IBM Cloud Pak for Business Automation Demos and Labs 2022

Introduction to IBM Business Automation Workflow

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V 1.2

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1 Introduction

1.1 IBM Business Automation Workflow

Organizations often require workflows that are unstructured, require knowledge workers, implement straight-through processes, integrate documents with the workflows and provide system of records. IBM Business Automation Workflow is software that combines business process management and case management capabilities in a single integrated workflow solution to provide these capabilities. It unites information process, and users to provide a 360-degree view of work to help drive more successful business outcomes.

Using the case feature, you can create unstructured workflows that can be triggered using documents and maintain the case information in a system of record for auditability. You do this in the <u>IBM Case</u> <u>Builder</u>.

Using the process features, you can implement the activities in the unstructured workflows as structured tasks that can be both straight-through and require human intervention when required. The process feature also allows developers to create UIs for the end users working on a workflow. You do this in the <u>IBM Process Designer</u>.

Additional information about IBM Business Automation Workflow can be found here.

1.2 Lab Overview

In this lab, you will learn how to create a sample Workflow automation project for the client onboarding scenario. It covers how to build a Workflow project that includes both case and process features and will help you learn more about how the Case Builder and Process Designer integrate. As a part of the lab, you will perform the following exercises:

- **Create the Client Onboarding solution** In this exercise, you will learn how to <u>create a Workflow</u> <u>solution</u>. You will do this by creating the initial framework of the client onboarding solution in the Case Builder.
- Create the Client Onboarding Request case type In this exercise, you will learn more about <u>case</u> <u>types</u>. A case type identifies the activities, content, views, etc. that are required to manage the case. Using the Case Builder, you will add a case type to the solution created in the previous exercise that will handle the client onboarding request. You will then use the Process Designer to create a custom UI that shows the details of an existing case.
- Adding activities to the Client Onboarding Request case type In this exercise, you will learn how to create and implement <u>activities</u> in a case type. You will do that by creating some of the activities that are required for the Client Onboarding Request case type in the Case Builder. Then, using the Process Designer, you will implement the details of these activities.

Approximate Duration: 3-4 hours

1.3 Lab Setup Instructions

- 1. If you are performing this lab as a part of an IBM event, access the document that lists the available systems and URLs along with login instructions. For this lab, you will need to access **IBM Business Automation Studio**.
- 2. Download the **Legacy Consulting Banking Information.pdf** from the Lab Data folder onto your computer.

2 Exercise: Create the Client Onboarding solution

2.1 Introduction

In this exercise, you will learn how to <u>create a Workflow solution</u> that includes case features. You will do this by creating the initial framework of the client onboarding solution in the Case Builder. The initial framework will define the roles (e.g., Account Manager & Client Rep), the properties (e.g., Client name & approval status) and the documents required (e.g, Client documents & utility bill).

2.2 Exercise Instructions

2.2.1 Create the solution in IBM Business Automation Studio

1. In your browser, login to IBM Business Automation Studio using the Enterprise LDAP option.



The homepage contains cards that showcase recent artifacts across all installed Cloud Paks in the system. For IBM Cloud Pak for Business Automation, the recent <u>business applications</u> and <u>automation services</u> are shown.

Overview	
Recent business applications	Recent automation services
① No recent business applications No recent business applications	client_onboarding_lab 05/20/2021
	Client_Onboarding_Workflows 05/18/2021
	client_onboarding_decisions 05/18/2021
	View all

2. In the top-left corner, click on the hamburger menu icon and select **Design** → **Business automations** to access the automation repository.



This brings up the Business automations page where you can create or reuse automations from different capabilities of IBM Cloud Pak for Business Automation. If a capability is not installed on the system, it will be greyed out. At this point, you may see a dialog for a guided tour and you can choose to go through it now or do it later.

Business automations Create or reuse automations. An automation is a collection of artifacts that fulfills a business purpose. You can publish some automation artifacts as automation services that you can call and reuse in a consistent way. Learn more		Published automation services (3)	Q	Ŷ٩
		client_onboarding_decisions Decision	Publ 05/18	ished /2021
		Client_Onboarding_Workflows Workflow	Publ 05/18	ished /2021
	_	Client_Onboarding_Workflows_External External workflow	Publ 05/27	ished /2021
Create ~ Import	₹			
Published automation services	\rightarrow			
Decision	\rightarrow			
Document processing	\rightarrow			
Workflow	\rightarrow			
External	\rightarrow			

3. Click on **Create** → **Workflow** → **Workflow** automation.

Create	~	Import <u>J</u>	Ł
Decision au	tomations		
Workflow	>	Workflow automation	
External		Template	
Decision		Toolkit	

4. Check the **Includes case features** checkbox.

Note: As a best practice, you should include the case features when you want to create a Workflow automation project that contains unstructured activities, is content intensive (i.e., activities triggered by documents) and/or requires persistence (i.e., a permanent system of record). When you create a Workflow automation project with case features, you can design your solution in the Case Builder and implement the activities of the case in the Process Designer.

Historically, a case solution would be required to access the Case Builder and a process application would be required to access the Process Designer. However, with Business Automation Workflow, when you create a Workflow automation project with case features, a case solution is created along with a hidden Process Application for the case and process integration to work seamlessly. This is important to understand from an operations standpoint as processes are not systems of records and require regular cleanup.

- 5. In the Name field, enter UsrNNN Client Onboarding where usrNNN is your username.
- 6. Provide an optional purpose.

7. Click on Create.

Create a workflow automation

lame ③	7	
Usr011 Client Onboarding		
urpose (optional)		
Solution to orchestrate different tasks		
required to onboard a client		
	11.	

This launches the Case Builder where you can <u>define your case management solution</u>. Note that the Case Builder may take a few seconds to load.

×

2.2.2 Create roles in the solution

<u>Roles</u> are the different personas/teams that are required as part of the client onboarding solution i.e., Client Rep & Account Manager.

1. Click on the **Roles** tab.

Usr011 Client	Onboarding
---------------	------------



- 2. Click on Add Role+ in the upper-right corner.
- 3. In the Role field, enter Client Rep.
- 4. Provide an optional description.
- 5. Click on **OK**.

Roles (1)		ок аш ў⊒	Add Role +
Name	Description		
* Role:	Description: Handles all activities associated with client interaction	Cancel	ок
Client Rep	Handles all activities associated with client interaction	Cancel	ок

6. Repeat the steps before to add another role called **Account Manager**.

Roles (1)		ok all %⊒	Add Role +
Name	Description		
* Role:	Description:	_	
Account Manager	Reviews the client onboarding request	Cancel	ок

You should now have 2 roles defined in your solution:

Roles (1)	
Name	Description
Account Manager	Reviews the client onboarding request
Client Rep	Handles all activities associated with client interaction

7. Click on **Save** in the upper-right corner.



2.2.3 Add document classes to the solution

Next, we will add <u>document classes</u> that are required as a part of the solution. Document classes help you organize and classify the documents that belong to a case and can contain custom properties. The document classes required for this solution are **Client Document** and **Utility Bill**. These classes have already been defined in the environment and can be re-used in the solution. This is to avoid creating multiple document classes with the same name.

- 1. Click on the **Documents** tab.
- 2. Click on Add Document Class → Reuse Document Class.
- 3. Select the Client Document class.
- 4. Click on OK.

In-baskets	Documents	Business Objects	Pages	Case Types	_		
							Add Document Class
							New
							New Subclass
Filter Docu	iment Classes				Clear All	Select All	Reuse Document Class 🔸
Name			≜ Ur	nique ID			
Banking	Information		СС	D_BankingInform	nation		
Client Do	cument		СС)_ClientDocume	nt		
Email			En	nail			
				Cancel		ок	

5. Repeat the previous steps to add the existing **Banking Information** and **Utility Bill** document classes.

Note: You can use Ctrl/Command to select multiple documents at once.

You should now have two document classes defined in your solution:

Document Classes	i
Client Document Utility Bill	

6. Click on Save. ⊘

2.2.4 Create properties in the solution

Next, we will add some of the <u>properties</u> required for this solution. Properties are artifacts that can be reused within the solution at various levels to define things such as names, dates, approval status, amounts, etc.

- 1. Click on the **Properties** tab.
- 2. Click on Add Property \rightarrow New.
- 3. In the Name field, enter Annual Revenue.
- 4. For the **Type** field, select **Integer**.
- 5. Provide an optional description.
- 6. Click on **OK**.

Property Definitions ①				ok all ∑⊒	Manage Choice Lists 🛅	Add Property	~
Name ^	Туре	Attribute	25	Description			
* Name: Annual Revenue		Type: Integer	~	Description: Client annual revenue	Cancel	ОК	
This property can have:		Minimum valuo Maximum valu	e:		Choice list: None	~	
Default value:		* Unique Iden U011C_ A	tifier .nnualRev	renue			

7. Similarly, add the following 6 properties:

Name	Туре	Optional Description
Client Name	String	Name of the client
Company Age	Integer	Age of the client's company in years
Defaulted Payment	Boolean	Client has previously defaulted a payment
Number of Employees	Integer	Number of employees working for the client
Industry	String	The industry the client is interested in
All Documents Received	Boolean	Status of required documents

8. Click on the column header **Name** to sort the list of properties alphabetically.

You should now have the following list of 7 property definitions:

Property Definitions ①			OK All 🏸 Manage Choice Lists 恒 Add Property 💙
Name ^	Туре	Attributes	Description
All Documents Received	Boolean		Status of required documents
Annual Revenue	Integer		Client annual revenue
Client Name	String		Name of the client
Company Age	Integer		Age of the client's company in years
Defaulted Payment	Boolean		Client has previously defaulted a payment
Industry	String		The industry the client is interested in
Number of Employees	Integer		Number of employees working for the client

Note: In the current solution, we have only used simple types such as String, Boolean, etc. However, you can configure a property to be of type **Business Object** which allows you to create more complex types with nested properties.

Next, we need to add a property to hold the status of the approval. The approval status can either be **Under Review**, **Approved** or **Rejected**. To do this, we will add a choice list.

9. Click on Manage Choice Lists.



- 10. In the dialog, click on Add Choice List+.
- 11. In the Name field, enter Approval Status.
- 12. Enter **Under Review** for both the **Display Name** and **Value**.
- 13. Click on Add Choice Item+.
- 14. Enter Approved for both the Display Name and Value.
- 15. Click on Add Choice Item+.

- 16. Enter **Rejected** for both the **Display Name** and **Value**.
- 17. Click on **OK**.
- 18. Click on **Close**.

Manage Choice Lists			Add Choice List +
Choice List ^	List Details		
No choice lists are defined.	* Name: Approval Status	Choice list type: String V Cance	ι
	* Display Name	* Value	Add Choice Item +
	Under Review	Under Review	
	Approved	Approved	
	Rejected	Rejected	

Close	

Next, we will add a property that uses this choice list.

- 19. Click on **Add Property** \rightarrow **New**.
- 20. In the Name field, enter Approval Status.
- 21. Enter an optional description.
- 22. For the Choice List field, select Approval Status.
- 23. For the **Default value** field, select **Under Review**.
- 24. Click on **OK**.

Property Definitions ③				ok all ∜⊒	Manage Choice Lists 📳	Add Property	~
Name ^	Туре	Attributes	Description				
* Name: Approval Status	Type: String	~	Description: Approval status of the client onb	oarding request	Cancel	ок	
This property can have: A single value Multiple values		* Maximum leng	th: 64	Ch	oice list: Approval Status	~	_
Default value: Under Review ~		* Unique Identifi U011C_ App	er provalStatus				

We will now add the last property for this exercise, to contain the list of services requested by the client.

- 25. Click on Add Property \rightarrow New.
- 26. In the Name field, enter Services Requested.
- 27. Provide an optional description.

28. For the This property can have field, select the Multiple values option.

29. Click on **OK**.

Property Definitions ③				οκ αιι 🚝	Manage Choice Lists 🛅	Add Property ~	
Name ^	Туре	Attributes	Description				
* Name: Services Requested	Type: String	ا ب	Description: List of services requested by the	e client	Cancel	ок	
This property can have: A single value Multiple values		* Maximum lengt	64	c	hoice list: None	~	
		* Unique Identifie U011C_ Ser	er vicesRequested				

30. Click on the column header **Name** to sort the list of properties alphabetically.

Your list of property definitions should now look as follows:

Property Definitions (1)			OK All 🎾 Manage Choice Lists 🄨 Add Property 🗠
Name ^	Туре	Attributes	Description
All Documents Received	Boolean		Status of required documents
Annual Revenue	Integer		Client annual revenue
Approval Status	String		Approval status of the client onboarding request
Client Name	String		Name of the client
Company Age	Integer		Age of the client's company in years
Defaulted Payment	Boolean		Client has previously defaulted a payment
Industry	String		The industry the client is interested in
Number of Employees	Integer		Number of employees working for the client
Services Requested	String		List of services requested by the client

31. Click on Save. 📀

This concludes exercise 1. In this exercise, we setup the framework necessary to create a case solution. In the next exercise, we will use the various properties, roles, etc. to create a <u>case type</u> for the solution.

3 Exercise: Create the Client Onboarding Request Case Type

3.1 Introduction

In this exercise, you will learn more about <u>case types</u>. A case type identifies the activities, content, views, etc. that are required to manage the case. Using the Case Builder, you will add a case type to the solution created in the previous exercise that will handle the client onboarding request. You will then use the Process Designer to create a custom UI that shows the details of an existing client onboarding case request.

3.2 Exercise Instructions

3.2.1 Create the case type

- 1. Open the UsrNNN Client Onboarding Workflow project if not already open.
- 2. Click on the **Case Types** tab.



- 4. In the Case type name field, enter Client Onboarding Request.
- 5. Provide an optional description.

Case Type	Properties	Views	Case Folders	Stages	Rules	Activities
Case Type	(i)					
* Case type na Client Onl	me: poarding Reques	t				
* Case type un	ique identifier:					
U011C_	ClientOnboardin	gRequest				
Case type desc	cription:					
Case type	that handles the	client onbo	parding request			
Starting docun	nent class:					
<none></none>			~			

6. Click on Save. ⊘

We will leave the **Starting document class** as **<None>** but it's an important field to note. This field allows the case to be triggered automatically when a document of the selected class is added to the content repository backing the Workflow server. This has several use cases like - starting a mortgage application case if a mortgage application form is uploaded, starting an insurance claim request if a picture of a car is submitted. In this lab, we will start the client onboarding request using the JavaScript API.

3.2.2 Add properties to the case type

Next, we will add properties to the case type.

- 1. Click on the **Properties** tab.
- 2. Click on Add Property → Existing → Select All.
- 3. Click on **OK**.

Case Type	Properties	Views	Case Folders	Stages	Rules	Activities				
Case Prope	erties 🛈 🤉	Case Title Prop	perty: Case ID 🖉					OK AII %⊒	Add Property	^
Name ^		Filter proper	ties	Busine	ss object pro	operties	Clear All	Select All	Existing	,
		Name			Unia	ue ID		Туре	New	
		All Docume	nts Received		U011		ived	Boolean	Reuse Propert	ty ►
		Annual Pov			1011		ived.	Integer		
		Approval St	atus		0011			String		
		Αρριοναι σι	atus		0011			Jung		
						Cance	l I	ОК		

4. Click on **OK All**.

Rules	Activities			
		ok all %⊒	Add Property	~

Your case properties (sorted by name) must now look as follows:

Case Properties ③ Case Title Prop	erty: Case ID 🖉		OK All Ӳ二 Add Property ❤
Name ^	Туре	Attributes	Description
All Documents Received	Boolean		Status of required documents
Annual Revenue	Integer		Client annual revenue
Approval Status	String		Approval status of the client onboarding request
Client Name	String		Name of the client
Company Age	Integer		Age of the client's company in years
Defaulted Payment	Boolean		Client has previously defaulted a payment
Industry	String		The industry the client is interested in
Number of Employees	Integer		Number of employees working for the client
Services Requested	String		List of services requested by the client

5. Click on Save. Θ

3.2.3 Create a custom UI for the case details view

Each case type has a case details view. This view allows users to see the details of a case like the summary, properties, activities, comments, documents, etc. In the latest release, you can define this view as a <u>Client-side human service</u> which offers enhanced flexibility in terms of UI design.

- 1. Click on the **Case Type** tab.
- 2. Click on New Case Details layout at the bottom.

Default layout for Add Case page:		
Add Case	~	New Add Case layout
Default layout for Split Case page:		
Split Case	~	New Split Case layout
Default layout for Case Details page:		
Case Details	~	New Case Details layout

- 3. In the Name field, enter Custom Case Details.
- 4. Provide an optional description.
- 5. Click on **OK**.

Case Type P	Properties Vie	ws Case Folders	Stages	Rules	Activities		
Views 🛈							
Case Layouts	S Case Summa	ary Case Search					
						οκ αιι 🚝	Add Layout 🛛 🗡
Name ^		Туре			Description ^		
* Name:		Description:					
Custom Cas	se Details	Custom client-side	human ser	vice to show	w the case details	Cancel	ок
* Unique Identi	ifier:	Туре 🕤	Cas	se Adapter P	age)		
CustomCas	seDetails	Case Details	~	Case Detai	ils Adapter 🗸 🗸		

- 6. Click on Save. 📀
- 7. Click on **Custom Case Details** to modify its design.

Name ^	Туре	Description ^
Custom Case Details	Case Details	Custom client-side human service to show the case d etails



This opens a new window in IBM Process Designer which contains the following diagram.

The default diagram consists of two <u>coaches</u> – **View Instance Details** & **Show Error**. Coaches contain the UI of an activity and each human service can contain multiple coaches. As we are customizing the UI for the case details, we will now edit the **View Instance Details** coach.

8. Select **Coach** → **View Instance Details** at the top.



This shows the editor for the coach where you can create the UI to be shown when a user looks at the details of a case. A default UI already exists using out-of-the-box views (e.g., case comments, documents, activities, etc.) that can be modified.

Variables	Coach: Vie	ew li	nstance Details 🗸	
1				
tw.resource	e.CAT.properti	es	tw.resource.CAT.docu	uments
tw.resource	e.CAT.history	+		
Dr	op content he	re		
	Variables tw.resource tw.resource	Variables Coach: Vie tw.resource.CAT.propertia tw.resource.CAT.history Drop content be	Variables Coach: View I tw.resource.CAT.properties tw.resource.CAT.history	Variables Coach: View Instance Details Variables tw.resource.CAT.properties tw.resource.CAT.docu tw.resource.CAT.history

To modify this UI, we will first add a pre-built toolkit dependency to the current project. Toolkits contain shared artifacts that can be reused by other projects. The toolkit contains user interfaces built using the **View** artifact that can be reused in the client onboarding project.

To learn more about how to create a toolkit and reusable user interfaces like a view, look at **Exercise 1** of the **Introduction to Business Automation Application** lab.

9. In the library pane on the left, click on the + button next to **Toolkits** (you will have to hover on it to see the + button) and select the latest version the of the **Client Onboarding Toolkit** (it might differ from the one shown in the screenshot).

Note: If you don't see the library pane on the left, close the window showing the Process Designer and open it again by clicking on **Custom Case Details**.



Note: The latest version in your environment may differ from the screenshot.

- 10. Back in the Coach editor, search for **header** in the right-hand side palette.
- 11. Drag and drop the **Header** view above the tabs in the editor.

	Drag a componen	it to your page
	All views	~
tw.resource.CAT.properties tw.resource.CAT.documen	ts Q header	1
tw.resource.CAT.history		-
Drop content here	Header Panel	
	tw.resource.CAT.properties tw.resource.CAT.documen tw.resource.CAT.history	All views tw.resource.CAT.properties tw.resource.CAT.documents tw.resource.CAT.history Image: Comparison of the second

Your UI should now look as follows:



- 12. Click on the **Header** view just added to the UI.
- 13. In the **Properties** pane at the bottom, select **Configuration**.



14. For the Account Manager Visibility field, select None.

15. For the **Client Rep Visibility** field, select **Same as parent**.

This will hide the Account Manager persona from the header and show the Client Rep one.

- 16. Click on the **Positioning** tab.
- 17. In the Margin field, enter **0 0 25px 0**.

General	
Positioning	Width:
Configuration	Height:
Events	
Visibility	Content Minimum height
HTML attributes	
	Minimum width:
	Overflow content: C

This is to add a bottom margin to the header.

18. Click on the **tw.resource.CAT.properties** tab in the editor.

tw.resource.CAT.overview	tw.resource.CAT.properties	tw.resource.CAT.documents
tw.resource.CAT.activities	tw.resource.CAT.history	

The **tw.resource.CAT.properties** label means that when the UI is generated, the actual label will be retrieved from a resource file **CAT** based on the user's locale. Resource files provide a way to create a UI for different languages.

19. In the right-hand side palette, switch the dropdown selection from **All Views** to **Variables**.

Drag a component to your page					
All views	^				
Input					
Informational					
Layout					
Operational					
Chart					
Content					
Uncategorized					
Variable					

20. Drag and drop the **caseProperties** variable onto the editor where it says **Drop content here**.

	1			Drag a component to your page
Case Information				Variable ~
procus C	orp		Account Mgr	 Input caseId (String) tosName (String) isCaseClient (Boolean)
				Output Private
tw.resource.CAT.overview	tw.resource.CAT.properties	tw.resource.CAT.documents		caseProperties (Client Onboarding Req Annual Revenue (Annual Revenue)
tw.resource.CAT.activities	tw.resource.CAT.history			
				🛞 🐵 CompanyAge (Company Age)
				🛞 💩 DefaultedPayment (Defaulted Payr
Case Properties				NumberofEmployees (Number of E
Add case properties from the	a caseProperties variable to the dr	on zone below		\pm 💩 Industry (Industry)
		op zone betow		\pm 👳 AllDocumentsReceived (All Docum
	Drop con	tent here		\pm e ApprovalStatus (Approval Status)
				🟦 🙍 ServicesRequested (Services Requ
				 e caseInstance (CaseObject)
				 caseId (String)

Once you have added that, you should see the UI for the case properties automatically created.

Note: The case properties are automatically added to the Process Designer as a <u>content object</u> <u>property</u>. This allows users to use the case properties like any other variable in the Process Designer.

tw.resource.CAT.activities tw.resource.CAT.history Case Properties Add case properties from the caseProperties variable to the drop zone below tw.local.caseProperties.AnnualRevenue.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName tw.local.caseProperties.AllDocumentsReceived.displayName	tw.resource.CAT.overview	tw.resource.CAT.properti	es	tw.resource.CAT.documents	
Case Properties Add case properties from the caseProperties variable to the drop zone below tw.local.caseProperties.AnnualRevenue.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllOcumentsReceived.displayName tw.local.caseProperties.AllOcumentsReceived.displayName <t< td=""><th>tw.resource.CAT.activities</th><th>tw.resource.CAT.history</th><td>÷</td><th></th><td></td></t<>	tw.resource.CAT.activities	tw.resource.CAT.history	÷		
Case Properties Add case properties from the caseProperties variable to the drop zone below tw.local.caseProperties.AnnualRevenue.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived.displayName Services Requested Services Requested					
Add case properties from the caseProperties variable to the drop zone below tw.local.caseProperties.AnnualRevenue.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllocumentsRecei	Case Properties]			
tw.local.caseProperties.AnnualRevenue.displayName tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AlprovalStatus.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived	Add case properties from the	e caseProperties variable to the		p zone below	
tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested	tw.local.caseProperties.Annua	lRevenue.displayName			
tw.local.caseProperties.ClientName.displayName tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName tw.local					
tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllocumentsReceived.displayName tw.local.caseProperties.AllocumentsReceived.displayName <th>tw.local.caseProperties.ClientN</th> <th>Jame.displayName</th> <td></td> <th></th> <td></td>	tw.local.caseProperties.ClientN	Jame.displayName			
tw.local.caseProperties.CompanyAge.displayName tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName tw.local.caseProperties.ApprovalStatus.displayName tw.local.caseProperties.ApprovalStatus.displayName					
Image: style="text-align: center;">tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName Image: style="text-align: center;">tw.local.caseProperties.Industry.displayName Image: style="text-align: center;">tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.AlprovalStatus.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested	tw.local.caseProperties.Compa	nyAge.displayName			
tw.local.caseProperties.NumberofEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName tw					
tw.local.caseProperties.NumberorEmployees.displayName tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName	tw.local.casePropertie	s.DefaultedPayment.displa	ayN	ame	
tw.local.caseProperties.Industry.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested	tw.local.caseProperties.Numbe	rofEmployees.displayName			
tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested	tu laal oo Dugaatia Taduat	- diasta di seco			
tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested	tw.tocal.caseProperties.indust	ry.displayName			
tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName Services Requested Services Requested					
Services Requested Services Requested	tw.local.caseProperties	s.AllDocumentsReceived.o	lisp	layName	
Services Requested Services Requested		activitionaloptaynamo			
Services Requested Services Requested					*
Services Requested	Services Requested				
	Services Requested				

Note: The case properties can be filtered out in the **Variables** tab of the Client-side human service if you don't want to see them to be included in the editor view.

- 21. Optionally, rearrange the views in the editor by dragging and dropping them in the order you want. With that you've successfully created a custom UI for the case details page.
- 22. Click on the Finish Editing button.



Note: In the Case Builder, you click on the **Save** button to save your changes. In the Process Designer, your changes are <u>automatically saved</u>. When you close the editor for an artifact or if your browser crashes, your changes are preserved. You only need to click the **Finish Editing** button to make the artifact available to others for editing as an artifact can only be edited by one person at a time. You can still have other users working on other artifacts in the same Workflow solution in parallel.

In this case, we click on the **Finish Editing** button as we are about to close the Process Designer window and it tells the browser that there are no changes left to be made.

23. Close the Process Designer window to show the Case Builder again.

3.2.4 Add stages to the case type

You can define <u>stages</u> to represent the lifecycle of a case. The first stage starts automatically when the case is started. We will add two stages for this case – **Document Review** & **Scoreboarding**.

1. Back in the Case Builder, click on the **Stages** tab.

Case Type Properties Views Case Folders Stages Rules	Activities
--	------------

- 2. Click on Add Stage +.
- 3. In the Name field, enter Document Review.
- 4. Provide an optional description.
- 5. Click on OK.

Stages ①		OK All ⅔ Add Stage +
Stage Name	Duration Description	
* Name: Document Review	Description: Review client documents	Cancel OK
* Unique Identifier	Duration:	
DocumentReview	hours	

6. Similarly, add another stage called **Scoreboarding**.

* Name:	Description:			
Scoreboarding	Perform risk assessment		Cancel	ок
* Unique Identifier	Duration:			
Scoreboarding		hours		

You should now have the following 2 stages:

Stages (1)		
Stage Name	Duration	Description
Document Review		Review client documents
Scoreboarding		Perform risk assessment

When the **Document Review** stage completes, the **Scoreboarding** stage will begin automatically. In the next exercise, you will define activities that get start automatically when a specific stage begins. You can define multiple activities that start in parallel when a stage begins. A case stage can only be started if the previous stage has completed.

Note: As a part of the low-code Javascript APIs, developers can also disable/skip certain stages depending on the case.

7. Click on Save. Θ

3.2.5 Deploy and test the solution

This completes creating the framework for the Case type. We will now deploy the solution so that we can test the customized UI.

1. Click on the **Deploy** button in the upper-right corner.



2. In the confirmation dialog, click on **Deploy**.





Once the solution is deployed and reloaded, you should see the status update in the upper-right corner with two green checkmarks.



Next, we will add the user you are working with to the roles defined in the previous exercise. There are two ways to do this:

- 1. <u>Create a security configuration</u> using the Case administration client.
- 2. <u>Manage the roles</u> in the Case Client.

The first approach is typically used for production systems. As we are testing our solution, we will use the second approach.

3. Click on the **Test** button in the upper-right corner.



This launches a new window with the <u>Case Client</u>. This is a client used by case workers to complete their work for each case. In newer releases, the case workers can also use Workplace to access their work. Workplace allows knowledge workers to see tasks from both Case and Process (BPM) capabilities in a single unified place. If you want to see what Workplace looks like, you can perform the end-to-end scenario lab.



You are not a member of a role that is associated with the following solution: Usr011 Client Onboarding.

If you have access rights, click Manage Roles in the Solution and Roles list and then add yourself to a role in this solution. Otherwise, contact your system administrator to add you to a role.

Note: It may take a few seconds for the entire page to load.

4. In the upper-right corner, click on *UsrNNN* Client Onboarding → Manage Roles for your Workflow automation project.



This brings up another window to manage the role memberships.

5. Click on Add Users and Groups.

Roles	Add Users and Groups	
Account Manager	Members	\uparrow
Client Rep	There are no members.	

- 6. In the search field, enter *usrNNN* where usrNNN is your username.
- 7. Click on the username and then the \rightarrow button.
- 8. Click on Add.

Add Users and Groups

Search for: Users 🗸	usr	011		Q
			Selected	
		÷		
			Close	Add

You should now see the user added as a member to the role.

Roles	Add Users and Groups	
Account Manager	Members	\uparrow
Client Rep	° usr011	

- 9. Click on the **Client Rep** role.
- 10. Add the *usrNNN* user to this role just like you did before.
- 11. Click on **Save** in the bottom-right corner.

This will refresh the Case Client with the following screen:

Cases Work				Usr011 Client Onboar	ding /	Accoui	nt Mai	nager 🗸
Add Case 🗸								=
Search:								
Added On	~			No items to display				
6/3/2021	Ë							
Search								
Advanced Search		Total: 0	Items 0 - 0		1	\sim		Þ

We can use the **Add Case** button here to add and test the case we just created but we will be testing this case often throughout the lab. To do this we will create a Process in the Process Designer that uses the <u>JavaScript API to start a case</u>. We will create a new Process in the same Workflow project, but this Process can be a part of any other project as well.

3.2.5.1 Using JavaScript API to start a case

- 1. Minimize the Case Client window to go back to the Case Builder. We will come back to the Case Client after starting a new case.
- 2. Click on **Automations** in the upper-left corner.

Automations / Workflow Automation Usr011 Client Onboarding

3. Click on Workflow.



4. Click on your Workflow project *UsrNNN* Client Onboarding. Do NOT click on Open but on the tile itself as this will re-open the Case Builder.

Hint: You can use the search by clicking on the search icon the upper-right corner.



5. Click on the **3-dot menu** next to the open button and select **Open in Process Designer**.



There are no versions to display...yet.

6. In the library pane on the left, hover over **Processes** and click on + and select **Process**.



- 7. In the Name field, enter Start Client Onboarding Request.
- 8. Click on Finish.



9. In the Process that opens, click on the **Inline User Task** node.



- 10. In the **Properties** pane on the bottom, in the **General** tab, under the **Activity** section, select **Script** for the **Type** field (where it currently says Inline User Task).
- 11. In the Name field, enter Start Case.
- 12. Click on the **Script** tab.

General	~ A	ctivity	
Script	Name:	Start Case	
Pre & Post	Type:	Script	
Tracking	.,,		~
Conditions			
Documentation			

13. Copy & paste the following script:

```
// Create a new Client Onboarding Request case
// The record object holds the properties of the case
var newCaseProperties = new tw.object.Record();
// Fetch the arocnym of the Workflow project
// This can be used to generate the prefix of the Case properties
var prefix = tw.system.model.processApp.acronym + " ";
// Set property values for the properties defined in the case
// Client
newCaseProperties.setPropertyValue(prefix + "ClientName", "Legacy Consulting");
// Client Additional Info
newCaseProperties.setPropertyValue(prefix + "AnnualRevenue", 4500000);
newCaseProperties.setPropertyValue(prefix + "CompanyAge", 14);
newCaseProperties.setPropertyValue(prefix + "DefaultedPayment", true);
newCaseProperties.setPropertyValue(prefix + "NumberofEmployees", 75);
// Client Services
newCaseProperties.setPropertyValue(prefix + "Industry", "Healthcare");
var servicesRequested = new tw.object.listOf.String();
servicesRequested[0] = "Mental Health Care";
newCaseProperties.setPropertyValue(prefix + "ServicesRequested", servicesRequested);
// Reviewed Documents
newCaseProperties.setPropertyValue(prefix + "AllDocumentsReceived", false);
// Create Case using the JavaScript API
tw.system.currentProcessInstance.createCase(prefix + "ClientOnboardingRequest",
newCaseProperties, null, true);
```

Look at the comments of the code for further explanation on each line.

14. Click on the **Run** button in the upper-right corner to run this process and start the case.

Note: You don't need to save your changes. Clicking on the run button saves all the changes.



The Inspector view will then show up with Status set to Completed.



Note: If you get an error at this point, compare the property names in the code to the properties you defined in the case solution.

15. Go back to the window containing the **Case Client**.

If you can't find the window or accidentally closed it, open your Workflow project, and click on the Test button again in the Case Builder.

Cases Work				Usr011 Client Onboa	rding	Accou	nt Ma	nager 🗸
Add Case 🗸								E
Search:								
Added On	~			No items to display				
6/3/2021	Ë							
Search								
Advanced Search		Total: 0	Items 0 - 0		1	\sim		Þ

16. Click on **Search** in the search field.

Cases	Work	
Add Cas	se 🗸	
Search:		
Added	On	~
6/3/20	21	Ë
Search		
Advance	ed Search	

You should now see a Case in the **Working** state. If you have multiple cases from multiple attempts before, click on the latest one.

Title	↑↓	Added On	\uparrow	Case State	Modified By	Modified On
U011C_ClientOnboardingRequest_0000001	00001	6/3/2021, 11:15 PM		Working	cp4badmin	6/3/2021, 11:15 PM

17. Click on the **Title** of the case to open the case details.

The customized UI should now open.

Pocus Corp									
Overview P	roperties Documents Activities History								
Stages Document F 	eview O Scoreboarding	Comments Add comment 🗊							
Summary Created by Created on Last modified by Last modified on Status	cp4badmin Jun 3, 2021, 11:51 PM cp4badmin Jun 3, 2021, 11:51 PM Good								

18. Click on the **Properties** tab.

	Properties	Documents	Activities	History		
					6	Save
Client Name						
Legacy Co	onsulting					
Industry						
Healthca	re					
Services	Requested					
Mental	Health Care					Ū
0						
Approval Stat	us					
Under Re	eview					~
All Docu Annual Reven	uments Received					
All Docu Annual Reven 4,500,00	uments Received ue 10					
All Docu Annual Reven 4,500,00 Company Age	uments Received ue 10					
All Docu Annual Reven 4,500,00 Company Age 14	uments Received ue 10					
All Docu Annual Reven 4,500,00 Company Age 14 Number of Em	uments Received ue 10 					

The properties from the script must now be visible in the UI.

Note: You might see the properties in a different order based on your optional customization.

19. Click on the **Activities** tab.

This tab shows that there are no activities. We will add some activities in the next exercise. Keep the Case Client open for future test runs.

20. Click on the **Close** button in the upper-right corner to close the case details page.

4 Exercise: Adding activities to the Client Onboarding Request Case Type

4.1 Introduction

In this exercise, you will learn how to create and implement <u>activities</u> in a case type. You will do that by creating some of the activities that are required for the Client Onboarding Request case type in the Case Builder. Then, using the Process Designer, you will implement the details of these activities.

We will create and implement 3 activities as a part of this exercise:

- Initialize Request: This activity will verify if there are documents to be received from the client. If there are, it will end the activity and wait for client documents. If all client documents are received, it will complete the Document Review stage which in turn will automatically start the Scoreboarding stage.
- 2. **Review Client Documents**: This activity will be started when a client document is filed to the case. The activity will contain a human service to manually review the client document that will be completed by the **Client Rep**.
- 3. **Scoreboarding**: This activity will be started once the **Scoreboarding** stage is started. It will call out to an artificial intelligence backed Decision service to get a risk assessment. If the confidence of this decision service is low, a human service to manually review the client onboarding request will be started that will be completed by the **Account Manager**. The Decision service is pre-built. If you want to learn how to call out to a Decision service from Workflow, look at the **Consume & Publish Automation Services in Workflow** lab.

4.2 Exercise Instructions

4.2.1 Create new activities

1. Open the UsrNNN Client Onboarding Workflow automation project in Case Builder.

To do this you can go to **IBM Business Automation Studio**, click on **Business automations** in the hamburger menu in the upper-left corner, select the **Workflow** capability and click **Open** for your Workflow automation project.

2. Click on the **Case Types** tab.

	Overview	Properties	Roles	In-baskets	Documents	Business Objects	Pages	Case Types
3.	Open the Cli	ent Onbo	arding Re	equest case t	type.			
4.	Case Type	Properties	Views	Case Folders	Stages	Rules Activities		
5.	Click on Add	l Activity	\rightarrow Activit	y with New I	Process.			
	View by: Pri	ority ~	Manage Set	s	tivity ^			
			Activity with N	New Process				
			To-do Task		_			

This brings up a dialog that allows you to create an activity with an implementation in the Process Designer. In scenarios where a user may already have an existing implementation in another Workflow project that they want to reuse, they can select Activity with Existing Process.

- 6. In the Name field, enter Initialize Request.
- 7. Provide an optional description.

Add an activity

 General
 Preconditions
 Activity Properties
 Design Comment

 * Name:
 Initialize Request
 *

 * Unique Identifier
 U011C_
 InitializeRequest

 Description:
 Check if all client documents are received.

 This activity starts:

 Automatically
 Manually
 Discretionally

- 8. For the This activity is field, select Required.
- 9. Click on OK.



You should now see an activity added to a section of required activities.



Next, we will add the Review Client Documents activity.

10. Click on Add Activity → Activity with New Process.

11. In the Name field, enter Review Client Documents.

12. Provide an optional description.



- 13. Click on the **Preconditions** tab.
- 14. In the dropdown, select the **A document is filed in the case** option.

This ensures that the activity is started when a document is filed in the case.

15. Check the Activity is repeatable checkbox.

This ensures that a new instance of the activity is started each time a client document is filed to the case.

- 16. Click on Add Condition +.
- 17. In the **Property** field, select **All Documents Received**.
- 18. In the Value field, select False.

This ensures that the activity is not started after all client documents are received even if a new document is accidentally filed to the case. You can see here that a case activity with a precondition on a document class can also have a precondition on a property value at the same time.

General Preconditions	Activity Properties	Design Comme	nt		
What preconditions must be met	for this activity to start?				
A document is filed in the case	~	 Activity is r 	epeatable		
 Any document class 					
Document Classes:					
Client Document					
Utility Bill					
The above precondition and the f	ollowing conditions:			_	
Match: All 🗸			Delete All Conditions	,	Add Condition +
Property	Operator	Value			
All Documents Received	∽ is equal	~	False	~	
Property All Documents Received	Operator ~ is equal	Value	False	~	

- 19. Click on **OK**. This adds the activity to the optional activities section as it won't be required in all cases.
- 20. Click on Save. 🔗
- Next, we will add the Scoreboarding activity.
- 21. Click on Add Activity → Activity with New Process.

- 22. In the Name field, enter Scoreboarding.
- 23. Provide an optional description.
- 24. In the This activity is field, select Required.

General	Preconditions	Activity Properties	Design Comment
* Name: Scoreboard	ding		
* Unique Ide	ntifier		
00110_ 50	coreboarding		
Description:			
Perform ris	k assessment		
This activity s	starts:		
Automation	cally 🔿 Manua	lly O Discretionally	
This activity i	s:		
Hidden	_		
✓ Required	t		

- 25. Click on the **Preconditions** tab.
- 26. Select **A stage has started** as the precondition.
- 27. In the Select a stage field, select Scoreboarding.

General	Preconditions	Activity P	operties	Design Comment
What precon	ditions must be me	t for this acti	vity to start	?
A stage has started		~	□ A	Activity is repeatable
Select a stag	e:			
Scoreboarding		~		

Note: You can create multiple optional/required activities that start in parallel when a certain stage has started. This is one of the benefits of using the case features as it allows you to create unstructured activities and define their lifecycles using stages.

28. Click on **OK**.

You should now have 3 activities in your activities tab as follows:

nequieu activities	
Initialize Request Check if all client documents are received. Precondition: Case Start Set: <none></none>	Scoreboarding Perform risk assessment Precondition: Stage started: Scoreboarding Set: <none></none>
Optional activities	

- 29. Click on Save. 📀
- 30. Click on the **Deploy** button in the upper-right corner to re-deploy the solution.



- 31. In the confirmation dialog, click on **Deploy**.
- 32. Verify that two green checkmarks show once the solution reloads.
 - ✓
 ✓
 ✓
 ✓
 ✓
 ✓
 ✓
 ✓
 ✓

Now, we will implement the process for each activity.

4.2.2 Implement the Initialize Request activity

As mentioned in the exercise introduction, the **Initialize Request** activity will check if all client documents are received. If they are, it will complete the current stage – **Document Review**.

- 1. Click on the **Case Types** tab.
- 2. Open the Client Onboarding Request.
- 3. Click on Activities.
- 4. Hover over Initialize Request and click on the Open IBM Process Designer icon.



This opens the IBM Process Designer with the Initialize Request Process.

•4	💐 Initialize Request 🗸 🛞							
œ	c	Overview	Definition	Variables	Folders	Views	Tracking	
%								
Ĩ					12			
ŝ	Team	Start			► Inline Ta	Usersk		End
ŝ								
Ğ								
00								

The Process contains two lanes **Team** and **System**. Team lanes can be assigned to specific roles and all activities (human services) in that lane will be assigned to that role. Activities (non-human services) in the system lane are performed by the system.

As described in the exercise introduction, the process needs to verify if all client documents are received. If the documents are received, it will complete the current stage - **Document Review**.

If not, it will end the process without completing the current stage and the case will wait for client documents to be uploaded. To do this, we will create a reusable service flow that can be used in other processes.

5. In the diagram, drag and move your mouse to cover the area of all nodes.



6. Drag the nodes from the **Team** lane to the **System** lane.

We do this because this activity contains no human services and is a straight through process to be performed by the system.



7. Right click anywhere on the Team lane and select Delete.



8. Click on **Yes** in the confirm deletion dialog.

Your diagram should now look as follows:



- 9. Click on the Inline User Task node.
- 10. In the properties pane on the bottom, in the **General** tab, select **System Task** as the activity type.
- 11. In the Name field, enter Handle Doc Review Stage.
- 12. Click on the **New** button under **Implementation**.

We will create a service flow here that adds a comment to the case and completes the current stage. It will only do this if all documents are received.

General	✓ Activity
Data Mapping	Name: Handle Doc Review Stage
Pre & Post	Type: System Task v
Tracking Conditions	Delete task on completion:
Documentation	✓ Implementation
	Implementation: <none> Select New</none>

- 13. In the Name field, enter Handle Document Review Stage.
- 14. Click on Finish.

New Service Flow A service flow lets you build, test, and run a set of service	es. Learn More		
Name: Handle Document Review Stage			
Use as a team service:			
		Finish	Cancel
his opens the service flow editor	with a def	ault diagran	ו:
O			
Start			

- 15. Click on the **Variables** tab at the top.
- 16. Click on the + button next to **Input**.
- 17. In the Name field, enter allDocumentsReceived.

End

18. In the Variable type field, click on Select and select Boolean.

✓ Variables	۹ Type to filter	✓ Details	
🔻 电 Input	(+)	Name:	allDocumentsReceived
 allDocumentsReceived (Boolean) 		Documentation:	B I <u>U</u> ≡ ≡ ≡ ≡ ≡ ≡ ∈ ∉ ∉
🧼 Output	(+) (+)		
Private	\oplus \downarrow		
Exposed Process Variables	\oplus		
Localization Resources	\oplus		
		le liet:	
		15 1151.	
		Variable type:	Boolean System Data Select New
Curitale least to the Di agrams to	a at the ten		

19. Switch back to the **Diagram** tab at the top.



20. In the palette on the right-hand side, click on the arrow for Activity.



21. Drag and drop the Script Task onto the line connecting the Start and End nodes.



22. Enter the following script in the **Script** tab at the bottom:



The comments in the code explain each line. Focus particularly on the 'tw.system.currentProcessInstance.parentCase' part as it provides a way to access Case functions from the Process Designer including actions like disabling a Case stage.

General	✓ Script				
Implementation	© Script ⊘ Scriptlet				
Script 1 if(tw.local.allDocumentsReceived == true) { 2 // add a comment to the case					
Pre & Post	3 // The "true" input specifies that this action must be performed as an administrator 4 tw.system.currentProcessInstance.parentCase.addCommentToCase("All client documents have been received", true); 5				
	<pre>6 // complete current stage as the administrator 7 tw.system.currentProcessInstance.parentCase.completeCurrentStage(true); 8}</pre>				

- 23. Switch to the **General** tab.
- 24. In the Name field, enter Handle Doc Review Stage.
- 25. In the top-left corner, close the Handle Document Review Stage service flow editor.

Business automations /		
Usr011 Client Onboarding		
⊯ Handle Document Review Stage 🛛 🗸 🛞		

26. In the properties pane of the **Handle Doc Review Stage** system task, click on the **Data Mapping** tab.

In this tab, we can see the input variable defined in the service flow implementation.

27. Click on the variable picker icon for the **allDocumentsReceived** variable.

~	Input Mapping	÷	→
۵		AllDocumentsReceived (Boolean)	

28. Expand **caseProperties** → **AllDcoumentsReceived** and select **value**.



The Input Mapping section should now look as follows:

~	Input Mapping	←
	tw.local.caseProperties.AllDocumentsReceived.value	& ⇔ allDocumentsReceived (Boolean)

29. Click on Finish editing icon in the top-right corner.



30. Close the Process Designer window.

4.2.3 Implement the Review Client Documents activity

As mentioned in the exercise introduction, the **Review Client Documents** activity will be triggered when a new client document is filed to the case. The **Client Rep** will then be able to review the document.

- 1. Go back to the list of activities in the Case Builder.
- 2. Hover over **Review Client Documents** and click on the Open Process Designer icon.

	<i>6</i> •
Review any incoming client documents	2
Precondition: Documents: Any document Property Set: <none></none>	Ē

As mentioned in the exercise introduction, in this exercise we will add a human service to manually review the client document and this human service will be completed by the client rep.

- 3. Click on the empty space in the **Team** lane.
- 4. In the properties pane on the bottom, enter **Client Rep** as the name of the lane.
- 5. For the **Default lane team** field, click on **Select** and select the **Client Rep** team.

	Gener	al 🗸	Commor	ı			✓ Behavior			
		Na Co	me: lor:	Client Rep	••••	!	Default lane team: Is system lane:	A Client Rep	Select	New
Yo	our diagra	am shoi	uld now lo	ok as foll	ows:					
	Overview	Definition	Variables	Folders	Views	Tracking				
Cliant Ban	Start			Inline	User sk		► (Ind		

6. Click on the Inline User Task node.

Note: The inline user task node allows Process developers to quickly create prototype UIs. In our case, we will create a customized UI for the client rep to review the client documents.

- 7. In the properties pane on the bottom, in the **General** tab, select **User Task** as the activity type.
- 8. In the name field, enter **Review Client Documents**.
- 9. Click on **New** for the **Implementation** field.

General	✓ Activity
Data Mapping	Name: Review Client Documents
Pre & Post	Type: User Task ~
Tracking	✓ Implementation
Conditions Documentation	Implementation: <none> Select New</none>

This brings up the wizard to create a new Client-side human service that we can customize the UI for.

10. Click on the **Next** button.

New The cli tasks, optimiz	v Client-Side Human Service ent-side human service enables you to build, test, and run interactive dashboards, or user interfaces for process instances, and is zed to run in a web browser.	
Name:	Review Client Documents	
Inter	nded for use on multiple devices	

11. Uncheck the **activityProperties** checkbox as we have only defined case properties.

Next Finish Cancel

Variables	
✓ P Content Objects	Use
 caseProperties (Client Onboarding Request) 	S
 activityProperties (Review Client Documents) 	

12. Click on **Finish**.

This opens the Client-side human service editor.

2000 Marca 100 Marc	2		
	Coach	ОК	→ O
Start			End

13. Click on the **Coach** tab at the top.

Overview	Diagram	Variables	Coach:	Coach 🗸

In this UI, we want to add the client name, a view that shows the list of documents filed to the case and the checkbox that lets the user select if all client documents are received.

- 14. In the right-hand side palette, select **Variable** from the dropdown.
- 15. Drag and drop the **ClientName** variable onto the editor where it says **Drop content here**.

Overview	Diagram	Variables	Coach: Coach 🗸				~
					Drag a component	to your page	_
		Drop	content here		Variable	~	
ОК						(Client Onboarding R Idustry) mployees (Number o ayment (Defaulted Pæ te (Company Age) (Client Name) mue (Annual Revenud quested (Services Rei atus (Approval Status ntsReceived (All Docu	equest) f Emplo ayment) e) questec ;) uments

16. Similarly, drag and drop the **AllDocumentsReceived** variable below the client name field.

Your editor should now look as follows:

Overview	Diagram	Variables	Coach: Coach 🗸	
tw.local.case	Properties.Client	Name.displayNan	ne	
tw.loca	l.casePropertie	s.AllDocumen	tsReceived.displayName	
ок				

- 17. In the right-hand side palette, select **All views** and search for the **Case Folder** view.
- 18. Drag and drop the **Case Folder** view below the **All documents received** field in the editor.

	Drag a co	mponent to your	page
tw.local.caseProperties.ClientName.displayName	All views		~
tw.local.caseProperties.AllDocumentsReceived.displayName	Q case	folder	×
*			
ОК	Case Folder	case Folder ree	

Your editor should now look as follows:

Overview	Diagram	Variables	Coach: Coach 🗸	\oslash
tw local case	Properties Client	Name displayNar	ne	
tw.tocal.case	roperties.client	παποιωσριαγιναι	ne	
tw.loca	l caseProperti			
	lieuser reperti	es.AllDocumen	tsReceived.displayNar	ne
		es.AllDocumen	itsReceived.displayNar	ne
Case Fold	er	es.AllDocumen	itsReceived.displayNar	ne
Case Fold	er	es.AllDocumen	tsReceived.displayNar	ne
Case Fold	er	es.AllDocumen	tsReceived.displayNar	ne

- 19. Select on the **OK** button in the editor.
- 20. Click on the **Edit** icon.



- 21. Change the name of the button to **Complete Review**.
- 22. Select the **Complete Review** button.
- 23. Click on the **Select color** icon.



24. Select the **dark blue** color.

Your button should now look as follows:



- 25. Optionally, add the **Header** view at the top of this UI like we did before for the Case Details page.
- 26. Close the **Review Client Documents** editor using the **x** button in the top-left corner.

Usr011 Client Onboarding

```
🔐 Review Client Documents 🤜 🛞
```

This should bring you back to the **Review Client Documents** Process. We now need to add a system task here to complete the current stage if all client documents are received. We can reuse the service flow created before to do that.

27. Click on the dropdown for the **Activity** node in the right-hand side palette.



28. Drag and drop the **System Task** activity onto the line connecting **Review Client Documents** and the **End** node.

(Overview	Definition	Variables	Folders	Views	Tracking		
Client Rep	Start			Review Docur	Client		End	

Your diagram should now look as follows:



29. In the General tab, enter the name Handle Doc Review Stage.

30. Under the Implementation section, click on Select and select Handle Document Review Stage.

✓ Activity	
Name:	Handle Doc Review Stage
Туре:	System Task 🗸
Delete task on completion:	
 ✓ Implementation 	
Implementation: #	Document Review Stage Select New
Edit the data mapping.	

- 31. Click on Edit the data mapping.
- 32. For the allDocumentsReceived variable select the caseProperties \rightarrow AllDocumentsReceived \rightarrow value variable.

~	Input Mapping	\$
	tw.local.caseProperties.AllDocumentsReceived.value	lillocumentsReceived (Boolean)

33. Click on the **Finish editing** button in the upper-right corner.

			귚	lacksquare
Las	t saved s	econds	s ago b	y you.
Q	0 ~	¢	ightarrow	<u>@</u>

34. Close the Process Designer window.

4.2.4 Implement the Scoreboarding activity

Next, we will implement the **Scoreboarding** activity. As described in the introduction of this exercise, the scoreboarding activity will call an intelligent decision service to perform risk assessment. If the confidence of the AI model behind the decision service is low, we will start a human service where the account manager can manually review the client onboarding request.

1. Back in the Case Builder, hover over the **Scoreboarding** activity and click on the **Open IBM Process Designer** icon.

	Scoreboarding	z
	Perform risk assessment	Ø
÷	Precondition: Stage started: Scoreboarding	₽ Ū
	Set: <none></none>	\square

- 2. Click on the empty space in the Team lane.
- 3. In the property pane at the bottom, update the Team lane name and default lane team to **Account Manager**.

General	✓ Comm	non	✓ Behavior	
	Name:	Account Manager	Default lane team:	Account Manager Select New
	Color:		Is system lane:	

The case roles and process teams are automatically synchronized between the Case Builder and Process Designer which allows for easy integration between Case and Process within Workflow.

Note: If you want to assign a user task in a lane directly to a specific user, you can do that using the assignment configuration property of the activity. This is how the client onboarding end-to-end scenario assigns a task directly to the user performing the activities instead of assigning it to the whole team.

First, we will need to call the intelligent decision service that performs the scoreboarding.

- 4. Select the **Inline User Task** node.
- 5. In the properties pane, in the **General** tab, change the activity type to **System Task** and update its name to **Perform Scoreboarding**.

✓ Activity		
Name:	Perform Scoreboarding	
Type:	System Task	~
Delete task on completion:		· · · ·

6. Under **Implementation**, click on the **Select** button and select the **Perform Scoreboarding** service flow.

If you want to learn how to consume a decision service in workflow, please look at the **Consume & Publish Automation Services in Workflow** lab.

7. Switch the Data Mapping tab.

The data mapping tab shows the inputs and outputs of the selected service implementation.

8. Click on the variable picker for the industry input variable.

~	Input Mapping	÷
۵		long the second
۵		lanualRevenue (Integer)
۵		& companyAge (Integer)
۵		🍂 수 <u>defaultedPayment (Boolean</u>)
۵		& ⇔ <u>numberOfEmployees (Integ</u>

9. Select the **caseProperties** \rightarrow **Industry** \rightarrow **value** variable.



10. Similarly, map all input variables to their matching case properties.

~	Input Mapping	⇔
	tw.local.caseProperties.Industry.value	& c⇒ industry (industryType)
	tw.local.caseProperties.AnnualRevenue.value	lannualRevenue (Integer)
	tw.local.caseProperties.CompanyAge.value	& companyAge (Integer)
	tw.local.caseProperties.DefaultedPayment.value	& colean) & defaultedPayment (Boolean)
	tw.local.caseProperties.NumberofEmployees.value	& construction and the second

11. For the Output Mapping section, click on the Auto-map icon.

✓ Output Mappin	g	ţ
confidence (Decimal)	⇔	æ,
<u>highRisk (Boolean</u>)	⇔	۵,
segment (String)	⇔	ê.,

This brings up the variable creation wizard.

Variable Name	Variable Type	Input	Output
confidence	Decimal		
highRisk	Boolean		
segment	String		

In this wizard you can select which of the auto-created variables will be an input and/or output for the **Scoreboarding** process. In our scenario, we only need to use these variables within the process, which is why we leave the input/output checkboxes unchecked.

12. Click on Finish.

The output mapping section should now have variable values automatically filled in.

✓ Output Mappin	ıg		5
confidence (Decimal)	⇔	tw.local.confidence	
<u>highRisk (Boolean</u>)	⇔	tw.local.highRisk	۵,
segment (String)	⇔	tw.local.segment	۵,

This completes the configuration for the Perform Scoreboarding activity. Next, we need to move it to the **System** lane as it is a system activity.

13. Drag and drop the **Perform Scoreboarding** activity from the **Account Manager** lane to the left side of the **System** lane.



Your diagram should now look as follows:

Next, we need to add a gateway to decide whether the next activity should be a human service or not.

14. Drag and drop a gateway to the right of the Perform Scoreboarding system activity.



15. In the properties tab at the bottom, in the **General** tab, rename the gateway to **Confidence**.

16. Click on the dropdown for the **Activity** node in the right-hand side palette.





17. Drag and drop a **User Task** to the left of the **End** node in the **Account Manager** lane.

- 18. Rename the User Task to Review Client Onboarding Request.
- 19. Move the **End** node to the System lane by dragging it there.
- 20. Drag a **Server Script** activity to the left of the **End** node in the **System** lane.



21. Rename the Script Task to Complete Current Stage.

22. In the **Script** tab, enter the following script:

```
// Complete the Scoreboarding stage
tw.system.currentProcessInstance.parentCase.completeCurrentStage(true);
```

23. Connect the **Confidence** gateway to the **Complete Current Stage** script task.

24. Drag and drop another Script task onto the line connecting the **Confidence** gateway and **Complete Current Stage** script task.



25. Rename the script task to Handle Request and enter the following script:

```
// For high-confidence decisions, automatically approve or reject
// the request based on the risk
if(tw.local.highRisk) {
   tw.local.caseProperties.ApprovalStatus.value = "Rejected";
} else {
   tw.local.caseProperties.ApprovalStatus.value = "Approved";
}
```

Your diagram should now look similar to the following:

- 26. Click on the **Confidence** gateway.
- 27. In the properties pane on the bottom, in the **General** tab, under the **Decisions** section, select the **confidence** variable using the variable picker.
- 28. In the **operation** field, select the **>=** operator.
- 29. In the **value** field, enter **75**.

✓ Decisions		
To Handle Request:	tw.local.confidence	🍂 🤑 🏠
Default flow:	To Review Client Onboarding Request	~

What this means is that after the decision service is invoked, if the confidence is greater than or equal to 75%, the scoreboarding stage will automatically complete without human intervention and the client onboarding request will be approved or denied based on the risk level.

Next, we will add the UI for the Review Client Onboarding Request human service.

- 30. Click on the **Review Client Onboarding Request** user task.
- 31. In the properties pane, in the General tab, under the Implementation section, click on New.
- 32. In the new Client-side human service wizard, click on Next.
- 33. In the variable selector, **uncheck activityProperties**.
- 34. Also uncheck the output for all local variables.

We require the local variables to be inputs to the human service as the UI will display their values. Output variables are only required if the values are updated and need to be fed back to the Process.

- 35. Click on Finish.
- 36. Click on Coach.

A default UI with the local variables is already created.

- 37. In the right-hand side palette, select the Variable option.
- 38. Drag and drop the **caseProperties** variable below the **segment** field in the editor.

39. Optionally, rearrange the views in the editor by dragging and dropping them in the order you want.

40. Optionally, add the **Header** view to the top of the editor.

41. Rename the **OK** button at the bottom to **Complete Review** and change its color to **dark blue**.

Your UI should look like the screenshot below (it may vary slightly based on the optional steps you completed):

Pocus Corp	Account Mgr
tw.local.caseProperties.ClientName.displayName	
Segment	
High Risk Confidence	
tw.local.caseProperties.Industry.displayName	
Services Requested Services Requested tw local caseProperties AppualRevenue displayName	
tw.local.caseProperties.CompanyAge.displayName	
tw.local.caseProperties.NumberofEmployees.displayName	
tw.local.caseProperties.DefaultedPayment.displayName tw.local.caseProperties.AllDocumentsReceived.displayName tw.local.caseProperties.ApprovalStatus.displayName	~
Complete Review	

42. Click the **Finish editing** button.

4.2.5 Test the final solution

We are now done with building the solution. Next, we will test the case and the activities created by starting the case using sample values.

1. In the library pane on the left, select **Processes** \rightarrow **Start Client Onboarding Request**.

		•						
₂ Review Client Onboarding Reque		Type 💌	Processes	8=				
	Usr011 Client On	boarding	Process					
2	Processes		📧 Initial 🗟	ize Request w Client Documents				
Ē	User interface		Score Start	boarding Client Onboarding Request				

- 2. Click on the **Run** button in the upper-right corner to start a new case using the sample values we created previously.
- 3. Go back to the Case Client window that was open earlier. If you have closed it, you can access it again by clicking the **Test** button in the Case Builder for your project. Keep the Process Designer open for future test runs.
- 4. In the Case Client, click on the **Search** button to search for cases added.
- 5. Verify that the Stage (last column) in the search results is Document Review.
- 6. Click on the Title for the latest case to open the case details UI.

Cases Work								Usr011 Client Onboard
Add Case 🗸								
Search:		Title	Added On	\uparrow	Case State	Modified By	Modified On	Case Stage
Added On	~	U011C_ClientOnboardingRequest_000000100003	6/4/2021, 3:14 AM		Working	cp4badmin	6/4/2021, 3:14 AM	Document Review
6/4/2021	Ë							
Search								

7. In the Case Details UI, click on the **Activities** tab.

You will see the Initialize Request task was Completed and the other two tasks are Waiting.

Overview	Properties	Documents	Activities	History					
						Ç	All	~	
Name			Status			Туре			
Scoreboardi	ng		🕚 Wait	ting		Required			
Initialize Rec	quest		√ Com	pleted on Jun 4, 2021, 3:14 A	Μ	Required			
Review Client Documents			🕚 Wait	() Waiting			Optional		
Per page:	5 Sho	wing 1 to 3 of 3 e	ntries		1 v of	1 page	•	•	

This means that the case is waiting for client documents to be uploaded to the case folder. Typically, this can happen in several ways. In the Client Onboarding end-to-end scenario, we upload the document to the case folder after it has been captured by IBM Automation Document Processing (ADP). For this lab, we will add a document to the case folder manually.

- 8. Click on the **Documents** tab.
- 9. Click on the + button to add a document and select Add Document.

Overview	Properties	Documents	Activities	History			
					0	c	Q
			Add Folder			-	
			Add D	ocument			

- 10. In the Add File dialog, select Client Document as the Document Type.
- 11. Click on **Select** and pick the **Legacy Consulting Banking Information.pdf** file downloaded as a part of the lab setup instructions.
- 12. Click on Upload.

Add File		
Select	Legacy Consulting - Banking Information.pdf	
Document Type		
Client Documen	t	
Document Title		
Client Name		
Reference ID		
Name		
Legacy Consulting	- Banking Information.pdf	
Keep dialog oper	ı	🛆 Upl

14. Click on the **Refresh** icon.

Overview	Properties	Documents	Activities	History			
					Ç	All	~
Name		Status			Ту	pe	

You will notice that the **Review Client Documents** activity has now started as its precondition was that a client document be filed to the case.

				Ç	All	~
Name		Status		Туре		
Scoreboarding		() Waiting		Require	ed	
Review Client Docume	ents	▲ Started on Jun 4, 2021, 3:2	6 AM	Require	ed	
Initialize Request		\checkmark Completed on Jun 4, 2021,	3:14 AM	Required		
Per page: 5	Showing 1 to 3 of 3 er	tries	1 ~ of	1 page	•	•

Next, we will assume the role of a Client Rep to review the document added.

15. Click on the **UsrNNN Client Onboarding | Account Manager** dropdown in the upper-right corner and select the **Client Rep** role.

			?	8	:
	U	sr011 Client Onboard	ding Acco	unt Manage	r 🗸
-		Usr011 Client Onb	oarding		
		Account Manager			
		Client Rep			

16. Once the role is switched, click on the **Work** tab.

17. The **Client Rep** task list should now have a new task – **Step: Review Client Documents**.

Client I	Rep (1) My Work		
Filter	No filters applied Reset		
	Step Name	Time Created	Subject
	Stern Deview Client Decomposite	(11/2024 2:2/ 114	Review Client

18. Click on the task name to open it.

As the task is assigned to the **Client Rep** role, you will need to claim it as **usrNNN**.

19. Click on the **Claim** button.

Claim Task

Case Folder

Step: Review Client Documents Review Client Documents:408 Assignment: Client Rep Due: 6/4/2021, 4:26 AM

Close	Claim

The UI for the task should now open as follows:

Client Name					
Legacy Consulting					
All Documents Received					
Case Folder					
			+	Ç	Q
Legacy Consulting - Banking Information.pdf	usr001	2021/11/10 15:47			
Complete Review					

20. Click on the dropdown next to the document name and click on View to view the document.

This opens the document in a new tab.

- 21. Close the tab that contains the document.
- 22. Check the **All Documents Received** checkbox.

23. Click on **Complete Review** to complete the task.

Client Name		
Legacy Consulting		
✓ All Documents Received		
Case Folder		
		+ C Q
Legacy Consulting - Banking Information.pdf	usr001	2021/11/10 15:47
Complete Review		

- 24. Switch back to the **Cases** tab on top.
- 25. Click on **Search** to search for cases.
- 26. Verify that the Stage for the latest case is now set to Scoreboarding.
- 27. Click on the title of the case to open the case details.

The overview page should look as follows:

Overview	Properties	Documents	Activities	History		
					Commonte	Add comment
Stages					comments	
Ocument	Review		Scoreboal	rding	৪ cp4badmi	n
					All client do	cuments have bee
Summary					Jun 4, 2021, 3:	38 AM
Created by	cp4badm	in				
Created on	Jun 4, 20	21, 3:14 AM				
Last modified by	cp4badm	in				
Last modified on	Jun 4, 20	21, 3:38 AM				
Status	Good					

As you can see the comment that we added as a part of the JavaScript code has now been added to the case and the stage is set to **Scoreboarding**. The comment was made by the admin user as it's a part of the JavaScript API that uses an admin user.

Depending on the security configuration, anyone with access to a case can add comments to the Case using the out-of-the-box Case comments view included as a part of the default case details UI.

28. Click on the Activities tab.

The **Review Client Documents** activity should now be marked **Completed** and the **Scoreboarding** activity should be **Started**.

		C All	~
Name	Status	Туре	
Scoreboarding	▲ Started on Jun 4, 2021, 3:38 AM	Required	
Initialize Request	✓ Completed on Jun 4, 2021, 3:14 AM	Required	:
Review Client Documents	✓ Completed on Jun 4, 2021, 3:38 AM	Required	
Per page: 5 Showing 1 to 3 of 3 entries		1 ∨ of 1 page ◀ ▶	Þ

The Scoreboarding activity would have completed automatically if the confidence of the decision service was high. We will switch back to the **Account Manager** role next to review the client onboarding request manually.

- 29. Switch the role in the upper-left corner to **Account Manager**.
- 30. Click on the **Work** tab at the top.

There should be a new activity **Step: Review Client Onboarding Request** for the **Account Manager**.

Accoun	t Manager (1)	My Work			
Filter	No filters applie	d Reset			
	Step Name			Time Created	Subject
4	Step: Review (Client Onboar	ding Request	6/4/2021, 3:38 AM	Scoreboarding:409

- 31. Click on the title of the task, then claim it to open it.
- 32. The UI should show the risk assessment values:

Segment	
Segment 2	
✓ High Risk	
Confidence	
68	

The **confidence** here is **68** which is lower than our threshold of **75** which is why a manual review as required. The decision service also marked this request as high risk and classified the client as **Segment 2**.

33. For the Approval Status field, select Rejected.

34. Click on **Complete Review**.

- 35. Click on the **Cases** tab at the top.
- 36. Click on **Search** to search for cases.
- 37. The latest case should now have a **Case State** and **Case Stage** of **Complete**.

Title	Added On	\uparrow	Case State	Modified By	Modified On	Case Stage
U011C_ClientOnboardingRequest_000000100003	6/4/2021, 3:14 AM		Complete	cp4badmin	6/4/2021, 3:46 AM	Completed

38. Optionally, click on the title of the case to see the details of the completed case.

We have now tested the path of the client onboarding request where human intervention was required. We now need to test the path where the request is processed automatically i.e., all client documents have been received and the decision service returns a high confidence.

- 39. Go back to the Process Designer. If you have closed it, you can re-open it by selecting the Workflow project in IBM Business Automation Studio and using the 3-dot menu to open it again.
- 40. Click on the Start Case script task in the Start Client Onboarding Request Process.
- 41. Modify the **annual revenue** in line 14 to **50000000**.
- 42. Modify the **company age** in line 15 to **8**.
- 43. Modify the **defaulted payment** in line 16 to **false**.
- 44. Modify the number of employees in line 17 to 1200.
- 45. Modify the **industry** in line 20 to **Finance**.
- 46. Modify the services requested in line 22 to Corporate Credit Card.
- 47. Modify the **all documents received** in line 26 to **true**.

Note: The line numbers may be slightly different for you if the copy/paste of the script changed the formatting of the code.

Your script should look as follows:

48. Click on the **Run** button to start a case with the updated sample values.

As before, the changes will automatically be saved on clicking **Run**.

- 49. Go back to the Case Client.
- 50. In the **Cases** tab, click on **Search** to search for cases.

The latest case should be marked completed as no human intervention was required.

Title	Added On \uparrow	Case State	Modified By	Modified On	Case Stage
U011C_ClientOnboardingRequest_000000100003	6/4/2021, 3:14 AM	Complete	cp4badmin	6/4/2021, 3:46 AM	Completed
U011C_ClientOnboardingRequest_000000100004	6/4/2021, 4:01 AM	Complete	cp4badmin	6/4/2021, 4:01 AM	Completed

51. Click on the **title** of the latest case to open it.

The overview page should show the completed stages and the comments added automatically.

Overview P	roperties	Documents	Activities	History		
					- ·	
Stages					Comments	Add comment
Ocument F	Review		Scoreb	ooarding	 ৪ cp4badmi	in
					All client do	cuments have b
Summary					Jun 4, 2021, 4:	01 AM
Created by	cp4badm	nin				
Created on	Jun 4, 20	21, 4:01 AM				
Last modified by	cp4badm	in				
Last modified on	Jun 4, 20	21, 4:01 AM				
Status	Complete	ed				

52. Click on the **Properties** tab.

The Approval Status should have Approved selected.

Approval Status
Approved

53. Click on the **Activities** tab.

The **Initialize Request & Scoreboarding** activities should be marked **Completed** and the optional **Review Client Documents** activity is in **Waiting** state as a manual review was not required.

Overview	Properties	Documents	Activities	History			
					Ç	All	~
Name			State	us	Туре		
Initialize Re	quest		\checkmark 0	Completed on Jun 4, 2021, 4:01 AM	Required		
Scoreboard	ng		\checkmark (Completed on Jun 4, 2021, 4:01 AM	Required		
Review Clie	nt Documents		© V	Vaiting	Optional		
Per page:	5 Show	wing 1 to 3 of 3 e	ntries		1 v of 1 page	•	•

That concludes the testing of the solution built. In the client onboarding end-to-end scenario, a bot is called after a client is approved/rejected to update legacy systems. If you are interested to learn more about IBM Robotic Process Automation and how Workflow can call a bot, please look at the **IBM Robotic Process Automation** lab.

Congratulations on completing the Introduction to Business Automation Workflow lab!