

Week 09

Tutorial on Defining and Executing
Workflows on the Force platform

Solution for the Simple Automatic
Patient Appointment Reminder
Application



SCHOOL OF SOFTWARE

(1) Create a new patient object

- To create a new patient object go to
- Your Name → Application Set up → Create → Objects

The screenshot shows the Salesforce 'Custom Objects' page. The left sidebar contains navigation links: Home, Positions, Job Applications, Employees, and a plus sign. Below these are sections for 'Expand All | Collapse All', 'Quick Find', 'Force.com Home', 'System Overview New!', 'Personal Setup' (with links to My Personal Information, Email, Import, Desktop Integration, My Chatter Settings, My Social Accounts and Contacts), and 'App Setup' (with links to Customize, Create, Apps, Custom Labels, Interaction Log Layouts, Objects, and Packages). The main content area is titled 'Custom Objects' and includes a description of custom objects and a 'New Custom Object' button. A table lists existing objects: Customer, Employee, Interviewer's Review, Job Application, and Position. Annotations include a blue arrow pointing to the 'Objects' link in the sidebar labeled 'Step 1 : Select "Objects"', and another blue arrow pointing to the 'New Custom Object' button labeled 'Step 2 : New Custom Object'.

Home Positions Job Applications Employees +

Expand All | Collapse All

Quick Find

Force.com Home

System Overview **New!**

Personal Setup

- My Personal Information
- Email
- Import
- Desktop Integration
- My Chatter Settings
- My Social Accounts and Contacts **New!**

App Setup

- Customize
- Create
 - Apps
 - Custom Labels
 - Interaction Log Layouts
 - Objects**
 - Packages

Custom Objects

Custom objects are database tables that allow you to store data specific to your organization in salesforce.com. You can use custom objects to extend salesforce.com application functionality.

Once you have created a custom object, you can create a custom tab, custom related lists, reports, and dashboards for users to interact with the custom object data, object data through the Force.com API.

New Custom Object Schema Builder

Action	Label	Master Object	Deployed	Description
Edit Del	Customer		✓	This object is used to store customer records
Edit Del	Employee		✓	
Edit Del	Interviewer's Review	Job Application	✓	This object is used to store the review score assigned by an interviewer
Edit Del	Job Application		✓	This object is used to store job application/position details
Edit Del	Position		✓	This object is used to store instances of the position object

Step 1 : Select "Objects"

Step 2 : New Custom Object

Create a new patient object

- Enter the details of the patient object and save it.

The screenshot shows the 'Custom Object Information' section of the Salesforce setup interface. It includes fields for Label, Plural Label, Object Name, Description, Context-Sensitive Help Setting, and Content Name. Below this is the 'Enter Record Name Label and Format' section with fields for Record Name and Data Type. At the bottom is the 'Optional Features' section with checkboxes for Allow Reports, Allow Activities, and Track Field History. Blue arrows point from a purple text label to the Label, Plural Label, Object Name, Description, and Record Name fields.

Custom Object Information

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

Label Patient **Example: Account**

Plural Label Patients **Example: Accounts**

Starts with vowel sound ☐

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

Object Name Patient **Example: Account**

Description This object is used to store the patient's details

Context-Sensitive Help Setting

☒ Open the standard Salesforce.com Help & Training window

☐ Open a window using a Visualforce page

Content Name --None--

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name field is always called "Name" when referenced via the API.

Record Name Patient Name **Example: Account Name**

Data Type Text

Optional Features

☐ Allow Reports

☐ Allow Activities

☐ Track Field History

Enter the details of the patient object

Create a new patient object

Context-Sensitive Help Setting

☒ Open the standard Salesforce.com Help & Training window
☐ Open a window using a Visualforce page

Content Name

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account Record Name field is always called "Name" when referenced via the API.

Record Name **Example: Account Name**

Data Type

Optional Features

☐ Allow Reports
☐ Allow Activities
☐ Track Field History

Deployment Status

☐ In Development
☒ Deployed

Object Creation Options (Available only when custom object is first created)

☐ Add Notes and Attachments related list to default page layout
☐ Launch New Custom Tab Wizard after saving this custom object

Save **Save & New** **Cancel**

Enter the details of the patient object

Click "Save" to save the patient object

Create a custom fields in the patient object

Custom Object Patient

[Standard Fields \[4\]](#) | [Custom Fields & Relationships \[0\]](#) | [Validation Rules \[0\]](#) | [Page Layouts \[1\]](#) | [Field Sets \(BETA\) \[0\]](#) | [Search Layouts \[4\]](#) | [Record Types \[0\]](#) | [Apex Sharing Reasons \[0\]](#) | [Apex Sharing Recalculation \[0\]](#)

Custom Object Definition Detail

[Edit](#) [Delete](#)

Singular Label	Patient	Description
Plural Label	Patients	Enable Reports
Object Name	Patient	Track Activities
API Name	Patient__c	Track Field History
		Deployment Status
		Help Settings
Created By	Farookh Hussain , 20/05/2012 1:10 PM	Modified By

Standard Fields

Action	Field Label	Field Name	Data Type
	Created By	CreatedBy	Lookup(User)
	Last Modified By	LastModifiedBy	Lookup(User)
Edit	Owner	Owner	Lookup(User,Queue)
Edit	Patient Name	Name	Text(80)

Click “New” to define custom fields in the patient object

Custom Fields & Relationships

[New](#) [Field Dependencies](#)

No custom fields defined

[New Custom Fields & Relationships](#)

Related Lookup Filters

No related lookup filters defined.

Validation Rules


[New](#)

Defining the custom fields in the patient object

- Create the following custom fields in the patient object:
 - Patient's Name(Text)
 - Patient Illness Record (Text - Long)
 - Patient Email Address (Email)
 - Doctor's Name (Text)
 - Doctor's Email Address (Email)
 - Next Appointment Date and Time (Date/Time)
 - Patient Notified? (Pick List of the following two values: Yes and No). Default value for this field is No.

Example of creating custom field in the patient object – Patient Notified?


Step 2. Enter the details

Field Label 

Please enter the list of values for the picklist field below. Each value should be separated by a new line.

No
Yes

☐ Sort values alphabetically, not in the order entered. Values will be displayed alphabetically even when ☒ Use first value as default value

Field Name 

Description

Help Text

Enter the name of the custom field (Patient Notified). The type of this field is Pick list.

Enter the various possible values for this pick list field

Enter the description of this field

Patient Object after defining the required custom fields

Custom Fields & Relationships

[New](#)[Field Dependencies](#)

Action	Field Label	API Name	Data Type	Controlling I
Edit Del	<u>Doctor's Email Address</u>	Doctor_s_Email_Address__c	Email	
Edit Del	<u>Doctor's Name</u>	Doctor_s_Name__c	Text(70)	
Edit Del	<u>Email Address</u>	Email_Address__c	Email	
Edit Del	<u>First Name</u>	First_Name__c	Text(60)	
Edit Del	<u>Illness Record</u>	Illness_Record__c	Rich Text Area(32768)	
Edit Del	<u>Last Name</u>	Last_Name__c	Text(70)	
Edit Del	<u>Next Appointment Data and Time</u>	Next_Appointment_Data_and_Time__c	Date/Time	
Edit Del Replace	<u>Patient Notified</u>	Patient_Notified__c	Picklist	

Define a new tab for the patient object

Force.com Home

System Overview *New!*

Personal Setup

- My Personal Information
- Email
- Import
- Desktop Integration
- My Chatter Settings**
- My Social Accounts and Contacts *New!*




App Setup

- Customize
- Create**
 - Apps
 - Custom Labels
 - Interaction Log Layouts
 - Objects
 - Packages
 - Report Types
 - Tabs**
- Workflow & Approvals

Custom Object Tabs look and behave like the standard tabs provided with salesforce.com. Web Tabs allow you to embed external web applications and c Visualforce Tabs allow you to embed Visualforce Pages.

Custom Object Tabs

[New](#) [What Is This?](#)

Action	Label	Tab Style	Description
Edit Del	Employees	 Camera	
Edit Del	Job Applications	 Chalkboard	
Edit Del	Positions	 Castle	This tab is meant to interface the position object

Web Tabs

[New](#) [What Is This?](#)

No Web Tabs have been defined

Visualforce Tabs

[New](#) [What Is This?](#)

No Visualforce Tabs have been defined

Step 1 : Select "Objects"

Step 2 : Create a new tab and associate it with the Patient Object

(2) Create a patient management application, and provide it with access to the patient object

- To create a new patient object go to
- Your Name → Application Set up → Create → Apps

System Overview New!

Personal Setup

- ▶ My Personal Information
- ▶ Email
- ▶ Import
- ▶ Desktop Integration
- ▶ My Chatter Settings
- ▶ My Social Accounts and Contacts New!

App Setup

- ▶ Customize
- ▶ **Create**
 - Apps**
 - Custom Labels
 - Interaction Log Layouts
 - Objects
 - Packages
 - Report Types
 - Tabs
 - ▶ Workflow & Approvals
- ▶ Develop
- ▶ Deploy

Apps Quick Start New Reorder

Action	App Label	Service Cloud Console	Custom	Description
Edit	Call Center	<input type="checkbox"/>	<input type="checkbox"/>	State-of-the-Art On
Edit	Community	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM C
Edit Del	HRApplication	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This is a human r
Edit Del	Human Resource Management Application	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This application is
Edit	Marketing	<input type="checkbox"/>	<input type="checkbox"/>	Best-in-class on-c
Edit	Platform	<input type="checkbox"/>	<input type="checkbox"/>	The fundamental f
Edit Del	Recruiting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Manage positions
Edit	Sales	<input type="checkbox"/>	<input type="checkbox"/>	The world's most
Edit	Salesforce Chatter	<input type="checkbox"/>	<input type="checkbox"/>	The Salesforce Ct
Edit	Sample Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The out-of-the box
Edit	Site.com	<input type="checkbox"/>	<input type="checkbox"/>	Build pixel-perfect, published sites.

Step 1 : Select “Apps to create a new application”

Step 2 : Select “New” to create a new application

Enter the details for the application

- Enter the details of the new patient appointment management applications

New Custom App

Step 2. Enter the Details

Fill in the fields below to define the custom app.

Custom App Information

App Label	<input type="text" value="Patient Appointment Mgmt Application"/>	Example: HRforce, Financeforce, Bugforce
App Name	<input type="text" value="Patient_Appointment_Mgr"/> 	
Description	<div>This application is used to store the appointment details of the patient and send reminders to the patient and the doctor</div>	

Enter the details of the patient management application

Adding tabs to the patient application

- Provide the new application with access to the patient tab

Step 4. Choose the Tabs

Choose the tabs to include in this custom app.

Available Tabs

- Console
- Ideas
- Answers
- Profile
- People
- Groups
- Files
- Chatter
- Data.com
- Site.com
- Positions
- Job Applications
- Employees

Selected Tabs

- Home
- Patients

Add
Remove

Up
Down

Default Landing Tab: Home

Select the tabs to be included in this application

(3) Create three instances (or records) of the patient object

Step 1 : Select “Patient Tab”

Step 2 : Select “New” to create a new patient record

The screenshot displays the Salesforce 12 user interface. At the top, the Salesforce logo and version number '12' are visible, along with a search bar labeled 'Search All...' and a 'Search' button. Below the header, a navigation bar contains tabs for 'Home', 'Positions', 'Job Applications', 'Employees', and 'Patients'. The 'Patients' tab is highlighted with a yellow background. To the left of the main content area, there is a 'Recent Items' sidebar listing various entities like 'Board of Directors', 'John Smith', and 'Farookh Hussain'. The main content area is titled 'Patients Home' and includes a 'View:' dropdown set to 'All', a 'Go!' button, and a link to 'Edit | Create New View'. Below this, a section titled 'Recent Patients' contains a 'New' button and a message: 'No recent records. Click Go or select a view from the dropdown to display records.' Two blue arrows are overlaid on the image: one points from the 'Patients' tab in the navigation bar to the 'New' button, and the other points from the 'New' button to the 'Recent Patients' section.

4(a) Create a workflow rule to evaluate the current value of the object field *Patient Notified*?

The screenshot shows the Salesforce Setup interface. On the left is a sidebar with navigation links. The main area is titled 'All Workflow Rules' and contains instructions on how to create workflow rules. A blue arrow points from the 'Workflow & Approvals' link in the sidebar to the 'Workflow Rules' link at the bottom. Another blue arrow points from the 'New Rule' button in the main area to the text 'Step 2 : Select New'.

Force.com Home

System Overview *New!*

Personal Setup

- My Personal Information
- Email
- Import
- Desktop Integration
- My Chatter Settings
- My Social Accounts and Contacts *New!*

App Setup

- Customize
- Create**
 - Apps
 - Custom Labels
 - Interaction Log Layouts
 - Objects
 - Packages
 - Report Types
 - Tabs
 - Workflow & Approvals**
 - Workflow Rules

All Workflow Rules

Configure your organization's workflow by creating workflow rules. Each workflow rule consists of:

- Criteria that cause the workflow rule to run.
- Immediate actions that execute when a record matches the criteria. For example, salesforce.com can automatically send when a new high-value opportunity is created.
- Time-dependent actions that queue when a record matches the criteria, and execute according to time triggers. For exam send an email reminder to the account team if a high-value opportunity is still open ten days before the close date.

View: All Workflow Rules [Create New View](#)

[New Rule](#)

Rule Name ↑	Description
No records to display.	

Step 1 : Select “Workflow Rules”

Step 2 : Select New

4(a) Create a workflow rule to evaluate the current value of the object field *Patient Notified*?

Home Positions Job Applications Employees Patients +

Expand All | Collapse All

Quick Find

Force.com Home

System Overview **New!**

Personal Setup

- My Personal Information
- Email
- Import
- Desktop Integration
- My Chatter Settings
- My Social Accounts and Contacts **New!**

App Setup

- Customize
- Create
 - Apps
 - Custom Labels
 - Interaction Log Layouts
 - Objects
 - Packages
 - Report Types

Workflow Rule

New Workflow Rule

Step 1: Select object

Select the object to which this workflow rule applies.

Select object

- Patient
- None--
- Account
- Asset
- Campaign
- Campaign Member
- Case
- Case Comment
- Contact
- Contract
- Customer
- Employee
- Event
- Idea
- Interviewer's Review
- Job Application
- Lead
- Opportunity
- Opportunity Product
- Organization
- Patient

Select the object on which the workflow rule is to be defined

4(a) Create a workflow rule to evaluate the current value of the object field *Patient Notified*?

Edit Rule Evaluate if the Patient has

Enter the name, description, and criteria to trigger your workflow rule. In the next step, associate workflow actions with this workflow rule.

Step 2: Save the workflow rule → **Save** **Cancel**

Step 1: Enter the details and logic of the workflow rule

Edit Rule

Object Patient

Rule Name Evaluate if the Patient has

Description This rule is used to determine if the patient has yet been notified of the next appointment time and date

Evaluation Criteria

Evaluate the rule when a record is:

☐ created

☒ created, and every time it's edited

☐ created, and any time it's edited to subsequently meet criteria

How do I choose?

You cannot add time-dependent workflow actions with this option.

Rule Criteria

Run this rule if the following criteria are met:

Field	Operator	Value	
Patient Notified	equals	No	AND
--None--	--None--		AND
--None--	--None--		AND
--None--	--None--		AND
--None--	--None--		AND

[Add Filter Logic...](#)

Save **Cancel**

4(b) Create an email template for sending reminder emails to the patients

Go to your Profile Name on Top right hand side of the page → [My Settings](#) → [Email](#) → [Email Templates](#)

Force.com Home

System Overview **New!**

Personal Setup

- My Personal Information
- Email**
 - My Email Settings
 - [My Templates](#)
 - My Stay-in-Touch Settings
 - My Mass Emails
- Import
- Desktop Integration
- My Chatter Settings
- My Social Accounts and Contacts **New!**

App Setup

- Customize

Unfiled Public Email Templates

Below is a list of all your email templates in the folder selected. Click the new button to create a new text, HTML, sending single emails. For mass emails, only text, HTML, and Custom templates may be used.

Folder: Unfiled Public Email Templates [Create New Folder](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S

[New Template](#)

Action	Email Template Name ↑	Template Type	Available For Use	Description
Edit Del	Marketing: Product Inquiry Response	Text	✓	Standard email respon
Edit Del	Sales: New Customer Email	Text	✓	Email to new customer
Edit Del	SUPPORT: Self-Service New Comment Notification (SAMPLE)	Text	✓	Sample email template a public comment has
Edit Del	SUPPORT: Self-Service New User Login Information (SAMPLE)	Text	✓	Notification of login and
Edit Del	SUPPORT: Self-Service Reset Password (SAMPLE)	Text	✓	Notification of new pas
Edit Del	Support: Case Assignment Notification	Text	✓	Notification to rep wher
Edit Del	Support: Case Created (Phone Inquiries)	Text	✓	Notification to custome
Edit Del	Support: Case Created (Web Inquiries)	Text	✓	Notification to custome
Edit Del	Support: Case Response	Text	✓	Standardized template
Edit Del	Support: Escalated Case Notification	Text	✓	Notification email on c

Step 1: Select “My Templates”

Step 2: Select “New Template”

4(b) Create an email template for sending reminder emails to the patients

Available Merge Fields

Select Field Type

Patient Fields

Select Field

Next Appointment Data and Time

Copy Merge Field Value

{!Patient__c.Next_Appoint

Copy and paste the merge field value into your template below.

Use merge fields to select the date values in the patient record in the email template

Step 2. Text Email Template: New Template

Previous Save

Email Template Information

Folder: Unfiled Public Email Templates

Available For Use: ☒

Email Template Name: Template for sending patie

Template Unique Name: Template_for_sending_pat

Encoding: General US & Western Europe (ISO-8859-1, ISO-LATIN-1)

Description: Your appointment at Hospital SouthWest

Subject: Your appointment at Hospital SouthWest

Email Body:

Dear {!Patient__c.OwnerFirstName}

You are scheduled to see Dr {!Patient__c.Doctor_s_Name__c} on
{!Patient__c.Next_Appointment_Data_and_Time__c}.

Please let us know if you are unable to make it to this appointment.

With Best Regards

The Management of Hospital SouthWest

= Required Info

Enter the details of the template including the body of the template and "Save" it

Save the email template

4(c) Create a workflow action to send appointment reminder to patients automatically

- Go to Build → Create → Workflow & Approvals → Workflow Rules
- Select the workflow rule that you created for evaluating the “Patient Notified” object field
- Select “Immediate Workflow Action”

4(c) Create a workflow action to send appointment reminder to patients automatically

Edit Rule Evaluate if the patient has been notified

Step 3: Specify Workflow Actions

Specify the workflow actions that will be triggered when the rule criteria are met. [See an example](#)

Rule Criteria	Patient: Patient Notified EQUALS No
Evaluation Criteria	When a record is created, or when a record is edited and did not previously meet the rule criteria

Immediate Workflow Actions

No workflow actions have been added.

Add Workflow Action ▾

New Email Alert

New Field Update

New Outbound Message

Select Existing Action

[See an example](#)

No workflow actions have been added. Before adding a workflow action, you must have at least one time trigger defined.

Add Time Trigger

Select “New Email Alert”
as Workflow Action

4(c) Create a workflow action to send appointment reminder to patients automatically

processes associated with it.

Email Alert Edit

Save Save & New Cancel

Edit Email Alert

Description Your next appointment at Hospital SouthWest

Unique Name Your_next_appointment_a

Object Patient

Email Template Template for sending patie

Protected Component ☐

Recipient Type Search: Email Field for: Find

Recipients

Available Recipients

--None--

Add



Remove

Selected Recipients

Email Field: Doctor's Email Address
Email Field: Email Address

You can enter up to five (5) email addresses to be notified.

Additional Emails

Step 1: Enter the description for the email to be sent out

Step 2: Select the Email Template defined for sending our reminder emails

Step 3: From the drop-down list select "Email Field" and select the Patients and Doctor's Email Address Field

Step 4: Save the workflow action

4(d) Define Workflow Action to automatically update the *Patient Notified?* object field

Edit Rule Evaluate if the patient has been notified

Step 3: Specify Workflow Actions

Specify the workflow actions that will be triggered when the rule criteria are met. [See an example](#)

Rule Criteria Patient: Patient Notified EQUALS No

Evaluation Criteria When a record is created, or when a record is edited and did not previously meet the rule criteria

Immediate Workflow Actions

Action	Type	Description
Edit Remove	Email Alert	Your next appointment at Hospital SouthWest

Add Workflow Action ▾

New Email Alert

New Field Update

New Outbound Message

Select Existing Action

[Add Time Trigger](#)

Workflow Actions [See an example](#)

have been added. Before adding a workflow action, you must have at least one time trigger defined.

Select "New Field Update" as Workflow Action

4(d) Define Workflow Action to automatically update the *Patient Notified?* object field

Edit Field Update

Update the patient notified status

Define the field update, including the object associated with the workflow rule, approval process, or entitlement process, the field to update, and a related object. Fields are shown only for the type that you select.

Field Update Edit [Save] [Save & New] [Cancel]

Identification

Name [Update the patient notified] **Step 1: Enter a name, description for the workflow action**

Unique Name [Update_the_patient_notified] **Step 2: Select the field of the patient record that needs to be update**

Description [This field is used to automatically update the patient notified status on the corresponding patient record]

Object Patient

Field to Update [Patient Notified] **Step 3: Specify the new value for the Patient Notified Status?**

Field Data Type Picklist

Re-evaluate Workflow Rules after Field Change ☐

Specify New Field Value

Picklist Options

- ☐ The value above the current one
- ☐ The value below the current one
- ☒ A specific value [Yes] **Step 4: Select "New"**

[Save] [Save & New] [Cancel]

Activate Workflow

Step 4: Select “Activate”
activate the workflow rule
and its associated actions.

All Workflow Rules

Configure your organization's workflow by creating workflow rules. Each workflow rule consists of:

- Criteria that cause the workflow rule to run.
- Immediate actions that execute when a record matches the criteria. For example, salesforce.com can automatically send an email that notifies the account team when a new high-value opportunity is created.
- Time-dependent actions that queue when a record matches the criteria, and execute according to time triggers. For example, salesforce.com can automatically send an email reminder to the account team if a high-value opportunity is still open ten days before the close date.

View: All Workflow Rules  [Create New View](#)

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other **All**

[New Rule](#)

Action

Rule Name 

Description

[Edit](#) | [Del](#) | [Activate](#)

[Evaluate if the patient has been notified](#)

This rule is used to determine if the patient has yet been notified of the next appointment time and date

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other **All**