



System Architect   Low-Code App Builder   Mission Exercise

## Low-Code App Builder

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# Low-Code App Builder

9 Tasks | 2 hrs

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Beginner   Pega Platform '23   Low-Code App Development   Constellation   Case Management   ...

### Scenario

U-Plus wants to allow customers to transfer outstanding balances from other credit cards to a U-Plus credit card to encourage customers to consolidate financial services needs with U-Plus Bank. U-Plus offers several balance transfer options, with variations in up-front fees, promotional interest rates, and promotional offer length.

Customers can begin a Balance Transfer Case by calling a call center, where a customer service representative (CSR) walks the customer through the Balance Transfer.

After providing an account number, customers select one of the available balance transfer offers, identify the amount to transfer from one or more credit cards, and review the terms of the

balance transfer offer. The Case is then routed to a CSR Work Queue. A CSR either approves or rejects the transfer. If the transfer is rejected, the CSR identifies the reason for the rejection. After the transfer is approved or rejected, customers receive an email about the decision.

For MLP 1 of the Balance Transfer project, CSRs interact with the application through the Web Portal Channel. For MLP 2, customers can access the application directly through a mobile app and receive guidance from a web chatbot.

While you want to plan for MLP 1 and MLP 2, you are implementing the functionality described in MLP 1 only.

**Note:** The framework of this mission exercise uses the Constellation architecture of Pega Platform™. To practice this challenge on the Traditional UI architecture, see the [Low-Code App Builder](#) version 8.7 mission exercise.

The following table provides the credentials you need to complete the mission exercise:

Role	User name	Password
Application Developer	author@uplus	pega123!

**Tip:** Save often and click **Verify Mission Exercise** to test your configurations after each user story to confirm that features function as defined by the user story acceptance criteria.

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### Your Pega instance is ready!

Click the launch button below to open your Pega instance in a new browser tab.

[Reset Pega Instance](#)

[Launch Pega instance for this Mission Exercise](#)

NOTE: Always use the button(s) above for this Mission Exercise. Directly bookmarking a Pega instance may launch the wrong environment.

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## 1 US-001: Design the Balance Transfer Case Life Cycle

As a customer, I want to transfer balances to my U-Plus credit card so that I can save money on interest charges.

### US-001 Description

Design the Balance Transfer Case Life Cycle to reflect the process that U-Plus customers use to transfer balances to a U-Plus branded credit card. In the Case Life Cycle, include the following Stages, Processes, and Steps:

Stage	Process	Step	Step type
Create	Submit request	Create	Collect information
		Select offer	Collect information
		Identify transfers	Collect information
		Review transfers	Collect information
Approval	Approve transfer	Approve transfer	Approve/Reject
Fulfillment	Fulfill request	Send confirmation	Send email
Approval Rejection	Reject request	Identify reason for rejection	Collect information
		Send rejection email	Send email

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Configure the Case Life Cycle with the following Personas, Channels, and releases:

Stage	Persona	Channel	Release
Create	CSR	Web Portal	MLP 1
	Customer	User Mobile App	MLP 2
		User Digital Messenger	MLP 2
Approval	CSR	Web Portal	MLP 1
Fulfillment			
Approval Rejection	CSR	Web Portal	MLP 1

Configure the Case Life Cycle with the following data objects, systems of record (SOR), and releases:

Stage	Data object	SOR	Release
Create	Account	Pega	MLP 1
	Offer	Pega	MLP 1
Approval			
Fulfillment			
Approval Rejection			

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Configure the Case Type to change the Status of the Case at each Stage based on the following values:

Stage	Case Status on Stage entry	Resolution Status
Create	Open	
Approval	Pending-Approval	
Fulfillment	Pending-Fulfillment	Resolved-Completed
Approval Rejection		Resolved-Rejected

Configure routing to the **AcctMgmt:CSR** Work Queue for the **Approve transfer** Step.

Configure a Service-Level Agreement for the **Approve transfer** Step with the following details:

	Interval	Urgency Increase	Action
Goal	1 hour	20	Notify Assignee by using the default message
Deadline	2 hours	40	Notify Assignee by using the default message

## US-001 Acceptance criteria

- The balance transfer Case Life Cycle has a **Create** Stage, which has one Process containing a Multi-step Form with four Steps.
- The balance transfer Case Life Cycle has an **Approval** Stage, which has one Process and one Step.
- The balance transfer Case Life Cycle has a **Fulfillment** Stage, which has one Process and one Step.
- The balance transfer Case Life Cycle has an **Approval Rejection** Stage, which has one Process and two Steps.
- The **Create** Stage has the **CSR** Persona with the **Web Portal** Channel tagged with **MLP 1**.
- The **Create** Stage has the **Customer** Persona with a **Mobile** Channel named **User Mobile App** and a **Digital messaging** Channel named **User Digital Messenger** tagged with **MLP 2**.
- The **Create** Stage has the **Account** and **Offer** data objects tagged with **MLP 1**.
- The **Approval** and **Approval Rejection** Stages have the **CSR** Persona with the **Web Portal** Channel tagged with **MLP 1**.
- A CSR accesses the Case from a Work Queue to perform the **Approve transfer** Step.
- The Case Status updates at the start of the **Create**, **Approval**, and **Fulfillment** Stages and resolves at the end of the **Fulfillment** and **Approval Rejection** Stages.
- The **Approve transfer** Step has a completion goal and a completion deadline of one and two hours, respectively, increasing the Urgency and notifying the assignee by using a default message.

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To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

**NOTE:** After completing this Mission Exercise, you will be able to practice and try again without impacting your completion status.

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## 2 US-002: Configure the Create View

As a customer, I want to select one of my accounts so that I can transfer balances with as few errors as possible.

### US-002 Description

Configure the **Create** Step View to delete the **Primary Fields** View and add a data reference field named Balance transfer account that is a single record and is sourced from the preconfigured **Account** data object. Configure the **Balance transfer account** data reference field to show additional details by creating a View named Balance transfer account - default that displays the following fields, which are already defined for the data object:

- **Credit limit**
- **Current balance**
- **First name**
- **Last name**

Configure the data reference field as an **Autocomplete** field that displays the account number field.

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**Note:** During development, account numbers are selected from a list to test application functionality. Once the Case Type is fully configured, a different development team integrates the Case Type into the U-Plus website and passes the account number to the Case Type.

## US-002 Acceptance criteria

- The user can select an account number from an autocomplete control in the **Create** View.
- When an account number is selected, the **Create** View displays four fields: **Credit limit**, **Current balance**, **First name**, and **Last name**.

To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

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## 3 US-003: Configure the Select offer View

As a customer, I want to review all the available balance transfer offers so that I can select the one that best matches my needs.

### US-003 Description

Configure the draft data object named **Offer** to add the following fields:

Field name	Field Type
Title	Text (single line)
Description	Text (paragraph)
Interest rate	Percentage
Transfer fee	Percentage
Minimum payment rate	Percentage
APR after promotional period	Percentage
Length of offer	Text (single line)

**Tip:** The system uses the name of the field to predict the Field Type. When creating a field, make sure to always verify the Field Type by clicking or tabbing to the Field Type list before clicking **Submit**.

Using the values in the following table, add three records to the data object to identify the offers that are available to customers:

Title	Description	Interest rate	Transfer fee	Minimum payment rate	APR after pror
Low interest rate transfer	Low interest rate on transferred balances for twelve billing cycles.	.03	.04	.02	.13
No fee transfer	Balance transfer with no transfer fee. Promotional interest rate is applied for nine billing cycles following the transfer.	.06	0	.02	.15
Zero interest transfer	No interest on transferred balances for six billing cycles.	0	.04	.03	.16

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**Note:** The decimal values that you enter in the percentage Field Types are automatically converted to percentage values for each record added to the data object. For example, the decimal value, .03, is converted to the percentage value, 3.00%.

Configure the **Select offer** View with a single record, data reference field named Transfer offer. Configure the data reference field to source data from the **Offer** data object and display the names of available offers in a dropdown. When the user selects an offer by **Title**, show the details in a View named Transfer offer - default. The View displays the following fields in this order:

- **Description**
- **Interest rate**
- **Transfer fee**

- **Minimum payment rate**
- **APR after promotional period**
- **Length of offer**

## US-003 Acceptance criteria

- The **Offer** data object has fields for **Title**, **Description**, **Interest rate**, **Transfer fee**, **Minimum payment rate**, **APR after promotional period**, and **Length of offer**.
- The **Offer** data object has three records for **Low interest rate transfer**, **No fee transfer**, and **Zero interest transfer**.
- The user can select an offer by **Title** from a list in the **Select offer** View.
- When an offer is selected, the **Select offer** View displays six fields: **Description**, **Interest rate**, **Transfer fee**, **Minimum payment rate**, **APR after promotional period**, and **Length of offer**.

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## 4 US-004: Configure the Identify transfers View

As a customer, I want to identify the balances that I want to transfer from other accounts so that I can reduce the amount of interest I pay on outstanding debts.

### US-004 Description

Create a **Transfer** data object to represent transfers that customers authorize. Include the following fields in the **Transfer** data object:

Field name	Field type
Account number	Text (single line)
Amount	Currency
Lender	Text (single line)

Configure the **Identify transfers** View with a multi-record Embedded Data field named **Credit transfers** that references the **Transfer** data object. Configure the **Credit transfers** field to display as a table and to add and edit records within table rows. Add columns for each field in the **Transfer** data object. The fields are required.

### US-004 Acceptance criteria

- The **Credit transfers** Embedded Data field has three required fields: **Account number**, **Amount**, and **Lender**.
- The **Credit transfers** Embedded Data field is displayed as a table.
- The user can add and delete transfers in the **Identify transfers** View.

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To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

**NOTE:** After completing this Mission Exercise, you will be able to practice and try again without impacting your completion status.

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## 5 US-005: Configure the Review transfers View

As a customer, I want to review my transfers so that I authorize transfers in the correct amount to the correct lender.

### US-005 Description

Configure the **Review transfers** View to display a table of authorized transfers. Configure the table with columns for **Account number**, **Amount**, and **Lender**. Customers cannot update the details of each transfer.

Configure the **Review transfers** View with four calculated currency fields in the following order:

Field name	Expression
Total transfer amount	Sum of the amounts in the Credit transfers data fields
Transfer fee charged	Total transfer amount * Transfer fee
Total cost of transfer	Transfer fee charged + Total transfer amount
Minimum payment on transferred amounts	Total cost of transfer * Minimum payment rate

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**Note:** Add calculated fields to the Balance Transfer Data Model, and then configure the **Review transfers** View.

### US-005 Acceptance criteria

- The **Review transfers** View displays a read-only table of authorized transfers.
- The **Review transfers** View displays four calculated currency fields: **Total transfer amount**, **Transfer fee charged**, **Total cost of transfer**, and **Minimum payment on transferred amounts**.
- The **Total transfer amount** field displays the sum of the **Amount** values added by the user.
- The **Transfer fee charged** field displays the value of the **Total transfer amount** multiplied by the **Transfer fee**.
- The **Total cost of transfer** field displays the sum of the **Transfer fee charged** and **Total transfer amount**.
- The **Minimum payment on transferred amounts** field displays the value of **Total cost of transfer** multiplied by the **Minimum payment rate**.

To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

**NOTE:** After completing this Mission Exercise, you will be able to practice and try again without impacting your completion status.

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## 6 US-006: Configure the Approval View

As a CSR, I want to review the transfer and customer account information so that I can ensure that the requested transfers comply with lending policies at U-Plus.

**Note:** During this initial release, a CSR reviews each Balance transfer Case to either approve or reject the transfer. A future release automates the Approval Stage and directs the Balance Transfer Case as appropriate.

## US-006 Description

Configure the View for the **Approve transfer** Step to display the fields listed in the following table, organized into the three Views identified. Entries without a listed Field Type are reused fields that are already defined in the Data Model.

**Tip:** Create the new calculated fields on the Case Type Data Model tab. Create a new View for each set of details on the UX tab, and then add the Views to the main View for the Step. Create a Partial View that uses the **Details (One column)** template to make all fields read-only. Create a Form View that uses the **Default form** template to make the fields editable.

View	Field name	Field Type	Additional configurations
Account details	Account number		Read-only
	Credit limit		Read-only
	Current balance		Read-only
	Available credit		Read-only
Transfer details	Maximum transfer allowed		Read-only
	Total cost of transfer		Read-only
	Remaining transfer balance available	Currency	Calculated as Maximum transfer allowed - Total cost of transfer
	Remaining available credit	Currency	Calculated as Available credit - Total cost of transfer
Approval details	Credit utilization	Percentage	Calculated as (Current balance + Total cost of transfer) / Credit limit
	Credit score	Integer	Required
	Notes	Text (paragraph)	

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## US-006 Acceptance criteria

- The **Approve transfer** View displays eleven fields, separated into three Views: **Account details**, **Transfer details**, and **Approval details**.
- The **Account details** field contains five fields: **Account number**, **Credit limit**, **Current balance**, **Available credit**, and **Maximum transfer allowed**.
- The **Transfer details** field contains four calculated fields: **Total cost of transfer**, **Remaining transfer balance available**, **Remaining available credit**, and **Credit utilization**.
- The **Remaining transfer balance available** currency field displays the value of the **Maximum transfer allowed** minus the **Total cost of transfer**.
- The **Remaining available credit** currency field displays the value of the **Available credit** minus the **Total cost of transfer**.
- The **Credit utilization** percentage field displays the sum of the **Current balance** and the **Total cost of transfer**, divided by the **Credit limit**.
- The **Approval details** field contains two editable fields: **Credit score** and **Notes**.

To complete this Mission Exercise you must successfully complete all tasks above.

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## 7 US-007: Configure the Approval email

As a customer, I want to receive a notification when my requested transfer is approved so that I can manage payments to the specified accounts and keep those accounts in good standing.

### US-007 Description

When a requested transfer is approved, send an email to the address from the **Email** field that is associated with the balance transfer account with the subject line **Balance transfer approved**.

#### Message content

Dear [first name] [last name],

We have approved your balance transfer request.

- Balance transfer amount: [total cost of transfer]
- Selected offer: [title]

Please note the following terms for your balance transfer:

- Interest rate during the promotional period: [interest rate]
- Duration of promotional period: [length of offer]
- Interest rate on remaining balance after your promotional rate expires: [APR after promotional period]

Please review your account terms and conditions for important information about how we apply payments if you maintain a balance due to other card activity.

Thank you for banking with U-Plus.

**Note:** Items in square brackets are property references. You can click the **Insert property** icon to select a property from a list. If the Insert property icon is not visible, log out and log back in.

## US-007 Acceptance criteria

- When a requested transfer is approved, the account owner receives an email with the subject line Balance transfer approved.
- The approval email message contains the customer's full name, the total transfer cost, the selected offer, the interest rate, the offer length, and the APR after the promotional period.

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When you are ready, click **Verify Mission Exercise** to check your work.

**NOTE:** After completing this Mission Exercise, you will be able to practice and try again without impacting your completion status.

### Verify Mission Exercise

## 8 US-008: Configure the Identify reason for rejection View

As a CSR, I want to identify the reason for rejecting a balance transfer request so that I can communicate the reason for the rejection to the customer.

### US-008 Description

Route the **Identify reason for rejection** Assignment to the **CSR** Work Queue.

Configure the **Identify reason for rejection** View with a required picklist field named Reason for rejection. The picklist displays the results in a list with the following choices:

- Credit score too low
- Transfer too large

### US-008 Acceptance criteria

- The **Identify reason for rejection** View displays a required list with two options: Credit score too low and Transfer too large.
- A CSR accesses the Case from a Work Queue to perform the **Identify reason for rejection** Step.

To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

**NOTE:** After completing this Mission Exercise, you will be able to practice and try again without impacting your completion status.

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## 9 US-009: Configure the Rejection email

As a customer, I want to receive a notification if my transfer request is rejected so that I can understand why the rejection occurred and determine if another offer or transfer amount might be accepted.

### US-009 Description

When a requested transfer is rejected, send an email to the address from the **Email** field that is associated with the **Balance transfer account** with the subject line Balance transfer rejected.

#### Message content

Dear [first name] [last name],

We are unable to process your balance transfer for the following reason:

[reason for rejection]

If you have any questions, please contact our customer service department.

Thank you for banking with U-Plus.

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**Tip:** If the **Insert property** icon is not visible, log out and log back in.

### US-009 Acceptance criteria

- When a requested transfer is rejected, the account owner receives an email with the subject line **Balance transfer rejected**.
- The rejection email message contains the customer's full name and the reason for rejecting the transfer request.

To complete this Mission Exercise you must successfully complete all tasks above.

When you are ready, click **Verify Mission Exercise** to check your work.

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