# Developing and deploying Approvals

Week 10

School of Software

Faculty of Engineering and Information Technology

University of Technology Sydney



**SCHOOL OF SOFTWARE** 

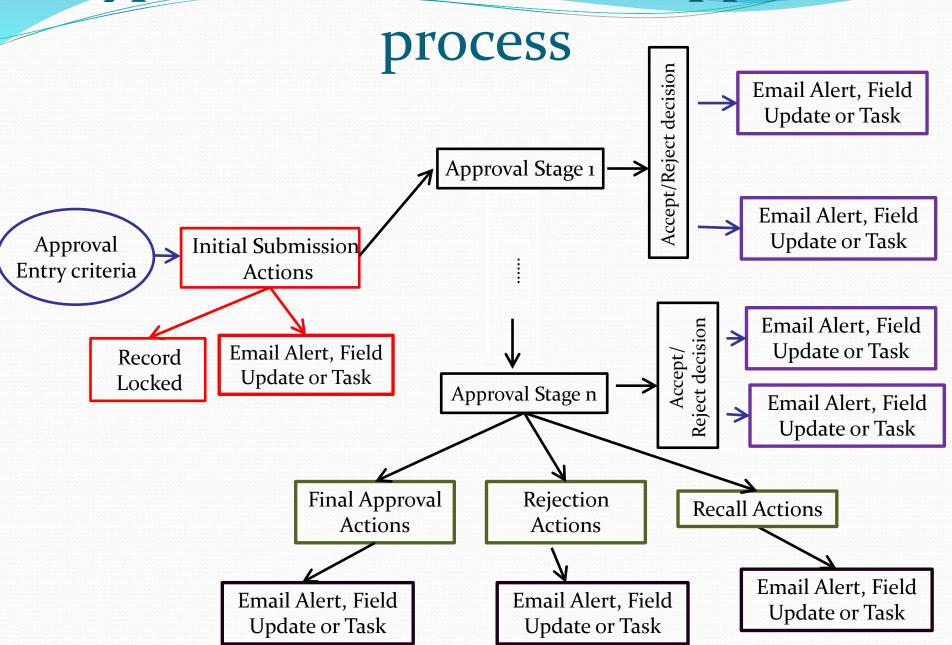
### Learning Objectives

- Approvals
- Various elements in an approval process
- Implementing an approval process
- Conclusion

### What are approvals?

- An inbuilt Force.com construct for automating approval processes:
  - Channel records to different persons (as required);
  - Comprised of one-step or multiple steps;
  - Based on a single either custom or standard object.

### Typical structure of an approval



### Structure of an approval process

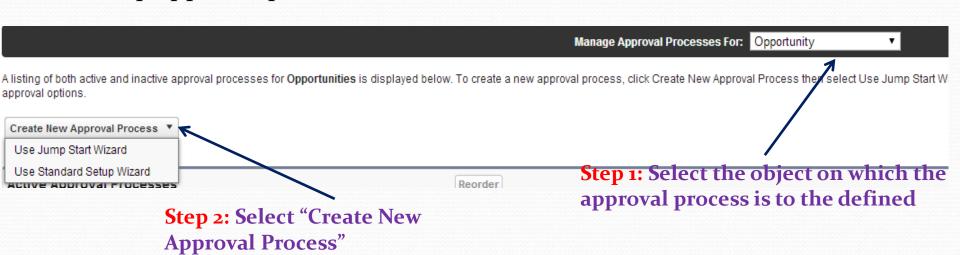
- An approval process has the following "elements":
  - Approval entry criteria
    - Specify the criteria under which an approval process should be invoked (Example: Discount >=0 etc..)
  - Initial Submission Actions
    - Specify who should be able to submit a record for approval;
    - What information relevant to the record should be presented to the approver for approval;
    - Edit ability of a record whilst in the approval process etc....

### Structure of an approval process

- Approval Stages
  - An approval process can be either single-staged or have multiple stages
    - Maximum number of approval stages allowed is 30);
  - Each approval stage can have actions associated in <u>two</u> categories -Acceptance actions and Rejection Actions
- Final Approval Actions
  - Final set of actions to take when an approval request is accepted
- Rejection Actions
  - Set of actions to take when an approval request is declined
- Recall Actions
  - What should be the actions carried out to recall a record?

### Creating an approval process – Preliminary Steps

- Step 1: Specify the object on which approval process is to be created
  - Go to Setup → Build → Create → Workflows and Approvals → Approval Processes
- **Step 2**: Select "Create New Approval Process"
  - Select the option "Use Jump Start Wizard" for creating a simple onestep approval process;
  - Select the option "Use Standard Setup Wizard" for creating a multistep approval process



### Creating an approval process – Preliminary Steps

• **Step 3**: Specify a name and description for the approval process

Step 1. Enter Name and Description				
Enter a name and description for your new approval process.				
Enter Name and Description				
Process Name	Discount Process Automation for ABC			
Unique Name	Discount_Process_Automation_for_ABC			
Description	This approval process automates the entire discount process within ABC			

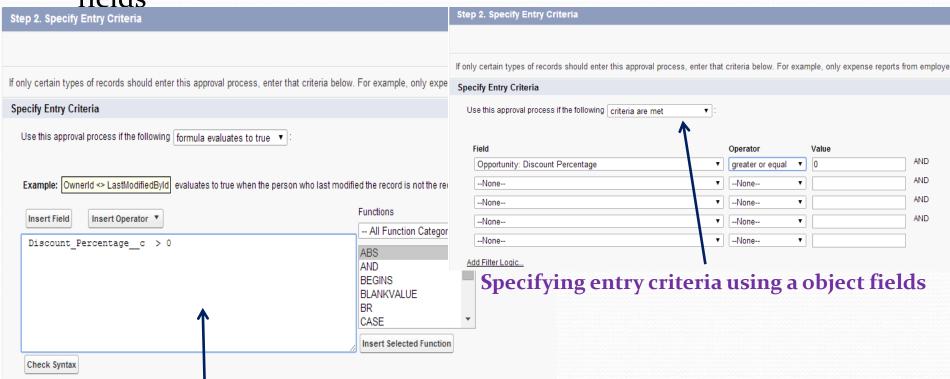
<u>Figure</u>: Entering the name and description of the approval process – Configuring an approval

#### Approval process entry criteria

 Step 4: Entry criteria specifies when a given record should be able to enter the approval process

• The entry criteria could be specified as a formula or using object

fields



Specifying entry criteria using a formula

Figure: Entry criteria - Configuring an approval

### Specifying automated approvers

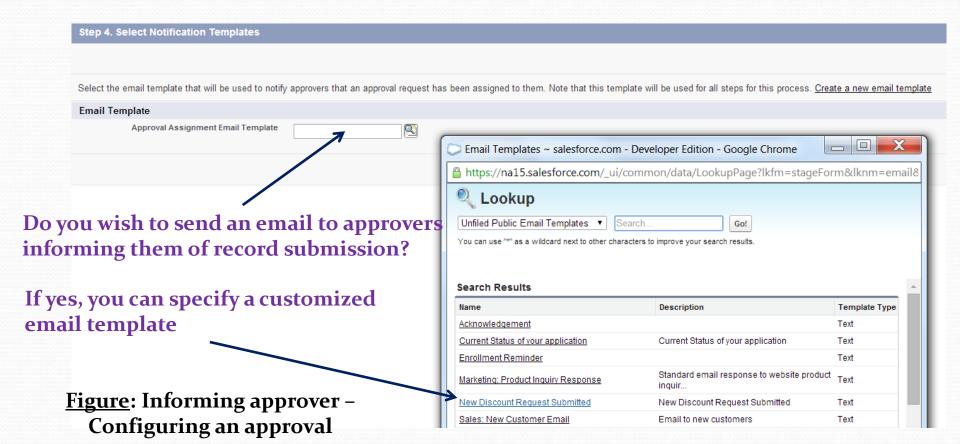
- <u>Step 5</u>: During the next step (optional), you can specify "automated approvers"
  - Automated approvers dynamically route records based on the value of the field in the record
- Specify who can edit the record whilst in approval process

Step 3. Specify Approver Field and Record Editability Properties	
Specify automated a	ipprovers (if any)
When you define approval steps, you can assign approval requests to different users. One of your options is to use record is in the approval process, it will always be locked only an administrator will be able to edit it. However, you may	
Select Field Used for Automated Approval Routing	
Next Automated Approver Determined ByNone	
Use Approver Field of Opportunity Owner	
Specifying edit ability of records whilst in approva	l process
Record Editability Properties	
<ul> <li>Administrators ONLY can edit records during the approval process.</li> <li>Administrators OR the currently assigned approver can edit records during the approval process.</li> </ul>	

Figure: Specifying automated approvers and record edit ability - Configuring an approval

### Informing approvers

- **Step 6**: In the next step (optional), you can set whether approvers (dynamic or static) should be send an email
  - The email to be sent can be customized using an email template



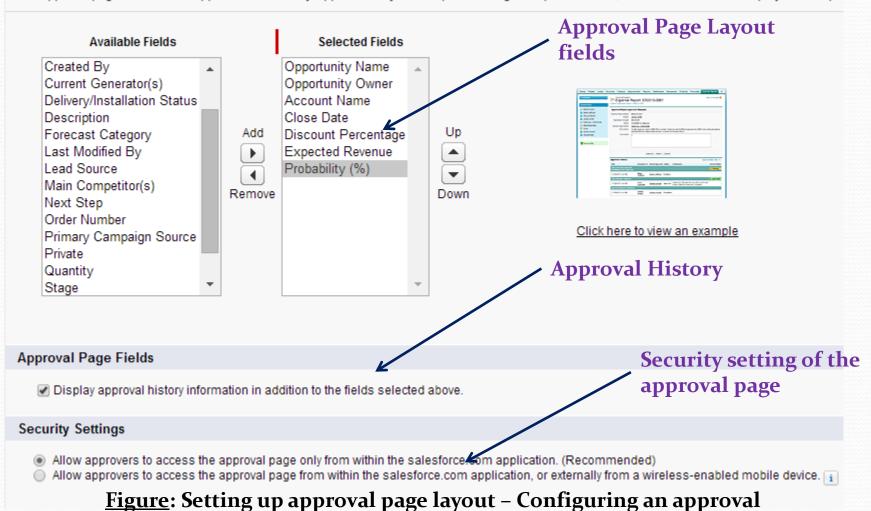
### Setting up approval page layout

- **Step 7**: During this stage, you are required to specify:
  - <u>Fields in Approval Page Layout</u>: Specify which fields from the relevant object should be included in the approval page layout (i.e., which relevant information do you want displayed to the approvers?)
  - <u>Approval History</u>: For multi-stage approvals should all the *relevant* approval history be displayed?
  - <u>Security Settings</u>: Should the approvers be able to access the approval page from within Salesforce, or otherwise?

### Setting up approval page layout

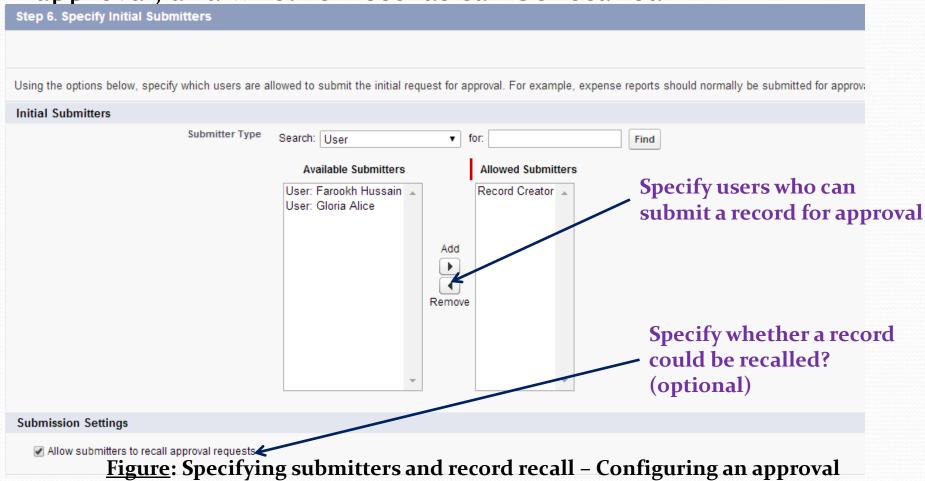
Step 5. Select Fields to Display on Approval Page Layout

The approval page is where an approver will actually approve or reject a request. Using the options below, choose the fields to display on this page.



### Who can submit an approval and recall it?

• **Step 8**: Specify users who can submit a given record for approval, and whether records can be recalled



### Overview of approval process (so far..)

Approval Processes

Opportunity: Discount Process Automation for ABC

Back to Approval Process List

Process Definition Detail			
Process Definition Detail		Edit V Clone Delete View Diagram	
Process Name	Discount Process Automation for ABC	Active	i
Unique Name	Discount_Process_Automation_for_AB(	C Next Automated Approver Determined By	
Description	This approval process automates the er	ntire discount process within ABC	
Entry Criteria	Opportunity: Discount Percen	ntage GREATER OR EQUAL 0	
Record Editability	Administrator OR Current Approver	Allow Submitters to Recall Approval Requests	✓
Approval Assignment Email Template	New Discount Request Submitted		
Initial Submitters	Record Creator		
Created By	Farookh Hussain, 8/1/2014 8:13 PM	Modified By	Farookh Hussain, 8/1/2014 8:13 Pl
Initial Submission Actions 1		Add Existing Add New   Add New	
Action Type		Description	
Record Lock		Lock the record from being edited	
Approval Steps i		New Approval Step	
You have not yet defined	any approval steps		
Final Approval Actions 1		Add Existing Add New ▼	
Action Type		Description	
Edit Record Lock		Lock the record from being edited	
Final Rejection Actions		Add Existing Add New ▼	
Action Type		Description	
Edit Record Lock		Unlock the record for editing	
Recall Actions i		Add Existing	
Action Type		Description	
Record Lock			
NOCOI U LUCK	Figure: Apr	proval process after initial configuration	

#### Initial Submission Actions

- Record automatically locked (cannot be changed)
- However, one or more actions to the initial submission action
  - Field Update;
  - Email Alert;
  - Task.
  - You can define a new action by selecting "Add New", or add an existing action
     Add an action to an initial submission action

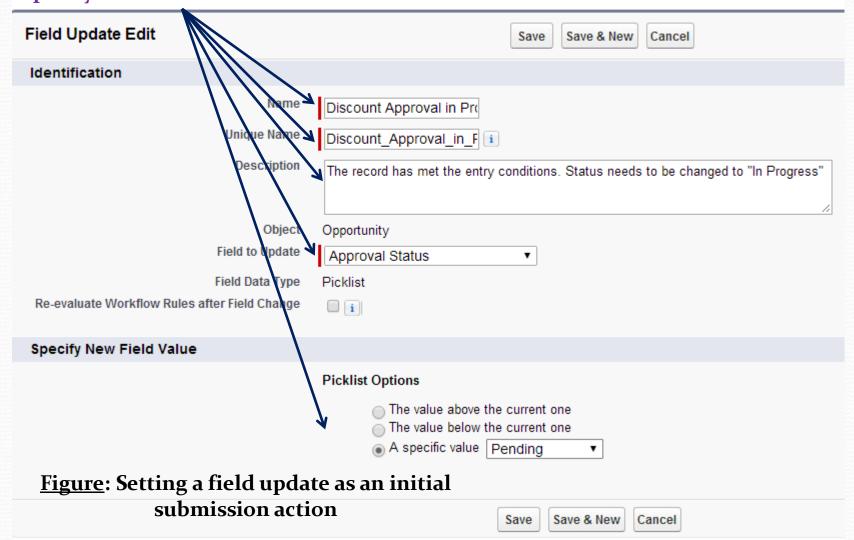


You can add an existing action to the set of initial actions

#### Example initial submission action -

Discount Approval in ProcesField Update

Define the field update, including the object associated with the workflow rule, approval process, or entitlement process, the field to uthat you select the details of the task



### Example initial submission action – Email Alert

Step 2. Custom Email Template: New Template Defining a new email template as an initial submission action Email Template Information Folder Unfiled Public Email Templates ▼ Available For Us **Email Template Name** Record successfully sub Template Unique Name Record successfully su i ncodina General US & Western Europe (ISO-8859-1, ISO-LATIN-1) ▼ scription Record\_successfully\_submitted\_to\_approval Step 3. Create HTML version HTML Email Content Subject Record successfully approved HTML Body Dear Sir/Madam: Thank you very much for submitting an approval. This is to confirm that your approval has passed the initial criteria test and is now with the approvers With Best Regards Figure: Setting an email alert as an initial submission action

### Example initial submission action – Email Alert

New Email Alert	Specify the setting of the email alert as an initial
Create an email alert to associate with one or n	nore workflow rules, approval processes, pentitiement processes. When changing an email alert, any modifica
Email Alert Edit	Save & New Cancel
Edit Email Alert	
Description	Your record have been submitted to approvers
Unique Nam	Your_record_has_beer
Obje	ct Opportunity
Email Templa	Record successfully sub
Protected Compone	nt
Recipient Typ	Search: Creator v for: Find
Recipien	Available Recipients Selected Recipients
	None A Record Creator
	Add

Figure: Setting an email alert as an initial submission action

# Initial Submission Actions – after specification

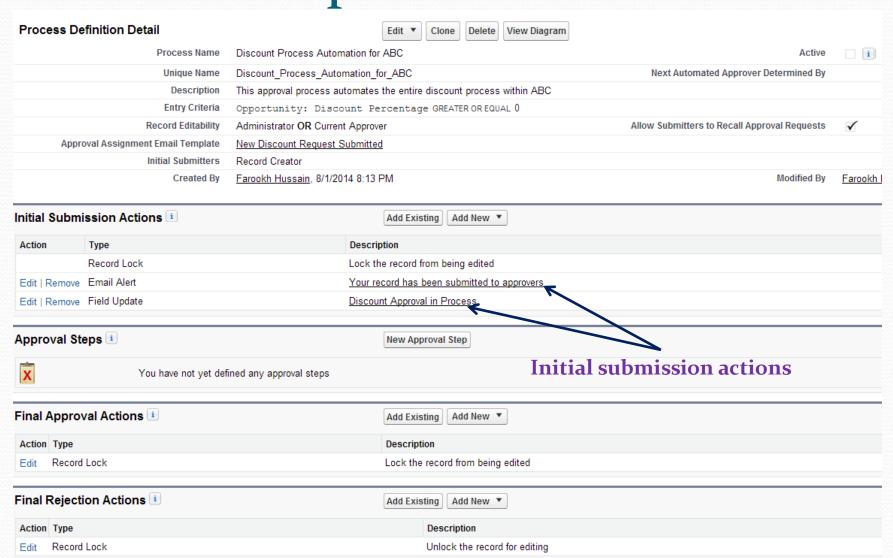


Figure: Approval process after configuration and defining initial submission actions

### Creating approval steps

- An approval process can be comprised of a single or multiple stages:
  - The settings for each stage needs to be defined
    - Name and description of the approval stage;
    - Entry Criteria for that stage;
    - Approvers for that stage
  - The approver for each step can be different

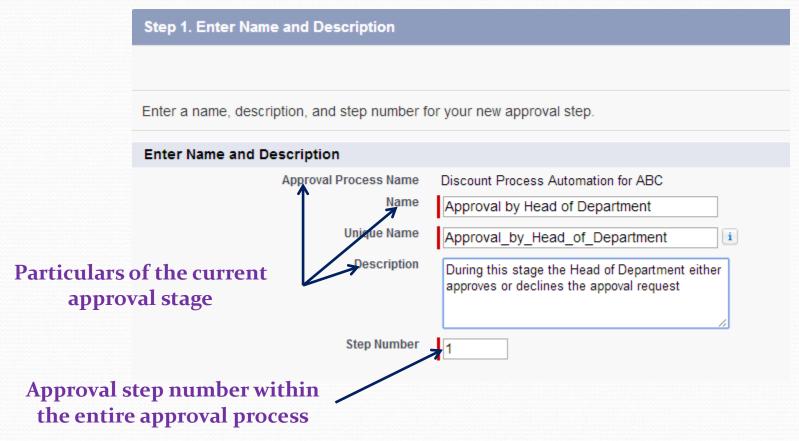
new approval stage

### Creating approval steps

- Multiple actions can be defined against each approval step
- The actions associated with each approval step can be categorized broadly into two parts:
  - Actions to take if record is accepted at that stage (<u>Approval</u> <u>Actions</u>)
    - Corresponding actions could be email alert, task or field update;
    - Multiple actions could be defined against this stage.
  - Actions to take if approval is declined at that stage (<u>Rejection</u>
     <u>Actions</u>)
    - Corresponding actions could be email alert, task or field update;
    - Again, multiple actions could be defined against this stage.

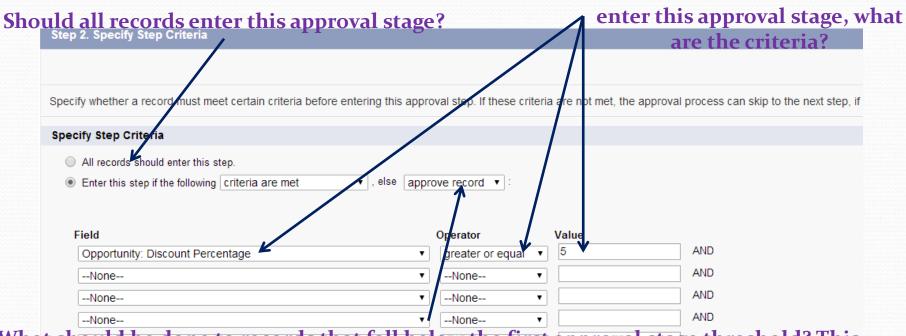
### Defining first approval stage Particulars

• **Step 1**: Specify the particulars of the first approval stage



### Defining first approval stage – Entry criteria

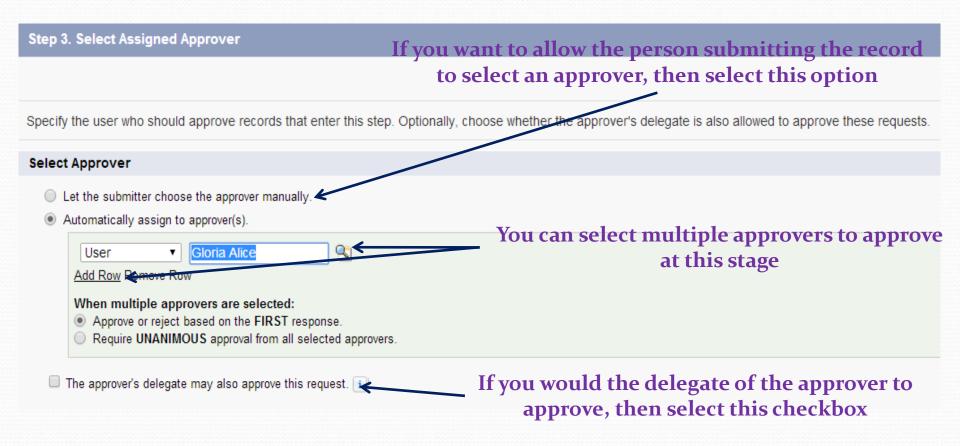
- Step 2: Specify the entry criteria for records to enter this stage:
  - This specifies which records should enter this approval stage;
  - Only during the first approval stage you can either automatically decline or approve records.



What should be done to records that fall belows the first approval stage threshold? This Add Filter Logic... option is available only during the first approval stage

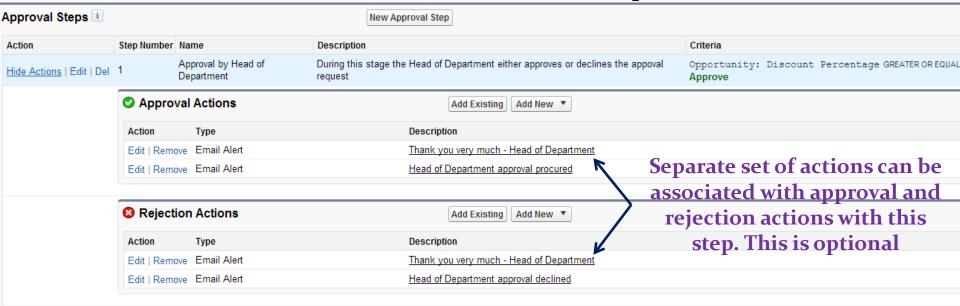
## Defining approvers for first approval stage

• **Step 3**: Specify who should be able to approve records during the first approval stage

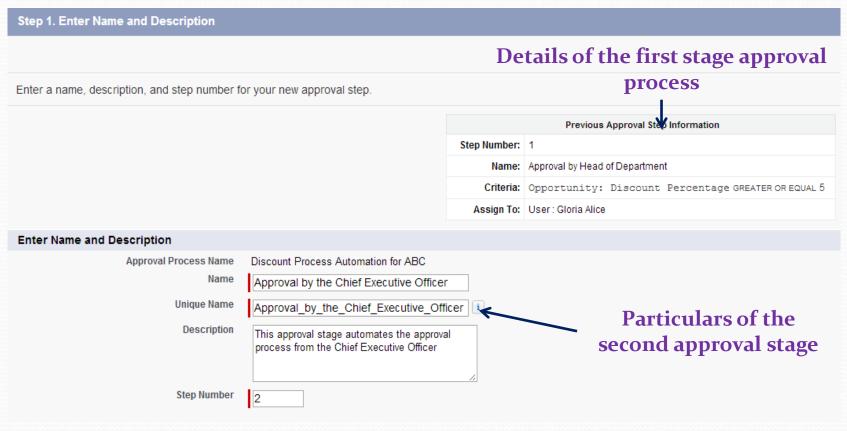


### Actions with each approval stage

- Each approval stage can have multiple actions associated with it.
- There could be distinct set of approval actions or rejection actions
  - These actions could be email alert, field update or task



 You can define up to thirty approval stages within a single approval process



- Specify which records should be able to enter this approval stage
  - Notice that there is no auto-accept or auto-reject action

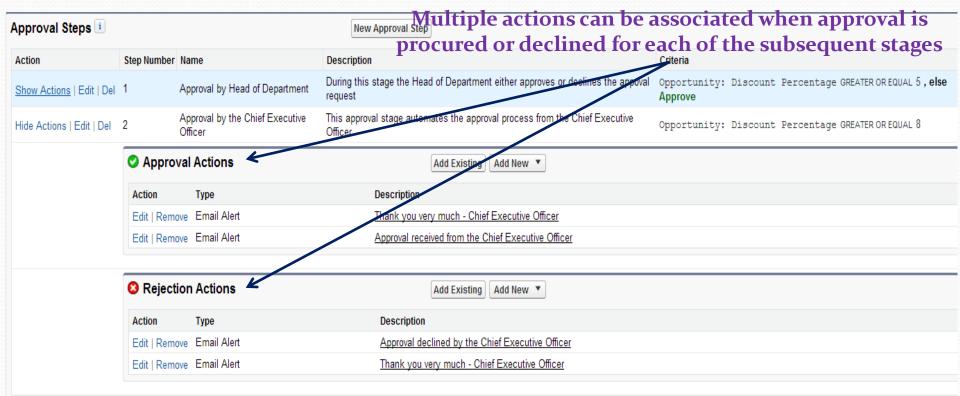
Specify whether a record must meet certain criteria before entering this approval step. If these criteria are not met, the approval process can skip to the next step, if one Previous Approval Step Information Step Number: 1 Name: Approval by Head of Department Criteria: Opportunity: Discount Percentage GREATER OR EQUAL 5 Assign To: User: Gloria Alice Specify Step Criteria All records should enter this step. Criteria to determine which Enter this step if the following | criteria are met ▼ |: records will enter this approval stage Field Operator AND Opportunity: Discount Percentage greater or equal AND --None----None--AND --None----None--• AND --None----None--• --None----None--• Add Filter Logic...

- Selecting approvers: Similar to the first stage, approvers can be selected for subsequent stages
  - The selected approvers, for each of the subsequent stages, can be different from the first stage
- Reject Behaviour:
  - This part is not there is the first approval stage, however, every subsequent approval stage has it;
  - In case the approval request is declined, which set of rejection actions should be carried out?

#### Select Approver Let the submitter choose the approver manually. Automatically assign to approver(s). Specifying approvers for Farookh Hussain User second stage Add Row Remove Row When multiple approvers are selected: Approve or reject based on the FIRST response. Require UNANIMOUS approval from all selected approvers. The approver's delegate may also approve this request. If the approval is declined, Reject Behavior which set of rejection actions should be carried out? What should happen if the approver rejects this request? Perform all rejection actions for this step AND all final rejection actions. (Final Rejection) Perform ONLY the rejection actions for this step and send the approval request back to the most recent approver. (Go Back 1 Step)

### Subsequent approval actions

- Similar to the first stage, each approval stage can have multiple actions associated with it.
  - There could be set of approval actions or rejection actions;
  - These actions could be email alert, field update or task



### Final Approval Actions

- Set of actions to be carried out in case the record is finally approved
  - Multiple actions could be associated with this stage of the approval
  - These actions could be email alert, field update or task
  - By default the record is locked, but this can be edited
- Select "Add New" in the "Final Approval Actions" section to define new actions



### Final Rejection Actions

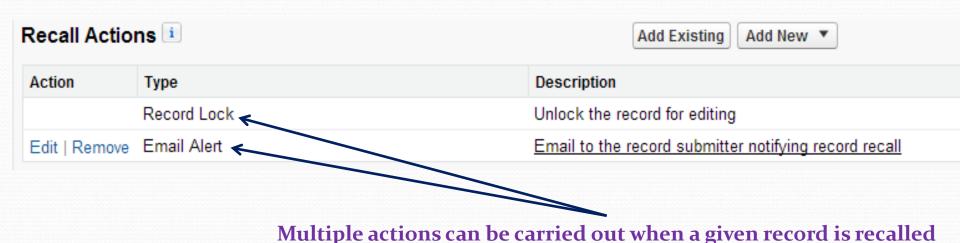
- Set of actions to be carried out in case approval is declined
  - Multiple actions could be associated with this stage;
  - These actions could be email alert, field update or task;
  - By default the record is unlocked, but this can be edited.
- Select "Add New" in the "Final Rejection Actions" section to define new actions



Multiple actions to be carried out when the final overall decision to decline has been made

#### Recall actions

- Set of actions to be carried out, in case, the record is recalled:
  - Similar to final approval and rejection action elements, multiple actions could be associated with this stage;
  - These actions could be email alert, field update or task
  - By default the record is locked and this cannot be changed.



### Example of creating a recall action – Email Alert

 This email alert will inform the record creator that the record has been recalled.

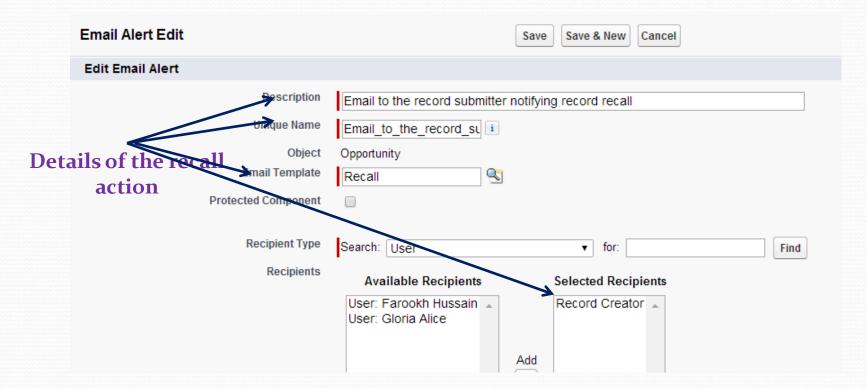
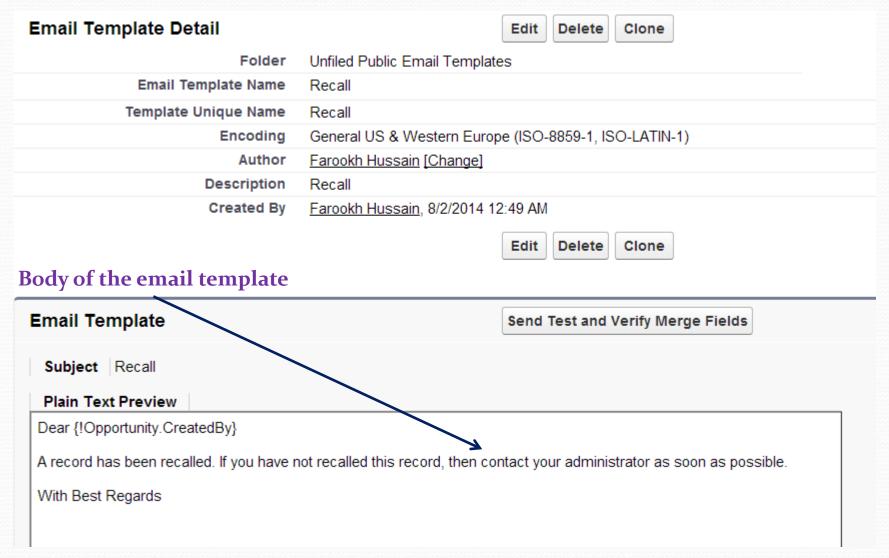


Figure: Setting an email alert as a recall action

### Email template for recall action



<u>Figure</u>: Example email template – To be used when a record is recalled

# Pictorially depicting the approval process

 Use "view diagram" on the approval process overview section, to pictorially view the entire approval process

Approval Processes



Click on "View Diagram" to visualize the entire approval process

### Activating approvals

- Click on "Activate" on the approval process overview section, to active it:
  - Once an approval process is activated it cannot be edited;

Approval Processes

Opportunity: Discount Process Automation for ABC

• The only way to edit an active approval process is to "Deactivate" it, and "Clone" it with a new name.

« Back to Approval Process List **Process Definition Detail** Delete Activate View Diagram Process Name Discount Process Automation for ABC Active Discount\_Process\_Automation\_for\_ABC Unique Name Next Automated Approver Determined By This approval process automates the entire discount process within ABC Entry Criteria Opportunity: Discount Percentage GREATER OR EQUAL 0 Record Editability Administrator OR Current Approver Allow Submitters to Recall Approval Requests New Discount Request Submitted Approval Assignment Email Template Record Creator Initial Submitters Farookh Hussain, 8/1/2014 8:13 PM Created By Farookh Hussain, 8/2/2014 12:

#### Click on "Activate" to activate approval process

#### Conclusion

- Approvals
  - Initial configuration/setup
  - Initial submission step
  - Approval stages
    - Different Approvers
    - Multiple Actions for approval stages
  - Final acceptance / rejection / recall actions

#### Reading Books

 McGuire, C., Roth, C., Carroll, D., and Tran, N. (2013), Force.com Fundamentals: An Introduction – Chapter 8