



Department of Information Technology, PICT Pune

Third Year Information Technology (2019 Course) 314458: Laboratory

Practice-II (Cloud Computing)

Design and develop "TODO List Application" using Salesforce Cloud.

Assignment no. 7

Name and roll number of group members

Rohit Pendse	33358
Harshal Rajput	33363
Shubham Saraf	33369
Atharva Sarwate	33370

Guided by Prof. Sachin Pande

Assignment - 7 CCL

Aim: Custom application using Salesforce cloud.

Problem statement:

A-1 Salesforce

Design an application using Salesforce cloud.
(Mini Project) which is custom

#

Theory:

Q-1. What is Salesforce?

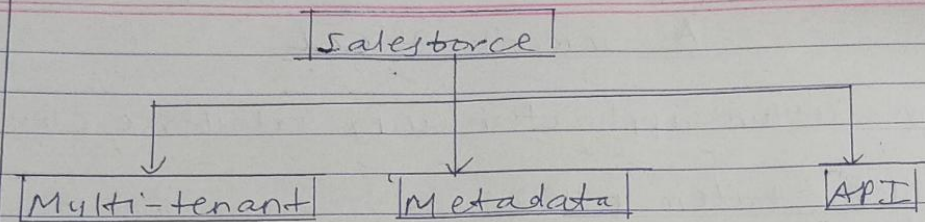
1. Salesforce Inc. is a famous American cloud-based software company that provides CRM services. Salesforce is a popular CRM tool for support, sales and marketing teams worldwide.

- Salesforce services allow businesses cloud technology to better connect with partners, customers and potential users. Using Salesforce CRM, companies can track customer activity, market to customers and many more services.

- The solution was built as an affordable and cost-effective CRM software and provide it entirely through internet & as a service.

2. Core Architecture of Salesforce.

Architecture of Salesforce can be understood as a series of layers as explained below



1. Multi-tenant: One common application for multiple groups/clients.
2. Metadata: It means data about data.
3. API service: Developers can use APIs to customize to Salesforce applications.

3. Salesforce Cloud Services:

- Salesforce cloud services include:-

a. Sales cloud	d. App cloud
b. Marketing cloud	e. Service cloud
c. IoT cloud	f. Analytics cloud.

4. Advantages of Salesforce:

- Better time management & team collaboration
- Greater customer satisfaction & increased revenue
- Ultimate Accessibility & simple accounting
- Better security & trusted reporting.

INDEX

SR.NO	NAME OF THE PAGE	PAGE NO.
1.	INTRODUCTION	5
2.	WORKING	6
3.	FEATURES	7
4.	SCREENSHOTS	8 -13

❖ INTRODUCTION TO THE APPLICATION:

- ❖ Do you often feel overwhelmed by the amount of work you have to do? Do you find yourself missing deadlines? Or do you sometimes just forget to do something important, so that people must chase you to get work done?
- ❖ All of these are symptoms of not keeping a proper "To-Do List." These are prioritized lists of all the tasks that you need to carry out. They list everything that you have to do, with the most important tasks at the top of the list, and the least important tasks at the bottom.
- ❖ By keeping such a list, you make sure that your tasks are written down all in one place, so you don't forget anything important. And by prioritizing tasks, you plan the order in which you'll do them, so that you can tell what needs your immediate attention, and what you can leave until later.
- ❖ To-do lists are essential if you're going to beat work overload. When you **don't** use them effectively, you'll appear unfocused and unreliable to the people around you.
- ❖ When you **do** use them effectively, you'll be much better organized, and you'll be much more reliable. You'll experience less stress, safe in the knowledge that you haven't forgotten anything important. More than this, if you prioritize intelligently, you'll focus your time and energy on high-value activities, which will mean that you're more productive, and more valuable to your team.

❖ **WORKING:**

CRUD stands for -

- C: Create
- R: Read
- U: Update
- D: Delete

What is a ToDo List? The definition is a simple one. It's a list of tasks you need to complete or things that you want to do.

Most typically, they're organised in order of priority. Traditionally, they're written on a piece of paper or post it notes and act as a memory aid.

Read More: [What is a ToDo List? Simple tool to organise everything](#)

❖ **Here are some of the basic features which we implemented in our application:**

Create

The create function allows users to create a new record in the list.

Read

The read function is similar to a search function. It allows users to search and retrieve specific records in the table and read their values. Users may be able to find desired records using keywords, or by filtering the data based on customized criteria.

Update

The update function is used to modify existing records that exist in the list.

Delete

The delete function allows users to remove records from a list that is no longer needed.

❖ **FEATURES:**

The features of property explorer app include the following:

1. Create a to-do list.
2. Implements basic CRUD operations.
3. Adding new task.
4. Accessing the new tasks in brief.
5. Updating new task.
6. Removing the task after completion.

SOME SCREENSHOTS OF THE APPLICATION:

1. UI to create a new task:

* Task Description

* Due date

Reminder date

Create Task

Description	Due Date	Reminder Date
Study about integration	November 21, 19	November 21, 19
Need to deliver demo	November 23, 19	November 23, 19
one	November 27, 19	November 26, 19
Visit client	December 03, 19	December 02, 19
Bike 4th servicing	December 27, 19	December 26, 19

2. New custom object field on Salesforce cloud:

salesforce

Search...

Switch to Lightning Experience Shashank Kapadia Setup Help Content

Home Chatter Libraries Content Subscriptions

It's Better in Lightning
Move to Lightning Experience and give your users a productivity boost.

Tell Me More Check Readiness

Quick Find / Search... Expand All / Collapse All

Lightning Experience Transition Assistant
Move to the new, more productive Salesforce.
Get Started

Salesforce Mobile Quick Start

Home

Administer

- Release Updates
- Manage Users
- Manage Apps
- Manage Territories
- Company Profile
- Data Classification
- Privacy Center
- Security Controls
- Domain Management
- Communication Templates
- Translation Workbench
- Data Management
- Mobile Administration
- Desktop Administration
- Outlook Integration and Sync
- Gmail Integration and Sync

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 this message again](#)

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 Example: Account

Plural Label Example: Accounts

Starts with vowel sound ☐

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

Object Name Example: Account

Description

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 is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name Example: Account Name

Data Type

Optional Features

☐ Show Reports

3. New Custom Object Tab:

salesforce

Search...

Switch to Lightning Experience Shashank Kapadia Setup Help Content

Home Chatter Libraries Content Subscriptions

It's Better in Lightning
Move to Lightning Experience and give your users a productivity boost.

Tell Me More Check Readiness

Quick Find / Search... Expand All / Collapse All

Lightning Experience Transition Assistant
Move to the new, more productive Salesforce.
Get Started

Salesforce Mobile Quick Start

Home

Administer

- Release Updates
- Manage Users
- Manage Apps
- Manage Territories
- Company Profile
- Data Classification
- Privacy Center
- Security Controls
- Domain Management
- Communication Templates
- Translation Workbench
- Data Management
- Mobile Administration
- Desktop Administration
- Outlook Integration and Sync
- Gmail Integration and Sync

New Custom Object Tab

Step 1: Enter the Details Step 1 of 3

Choose the custom object for this new custom tab. Fill in other details.

Select an existing custom object or [create a new custom object now](#)

Object Trip

Tab Style Car

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link

Enter a short description.

Description

Next Cancel

4. New Custom Field: (can be created using Field Label, Field Name, Description)

The screenshot shows the Salesforce 'New Custom Field' setup page, specifically Step 2: Enter the details. The page is titled 'New Custom Field' and is part of a 4-step process. The left sidebar contains navigation links for 'Home', 'Chatter', 'Libraries', 'Content', and 'Subscriptions'. The main content area has a 'Step 2 of 4' indicator and a 'Previous' button. The form fields include:

- Field Label:** A text input field with the value 'Date'.
- Field Name:** A text input field with the value 'Date'.
- Description:** A text area for describing the field.
- Help Text:** A text area for providing help text.
- Required:** A checkbox labeled 'Always require a value in this field in order to save a record'.
- Auto add to custom report type:** A checkbox labeled 'Add this field to existing custom report types that contain this entity'.
- Default Value:** A section with a 'Select Field Type' dropdown (set to 'Date'), an 'Insert Field' dropdown (set to 'Insert Merge Field'), and an 'Insert Operator' dropdown. Below these is a text input field containing 'Today()'.
- Functions:** A dropdown menu showing 'All Function Categories' with a list of functions including ABS, ADDMONTHS, AND, BEGINS, BLANKVALUE, and BR.


At the bottom, there is a 'Check Syntax' button and a note: 'No syntax errors in merge fields or functions.' Below this, there is a small text block explaining the use of the 'Today()' function and how to reference a field from a Custom Metadata type record.

5. Specifies the type of information custom field will contain:

The screenshot shows the Salesforce 'New Custom Field' setup page, specifically Step 1: Choose the field type. The page is titled 'New Custom Field' and is part of a 4-step process. The left sidebar contains navigation links for 'Home', 'Chatter', 'Libraries', 'Content', and 'Subscriptions'. The main content area has a 'Step 1 of 4' indicator and a 'Next' button. The form fields include:

- Data Type:** A section with a 'Select one of the data types below.' dropdown. The dropdown is open, showing a list of data types: None Selected, Auto Number, Formula, Roll-Up Summary, Lookup Relationship, Master-Detail Relationship, External Lookup Relationship, Checkbox, Currency, Date, Date/Time, Email, Geolocation, Number, Percent, Phone, Picklist, and Multiple Picklist.
- None Selected:** A description of the 'None Selected' data type.
- Auto Number:** A description of the 'Auto Number' data type.
- Formula:** A description of the 'Formula' data type.
- Roll-Up Summary:** A description of the 'Roll-Up Summary' data type.
- Lookup Relationship:** A description of the 'Lookup Relationship' data type.
- Master-Detail Relationship:** A description of the 'Master-Detail Relationship' data type.
- External Lookup Relationship:** A description of the 'External Lookup Relationship' data type.
- Checkbox:** A description of the 'Checkbox' data type.
- Currency:** A description of the 'Currency' data type.
- Date:** A description of the 'Date' data type.
- Date/Time:** A description of the 'Date/Time' data type.
- Email:** A description of the 'Email' data type.
- Geolocation:** A description of the 'Geolocation' data type.
- Number:** A description of the 'Number' data type.
- Percent:** A description of the 'Percent' data type.
- Phone:** A description of the 'Phone' data type.
- Picklist:** A description of the 'Picklist' data type.
- Multiple Picklist:** A description of the 'Multiple Picklist' data type.

6 Validating Custom Field Attributes:



Lightning Experience Transition Assistant

Move to the new, more productive Salesforce.

Get Started

Home Chatter Libraries Content Subscriptions

It's Better in Lightning

Move to Lightning Experience and give your users a productivity boost.

Tell Me More Check Readiness

Quick Find / Search... Expand All / Collapse All

Tip: New Custom Field

Step 2 of 4: Enter the details

Field Label: Starting Mileage

Please enter the length of the number and the number of decimal places. For example, a number with a length of 8 and 2 decimal places can accept values up to "12345678.90".

Length: 7 Decimal Places: 1

Field Name: Starting_Mileage

Description:

Help Text:

Required: ☐ Always require a value in this field in order to save a record

Unique: ☐ Do not allow duplicate values

External ID: ☐ Set this field as the unique record identifier from an external system

AI Prediction: ☐ Use this field to store AI prediction scores

Auto add to custom report type: ☒ Add this field to existing custom report types that contain this entity

Default Value: Show Formula Editor

Use formulas to create, combine text and picklist values. Picklist values in double quotes. (The last) Include numbers without quotes. (25) show percentages as decimals. (0.10), and express date calculations in the standard format. (Today) + 2. To reference a field from a Custom Metadata type record use: \$CustomMetadata.Type__c__RecordAPIName.Field__c__

7. App Details and Branding:

Setup

Home

Object Manager

Search Setup

New Lightning App

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

* App Name ⓘ

Name your app...

* Developer Name ⓘ

Enter a developer name...

Description ⓘ

Enter a description...

App Branding

Image ⓘ

Primary Color Hex Value ⓘ

#0070D2

Upload

Org Theme Options

☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview

Next

Analytics

Analytics

Auto-Installed Apps

Service Console

LightningService

(Lightning Experience) Lets support agents work with multiple records across customer service channels on one screen

4/22/2022, 2:04 AM

Lightning

Site.com

Sites

Build pixel-perfect, data-rich websites using the drag-and-drop Site.com application, and manage content and published sites.

4/22/2022, 2:04 AM

Classic

8. Data Logs:

The screenshot shows the 'Lightning Experience App Manager' interface. On the left, there is a sidebar with navigation options: 'Apps', 'Items', 'Manage Connected Apps', 'Lightning Bolt', 'Flow Category', 'Lightning Bolt Solutions', 'Mobile Apps', 'Salesforce', 'Salesforce Branding', 'Salesforce Navigation', 'Salesforce Notifications', 'Salesforce Offline', 'Salesforce Settings', 'Packaging', 'Installed Packages', 'Package Manager', 'Package Usage', 'Feature Settings', 'Analytics', and 'Auto-Installed Apps'. The main area displays a table of apps, sorted by App Name. The table has columns for App Name, Developer Name, Description, Last Modified Date, App Type, and Visibility. The apps listed include Analytics Studio, App Launcher, Bot Solutions, Community, Content, Digital Experiences, Lightning Usage App, Marketing, Mileage Tracker, Mileage Tracker, Platform, Queue Management, Sales, Sales, LightningSales, Sales Console, Salesforce Chatter, Salesforce Scheduler Setup, Service, Service Console, and Site.com.

App Name	Developer Name	Description	Last Modified Date	App T...	Visib...
Analytics Studio	Insights	Build Tableau CRM dashboards and apps	4/22/2022, 2:04 AM	Classic	✓
App Launcher	AppLauncher	App Launcher tabs	4/22/2022, 2:04 AM	Classic	✓
Bot Solutions	LightningBot	Discover and manage business solutions designed for your industry.	4/22/2022, 2:07 AM	Lightning	✓
Community	Community	Salesforce CRM Communities	4/22/2022, 2:04 AM	Classic	✓
Content	Content	Salesforce CRM Content	4/22/2022, 2:04 AM	Classic	✓
Digital Experiences	SalesforceCMS	Manage content and media for all of your sites.	4/22/2022, 2:04 AM	Lightning	✓
Lightning Usage App	LightningInstrumentation	View Adoption and Usage Metrics for Lightning Experience	4/22/2022, 2:04 AM	Lightning	✓
Marketing	Marketing	Best-in-class on-demand marketing automation	4/22/2022, 2:04 AM	Classic	✓
Mileage Tracker	Mileage_Tracker		4/24/2022, 4:55 AM	Lightning	✓
Mileage Tracker	Mileage_Tracker_1		4/24/2022, 5:34 AM	Lightning	✓
Platform	Platform	The fundamental Lightning Platform	4/22/2022, 2:04 AM	Classic	✓
Queue Management	QueueManagement	Create and manage queues for your business.	4/22/2022, 2:04 AM	Lightning	✓
Sales	Sales	The world's most popular sales force automation (SFA) solution	4/22/2022, 2:04 AM	Classic	✓
Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, and more	4/22/2022, 2:04 AM	Lightning	✓
Sales Console	LightningSalesConsole	(Lightning Experience) Lets sales reps work with multiple records on one screen	4/22/2022, 2:04 AM	Lightning	✓
Salesforce Chatter	Chatter	The Salesforce Chatter social network, including profiles and feeds	4/22/2022, 2:04 AM	Classic	✓
Salesforce Scheduler Setup	LightningScheduler	Set up personalized appointment scheduling.	4/22/2022, 2:06 AM	Lightning	✓
Service	Service	Manage customer service with accounts, contacts, cases, and more	4/22/2022, 2:04 AM	Classic	✓
Service Console	LightningService	(Lightning Experience) Lets support agents work with multiple records across customer service channels on one screen	4/22/2022, 2:04 AM	Lightning	✓
Site.com	Sites	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com application, and manage content and published sites.	4/22/2022, 2:04 AM	Classic	✓

9. Available Data Types in Custom Fields:

The screenshot shows the 'New Custom Field' setup page in Salesforce Lightning Experience. The page is titled 'New Custom Field' and has a 'Step 1: Choose the field type' section. Below this, there is a 'Data Type' section with a list of available data types. The 'Lookup Relationship' option is selected. The page also includes a sidebar with navigation options: 'Home', 'Chatter', 'Libraries', 'Content', 'Subscriptions', and 'Administer'. The 'Administer' section includes options for 'Release Updates', 'Manage Users', 'Manage Apps', 'Manage Territories', 'Company Profile', 'Data Classification', 'Privacy Center', 'Security Controls', 'Domain Management', 'Communication Templates', 'Translation Workbench', 'Data Management', 'Mobile Administration', 'Desktop Administration', 'Outlook Integration and Sync', and 'Gmail Integration and Sync'.

Step 1: Choose the field type

Specify the type of information that the custom field will contain.

Data Type

Select one of the data types below:

- ☐ None Selected
- ☐ Auto Number
- ☐ Formula
- ☐ Roll-Up Summary (3)
- ☒ Lookup Relationship
- ☐ Master-Detail Relationship
- ☐ External Lookup Relationship
- ☐ Checkbox
- ☐ Currency
- ☐ Date
- ☐ Date/Time
- ☐ Email

Lookup Relationship

Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.

- The relationship field is required on all detail records.
- The ownership and sharing of a detail record are determined by the master record.
- When a user deletes the master record, all detail records are deleted.
- You can create roll-up summary fields on the master record to summarize the detail records.

The relationship field allows users to click on a lookup icon to select a value from a popup list. The master object is the source of the values in the list.

Creates a relationship that links this object to an external object whose data is stored outside the Salesforce org.

Checkbox

Allows users to select a True (checked) or False (unchecked) value.

Currency

Allows users to enter a dollar or other currency amount and automatically formats the field as a currency amount. This can be useful if you export data to Excel or another spreadsheet.

Date

Allows users to enter a date or pick a date from a popup calendar.

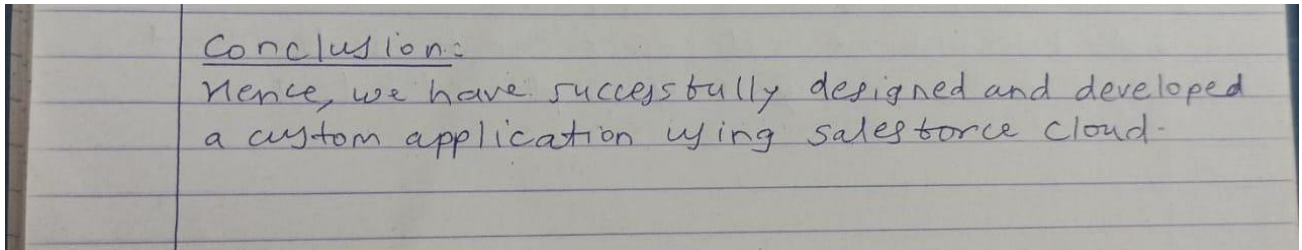
Date/Time

Allows users to enter a date and time, or pick a date from a popup calendar. When users click a date in the pop-up, that date and the current time are entered into the Date/Time field.

Email

Allows users to enter an email address, which is validated to ensure proper format. If this field is specified for a contact or lead, users can choose the address when clicking Send an Email. Note that custom email addresses cannot be used for mass emails.

Conclusion:



Conclusions
Hence, we have successfully designed and developed
a custom application using Salesforce cloud.