LIGHTNING FLOWS

Salesforce provides a collection of out of the box features (OOTB) as part of Configuration used to automate certain actions.

We have the below process automation tools which can be used to perform the actions automatically based on certain events and periodical time intervals.

1. Workflow Rules

2. Process Builder

3. Flow / Flow Builder / Lightning Flows

Workflow Rules: Workflow Rules are used to automate certain business processes inside the organization, which will get fired based on the specified events.

Workflow Rules fire "After Insert" and "After Update" operation on the records inside the object.

Limitations

1. Workflow Rules do not support all the DML Operations on the object records. It supports only Field Update.

2. Workflow Rules do not fire before performing the DML operations on the records.

Process Builder: Process Builder is a graphical representational tool used to automate certain actions inside the application.

It is an extension for Workflow rule which supports all the actions of workflow rules except "Sending Outbound Message" action.

Process Builder will fire "After Insert and After Update" the records inside the object.

Limitations:

1. Process Builder will fire the actions always after inserting and after updating the records. It won't fire the actions before performing the Insert and Update operation.

2. Process Builder won't support all the DML Operations.

3. Using process builder we can not send Outbound messages to the external system.

Flows/Lightning Flows: Flow is an application used to automate business processes inside the organization.

A flow is built using a flow builder which is a point- and -click tool.

Using flows, we can perform all the DML Operations on the object records.

Flows can fire before and after performing the operations on the records.

The Running instance of a flow is called as a "Flow Interview".

We can automate all the operations of workflow and process Builder using flows.

Salesforce provides 2 types of Flows.

1. **Screen Flows**: It provides a User Interface which is used to supply the input to the flow at runtime. Based on the input provided by the user, it will perform the operations. It guides the

users through a business process that's launched from Lightning pages, Experience Cloud sites, quick actions, and more

2. **Auto-Launched Flows:** These flows run in the background.

Auto-Launched Flows has been sub-categorized into 4 types.

1. **Record Triggered Flow**: This flow is launched when a record is created, updated or deleted.

2. **Auto-Launched Flow (No Trigger)**: This flow launches when invoked by Apex, Processes, REST API, and more.

3. **Scheduled Triggered Flow**: This flow launches at a scheduled time and frequency for each record in the batch. It will execute the scheduled jobs asynchronously by placing inside the "Apex Queue".

4. **Platform Event Message Triggered Flow:** This flow will be launched when the Platform Event Message is received from the Lightning Component.

Flow Elements: To automate the business processes by using flows, we need to configure the flow by using various elements. Each element represents an action that the flow can execute.

Salesforce provides the below 3 types of elements in the flows.

1. **Interaction Elements**: These are used to design the User Interfaces used to supply the input values to the flow at runtime.

Ex: Screen, Sub-Flow...etc.

2. **Logical Elements:** These are used to perform the intermediate operations on the input values given by the user at runtime.

Ex: Assignment, Loop, Collection sort...etc.

3. **Data Elements**: These are used to interact with the Salesforce Objects and perform the DML operations on the object records.

Ex: Get Record, Insert Record, Update Record, Delete Record etc.

Click on "Setup" menu.

1. Search for the option "Flows" in Quick Find box.
2. Click on New Flow button.
3. Select the "Flow Type" from the Template.
4. Configure the Flow Operations, by using Flow Elements.
5. Click on "Save" button.
6. Enter the Flow Label, Name and Description.
7. Click on "Save" button.
8. Click on "Activate" button.

Use Case: Configure a flow on the Hiring Manager Object, to notify the HR Person upon creating a New Hiring Manager Record inside the object by using a Pre-Existing Email Template.

Step 1: Create an Email Template with the required Subject and Content, used to send the Email Notification to the required users.

Step 2: Create an Email Alert to specify the Recipient details.

Click on "Setup" menu.

1. Search for the option "Email Alert".
2. Click on "New" button.
3. Enter the Email Alert Name and Unique Name.
4. Select the "Object Name", by using "Lookup Icon".
5. Select the "Email Template Name" by using "Lookup Icon", used to send the Email.
6. Select the Recipient Type from the Picklist (Ex: Email Field).

   Add the Email Address Field to the Selected Options.
7. Enter the CC Copy Email Addresses in the Text Area.
8. Click on "Save" button.

Step 3: Create a flow on the Hiring Manager Object to send the Email Alert.

Object Name: Hiring Manager

Event Name: After Inserting the Record

Condition: Hiring Manager: Email Address! = Null

Action Type: Email Alert

Flow Type: Record triggered flow

Use Case: Configure a flow on the account object, to create a related contact record for the account, if the account meets the below conditions.

1. Account:Active == 'Yes'
2. Account:AnnualRevenue > 5000000
3. Account:CustomerPriority__C == 'High'

Object Name: Account

Event Name : After Insert.

Flow Type : Record Triggered Flow.

Conditions:

Account:Active == 'Yes'

Account:AnnualRevenue > 5000000

Account:CustomerPriority__C == 'High'

Action: Create a Record

Use Case: Configure a flow on the Hiring Manager object to remove the related position records from the object upon removing the Hiring Manager Record.

Object Name : Hiring_Manager__C

Event Name : Before Delete.

Flow Type : Record Triggered Flow.

Conditions: Hiring_Manager__C.Location__C == 'Chennai'

Action: 1. Get the related position records from the object.

2. Delete the records from the object.

```
Public Class HiringManagerHelper
{
    Public static void DeleteRelatedPositions(List<Hiring_Manager__C> lstHRs)
        {
            List<ID> hrRecordIds = new List<ID>();
            for (Hiring_Manager__C hrRecord : lstHRs)
            {
                hrRecordIds.Add(hrRecord.id);
            }
            // Get the Related Positions
    List<Position__C> lstPositions = [Select id, name, Location__C, position_status__, maximum_budget__C, Hiring_Manager__C, open_date__C
            from Position__C Where Hiring_Manager__C IN : hrRecordIds];

        if (! lstPositions.isEmpty())
        Delete lstPositions;
        }
    }
```

Screen Flows: By using Screen Flows, we can design the custom user interface by using Mouse Clicks by placing the required fields on the Screen.

We have to invoke the Screen Flow manually either by using a "Button Click" or by using a "Quick Action".

We have to design the screen with the required elements to supply the input values to the application at runtime. Based on the input values supplied, it will perform the operations in the object.

We can design the multi-screen flow also based on the requirement.

Use Case: Configure a Screen Flow by designing a screen used to create a New Hiring Manager Record inside the object.

Invoke the Screen Flow by using a Quick Action to be represented on the Position Record Page.

Step 1: Create a Screen Flow.

i. Design the Screen by placing the required elements on the Screen.

ii. Customize the Screen Header, Footer and Buttons to be visible.

Step 2: Place the Flow Element "Insert Record, to insert the record inside the Object.

i. Map the Screen Element values to the associated fields in the object.

ii. Click on "Save" button.

iii. Activate the Flow.

Step 3: Create a Quick Action of type "Flow" on the position object.

Step 4: Place the Quick Actions on the Position Object Page layout.

Step 5: Test the Screen Flow.

Use Case: Configure a Screen Flow to create a new account record inside the object.

Design multiple screens to represent the fields.

Invoke the Screen Flow by using a Quick Action to be represented on the Hiring Manager Record Page.