

Lab 9. Creating a Business Process Flow

Author: Serge Luca aka "Doctor Flow"

Learning Objectives: Be able to create a Business Process Flow and a Model-driven app that will consume it.

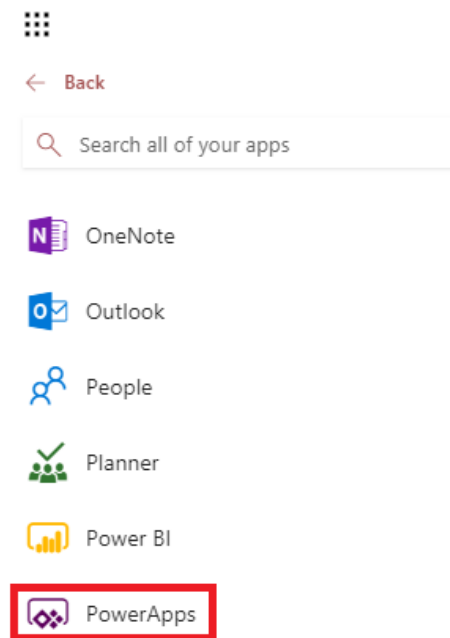
Scenario: You will create a Business Process Flow (BPF) that illustrates how to approve a loan. You will have to create business entities in CDS (Common Data service); these entities will be consumed by the BPF.

Prerequisites: During the lab the system will suggest you start a Premium trial subscription; you can accept it.

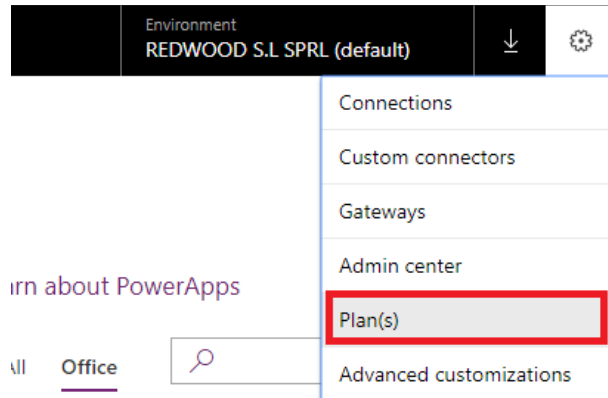
Duration : 25 minutes

Tasks:

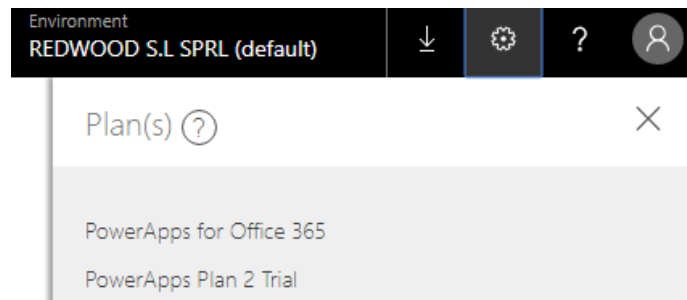
1. Go to the **PowerApps Studio**: <https://powerapps.microsoft.com> or by clicking on the **PowerApps app** in the **Office 365 App Launcher**:



2. If you are working on your own tenant, you first must have **PowerApps Plan 2** in order to be able to create **Model-driven apps**. To check your PowerApps plan, go to the following PowerApps menu:

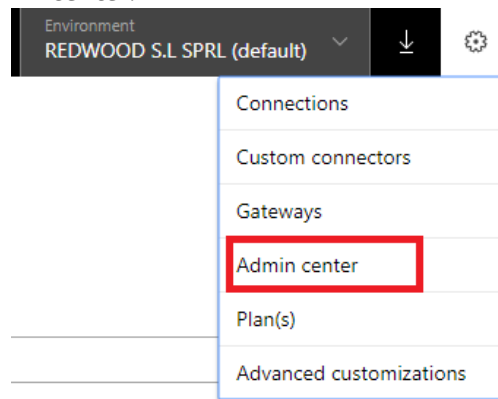


You should get **plan 2**:



If that is not the case, move to the next step.

3. You can have a free trial version of PowerApps Plan 2. Connect to the [web site](https://powerapps.microsoft.com/en-us/pricing/) <https://powerapps.microsoft.com/en-us/pricing/> to start your trial. When the trial is generated, go to the **PowerApps Admin center**:



4. Click **New environment**:



5. Fill in the required information:

New environment

Create new environments for app and flow development and to maintain separate databases. [Learn more](#)

Environment name

Workshop

Region (?)

Europe (default)

Can't be changed once your environment is created.

Environment type (?)

Trial

Cancel

Create environment

6. Click **Create environment**.
7. The next step (Creating a Database) should not be done if your PowerApps trial account is part of the tenant created by the trainer. You will use the shared database
When requested, click **Create Database**:

✓ You created an environment



Do you want to create a database?
(Recommended)

Your environment includes access to the Common Data Service. Create a database to start using it.

- Collect, store, and share data.
- Use data modeling
- Create custom forms
- Manage security and access to data

Skip

Create database

8. If the next screen you will provide more details on the **database settings**:

Create a database for this environment ?

Choose the currency and language your data should use.

Currency ?

EUR ▼

Language ?

English ▼

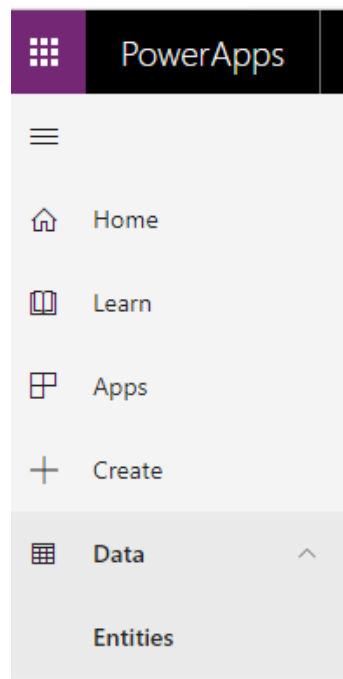
☒ Include sample apps and data

ⓘ By choosing **Create my database**, you agree Microsoft can use entity and field names that you create (but not content in the database tables) to help improve our common data model. These names may be stored in our diagnostic systems and copied across regions. [Learn more](#)

Cancel

Create database

9. Click again on **Create database**.
10. Go to the list of environments and click on the newly created environment, and you will see that the database is being built.
11. Go back to the PowerApps portal <https://powerapps.microsoft.com> and select the new [environment](#).
12. Select the Data Menu and click on Entities:



13.

14. Click new Entity and create a **new Entity** called **Loan**:

15. Click **Next**. Click **Add field** to add a new field in this loan entity:

New entity ×

Display name *

Plural display name *

Name * ⓘ

cr714_

Loan

☐ Enable attachments (including notes and files)

16. Create a field **Amount** (type **Currency**) like shown here:

Amount ×


Display name *

Name * ⓘ

cr327_

Amount

Data type * ⓘ

 Currency

✓

☐ Required

☒ Searchable

17. Create a field **Account** (type **Customer**):

Account ×

Display name *

Name * ⓘ

cr327_ Account

Data type * ⓘ

🔍 Customer ▾

☐ Required

☒ Searchable

18. Create another field **Approval Status** based on the **Option Set** datatype

Approval Status ×

Display name *

Name * ⓘ

cra46_ ApprovalStatus

Data type * ⓘ

☰ Option Set ▾

Option set *

▾

19. Click **Option set** and select **New option set**:

The screenshot shows a software interface with a sidebar on the left containing a list of categories. The first item, '+ New option set', is highlighted with a red rectangular box. A red arrow originates from this box and points diagonally down and to the right, ending at the 'Option set' dropdown field in a form titled 'Approval Status'.

Left Sidebar:

- + New option set
- A Yes or No boolean
- Activity Type
- Authentication Protocol
- Category
- Channel Activities
- Component State
- Component Type
- Confirm delete appointment series
- Connector Type
- Delivery Priority
- Dependency Type

Approval Status Form:

- Display name *:
- Name *: ⓘ
- Data type *: ⓘ
- Option set *:

Provide **3 options: Approved, Rejected, Pending**:

The screenshot shows the 'Approval Status' form with the 'Items (3)' section expanded. It lists three options: 'Approved', 'Rejected', and 'Pending'. Each option has a horizontal line below it and a three-dot menu icon to its right. Below the list is a link to 'Add new item'.

Approval Status ⏪

Display name *:

Name *:

[View more](#)

Items (3)

Approved	...
Rejected	...
Pending	...

[Add new item](#)

Approval Status ×

Display name *

Approval Status

Name * ⓘ

cr327_ ApprovalStatus

Data type * ⓘ

Option Set

Option set *

Approval Status

Edit option set

Default value

[No default value]

☐

Required

☒

Searchable

20. Click **Save** and make **Approved** the default value:

Approval Status ×

Display name *

Approval Status

Name * ⓘ

cra8b_ ApprovalStatus

Data type * ⓘ

Option Set

Option set *

Approval Status

Edit option set

Default value

Approved

☐ Required

☒ Searchable

21. Click Done.

22. Create a field **Signed** based on the **Two options** type (Yes, No), and Yes should be the default value:

Signed ×

Display name *

Signed

Name * ⓘ

cra8b_ Signed *

Data type * ⓘ

☰ Two Options ▾

Items

☒ Yes

☐ No

Default value

Yes ▾

☐ Required

☒ Searchable

23. Create the last field: **Send Money**:

Send Money ×

Display name *

Send Money

Name * ⓘ

cra8b_ SendMoney *

Data type * ⓘ

☰ Two Options ▾

Items

☒ Yes

☐ No

Default value

Yes ▾

☐ Required

☒ Searchable










24. Save your field.

25. Save the entity.

26. The following table summarizes your entity Loan fields and settings:

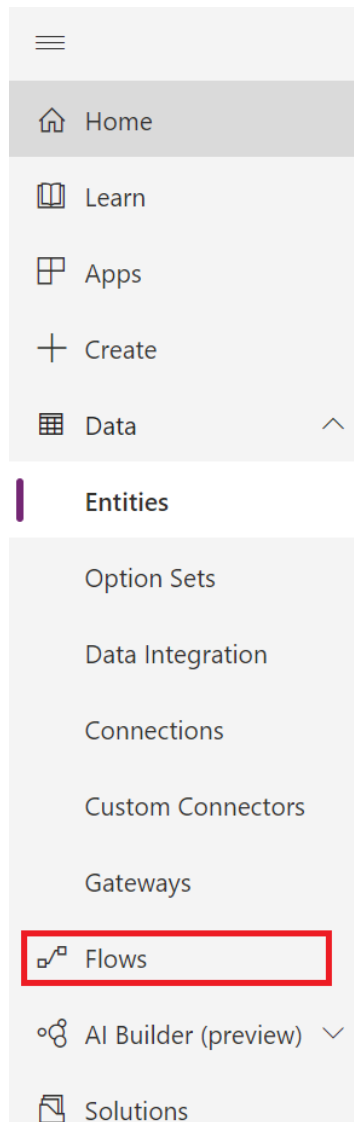
Entities > Loan

Fields Relationships Business rules Views Forms Dashboards Charts Keys Data

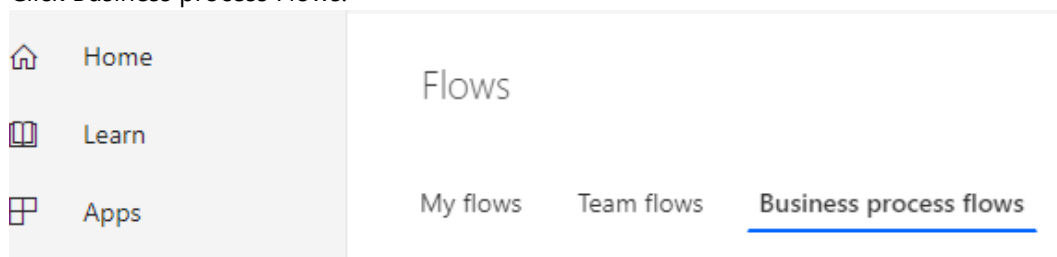
Display name ↑ ↓		Name ↓	Data type ↓	Type ↓	Required ↓	Searchable ↓
Account	...	cra8b_account	 Customer	Custom		✓
Amount	...	cra8b_amount	 Currency	Custom		✓
Amount (Base)	...	cra8b_amount_base	 Currency	Custom		✓
Approval Status	...	cra8b_approvalstatus	 Option ...	Custom		✓
Currency	...	transactioncurrencyid	 Lookup	Standard		✓
Exchange Rate	...	exchangerate	 Decimal...	Standard		✓
Name	...	cra8b_name	 Text	Custom	✓	✓
Send Money	...	cra8b_sendmoney	 Two Op...	Custom		✓
Signed	...	cra8b_signed	 Two Op...	Custom		✓

27. Let's get back to Flow to create a new Business Process Flow. Make sure you are in the good environment.

Click on Flows in the left panel.



28. Click Business process Flows:



29. Click New and fill in the BPF Display Name and Name; associate it with your loan entity in "Common Data Service entity field:

Create business process flow ×

Display name *

Loan BPF

Name *

new_LoanBPF

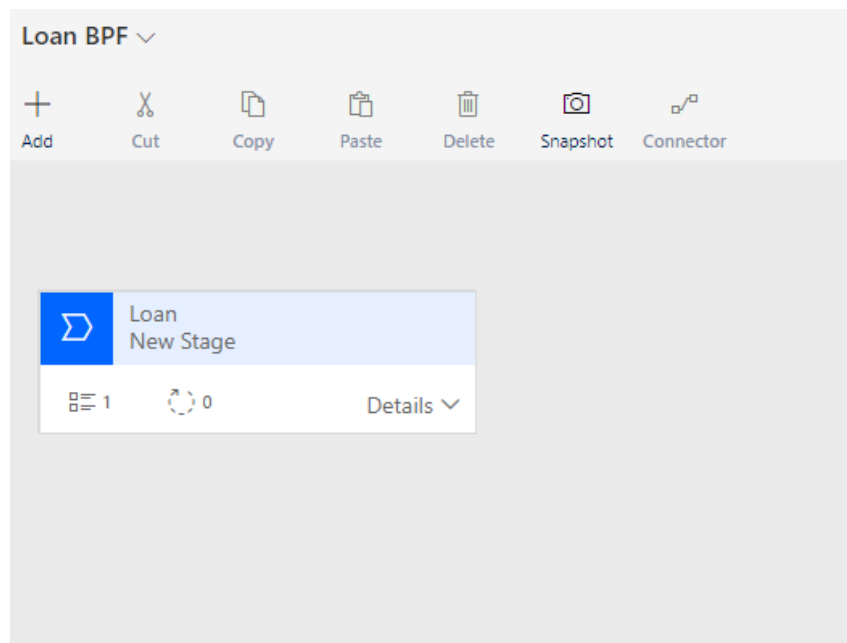


Common Data Service entity *

Loan



30. Click Next and the BPF designer will show-up:



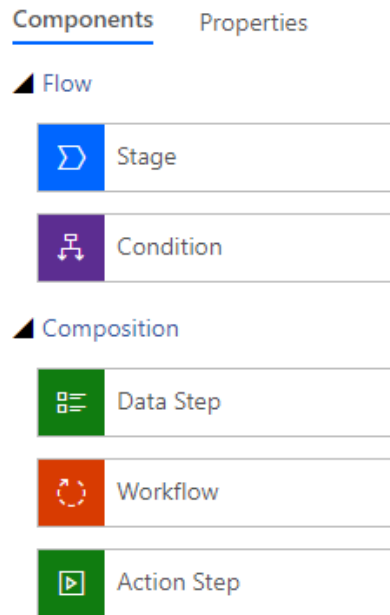
31. Click the **Loan New Stage** and the stage property page, change the display name as **Loan basic info** and click on **Apply**:

Components	Properties
Stage	
Display Name	<input type="text" value="Loan Basic Info"/>
Category	<input type="text"/>
Entity	<input type="text" value="Loan"/>

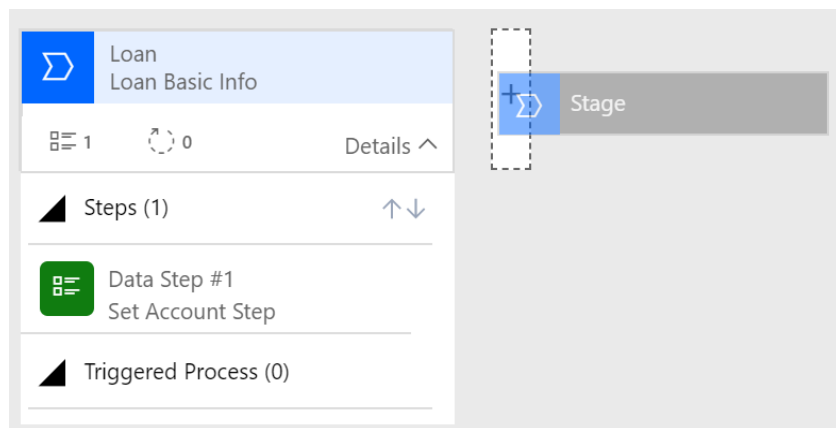
32. In the stage, click the **Data Step**, name the step Name **Set Account** Step, select the **Account** data field, make it **Required**, and click **Apply**.

Components	Properties
Data Step	
Step Name	<input type="text" value="Set Account Step"/>
Data Field	<input type="text" value="Account"/>
<input checked="" type="checkbox"/> Required	
Sequence	<input type="text" value="1"/>

33. Click **Components** to add a new Stage:



34. Click **Stage** and drag & drop a stage next to the current stage:



35. Name the Stage **Amount info** and like you did before, edit the data step of the new stage and link it to the Amount Data Field:

Components Properties

Data Step

Step Name

Set Amount

Data Field

Amount ▼

☒ Required

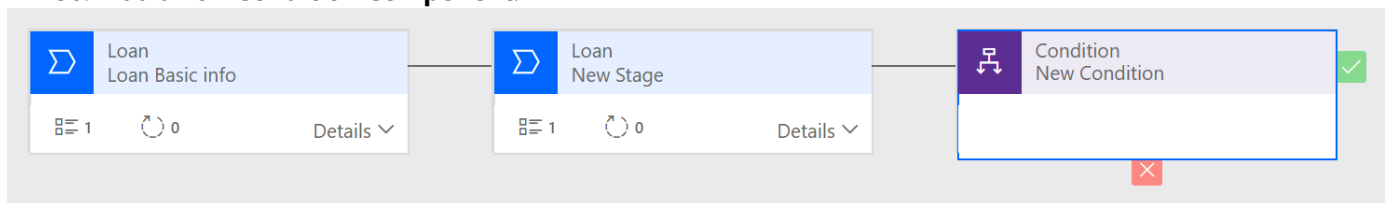
Sequence

1 ▼

36. Click Apply.

37. Name the stage Loan Amount info.

38. Add a new **Condition Component**:



39. and define the rule as follow:

Condition

Display Name

Check if expensive

Rules

[+ New](#)

Rule 1

Field
Amount

Operator
Is greater than

Type
Value

Value
500.00

Condition Expression (Text View)

(Amount Is greater than [500])

Apply

Discard

40. Add a **new stage** and name it **Approval**. Name the **data step Approval** and select the **field Approval Status**.

41. Add a **new Condition** and name it **Check if Approved** with the following rule:

Condition

Display Name

Check if Approved

Rules

[+ New](#)

Rule 1

Field

Approval Status

Operator

Equals

Type

Value

Value

☐ Pending

☒ Approved

☐ Rejected

Condition Expression (Text View)

(Approval Status Equals
[Approved])

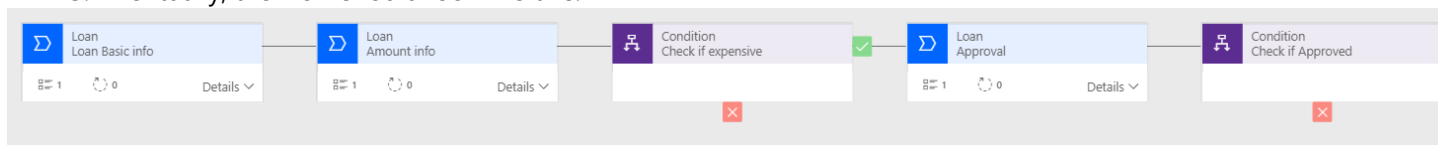


Apply

Discard

42. Add a **new stage**, name it **Send Money** and associate the data set with the field **Send Money**.

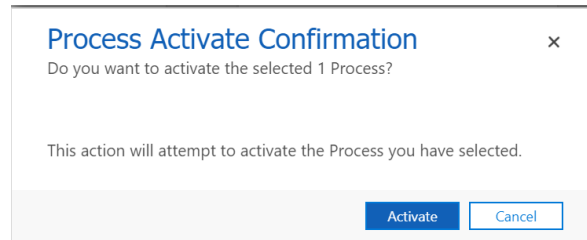
43. Eventually, the Flow should look like this:



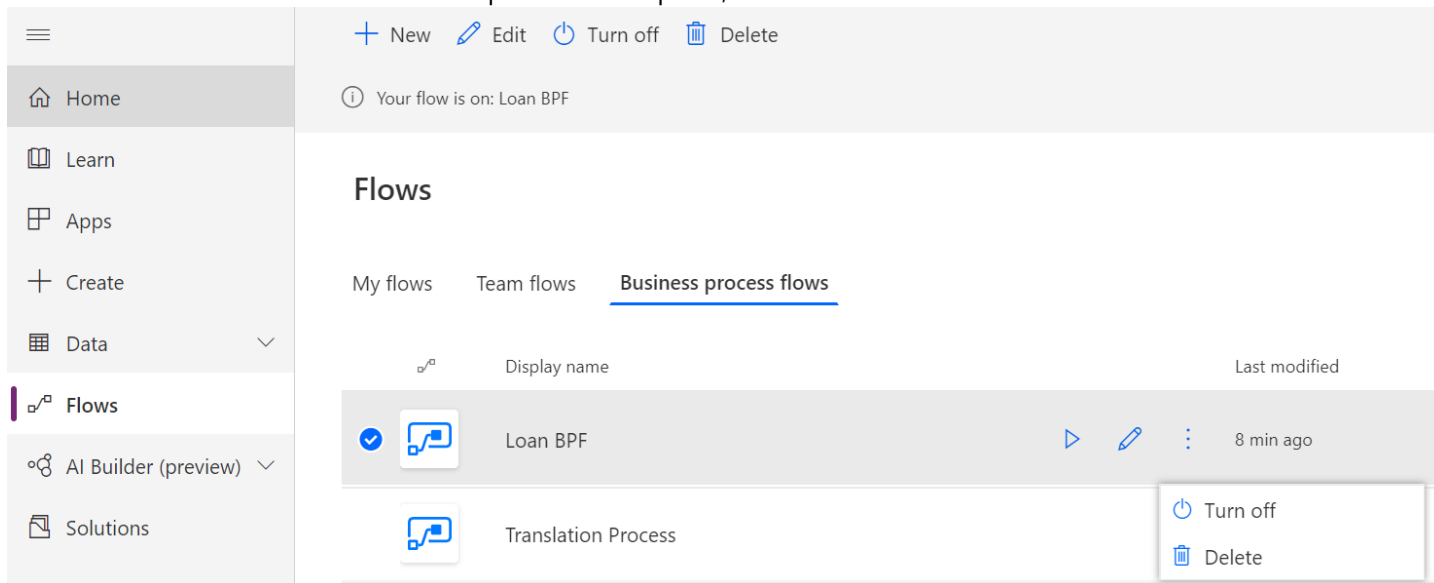
44. Click Save

45. Click Validate.

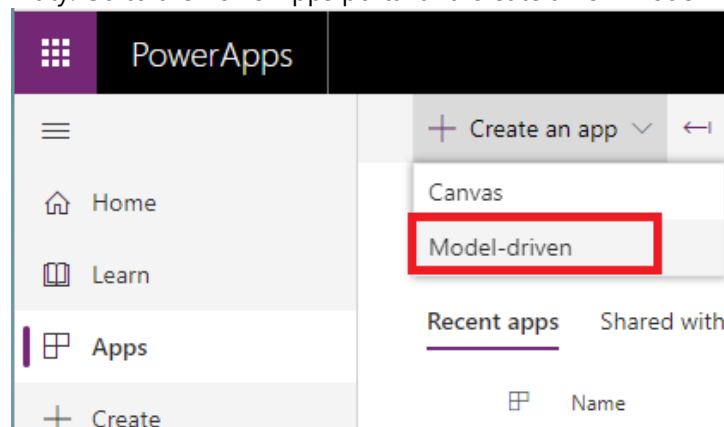
46. Click on Activate and confirm the activation:



47. Make sure the Business process Flow is activated; go to the Flows menu, and your LoanBPF Flow should be visible in the Business process Flows panel; turn it on if needed.



48. Now in order to use the Business Process Flow, we must create a **Model-Driven** Apps associated with our loan Entity. Go to the PowerApps portal and create a new Model-Driven Apps:




49. Name it Loan:

Name :*

Unique Name :*

Description:

Icon: ☒ Use Default Image

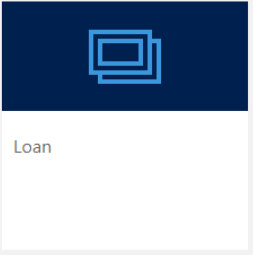
Unified Interface URL: 

☐ Use existing solution to create the App

☐ Choose a welcome page for the app

☐ Enable Mobile Offline

App Tile:



50. Click **Done**.



51. The App Designer will show-up:


PowerApps


App Designer
Loan

+ Add Edit Remove Search Canvas

Configuration Missing

Site Map  Site Map 

Dashboards  Dashboards | All

Business Process Flows  Business Proces... | All

Entity View (0)

52. Edit the **Site Map** component.

53. Rename the New Area to **Loan Area**.

54. Rename the New Group to **Loan Group**.

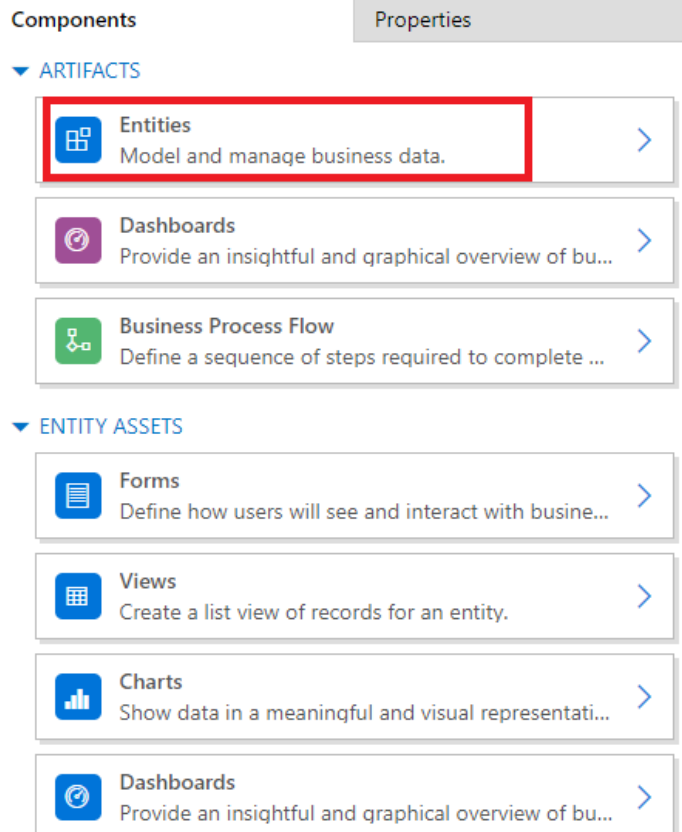
55. Rename the Sub Area to **Loan sub-area**.

56. Associate the Loan Subarea with the entity Loan:

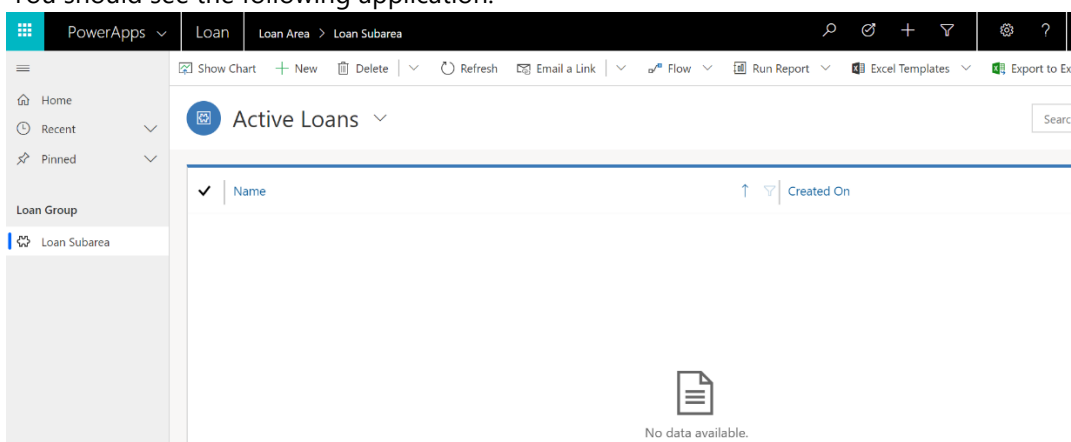
Components	Properties
SUB AREA	
▼ General	
Type	Entity ▼
Entity *	Loan ▼
URL	
Default Dashboard	Select a dashboard ▼
Title (1033)	Loan Subarea
Icon	Use Default Image ▼
ID *	New_SubArea
<input type="checkbox"/> Parameter Passing	

57. Click Save and Close, and you will be redirected back to the App Designer screen.

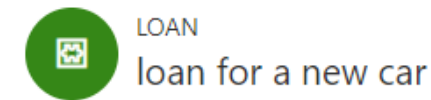
58. In the Designer, Click on **Entities**:



59. In the list of entities, **loan** has already been selected, but you still must select **Loan BPF**. This is important for the internal working of BPF. This extra step might be automated in the future.
60. Click Save.
61. Click Publish.
62. Click Play.
63. You should see the following application:



64. If you click **New**, a new loan will be created. Set the Name to **loan for a new car** and save it:



Loan BPF
Active for less than one mi...

General Related

Name * loan for a new car

Owner *  serge luca

65. Click on the stage Loan Basic Info; here, you need to define a **new account**:

A screenshot of a software interface. At the top, a grey header bar contains the text "Loan Basic Info (1 Min)". Below this, a white box with a thin border contains the text "Active for 1 minute" on the left and a close icon (X) on the right. In the center, there is a label "Set account step" followed by a red asterisk and a search input field containing the text "Look for Record" and a magnifying glass icon. At the bottom, there is a blue button with the text "Next Stage" and a right-pointing chevron.

66. A new popup will be visible, click on **Accounts** to create a new account.:

A screenshot of the same software interface as in the previous block, but with a popup menu open. The popup menu is positioned over the "Next Stage" button. It has a white background and a thin border. At the top, it contains the text "All" followed by a red box highlighting the word "Accounts", and then the word "Contacts". Below this, there is a message: "No records found. Create a new record." At the bottom, there are two options: a plus sign followed by the word "New", and a circular arrow icon followed by the text "Change View".

67. Click New to create a new account, call it **Redwood** and click **Save and Close**:

Save

Save & Close

New

Flow

Account: Account

New Account

Summary

Details

ACCOUNT INFORMATION

Account Name	* Redwood
Phone	---
Fax	---
Website	---
Parent Account	---
Ticker Symbol	---

68. In the Flow, go to the next stage:

Loan Amount Info (< 1 Min)

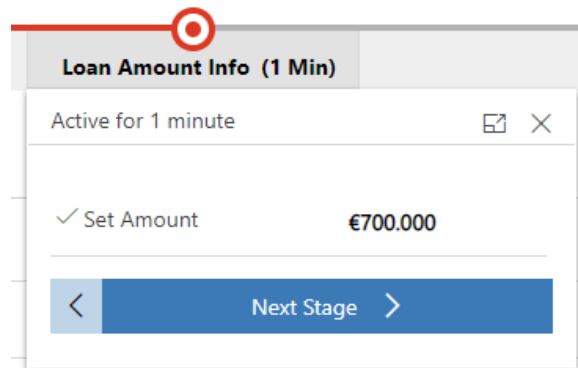
Active for less than one minute

Set Amount

<

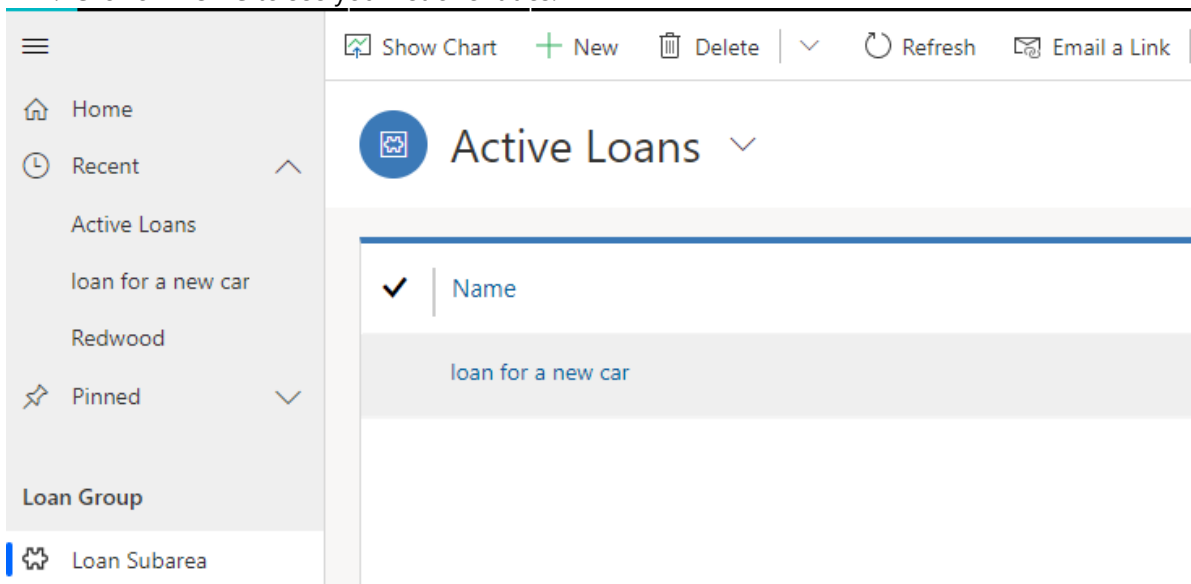
Finish

69. As you can see this is supposed to be the last step by default; however, if you add an amount higher than 500, you will see additional steps:

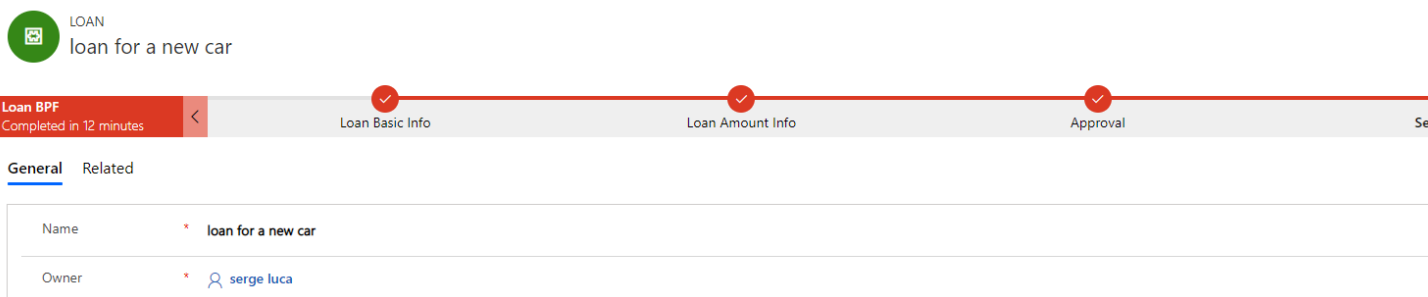


70. Click on **Next stage** until the end of the process.

71. Click on **Home** to see your list of entities:



72. If you click on **loan for a new car**, the whole process will show up:



73. Congratulation for your first Business Process Flow!

