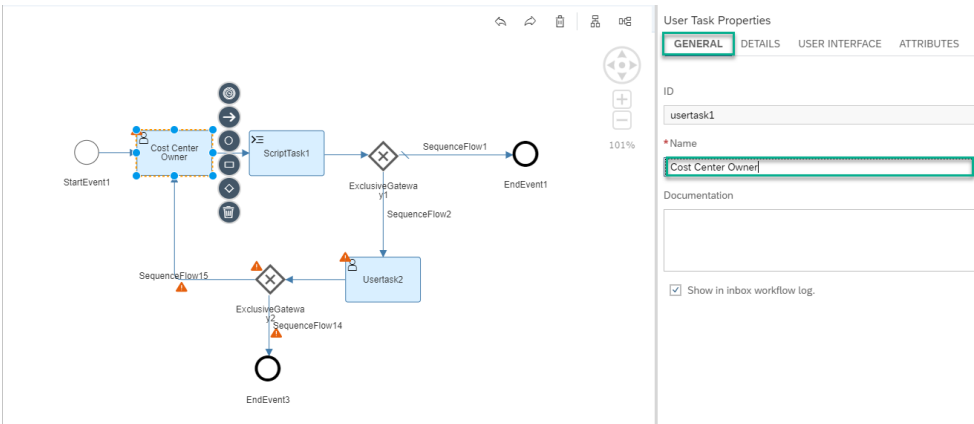
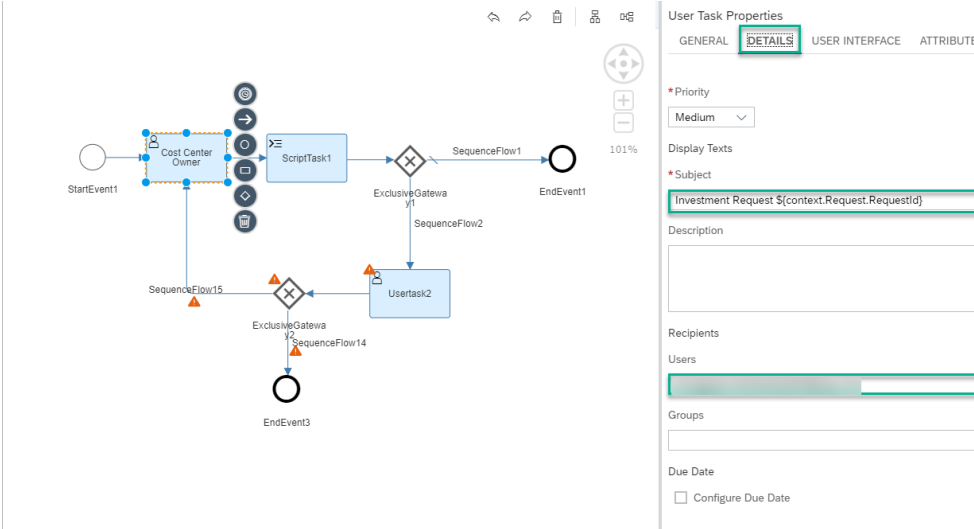
\${context.Reques...

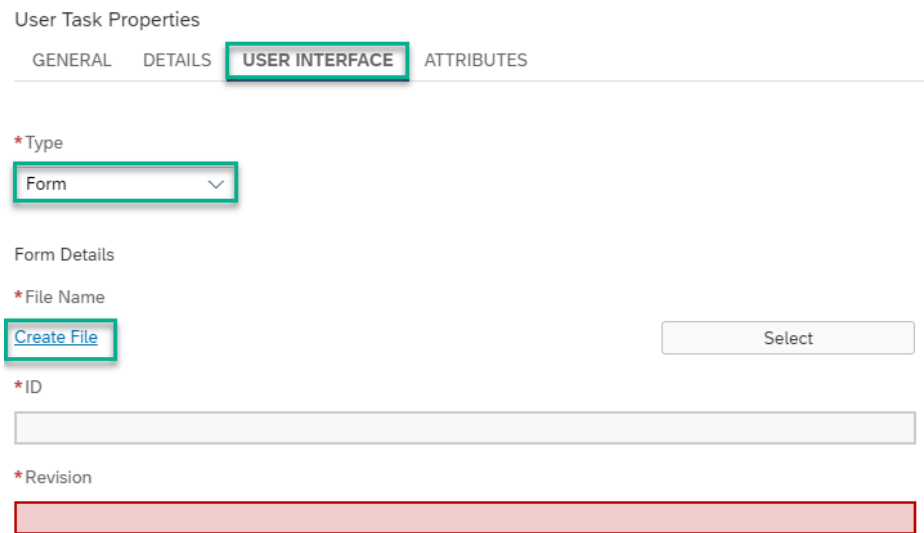
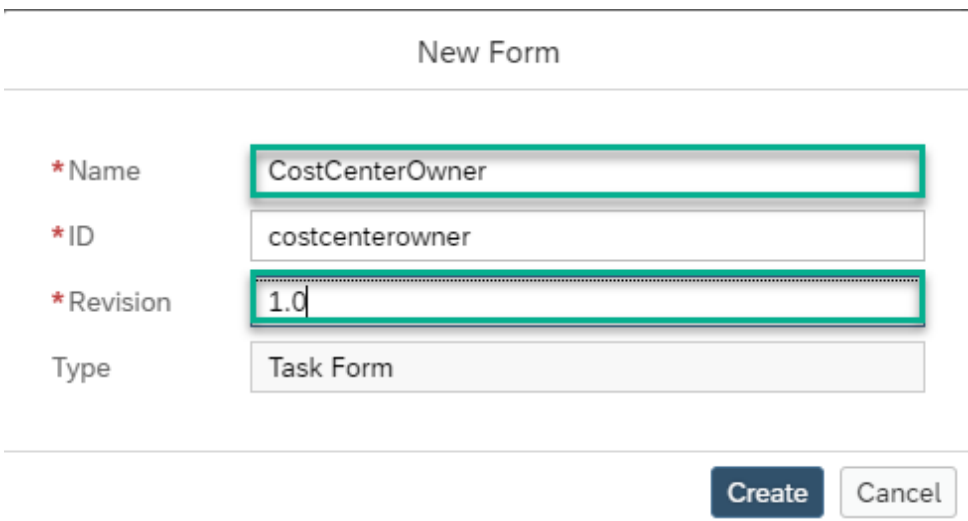
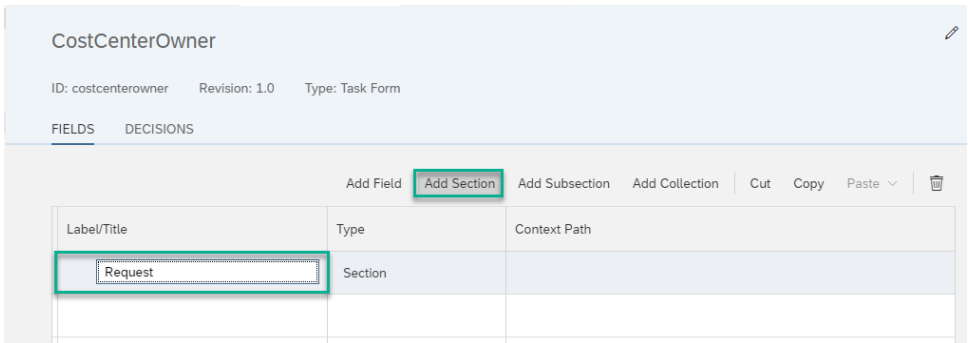
Explanation	Screenshot
<p>33. Before start modeling, please drag and drop the EndEvent1 towards the right side of the editor to keep some space between Start and End Event.</p> <p>34. Select the StartEvent, use the speed button and select User Task.</p> <p>A user task is added to the workflow model.</p>	
<p>35. Select the newly Added User Task.</p> <p>36. Using the speed button add a Script Task.</p>	
<p>37. Select the newly Added Script Task.</p> <p>38. Using the speed button add an Exclusive Gateway.</p>	

Explanation	Screenshot
<div>39. Select a User Task from the palette.</div> <div>40. Drag and drop the User Task just below the Exclusive Gateway.</div>	<p>The screenshot shows the BPMN editor interface. The top toolbar includes icons for undo, redo, delete, and zoom. The left sidebar contains a palette with various BPMN elements: Start Event, Intermediate Event, End Event, Task (User, Service, Script, Mail), and Gateway. The main canvas displays a workflow diagram with a Start Event, a User Task, a Script Task, an Exclusive Gateway, and an End Event. A 'User Task' is highlighted in the palette, and a green arrow indicates it being dragged to a position below the Exclusive Gateway.</p>
<div>41. Use Sequence Flow from Exclusive Gateway to the new User Task.</div>	<p>The screenshot shows the BPMN editor interface. The top toolbar includes icons for undo, redo, delete, and zoom. The left sidebar contains a palette with various BPMN elements: Start Event, Intermediate Event, End Event, Task (User, Service, Script, Mail), and Gateway. The main canvas displays a workflow diagram with a Start Event, a User Task, a Script Task, an Exclusive Gateway, and an End Event. A 'Sequence Flow' is highlighted in the palette, and a green arrow indicates it being dragged to connect the Exclusive Gateway to the new User Task.</p>

Explanation	Screenshot
42. Select User Task2 and choose Exclusive Gateway .	
43. Select newly added Exclusive Gateway and choose Sequence Flow from the speed button.	
44. Drag and drop to User Task1 .	

Explanation	Screenshot
45. Select Exclusive Gateway2 and choose End Event from speed button.	 <p>The screenshot shows a BPMN diagram in an editor. The diagram includes a StartEvent1, a UserTask1, a ScriptTask1, and an EndEvent1. An Exclusive Gateway (labeled 'Exclusive Gateway2') is positioned between ScriptTask1 and EndEvent1. A context menu is open over the Exclusive Gateway, with the 'End Event' option selected. The menu also lists 'Intermediate Message', 'Intermediate Timer', and 'Terminate End Event'. A toolbar on the right shows navigation and zoom controls, with the zoom level set to 101%.</p>
46. The workflow model sequence modeling has completed. Do necessary formatting if required.	 <p>The screenshot shows the completed BPMN diagram. It features a StartEvent1 leading to UserTask1, which then leads to ScriptTask1. ScriptTask1 connects to Exclusive Gateway y1. From Exclusive Gateway y1, SequenceFlow2 leads to UserTask2. UserTask2 connects to Exclusive Gateway y2. From Exclusive Gateway y2, SequenceFlow14 leads to EndEvent3, and SequenceFlow15 leads back to UserTask1. The diagram is well-formatted and includes a toolbar on the right with navigation and zoom controls, with the zoom level set to 101%.</p>

Explanation	Screenshot
<p>47. Select User Task1 and User Task Properties.</p> <p>48. Under GENERAL section, change the Name as Cost Center Owner.</p>	 <p>The screenshot shows a BPMN editor interface. On the left, a workflow diagram is visible with a start event, a task named 'Cost Center Owner', a script task, an exclusive gateway, and an end event. On the right, the 'User Task Properties' panel is open, showing the 'GENERAL' tab. The 'Name' field is set to 'Cost Center Owner'.</p>
<p>49. Select DETAILS section and set the following.</p> <p>Subject: Investment Request <code>\${context.Request.RequestId}</code></p> <p>Users: Your Cloud Platform User Id (email id)</p>	 <p>The screenshot shows the same BPMN editor interface. The 'User Task Properties' panel is now showing the 'DETAILS' tab. The 'Subject' field is set to 'Investment Request <code>\${context.Request.RequestId}</code>'. The 'Users' field is also visible, set to 'Your Cloud Platform User Id (email id)'.</p>

Explanation	Screenshot						
<p>Create Workflow Forms</p> <p>50. Select USER INTERFACE section.</p> <p>51. Change the type as Form.</p> <p>52. Click the link Create File.</p> <p>A popup window is available now to enter Form details.</p>	 <p>User Task Properties</p> <p>GENERAL DETAILS USER INTERFACE ATTRIBUTES</p> <p>*Type Form</p> <p>Form Details</p> <p>*File Name Create File Select</p> <p>*ID</p> <p>*Revision</p>						
<p>53. Enter the following. Name: CostCenterOwner Revision: 1.0</p> <p>54. Click Create button.</p> <p>You can see the Forms Editor opened to model the new task UI.</p>	 <p>New Form</p> <p>*Name CostCenterOwner</p> <p>*ID costcenterowner</p> <p>*Revision 1.0</p> <p>Type Task Form</p> <p>Create Cancel</p>						
<p>55. Click Add Section. A section contains set of Fields.</p> <p>56. Update the Label / Title of the section as Request</p>	 <p>CostCenterOwner</p> <p>ID: costcenterowner Revision: 1.0 Type: Task Form</p> <p>FIELDS DECISIONS</p> <p>Add Field Add Section Add Subsection Add Collection Cut Copy Paste</p> <table><tr><th>Label/Title</th><th>Type</th><th>Context Path</th></tr><tr><td>Request</td><td>Section</td><td></td></tr></table>	Label/Title	Type	Context Path	Request	Section	
Label/Title	Type	Context Path					
Request	Section						

Explanation

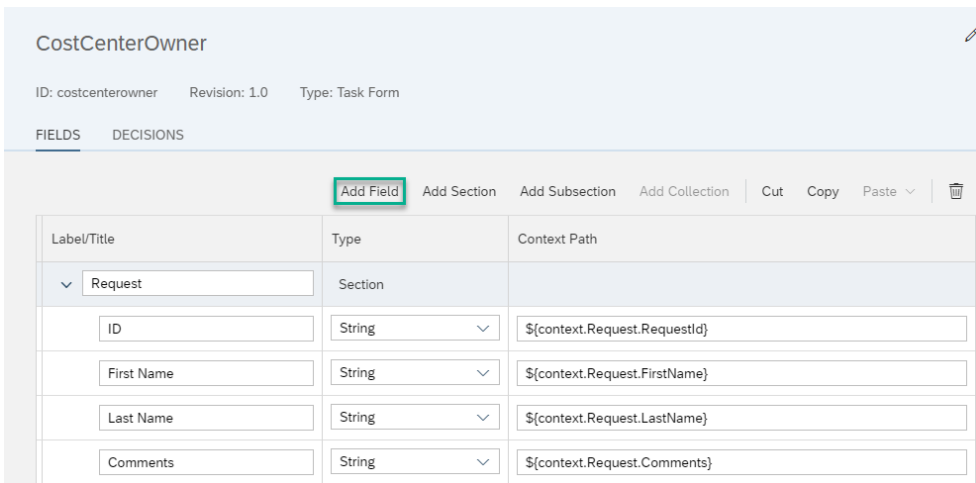
57. Select Request and click **Add Field** to add the following fields.

Copy the Context Path from the attached file

CostCenterOwnerApprovalTask

Label	Type	Context Path
ID	String	\${context.Request.RequestId}
First Name	String	\${context.Request.FirstName}
Last Name	String	\${context.Request.LastName}
Comments	String	\${context.Request.Comments}

Screenshot



The screenshot shows the 'CostCenterOwner' form with the 'Request' section expanded. The 'Add Field' button is highlighted. The fields added are:

Label/Title	Type	Context Path
Request	Section	
ID	String	\${context.Request.RequestId}
First Name	String	\${context.Request.FirstName}
Last Name	String	\${context.Request.LastName}
Comments	String	\${context.Request.Comments}

58. Add a new Section **Investment**.

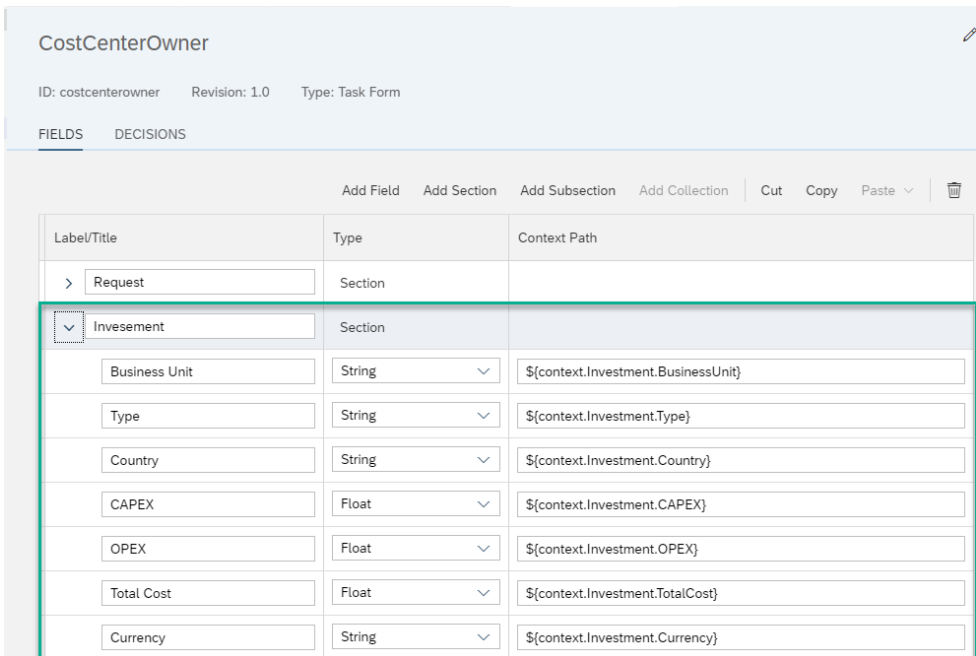
59. Add the following Fields.

Copy the Context Path from the attached file

CostCenterOwnerApprovalTask

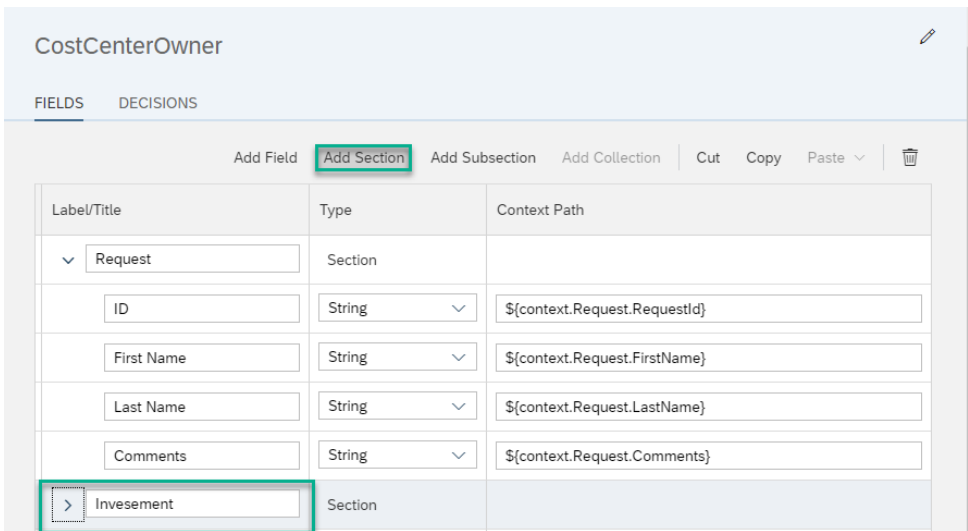
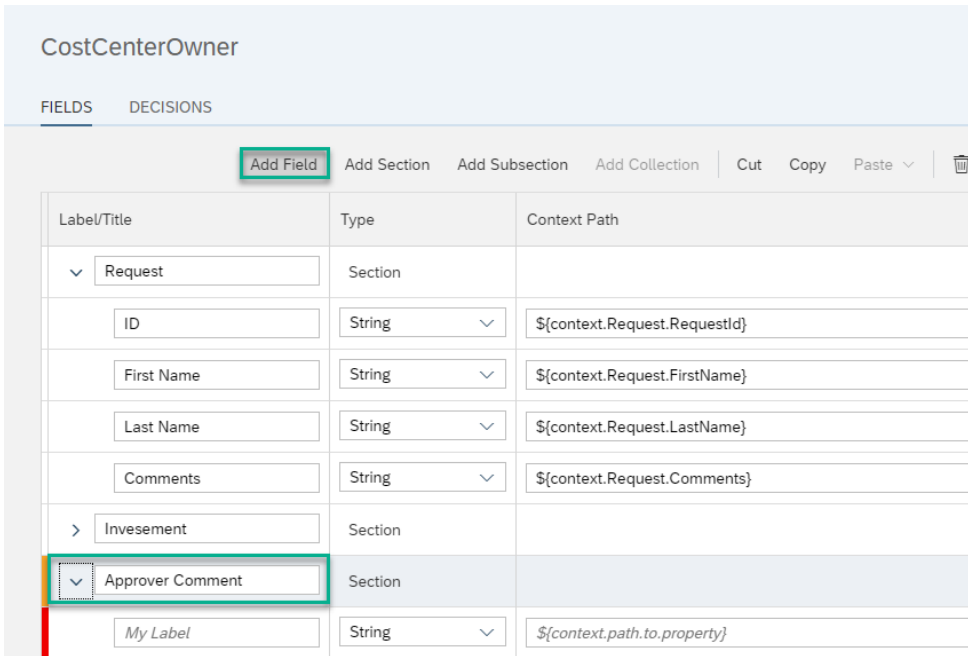
Label	Type	Context Path
Business Unit	String	\${context.Investment.BusinessUnit}
Type	String	\${context.Investment.Type}
Country	String	\${context.Investment.Country}
CAPEX	Float	\${context.Investment.CAPEX}
OPEX	Float	\${context.Investment.OPEX}
Total Cost	Float	\${context.Investment.TotalCost}
Currency	String	\${context.Investment.Currency}

Screenshot

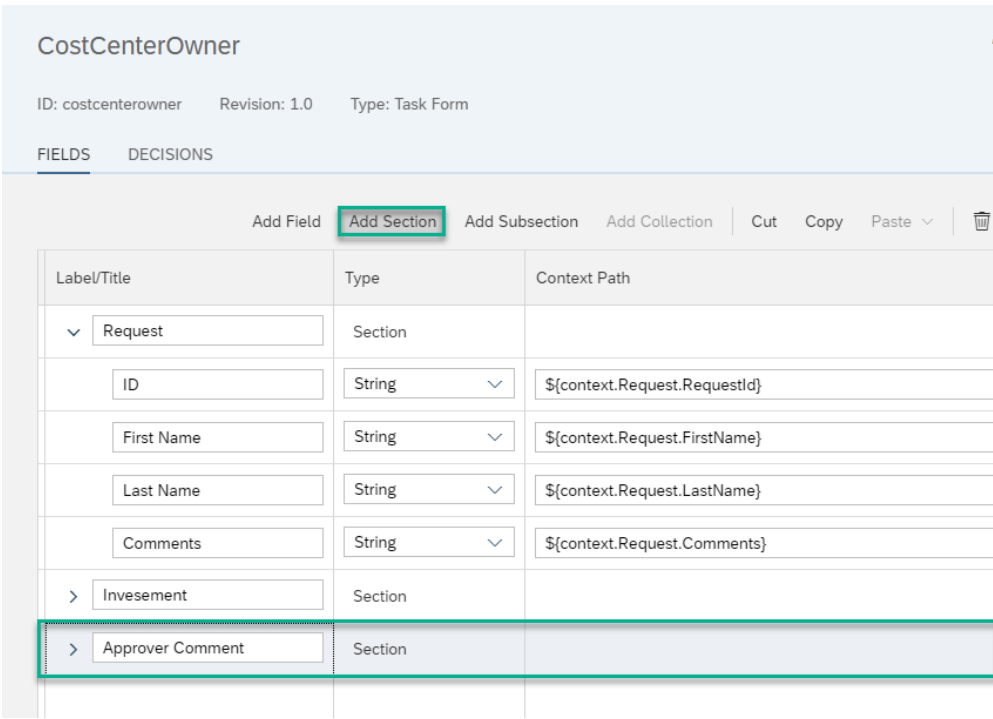
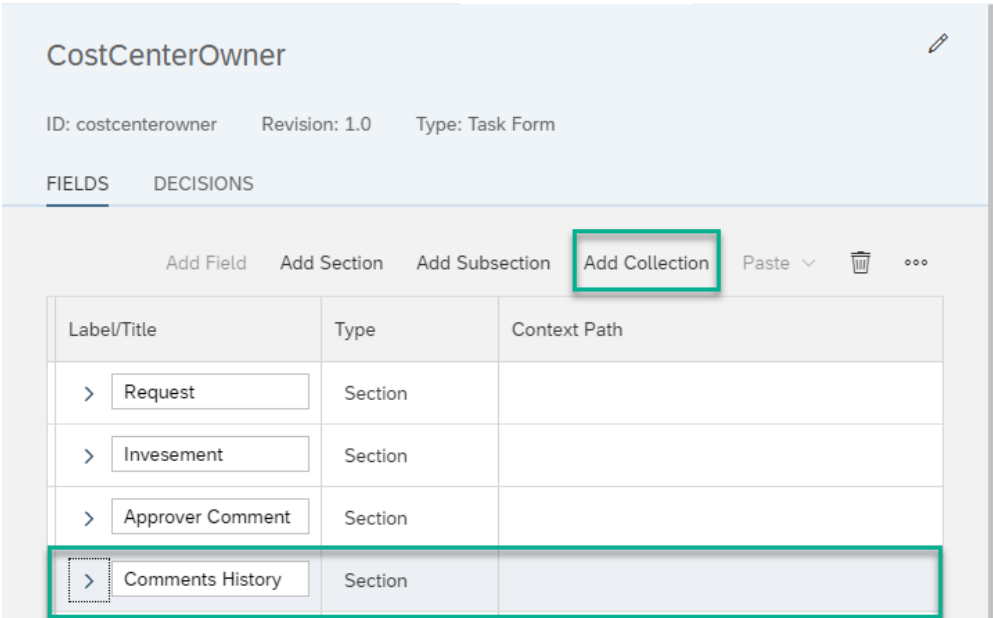


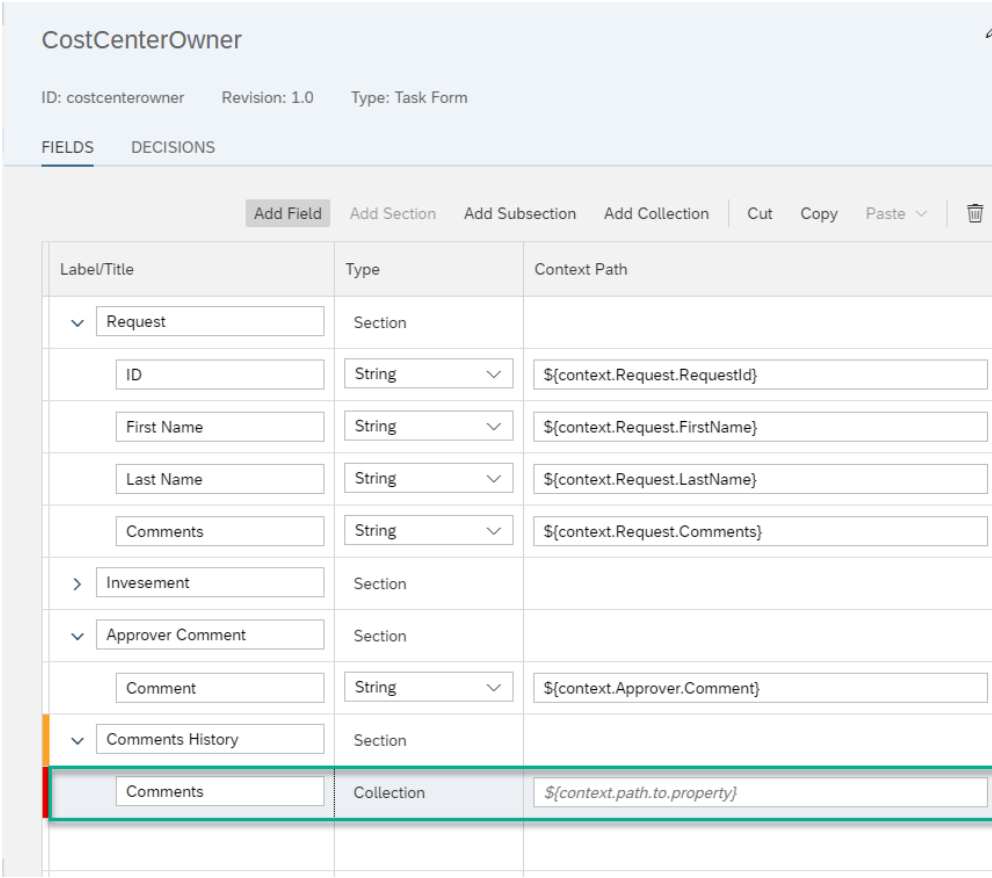
The screenshot shows the 'CostCenterOwner' form with the 'Investment' section expanded. The 'Add Field' button is highlighted. The fields added are:

Label/Title	Type	Context Path
Investment	Section	
Business Unit	String	\${context.Investment.BusinessUnit}
Type	String	\${context.Investment.Type}
Country	String	\${context.Investment.Country}
CAPEX	Float	\${context.Investment.CAPEX}
OPEX	Float	\${context.Investment.OPEX}
Total Cost	Float	\${context.Investment.TotalCost}
Currency	String	\${context.Investment.Currency}

Explanation	Screenshot																											
60. Select section Investment . 61. Click Add Section .	 <p>CostCenterOwner</p> <p>FIELDS DECISIONS</p> <p>Add Field Add Section Add Subsection Add Collection Cut Copy Paste</p> <table><tr><th>Label/Title</th><th>Type</th><th>Context Path</th></tr><tr><td>Request</td><td>Section</td><td></td></tr><tr><td>ID</td><td>String</td><td>\$(context.Request.RequestId)</td></tr><tr><td>First Name</td><td>String</td><td>\$(context.Request.FirstName)</td></tr><tr><td>Last Name</td><td>String</td><td>\$(context.Request.LastName)</td></tr><tr><td>Comments</td><td>String</td><td>\$(context.Request.Comments)</td></tr><tr><td>Investment</td><td>Section</td><td></td></tr></table>	Label/Title	Type	Context Path	Request	Section		ID	String	\$(context.Request.RequestId)	First Name	String	\$(context.Request.FirstName)	Last Name	String	\$(context.Request.LastName)	Comments	String	\$(context.Request.Comments)	Investment	Section							
Label/Title	Type	Context Path																										
Request	Section																											
ID	String	\$(context.Request.RequestId)																										
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Last Name	String	\$(context.Request.LastName)																										
Comments	String	\$(context.Request.Comments)																										
Investment	Section																											
62. Change the Label/Title of the section as Approver Comment . 63. Click Add Field .	 <p>CostCenterOwner</p> <p>FIELDS DECISIONS</p> <p>Add Field Add Section Add Subsection Add Collection Cut Copy Paste</p> <table><tr><th>Label/Title</th><th>Type</th><th>Context Path</th></tr><tr><td>Request</td><td>Section</td><td></td></tr><tr><td>ID</td><td>String</td><td>\$(context.Request.RequestId)</td></tr><tr><td>First Name</td><td>String</td><td>\$(context.Request.FirstName)</td></tr><tr><td>Last Name</td><td>String</td><td>\$(context.Request.LastName)</td></tr><tr><td>Comments</td><td>String</td><td>\$(context.Request.Comments)</td></tr><tr><td>Investment</td><td>Section</td><td></td></tr><tr><td>Approver Comment</td><td>Section</td><td></td></tr><tr><td>My Label</td><td>String</td><td>\$(context.path.to.property)</td></tr></table>	Label/Title	Type	Context Path	Request	Section		ID	String	\$(context.Request.RequestId)	First Name	String	\$(context.Request.FirstName)	Last Name	String	\$(context.Request.LastName)	Comments	String	\$(context.Request.Comments)	Investment	Section		Approver Comment	Section		My Label	String	\$(context.path.to.property)
Label/Title	Type	Context Path																										
Request	Section																											
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First Name	String	\$(context.Request.FirstName)																										
Last Name	String	\$(context.Request.LastName)																										
Comments	String	\$(context.Request.Comments)																										
Investment	Section																											
Approver Comment	Section																											
My Label	String	\$(context.path.to.property)																										

Explanation	Screenshot																											
<div>64. Update the Label/Title of the new Field as Comment.</div> <div>65. Update the Context Path <code>\${context.Approver.Comment}</code></div>	<div><div>CostCenterOwner</div><div><div>FIELDS</div><div>DECISIONS</div></div><div><div>Add Field</div><div>Add Section</div><div>Add Subsection</div><div>Add Collection</div><div>Cut</div><div>Copy</div><div>Paste</div><div></div></div><table><tr><th>Label/Title</th><th>Type</th><th>Context Path</th></tr><tr><td>Request</td><td>Section</td><td></td></tr><tr><td>ID</td><td>String</td><td><code>\${context.Request.RequestId}</code></td></tr><tr><td>First Name</td><td>String</td><td><code>\${context.Request.FirstName}</code></td></tr><tr><td>Last Name</td><td>String</td><td><code>\${context.Request.LastName}</code></td></tr><tr><td>Comments</td><td>String</td><td><code>\${context.Request.Comments}</code></td></tr><tr><td>Investment</td><td>Section</td><td></td></tr><tr><td>Approver Comment</td><td>Section</td><td></td></tr><tr><td>Comment</td><td>String</td><td><code>\${context.Approver.Comment}</code></td></tr></table></div>	Label/Title	Type	Context Path	Request	Section		ID	String	<code>\${context.Request.RequestId}</code>	First Name	String	<code>\${context.Request.FirstName}</code>	Last Name	String	<code>\${context.Request.LastName}</code>	Comments	String	<code>\${context.Request.Comments}</code>	Investment	Section		Approver Comment	Section		Comment	String	<code>\${context.Approver.Comment}</code>
Label/Title	Type	Context Path																										
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Investment	Section																											
Approver Comment	Section																											
Comment	String	<code>\${context.Approver.Comment}</code>																										
<div>66. Select the Comment field.</div> <div>67. Select Control as Text Area.</div> <div>68. Select Height as Medium.</div>	<div><div>UI Configuration</div><div><div>Control</div><div>Text Area</div></div><div><div>Placeholder</div><div>My Placeholder</div></div><div><div>Height</div><div>Medium</div></div></div>																											

Explanation	Screenshot
69. Add a new Section. Click Add Section .	
70. Update Label/Title of the newly added Section as Comments History . 71. Click Add Collection .	

Explanation	Screenshot
72. Update the Label/Title as Comments .	
73. Update the Context Path as \${context.Comments} .	

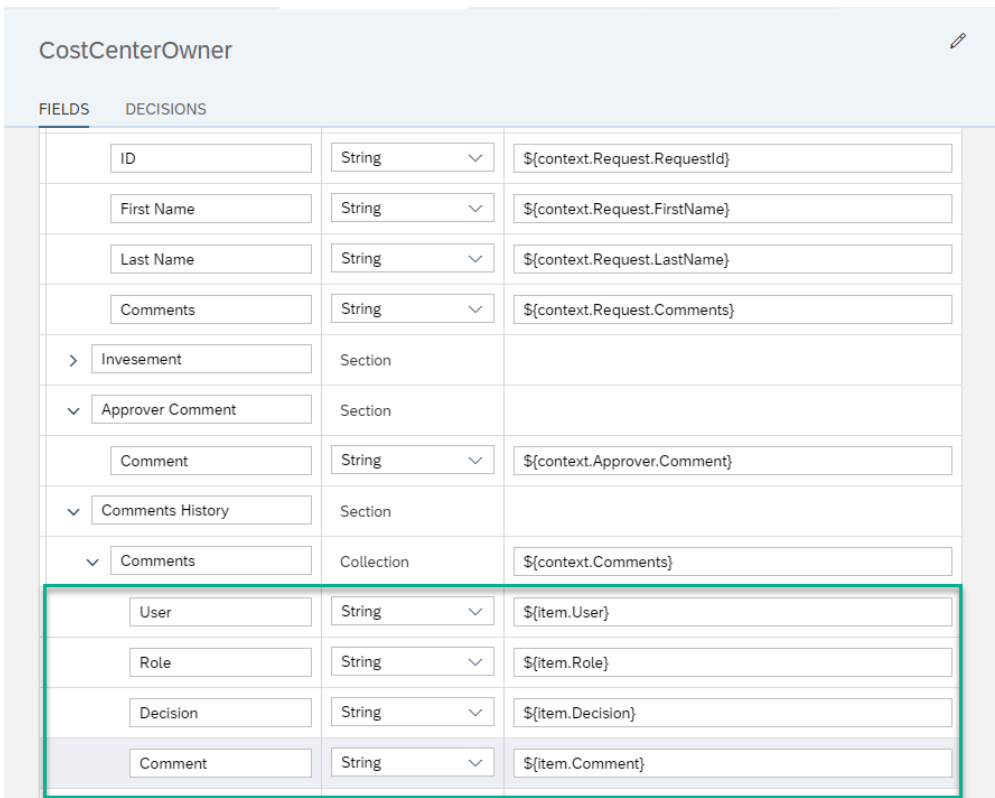
Explanation

74. Select **Comments** and click **Add Field** to add the following fields.

Copy the Context Path from the attached file
CostCenterOwnerApprovalTask

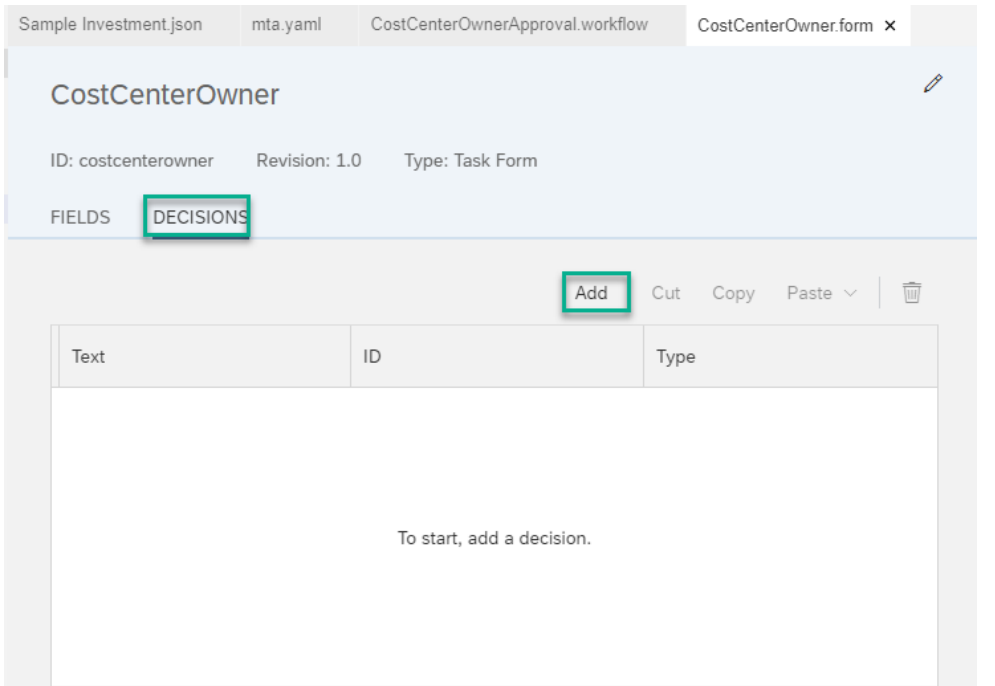
Label	Type	Context Path
User	String	\${item.User}
Role	String	\${item.Role}
Decision	String	\${item.Decision}
Comment	String	\${item.Comment}

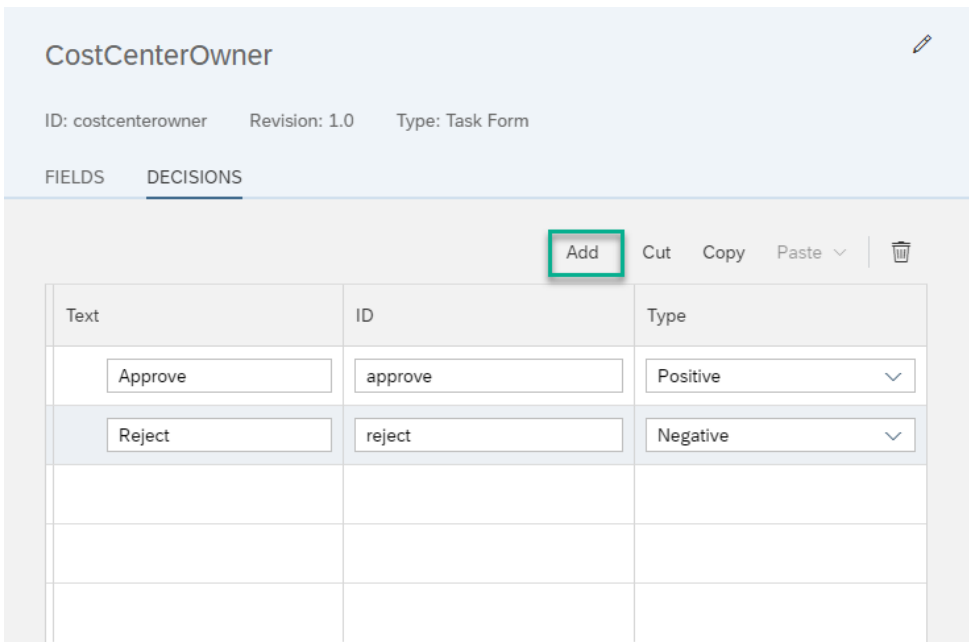
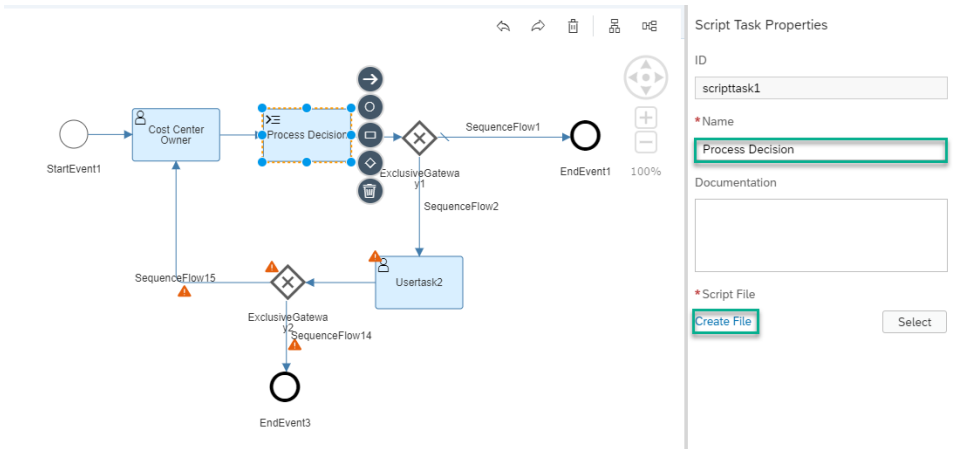
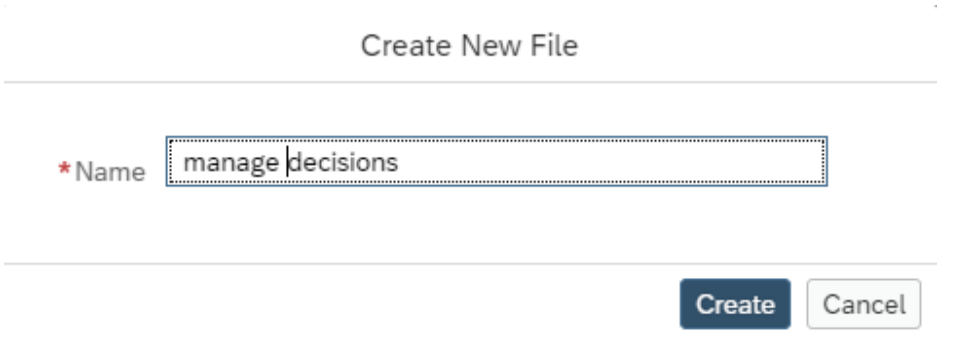
Screenshot

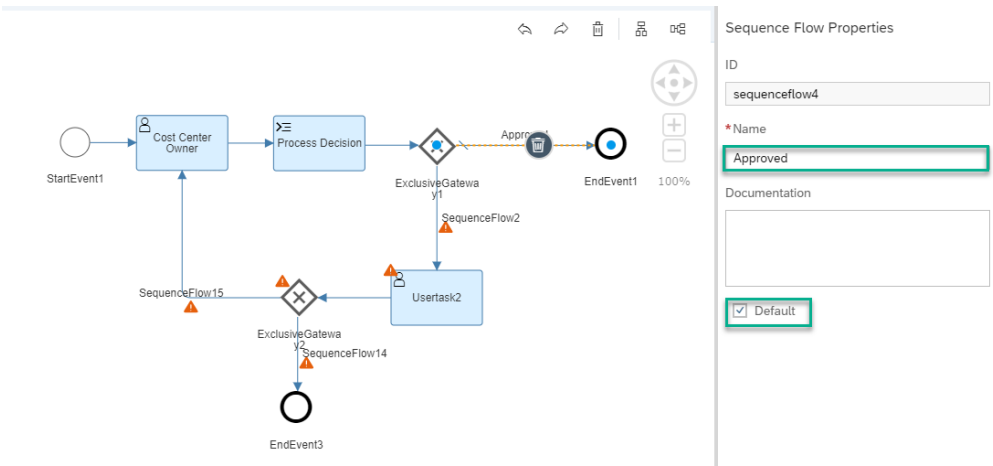
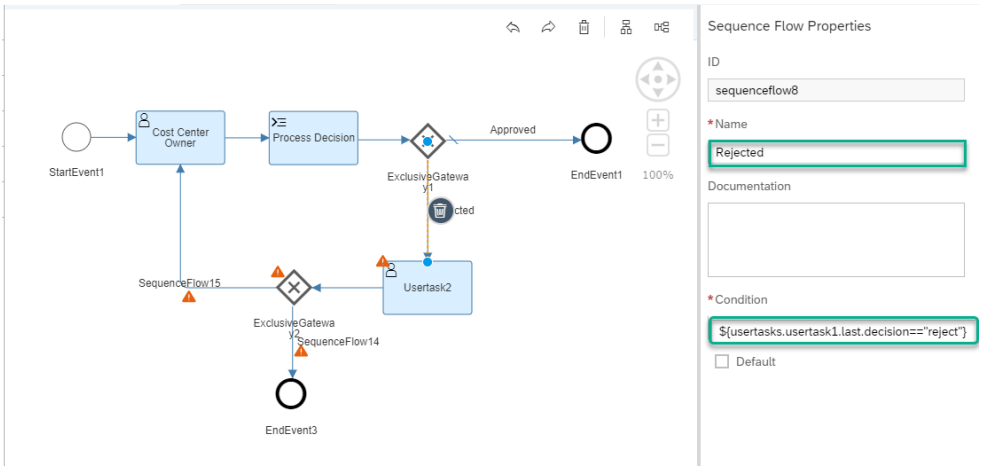


75. Select **DECISIONS**.

76. Click **Add**.



Explanation	Screenshot									
<p>77. Click Add and add the following Decisions.</p> <table><tr><th>Text</th><th>ID</th><th>Type</th></tr><tr><td>Approve</td><td>approve</td><td>Positive</td></tr><tr><td>Reject</td><td>reject</td><td>Negative</td></tr></table>	Text	ID	Type	Approve	approve	Positive	Reject	reject	Negative	
Text	ID	Type								
Approve	approve	Positive								
Reject	reject	Negative								
<p>78. Select the Script Task and enter name as Process Decision.</p> <p>79. Click Create File link.</p>										
<p>80. Enter file name as manage decisions.</p> <p>81. Click Create button.</p>										

Explanation	Screenshot
82. Copy and paste the scripts from the attached manage decisions.js .	<pre>1 2 var lastUserTask1 = \$.usertasks.usertask1.last; 3 \$.context.Approver.UserId = lastUserTask1.processor; 4 \$.context.Approver.decision = lastUserTask1.decision; 5 6 var decision={}; 7 decision.User= lastUserTask1.processor; 8 decision.Role="Cost Center Approver"; 9 decision.Decision = lastUserTask1.decision; 10 decision.Comment=\$.context.Approver.Comment; 11 12 \$.context.Comments.Add(decision); 13 14 \$.context.Approver.UserId = ""; 15 \$.context.Approver.decision = ""; 16 \$.context.Approver.Comment = "";</pre>
83. Select the sequence flow between the exclusive gateway and end event. 84. In Sequence flow properties enter Name as Approved. 85. Check the Default checkbox.	
86. Select sequence flow between the ExclusiveGateway1 and UserTask2 . 87. Enter Name as Rejected. 88. Enter the condition as <code>\${usertasks.usertask1.last.decision=="reject"}</code> You may copy the condition from the attached file Exclusive Gateway Conditions .	

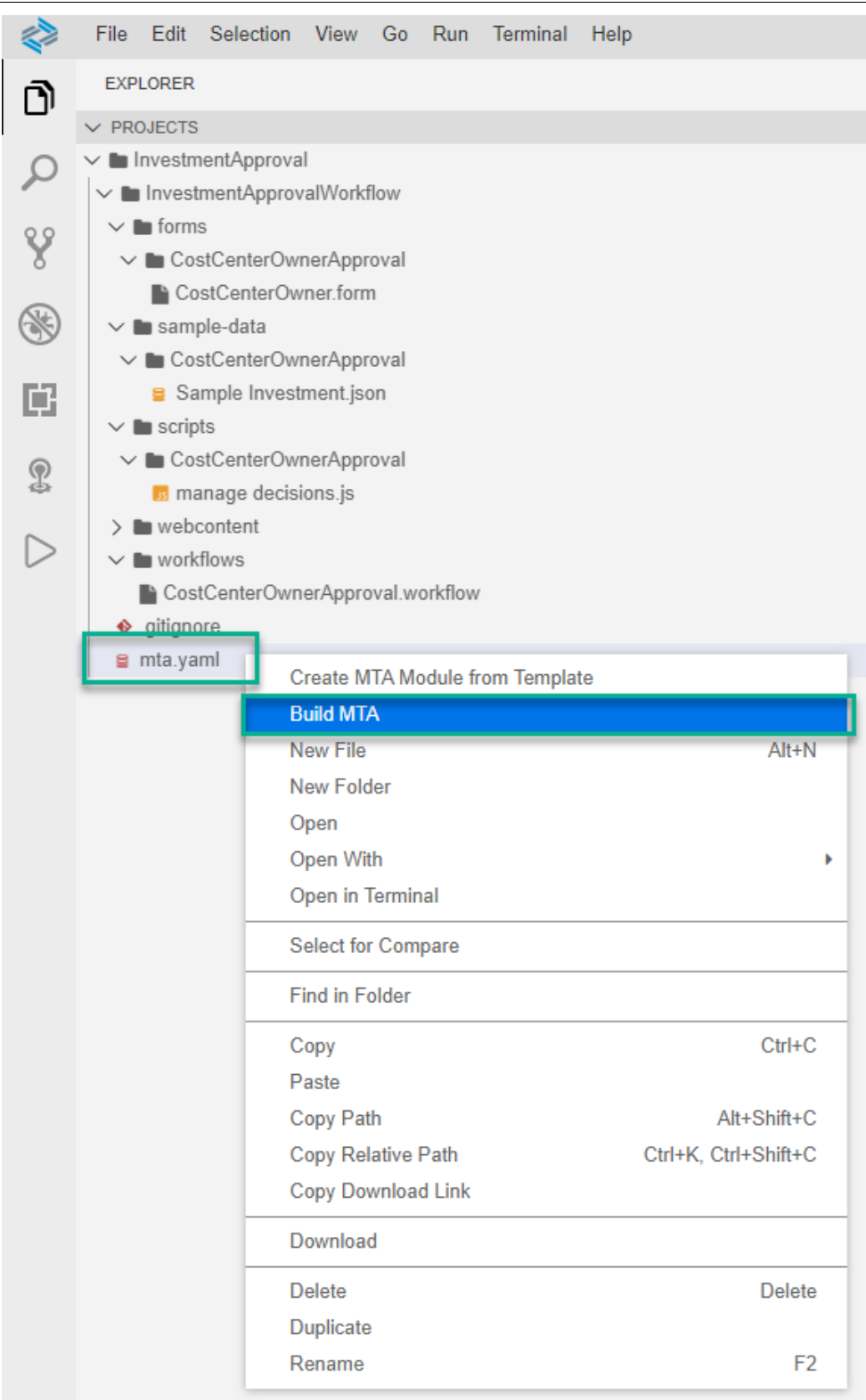
Explanation	Screenshot
<div>89. Select UserTask2 and in User Task Properties select GENERAL tab.</div> <div>90. update the Name as Requestor.</div>	
<div>91. Select Details tab.</div> <div>92. Set Subject as Request \${context.Request.RequestId} for Investment Rejected.</div> <div>93. Set Users as \${context.Request.UserId}</div>	

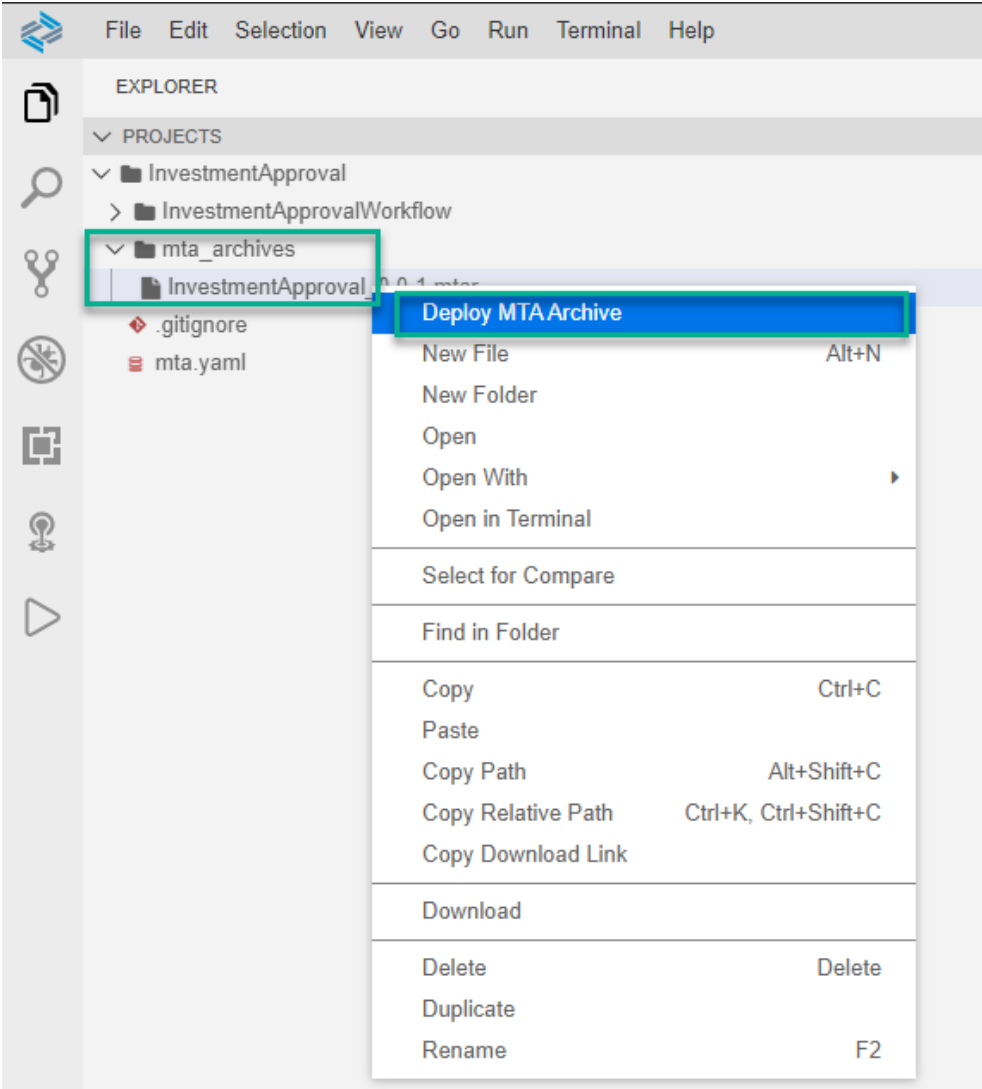

Explanation	Screenshot
<div>94. Select the sequence flow between the Exclusive Gateway and Cost Center Owner user task.</div> <div>95. Enter Name as Submit for Approval</div> <div>96. Check Default check box.</div>	<p>The screenshot shows a BPMN diagram with a StartEvent1, a Cost Center Owner user task, a Process Decision, an Exclusive Gateway, and a Requestor user task. A sequence flow labeled 'Submit for Approval' connects the Exclusive Gateway to the Cost Center Owner user task. The 'Sequence Flow Properties' panel on the right shows the ID 'sequenceflow15', the Name 'Submit for Approval', and the 'Default' checkbox checked.</p>
<div>97. Select the sequence flow between the Exclusive Gateway and End event.</div> <div>98. Enter Name as Cancel Request.</div> <div>99. Enter Condition as <code>\${usertasks.usertask2.last.decision=="reject"}</code></div> <div>Make sure the Requestor user task ID is usertask2. If it is different change the ID in the expression.</div> <div>You may copy the condition from the attached file Exclusive Gateway Conditions.</div>	<p>The screenshot shows the same BPMN diagram as the previous one, but with a new sequence flow labeled 'Cancel Request' connecting the Exclusive Gateway to an EndEvent3. The 'Sequence Flow Properties' panel on the right shows the ID 'sequenceflow14', the Name 'Cancel Request', and the Condition '<code>\${usertasks.usertask2.last.decision=="reject"}</code>'. The 'Default' checkbox is unchecked.</p>

Build and Deploy

- 100. Right click on **mta.yaml** file.
- 101. Select **Build MTA**.

This will start the MTA build and it may take a few seconds to create the mta archive under the folder **mta_archives**.



Explanation	Screenshot
<div>102. Successful build will create a new folder mta_archives and a .mtar file.</div> <div>103. Select the .mtar file and right click.</div> <div>104. Click Deploy MTA Archive.</div>	 <p>The screenshot shows the Visual Studio Code interface. In the Explorer sidebar, the 'InvestmentApprovalWorkflow' folder is expanded, showing a subfolder 'mta_archives' which contains a file 'InvestmentApproval_0.0.1.mtar'. A right-click context menu is open over this file, and the 'Deploy MTA Archive' option is highlighted in blue. Other menu options 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'.</p>
<div>105. Successful deployment will show the log.</div>	 <p>The screenshot shows the 'Problems' panel in VS Code, titled 'Task: Deploy MTA Archive'. It displays the following log output:</p> <pre>Uploading 1 files... /home/user/projects/InvestmentApproval/mta_archives/InvestmentApproval_0.0.1.mtar OK Operation ID: c443e49b-318f-11eb-a634-eeee0a8b72e6 Deploying in org "DEV264" and space "dev" Detected MTA schema version: "3" No deployed MTA detected - this is initial deployment Detected new MTA version: "0.0.1" Processing service "workflow_mta"... Creating service "workflow_mta" from MTA resource "workflow_mta"... 1 of 1 done Creating service key "InvestmentApprovalWorkflow-workflow_mta-credentials" for service "workflow_mta"... Uploading content module "InvestmentApprovalWorkflow" in target service "workflow_mta"... Deploying content module "InvestmentApprovalWorkflow" in target service "workflow_mta"... Skipping deletion of services, because the command line option "--delete-services" is not specified. Process finished. Use "cf dmol -i c443e49b-318f-11eb-a634-eeee0a8b72e6" to download the logs of the process.</pre> <p>At the bottom, it states: 'Terminal will be reused by tasks.'</p>

SUMMARY

You have modeled a workflow and successfully deployed in your SAP Cloud Platform trial account. In the Next hands on guide, you will Execute and Monitor the Workflow. Please see more details on SAP Cloud platform Workflow in [help portal](#).

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