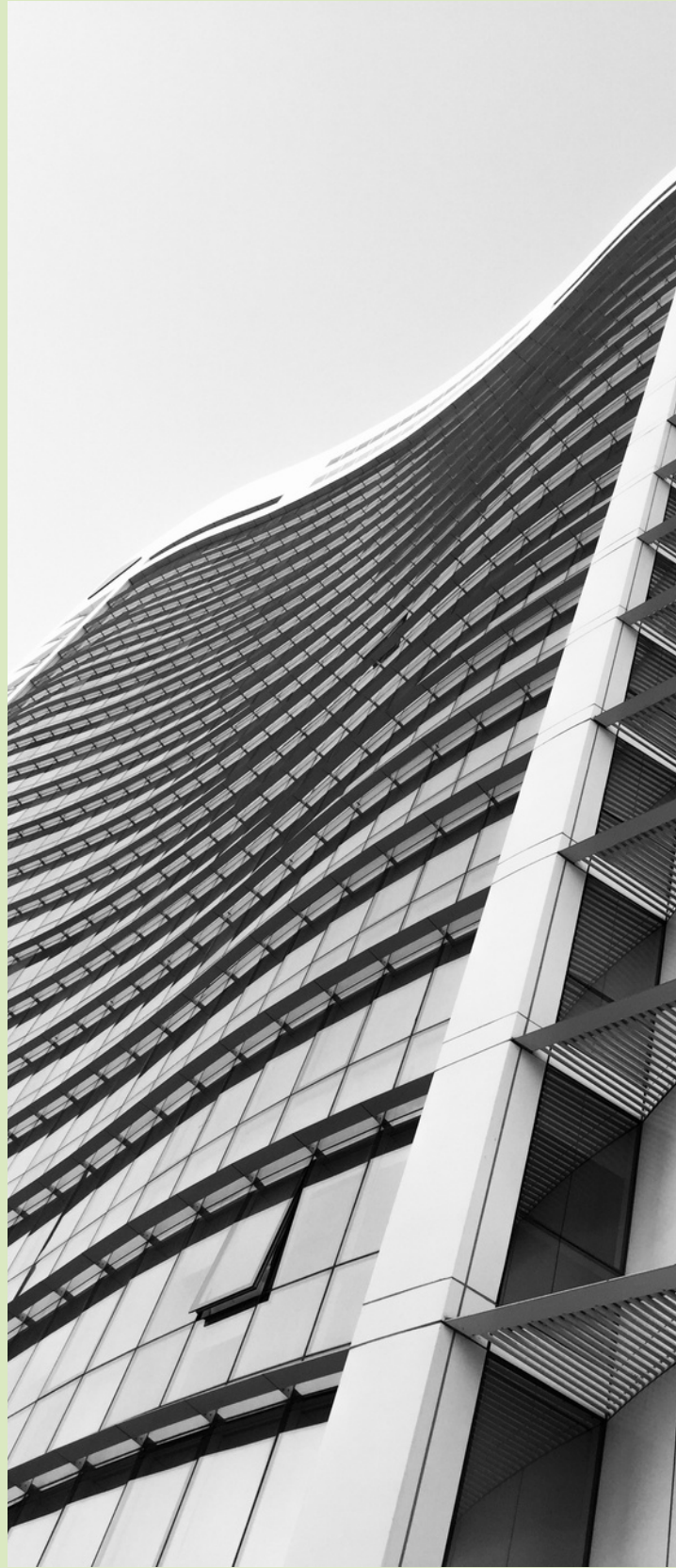


The Salesforce logo, consisting of the word "salesforce" in white lowercase letters inside a blue cloud-like shape.

salesforce

SALESFORCE CAPSTONE: FLOW BUILDER



PROJECT PREPARED BY:

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OVERVIEW

IN THIS PROJECT, WE CREATED FIVE CUSTOM OBJECTS AND FIELDS TO IMPLEMENT AND ENFORCE A FLOW FOR OUR ORGANIZATION TO ENSURE AUTOMATION OF TASKS INTERNALLY. IN ADDITION TO THE VARIOUS OBJECT AND FIELD CREATIONS, WE ALSO IMPLEMENTED VALIDATION RULES, WORKFLOWS, AND PROCESS BUILDERS FOR OUR CUSTOM OBJECTS. LASTLY, WE TESTED AND ACTIVATED THE FLOW FOR THIS ORGANIZATION



PROBLEM STATEMENT

In this project, we created basic components (objects, fields, etc.) for a more efficient business process in Salesforce using flows. Further, after creating the components for the basic layout of the flow we created a flow with various actions along with workflow rules and actions, validation rules, process builder, and flow builder. Then, added the flow into the action by activating it.

OBJECT CREATION

- IN **SETUP**, CLICK ON **OBJECT MANAGER** → **CREATE** → **CUSTOM OBJECT**
- FILL OUT NECESSARY SECTIONS AND ASSIGN OBJECT TAB

SETUP
New Custom Object

Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles. [Tell me more!](#) [Don't show](#)

Custom Object Definition Edit [Save] [Save & New] [Cancel]

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label Subject Example: Account

Plural Label Subjects Example: Accounts

Starts with vowel sound

The Object Name is used when referencing the object via the API.

Object Name Subject Example: Account

Description

Context-Sensitive Help Setting Open the standard Salesforce.com Help & Training window Open a window using a Visualforce page

Content Name --None--

SUBJECT

- REPEAT STEPS 1 & 2 FOR THE REST OF OBJECTS

SETUP > OBJECT MANAGER
Subject

Details [Edit] [Delete]

Description

API Name Subject__c

Custom

Singular Label Subject

Plural Label Subjects

Enable Reports

Track Activities

Track Field History

Deployment Status Deployed

Help Settings Standard salesforce.com Help Window

COURSE LEADS

- REPEAT STEPS 1 & 2 FOR THE REST OF OBJECTS

SETUP > OBJECT MANAGER
Course Leads

Details [Edit] [Delete]

Description

API Name Course_Leads__c

Custom

Singular Label Course Leads

Plural Label Course Leads

Enable Reports

Track Activities

Track Field History

Deployment Status Deployed

Help Settings Standard salesforce.com Help Window

OBJECT CREATION

IN SETUP, CLICK ON OBJECT MANAGER -> CREATE -> CUSTOM OBJECT
FILL OUT NECESSARY SECTIONS AND ASSIGN OBJECT TAB

TECHNOLOGY

- REPEAT STEPS 1 & 2 FOR THE REST OF OBJECTS

SETUP > OBJECT MANAGER
Technology

Details Edit Delete

Description

API Name
Technology__c

Custom
✓

Singular Label
Technology

Plural Label
Technologies

Enable Reports
✓

Track Activities
✓

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

COURSE

- REPEAT STEPS 1 & 2 FOR THE REST OF OBJECTS

SETUP > OBJECT MANAGER
Course

Details Edit Delete

Description

API Name
Course__c

Custom
✓

Singular Label
Course

Plural Label
Courses

Enable Reports
✓

Track Activities
✓

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

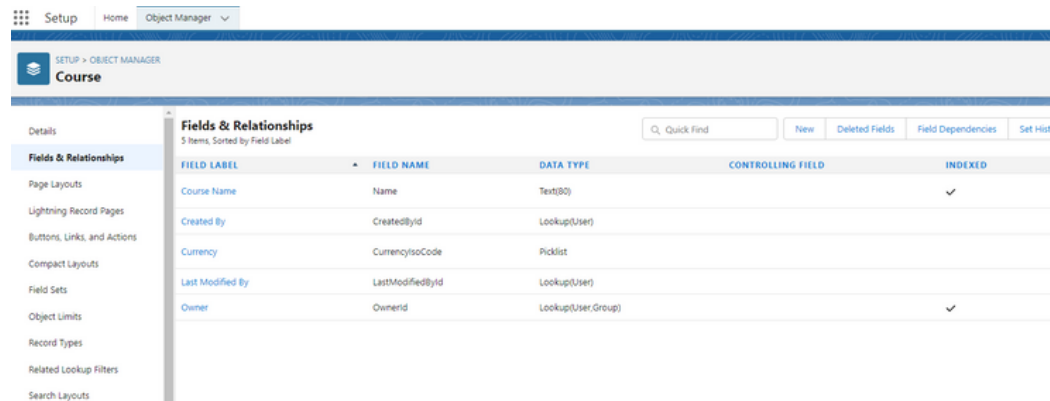
Related Lookup Filters

FIELD CREATION

IN YOUR CUSTOM OBJECT -> CLICK FIELD AND RELATIONSHIPS

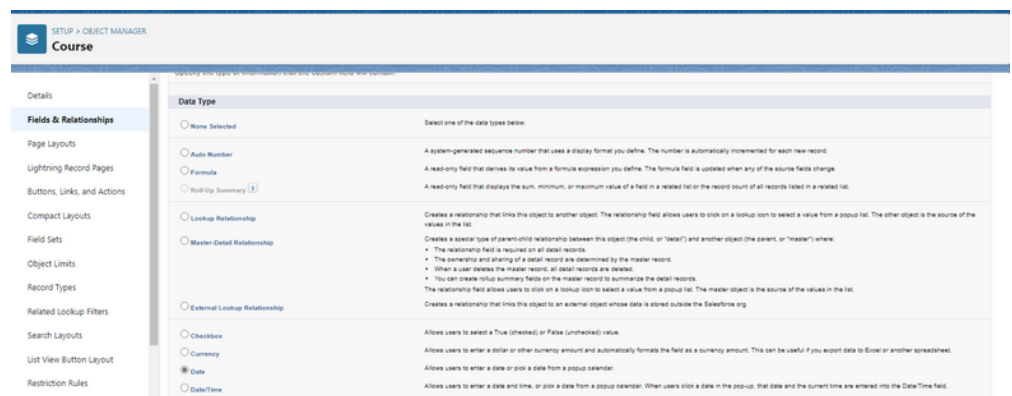
1

- IN YOUR CUSTOM OBJECT -> CLICK FIELD AND RELATIONSHIPS -> CLICK NEW ON THE RIGHT



2

- IN FIRST SCREEN, YOU ARE DIRECTED TO CHOOSE A **FIELD TYPE** TO SPECIFY THE TYPE OF INFORMATION THAT THE CUSTOM FIELD WILL CONTAIN



FIELD CREATION CONT.

3

- IN THE SECOND SCREEN, YOU WILL ENTER **DETAILS** FOR YOUR CUSTOM FIELD. HERE YOU CAN ADD A **LABEL, DESCRIPTION, HELP TEXT, MARK THE FIELD REQUIRED & ADD A FORMULA FOR DEFAULT VALUE**

The screenshot shows the 'New Custom Field' configuration page in Salesforce. The left sidebar lists various setup options, with 'Fields & Relationships' selected. The main content area is titled 'Step 2. Enter the details' and includes the following fields and options:

- Field Label:** Start Date
- Field Name:** Start_Date
- Description:** (empty text box)
- Help Text:** (empty text box)
- Required:** Always require a value in this field in order to save a record.
- Auto add to custom report type:** Add this field to existing custom report types that contain this entity.
- Default Value:** Show Formula Editor (with a small 'f' icon)

At the bottom right, there are 'Previous', 'Next', and 'Cancel' buttons.

4

- IN THE THIRD SCREEN, YOU ESTABLISH **FIELD-LEVEL SECURITY**. SELECT THE PROFILES TO WHICH YOU WANT TO GRANT EDIT ACCESS TO THIS FIELD VIA **FIELD-LEVEL SECURITY**. THE FIELD WILL BE HIDDEN FROM ALL PROFILES IF YOU DO NOT ADD IT TO **FIELD-LEVEL SECURITY**.
- IN THE FOURTH SCREEN, YOU SELECT THE PAGE LAYOUTS THAT SHOULD INCLUDE THIS FIELD AND **SAVE!**

The screenshot shows the 'New Custom Field' configuration page in Salesforce, specifically the 'Step 3. Establish field-level security' screen. The left sidebar is the same as in the previous screenshot. The main content area includes a summary of the field and a table for selecting profiles.

Field Summary:

- Field Label:** Start Date
- Data Type:** Date
- Field Name:** Start_Date
- Description:** (empty)

Select the profiles to which you want to grant edit access to this field via field-level security. The field will be hidden from all profiles if you do not add it to field-level security.

Field-Level Security for Profile	<input checked="" type="checkbox"/> Visible	<input type="checkbox"/> Read-Only
Analytics Cloud Integration User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Analytics Cloud Security User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Authenticated Website	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Authenticated Website	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contract Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cross Org Data Proxy User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom - Marketing Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom - Sales Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom - Support Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>

At the bottom right, there are 'Previous', 'Next', and 'Cancel' buttons.

VALIDATION RULES FOR VERIFYING DATA

1 SUBJECT

- Go to the object manager. In this instance, click **Subject** → **fields & relationships**.
- ****Take note of custom fields created previously & the data type.**
- On the left side panel, scroll down to validation rules. Click **new**
 - ****Repeat steps for the rest of val. rules**

The screenshot displays the Salesforce Object Manager interface for the 'Subject' object. The left sidebar lists various configuration options, with 'Validation Rules' selected. The main content area shows the 'Subject Validation Rule' configuration page. The rule is named 'Verifying_datasubject' and is active. The error condition formula is: `OR(ISBLANK(Instructor_Name__c), ISPICKVAL(Level__c, ""), ISBLANK(No_of_Modules__c), ISBLANK(Subject_name__c), ISBLANK(Priority__c, ""), ISBLANK(Rating__c, ""), ISBLANK(Category__c, ""))`. The error message is 'Field is required' and the error location is 'Top of Page'. The rule was created by 'Salesforce Five' on 10/31/2022 at 7:11 PM.

2 TECHNOLOGY

- As indicated above, go to the **Object Manager**. In this instance, click **Technology** → **Fields & Relationships**.
- Validation rule formulas are selected based on data type.
 - Group validation rules together to make things easier

The screenshot displays the Salesforce Object Manager interface for the 'Technology' object. The left sidebar lists various configuration options, with 'Validation Rules' selected. The main content area shows the 'Technology Validation Rule' configuration page. The rule is named 'Verifying_datastechnology' and is active. The error condition formula is: `OR(ISBLANK(Instructor_Name__c), ISPICKVAL(Type__c, ""), ISBLANK(Category__c, ""), ISBLANK(Rating__c, ""), ISBLANK(Active__c, ""))`. The error message is 'Field is required' and the error location is 'Top of Page'. The rule was created by 'Salesforce Five' on 10/31/2022 at 6:39 PM.

VALIDATION RULES FOR VERIFYING DATA CONT.

3 COURSE

- Repeat Validation Rules, Steps 1 & 2 for **Course** object.

The screenshot displays the Salesforce Object Manager interface for the 'Course' object. The left sidebar contains navigation options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area is titled 'Course Validation Rule' and includes a 'Back to Course' link. Below this is the 'Validation Rule Detail' section, which shows the rule name 'Verifying_datacourse1', its status as 'Active', and a checkmark. The 'Error Condition Formula' is defined as: `OR(ISBLANK(Course_Duration__c), ISBLANK(Instructor_Name__c), ISPICKVAL(Priority__c, ''), ISPICKVAL(Rating__c, ''), ISPICKVAL(Type_of_Course__c, ''), ISBLANK(Start_Date__c), ISNUMBER(No_of_Modules__c), ISBLANK(End_Date__c), ISPICKVAL(Active__c, ''))`. The 'Error Message' is 'Field is required', and the 'Error Location' is 'Top of Page'. The 'Description' field is empty. The rule was created by 'Salesforce.Five' on 10/31/2022 at 6:23 PM and was last modified by the same user on the same date and time. 'Edit' and 'Clone' buttons are visible for the rule.

4 COURSE LEADS

- Repeat Validation Rules, Steps 1 & 2 for **Course Leads** object.

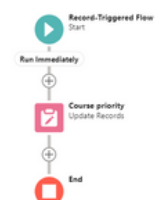
The screenshot displays the Salesforce Object Manager interface for the 'Course Leads' object. The left sidebar contains navigation options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area is titled 'Course Leads Validation Rule' and includes a 'Back to Course Leads' link. Below this is the 'Validation Rule Detail' section, which shows the rule name 'Verifying_datacourseleads', its status as 'Active', and a checkmark. The 'Error Condition Formula' is defined as: `OR(ISPICKVAL(Category__c, ''), ISBLANK(Course_Lead_Amount__c), ISBLANK(First_Name__c), ISBLANK>Last_Name__c), ISBLANK(Phone__c), ISBLANK>Email__c), ISBLANK(Source__c), ISPICKVAL(Rating__c, ''), ISBLANK(Currency__c))`. The 'Error Message' is 'Field is required', and the 'Error Location' is 'Top of Page'. The 'Description' field is empty. The rule was created by 'Salesforce.Five' on 10/31/2022 at 6:33 PM and was last modified by the same user on the same date and time. 'Edit' and 'Clone' buttons are visible for the rule.

SETTING WORKFLOW RULES

1. Course

- In Home Setup, type **Flow** into the search bar and click **New Flow**.
- Select **Record Trigger Flow** and select **Create**.
- Chose **Course** as your object and trigger a flow when an object is created or update
- Set condition requirements as **All Conditions are Met (AND)**
- Field: **Priority__c**
- Operator: **Equals**
- Value: **Hot**
- Click **Done**

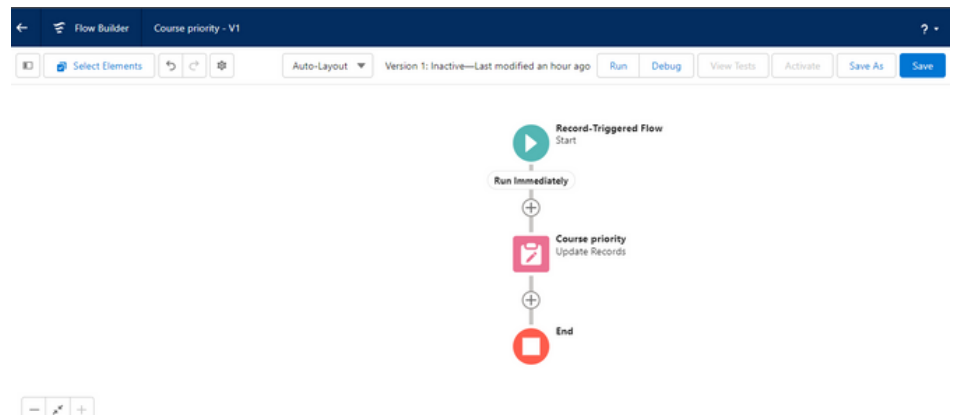
- Click the + icon under run immediately and select **Update Records** under data
- Label: **Course Priority**
- API Name: **Course_Priority**
Set Filter Conditions
- **All Conditions Are Met (And)**
- Field: **Priority__c**
- Operator: **Equals**
- Value: **Hot**
Set Field Value for Course Record
- Field: **Course_name__c**
New Resource to be created for value
- Select value search bar and select **New Resource**
- Resource Type: **Formula**
- API Name: **High_Priority_Course**
- Data Type: **Text**
- Formula: **"High Priority" + {\$Record.Course_name__c}**,
- Check Syntax, **Done, Done**
- Select **Debug**
- Click **Save**



SETTING WORKFLOW RULES CONT.

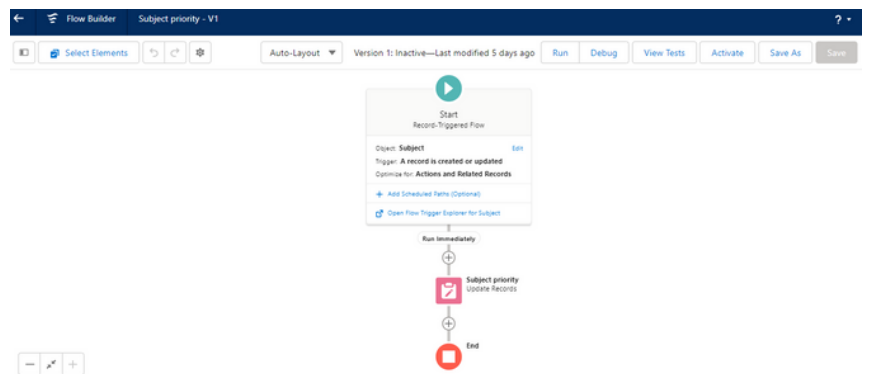
2 TECHNOLOGY

- Repeat the previous steps for the **Technology** Flow



3 SUBJECT

- Repeat the previous steps for the **Subject** object



SETTING WORKFLOW RULES CONT.

4 COURSE LEAD

- In Home Setup, type **Flow** into the search bar and click **New Flow**.
- Select **Record Trigger Flow** and select **Create**.
- Chose **Course Leads** as your object and trigger a flow when an object is created or update
- Set condition requirements as **All Conditions are Met (AND)**
- Field: **Course_Lead_Amount__c**
- Operator: **Greater Than**
- Value: **1000**
- Click **Done**

Configure Start

Select Object

Select the object whose records trigger the flow when they're created, updated, or deleted.

*Object

Course Leads

Configure Trigger

*Trigger the Flow When:

A record is created

A record is updated

A record is created or updated

A record is deleted

Cancel Done

Configure Start

Set Entry Conditions

Specify entry conditions to reduce the number of records that trigger the flow and the number of times the flow is executed. Minimizing unnecessary flow executions helps to conserve your org's resources.

If you create a flow that's triggered when a record is updated, we recommend first defining entry conditions. Then select the **Only when a record is updated to meet the condition requirements** option for When to Run the Flow for Updated Records.

Condition Requirements

All Conditions Are Met (AND)

Field Operator Value

Course_Lead_Amount__c Greater Than 1000

+ Add Condition

Cancel Done

- Click the + icon under run immediately and select **Update Records** under data
- Label: **Top Priority**
- API Name: **Top_Priority**
- **Set Filter Conditions**
- **All Conditions Are Met (And)**
- Field: **Course_Lead_Amount__c**
- Operator: **Greater Than or Equal To**
- Value: **1000**
- **Set Field Value for Course Record**
- Field: **Name**
- **New Resource to be created for value**
- Select value search bar and select **New Resource**
- Resource Type: **Formula**
- API Name: **Top_Priority_Course**
- Data Type: **Text**
- Formula: **""Top Priority Customer" + {\$Record.Name}}**
- Check Syntax, Done, Done
- Select **Debug**
- Click **Save**

New Resource

*Data Type

Text

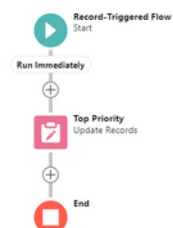
*Formula

Insert a resource... All Functions Insert a function... Select an Operator...

"Top Priority Customer" + {\$Record.Name}

Check Syntax

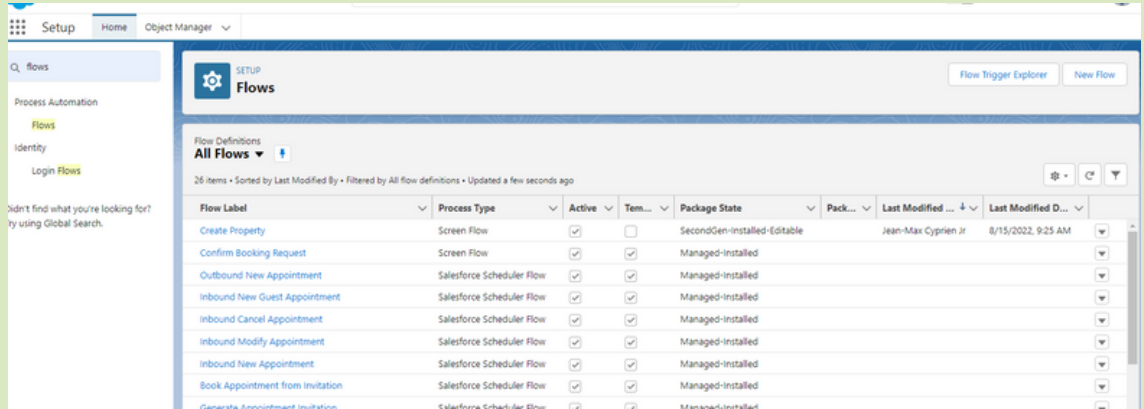
Cancel Done



CREATING A FLOW

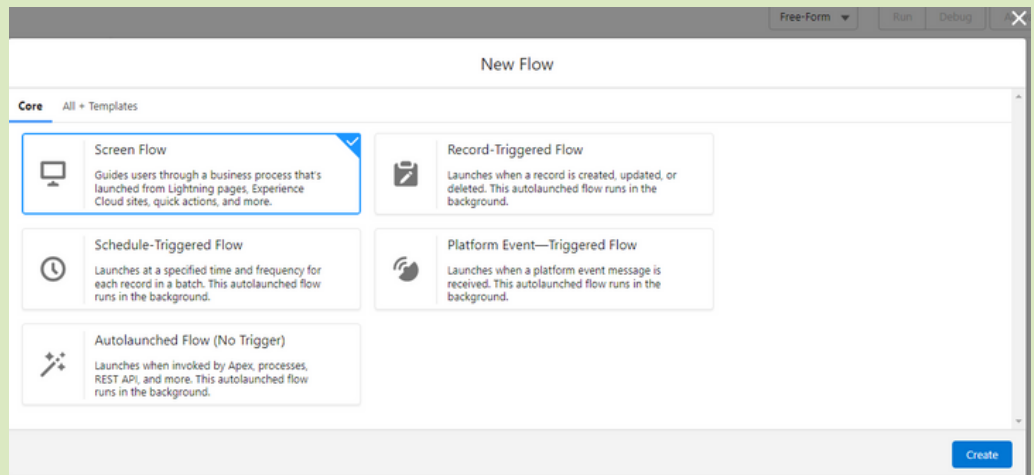
1

- IN YOUR SETUP PAGE, GO TO FLOW -> CLICK NEW FLOW



2

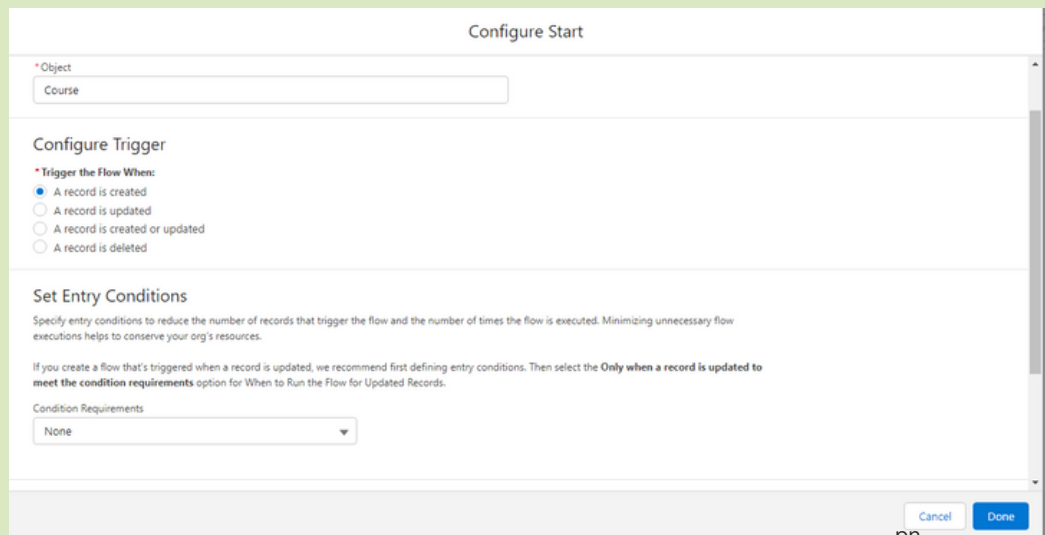
- In the **New Flow** window, select the desired flow template for your workflow.
- Here, for each Object's flow, '**Record-Triggered Flow**' was selected to ensure flow runs in the background.
 - **Note:** Salesforce is phasing out the usage of the 'Workflow Rules' on the platform. While Flow Builder was used as an alternative, the yielded flow result is unaffected.



3

- In the **Configure Start** window, select the desired trigger for the flow.
- Here, the trigger implemented for each flow was "**A record is created or updated.**"

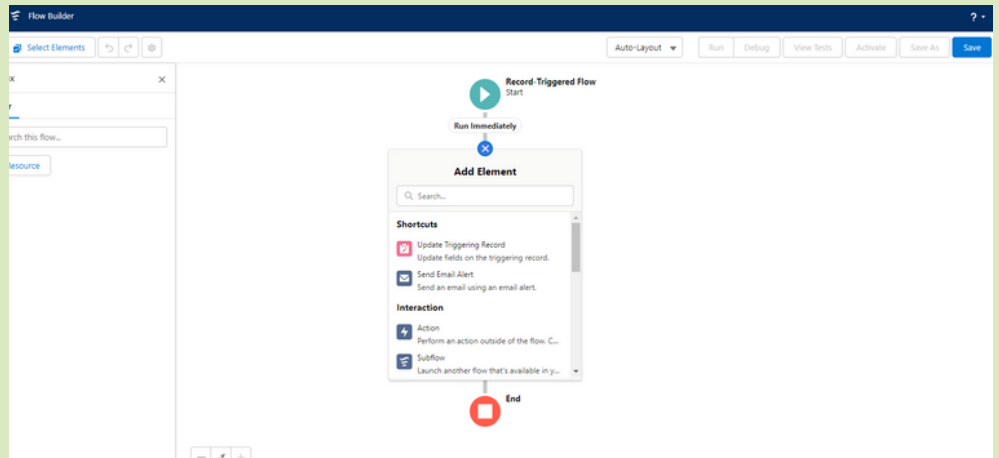
** The '**Record-Triggered Flow**' is the only flow type that contains the triggering event (create, update, or delete). It runs automatically when a record is created, updated, or deleted.



CREATING A FLOW CONT.

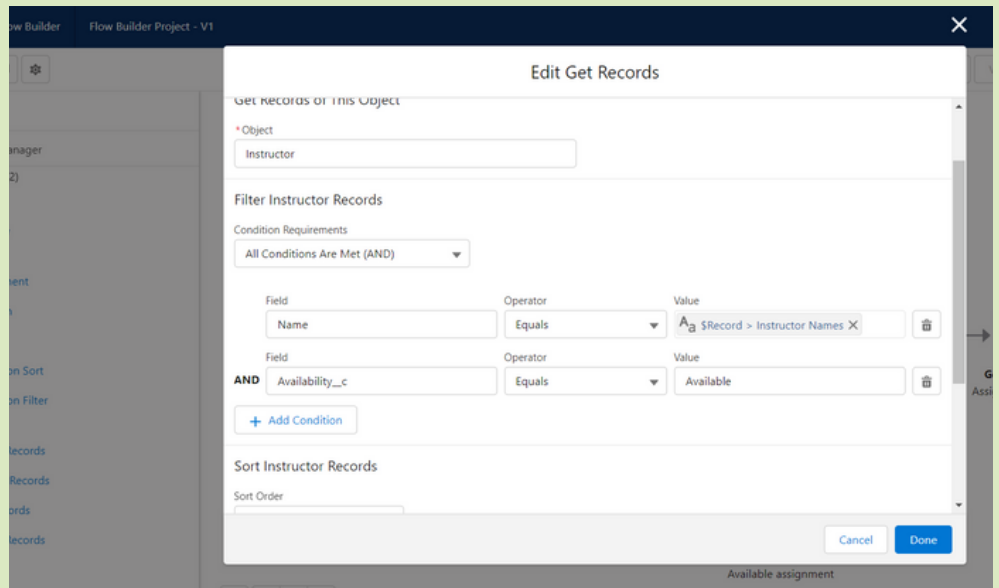
4

- After selecting your desired flow type, you will observe that the flow is generated on the flow builder window.
- In the **Flow Builder** window, select **'Add Element'** then select the action most appropriate for the next step of your flow.
- Here, the element we chose for our flow is **'Get Records'**



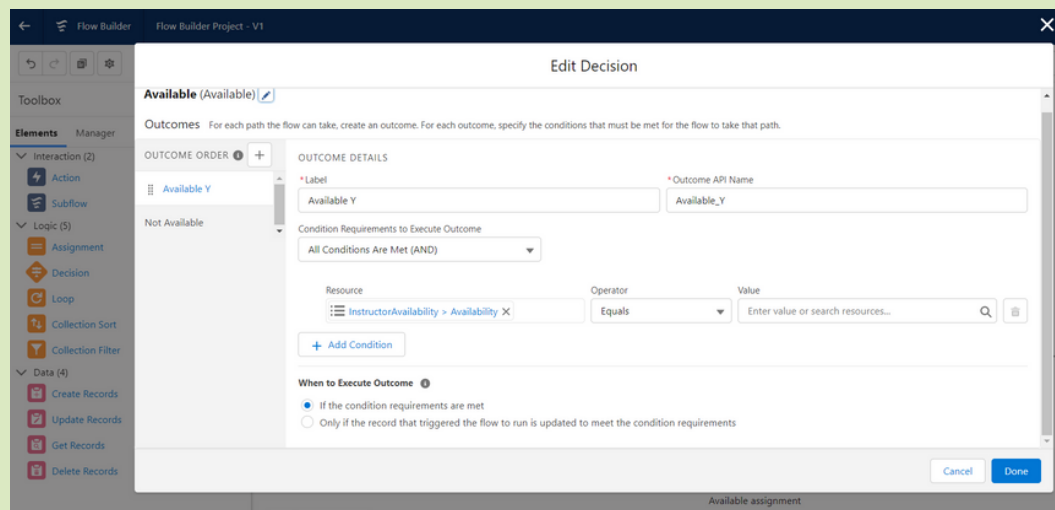
5

- In the **Edit Get Records** window, select the **Object** you desire to work on, then filter to the appropriate condition.
- Here we selected **'All Conditions are Met'**
- Select the **Fields, Operator,** and **Value** that are consistent with this section of your flow then select **'Done'**



6

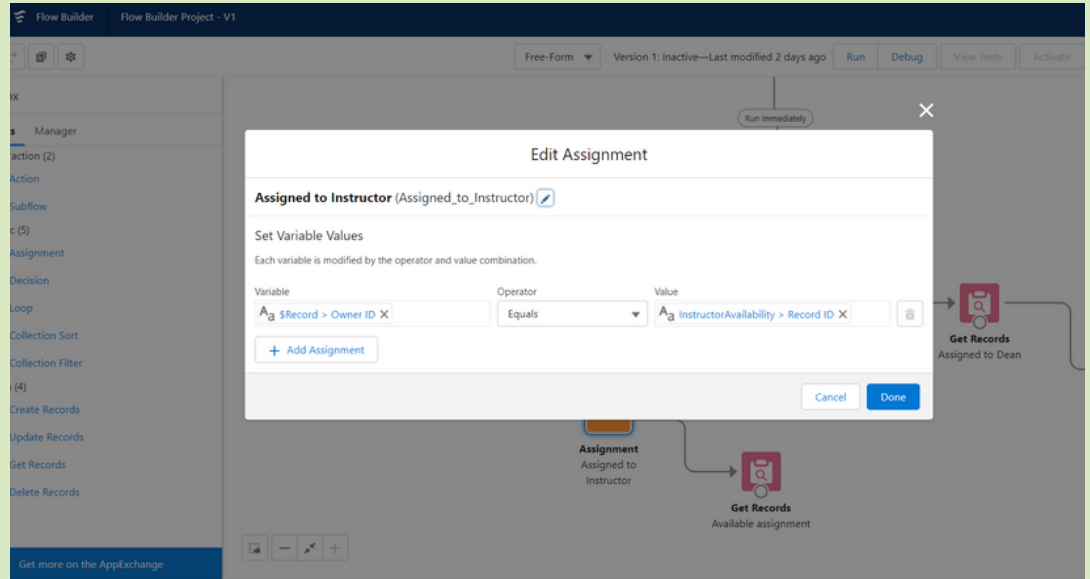
- In the **Edit Decision** window, type in the **Label Object** you desire and be sure that an **Outcome API Name** is generated, then filter to the appropriate condition.
- Here we selected **'All Conditions are Met'**
- Select the **Resource, Operator,** and **Value** that are consistent with this section of your flow then select **'Done'**



CREATING A FLOW CONT.

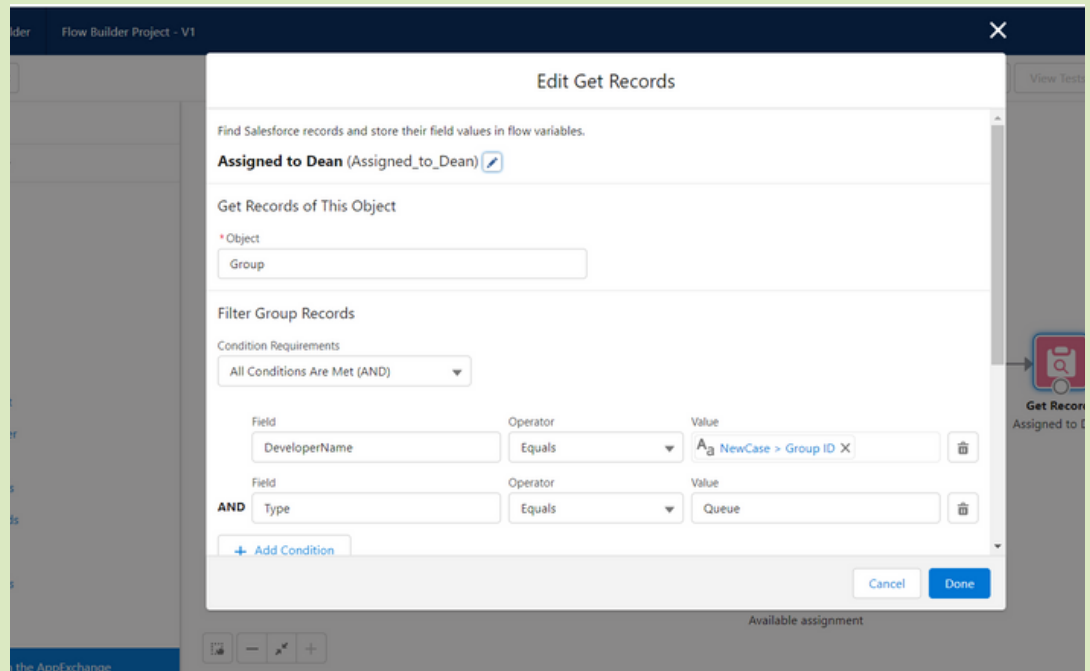
7

- In the **Edit Assignment** window, ensure that you are editing the assignment for the Assigned Instructor.
- Select the **Variable, Operator, and Value** that are consistent with this section of your flow then select 'Done'



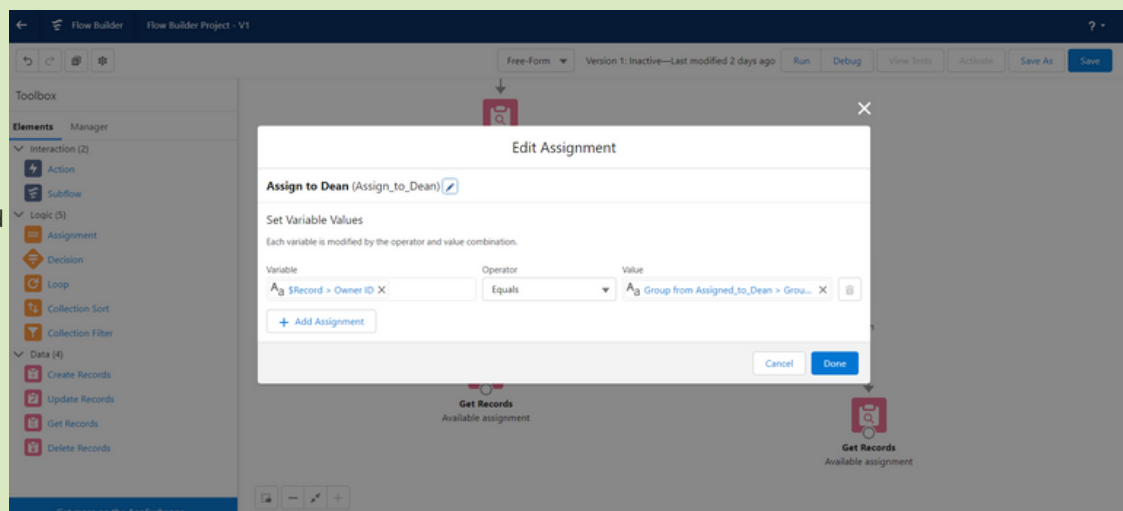
8

- In the **Edit Get Records** window, select the **Object** you desire to work on, then filter to the appropriate condition. Here we selected the 'Group' object
- Then select the condition requirements. Here 'All Conditions are Met' is the chosen condition for this part of the flow.
- Select the **Fields, Operator, and Value** that are consistent with this section of your flow then select 'Done'



9

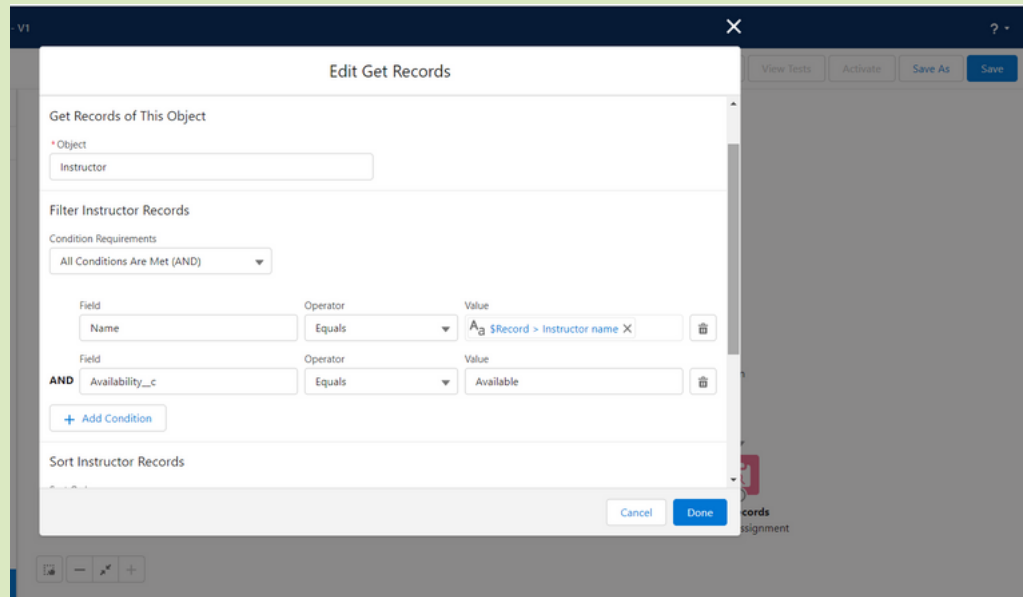
- In the **Edit Assignment** window, ensure that you are editing the assignment for the Assigned to Dean.
- Select the **Variable, Operator, and Value** that are consistent with this section of your flow then select 'Done'



CREATING A FLOW CONT.

10

- In the **Edit Get Records** window, select the **Object** you desire to work on, then filter to the appropriate condition. Here we selected the '**Instructor**' object
- Then select the condition requirements. Here '**All Conditions are Met**' is the chosen condition for this part of the flow.
- Select the **Fields, Operator, and Value** that are consistent with this section of your flow then select '**Done**'



11

- Review the Flow created.
- **Debug** the flow to ensure that there are no errors populated.
- Assign a **Name** to the completed flow, then **Save**.
- If you are happy with the flow build, then **Activate** the flow.

