



Report On

“TRAVEL APPROVAL APP”

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INTRODUCTION TO SALESFORCE

- Salesforce is a cloud-based software company that provides its customers with a platform to develop their own applications without following the tough steps that they used to follow in the legacy system. The software or application once created can be uploaded onto the cloud allowing the end-users to view them.
- Salesforce is currently providing various software solutions and platforms for developers to create and distribute custom software/applications. Tech giants like Google, Twitter, Amazon, and Facebook are using Salesforce either in the form of SaaS or PaaS.



INTRODUCTION OF TRAVEL APPROVAL APP

- The travel approval project in Salesforce is a system designed to automate and streamline the process of requesting and approving travel expenses for employees. The project involves several components, including a custom object to track travel requests, a custom approval process, and various integrations with external systems.
- Overall, the travel approval project in Salesforce provides a streamlined and efficient way for employees to request and manage travel expenses, while also providing managers with the tools they need to ensure that all expenses are approved and accounted for.



Module -1

- This project module focuses on the non-coding approach to modifying the user interface, as you customize an app that tracks company travel.
- Create Custom App, Objects, Fields & Relationships, and how you customize the App using declarative tools.



Exercise-01

Creating Lightning App: TRAVEL APP

Lightning App Builder | App Settings | Pages | Travel App

App Settings

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: Travel App

* Developer Name: Travel_App

Description: Enter a description...

App Branding

Image:  Primary Color Hex Value: #0070D2

Clear

Org Theme Options: Use the app's image and color instead of the org's custom theme

App Launcher Preview

 Travel App

Travel App Chatter Reports Dashboards

All Search Chatter and more...

What I Follow To Me Bookmarked Company Highlights My Drafts

Post Poll Question Share an update... Share

Custom object Department and Creating custom fields in Department object

The screenshot shows the Salesforce Setup interface for the 'Department' object. On the left, a sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main area displays the 'Details' tab for the Department object. It includes fields for Description, API Name (Department__c), Singular Label (Department), Plural Label (Departments), and several checkboxes for features like Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), and Help Settings. A modal window is open over the details, titled 'DISPLAY DENSITY', showing options for 'Comfy' (selected) and 'Compact'. At the bottom of the modal are links to 'Switch to Salesforce Classic' and 'Add Username'. The top of the screen shows the browser's address bar with the URL 'mindful-hawk-9qyyuh-dev-ed.trailblaze.lightning.force.com/lightning/setup/ObjectManager/01l2w000003CobI/Details/view'.

The screenshot shows the 'Fields & Relationships' section of the Salesforce Setup for the 'Department' object. The left sidebar shows the 'Fields & Relationships' tab is selected. The main area lists seven items under 'Fields & Relationships'. A table provides detailed information for each field:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Department Code	Department_Code__c	Text(10) (Unique Case Sensitive)		
Department Name	Name	Text(80)		
Department Type	Department_Type__c	Picklist	Location	
Last Modified By	LastModifiedBy	Lookup(User)		
Location	Location__c	Picklist		
Owner	OwnerId	Lookup(User,Group)		

Field dependency in department

The screenshot shows a Salesforce setup page titled "Edit Field Dependency" for the "Department" object. The "Fields & Relationships" section is selected in the sidebar. The main area displays the configuration for a field dependency where the "Controlling Field" is "Location" and the "Dependent Field" is "Department Type". The "Instructions" section provides guidance on using the grid to toggle field visibility based on controlling location values. A legend indicates that yellow cells represent "Included Value" and white cells represent "Excluded Value". The grid shows data for two locations: Kolkata and Delhi, with various department types listed under each.

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

Edit Field Dependency

Help for this Page [?](#)

Controlling Field: Location
Dependent Field: Department Type

Instructions

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells at once.
- Use SHIFT + click to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent.
- Use the Preview button to test the results.

Legend

Excluded Value
Included Value

Edit Field Dependency ~ Salesforce - Developer Edition

Click button to include or exclude selected values from the dependent picklist:

Include Values Exclude Values

Showing Columns: 1 - 2 (of 2) < Previous Next > View All Go to		
Location:	Kolkata	Delhi
Department Type:	Banking, Finance, Education, Energy, IT	Banking, Finance, Education, Energy, IT

Showin Columns: 1 - 2 (of 2) < Previous | Next > [View All](#)

javascript:srcUp(%27%2Fp%2Fdependency%2FeditDependencyUI%2Fe%3FtableEnumOrId%3D012w000003Cobl%26controller%3D00N2w00000V6uBM%26dependent%3D00N2w00000V6uBv%26retURL%3D%252Fsetup%252Fui%252Fdep...

Creating Custom Object Travel Approval and Custom Fields in that Object

The screenshot shows the Salesforce Setup interface with the following details:

- Setup Tab:** The user is currently in the "Object Manager" tab under the "Travel Approval" object.
- Fields & Relationships Section:** This section displays 13 items, sorted by Field Label. It includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.
- Table Data:** The table lists the following fields:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Department	Department__c	Lookup(Department)		✓
Destination State	Destination_State__c	Text(2)		
Last Modified By	LastModifiedById	Lookup(User)		
Out-of-State	Out_of_State__c	Checkbox		
Owner	OwnerId	Lookup(User,Group)		✓
Purpose of Trip	Purpose_of_Trip__c	Text Area(255)		
Status	Status__c	Picklist		
Status Indicator	Status_Indicator__c	Formula (Text)		
Total Expenses	Total_Expenses__c	Roll-In Summary (SLIM Expense Item)		
- Left Sidebar:** A sidebar on the left lists various setup categories: 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.
- Header:** The header shows the current date and time (Thu 23 Feb 12:34 PM) and includes tabs for Mail, Meeting, Chatter Home, Travel Approval, and Recently Viewed.

After creating travel approval object with fields, it looks as shown below

The screenshot shows a Salesforce Lightning record page for a Travel Approval object. The URL in the browser is mindful-hawk-9qyyuh-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval__c/a062w00000OInxKAAT/view. The page title is "Travel Approval TA-00001". The main content area displays the following details:

Field	Value
Travel Approval #	TA-00001
Status	Approved
Total Expenses	\$1,320.00
Status Indicator	Accepted
Trip Info	
Purpose of Trip	Attend Dreamforce
Trip Start Date	1/31/2023
Trip End Date	2/28/2023
Created By	Shaik Karimunnisa, 2/14/2023, 9:06 PM
Out-of-State	<input checked="" type="checkbox"/>
Destination State	CA
Last Modified By	Shaik Karimunnisa, 2/15/2023, 1:35 AM

On the right side, there is a Chatter feed with the following entries:

- A post from Shaik Karimunnisa: "Shaik Karimunnisa updated this record. February 15, 2023 at 1:35 AM" with a status update: "Status Draft to Approved".
- A comment from Shaik Karimunnisa: "Shaik Karimunnisa February 14, 2023 at 9:37 PM"

The page also includes standard Salesforce navigation elements like "Follow", "Edit", "New Contact", and "New Opportunity". The top navigation bar shows various tabs and the current date and time: Fri 24 Feb 3:45 PM.

Importing Department records using data import wizard and imported record data status can viewed below

The screenshot shows a Salesforce Lightning interface on a Mac OS X desktop. The browser window title is "mindful-hawk-9qyyuh-dev-ed.trailblaze.lightning.force.com/lightning/o/Department__c/list?filterName=00B2w00000YWWztEAH". The main content area displays a list of 16 department records under the "Travel App" tab. The list includes:

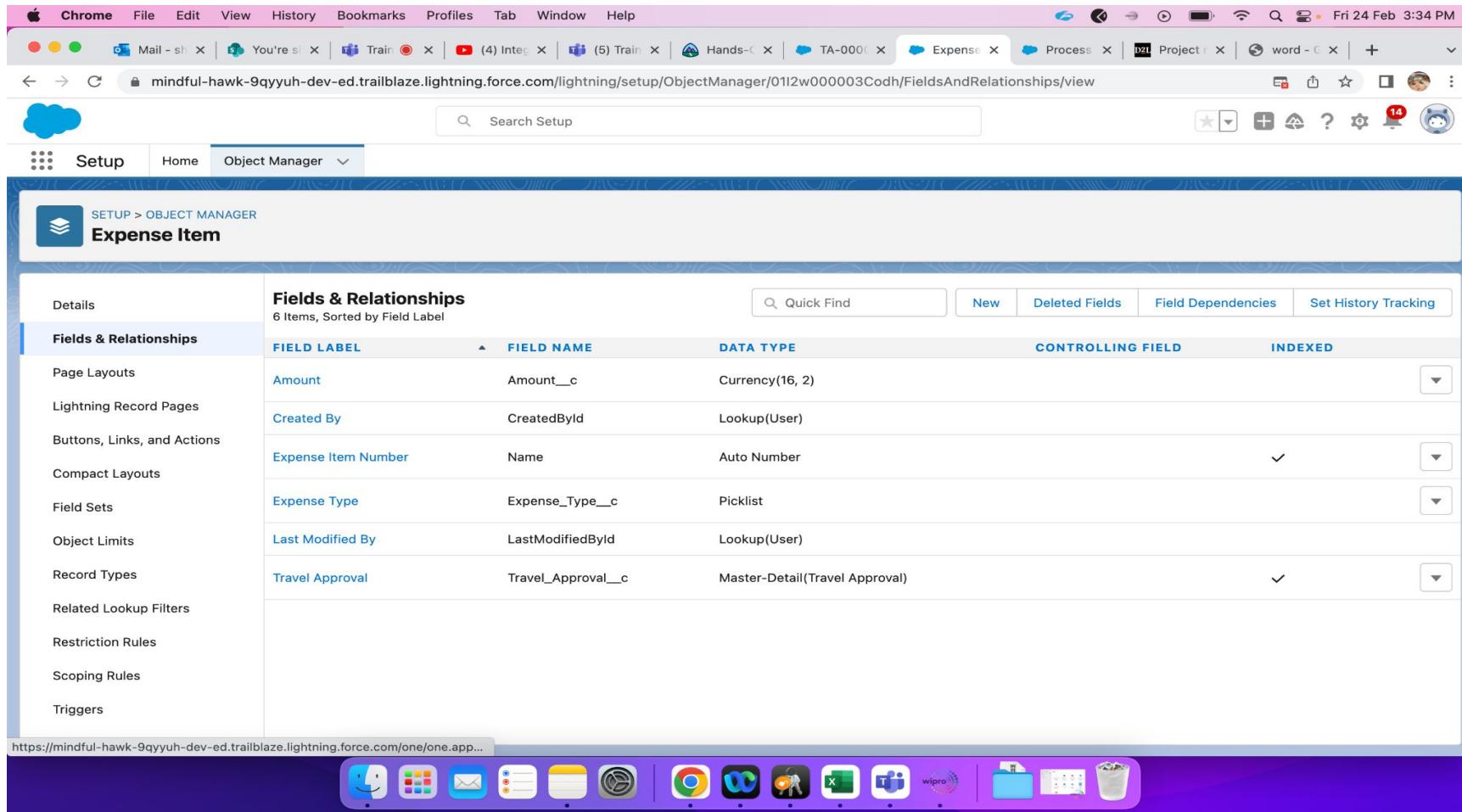
Rank	Department Name
1	Audit Services
2	Contract Management
3	Disability Determination Bureau
4	Division of Aging
5	Division of Disability and Rehabilitative Services
6	Division of Family Resources
7	Division of Finance
8	Division of Mental Health and Addiction
9	Human Resources
10	Legislative Services
11	Office of Communications and Media
12	Office of Early Childhood and Out-of-School Learning
13	Office of General Counsel
14	Office of Medicaid Policy and Planning
15	Quality and Compliance Office

A sidebar on the right shows the user profile "Shaik Karimunnisa" from "mindful-hawk-9qyyuh-dev-ed.trailblaze...." with options to "Settings" and "Log Out". The sidebar also includes "DISPLAY DENSITY" set to "Comfy" (Compact), "OPTIONS" (Switch to Salesforce Classic, Add Username), and a "Switch to Salesforce Classic" link.

The desktop dock at the bottom contains icons for various applications like Finder, Mail, and Microsoft Office.

Exercise-02

Creating Expense Item custom object and Custom fields in Expense Item object



The screenshot shows the Salesforce Object Manager interface for the 'Expense Item' custom object. The left sidebar lists various setup categories: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, and Triggers. The 'Fields & Relationships' tab is selected, displaying a table of fields:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(16, 2)		
Created By	CreatedById	Lookup(User)		
Expense Item Number	Name	Auto Number	✓	
Expense Type	Expense_Type__c	Picklist		
Last Modified By	LastModifiedById	Lookup(User)		
Travel Approval	Travel_Approval__c	Master-Detail(Travel Approval)	✓	

Creating User Eric

The screenshot shows the Salesforce Setup interface in a web browser. The URL in the address bar is `mindful-hawk-9qyyuh-dev-ed.trailblaze.lightning.force.com/lightning/setup/ManageUsers/page?address=%2F0052w00000EhbZR%3Fnoredirect%3D1%26isUserE...`. The page title is "Users".

The left sidebar shows the navigation menu under "Setup":

- Permission Set Groups
- Permission Sets
- Profiles
- Public Groups
- Queues
- Roles
- User Management Settings
- Users** (selected)
- Feature Settings
 - Data.com
 - Prospector Users
- User Interface
 - Action Link Templates
 - Actions & Recommendations
 - App Menu
 - Custom Labels
 - Density Settings

The main content area displays the "User Detail" for "Eric Executive".

User Detail	
Name	Eric Executive
Alias	eexec
Email	shaik.karimunnisa2@wipro.com
Username	shaik.karimunnisa5@wipro.com
Nickname	eric.exec
Title	
Company	
Department	
Division	
Address	
Time Zone	(GMT-08:00) Pacific Standard Time (America/Los_Angeles)
Locale	English (United States)
Language	English
Delegated Approver	
Manager	
Receive Approval Request Emails	Only if I am an approver
Federation ID	
Role	
CEO	
User License	Salesforce
Profile	System Administrator
Active	<input checked="" type="checkbox"/>
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>
Flow User	<input type="checkbox"/>
Service Cloud User	<input type="checkbox"/>
Site.com Contributor User	<input type="checkbox"/>
Site.com Publisher User	<input type="checkbox"/>
WDC User	<input type="checkbox"/>
Mobile Push Registrations	View
Data.com User Type	i
Accessibility Mode (Classic Only)	<input type="checkbox"/> i
Debug Mode	<input type="checkbox"/> i

Customize The Travel Approval Default Search Layout

The screenshot shows a Chrome browser window with multiple tabs open, including various Salesforce objects like Mail, You're s..., Train, Hands..., E-0000..., Search L..., Process, Project, and word - e. The main content area is the Salesforce Setup interface.

Setup is selected in the top navigation bar. The left sidebar shows the following navigation tree:

- Search
- Einstein
 - Einstein Search
 - Objects to Always Search (Beta)
 - Promoted Search Terms
 - Search Layouts
 - Search Manager
 - Settings
 - Synonyms
- Objects and Fields
 - Object Manager

A message at the bottom of the sidebar says: "Didn't find what you're looking for? Try using Global Search."

The main content area is titled "Search Layouts" under the "SETUP" tab. It displays the "Edit Search Layout" for "Travel Approval Search Results".

The interface includes two main sections:

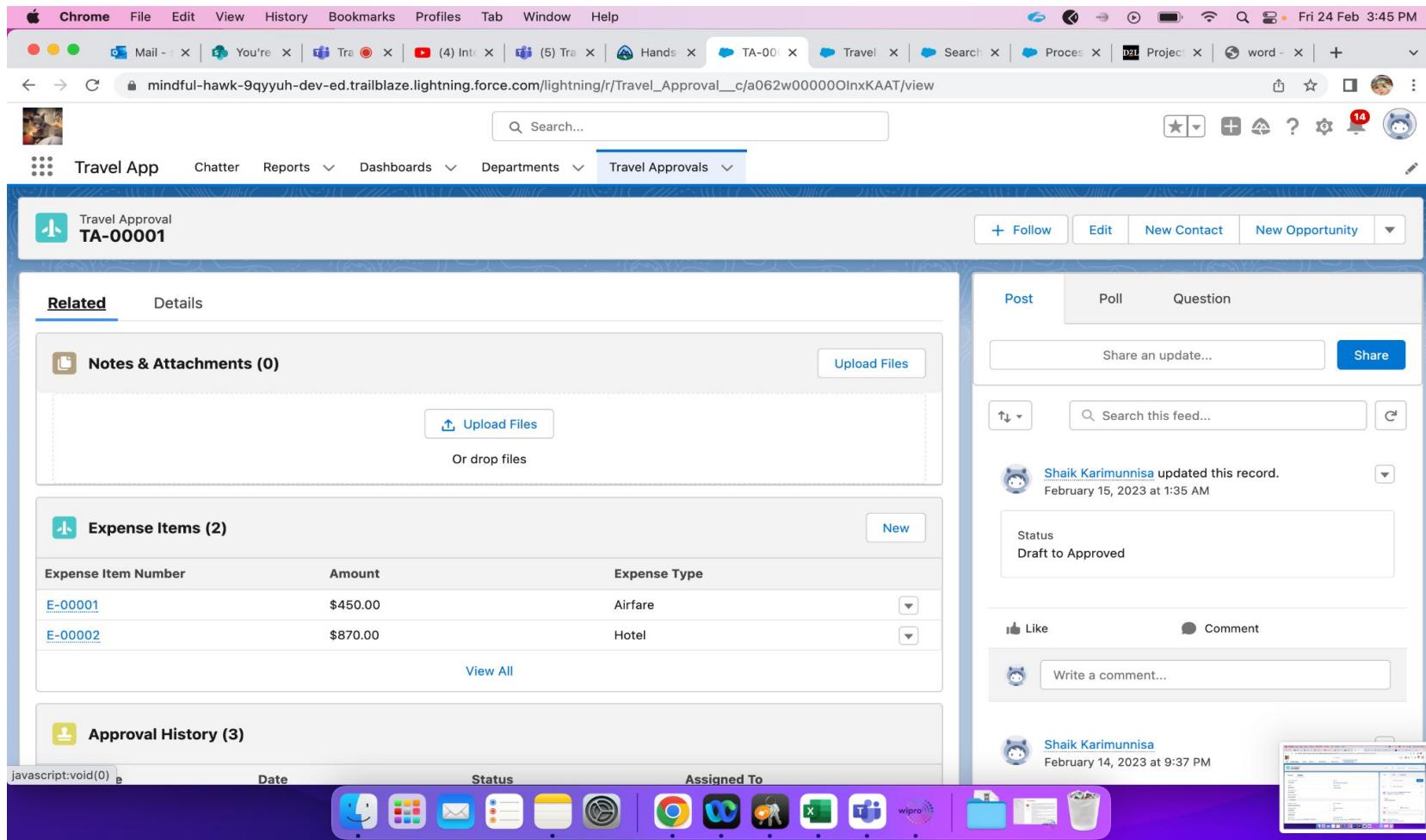
- Available Fields:** A list of fields including Record ID, Out-of-State, Status Indicator, Total Expenses, Owner Alias, Owner First Name, Owner Last Name, Created By Alias, Created By, Created Date, and Last Modified By Alias. There are "Add" and "Remove" buttons between the Available and Selected fields.
- Selected Fields:** A list of fields including Department, Purpose of Trip, Status, Destination State, Trip Start Date, Trip End Date, and Travel Approval #. There are "Up" and "Down" buttons to rearrange the order.

Below these sections are three expandable sections:

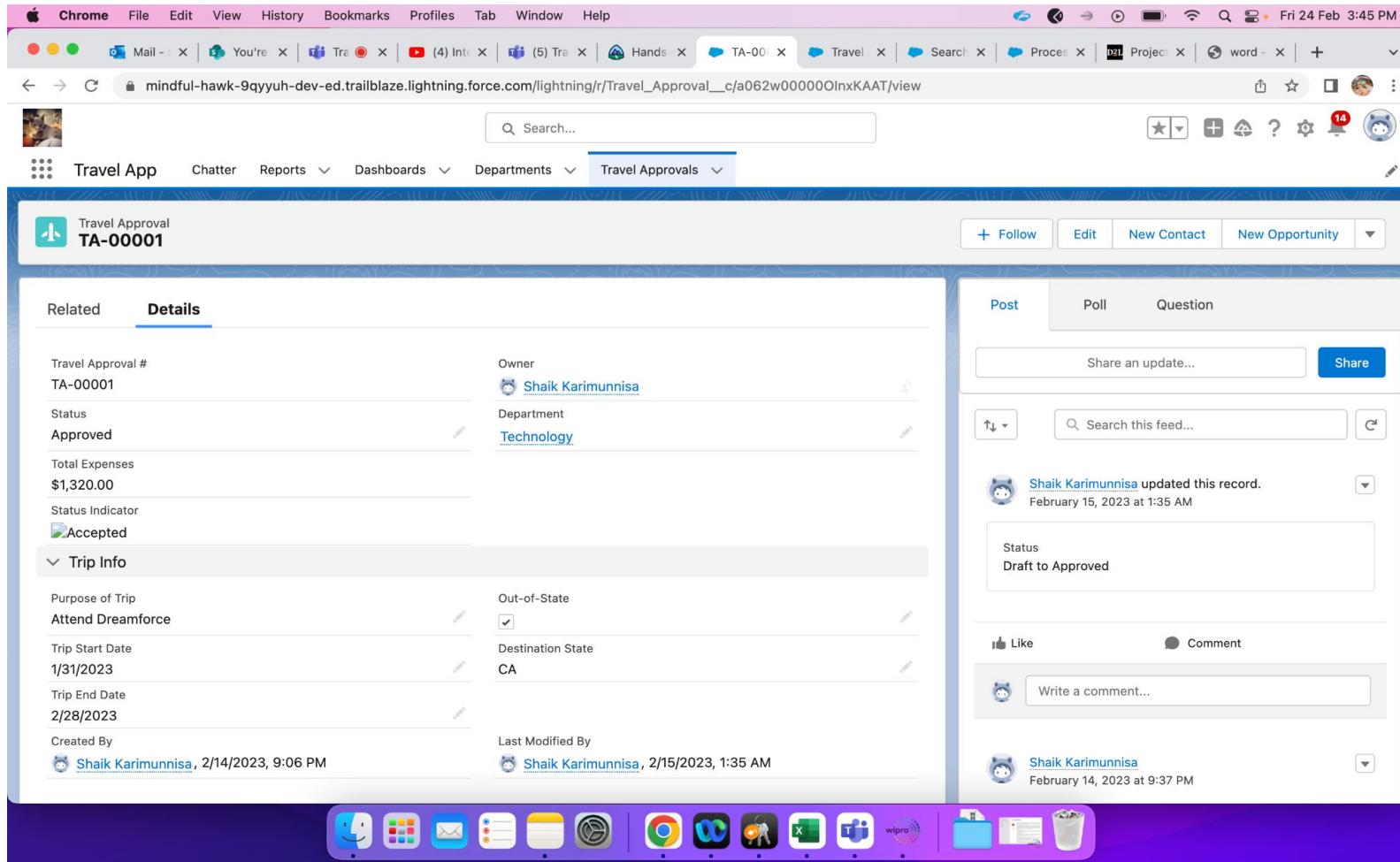
- Standard Buttons:** States "There are no customizable standard buttons for this view."
- Custom Buttons:** Contains the text "Click here to create a new custom list button" and a link.
- Override the search result column customizations for all users:** A checkbox.

The bottom of the screen shows the Mac OS X Dock with various application icons.

Customizing page layout



Test the app:

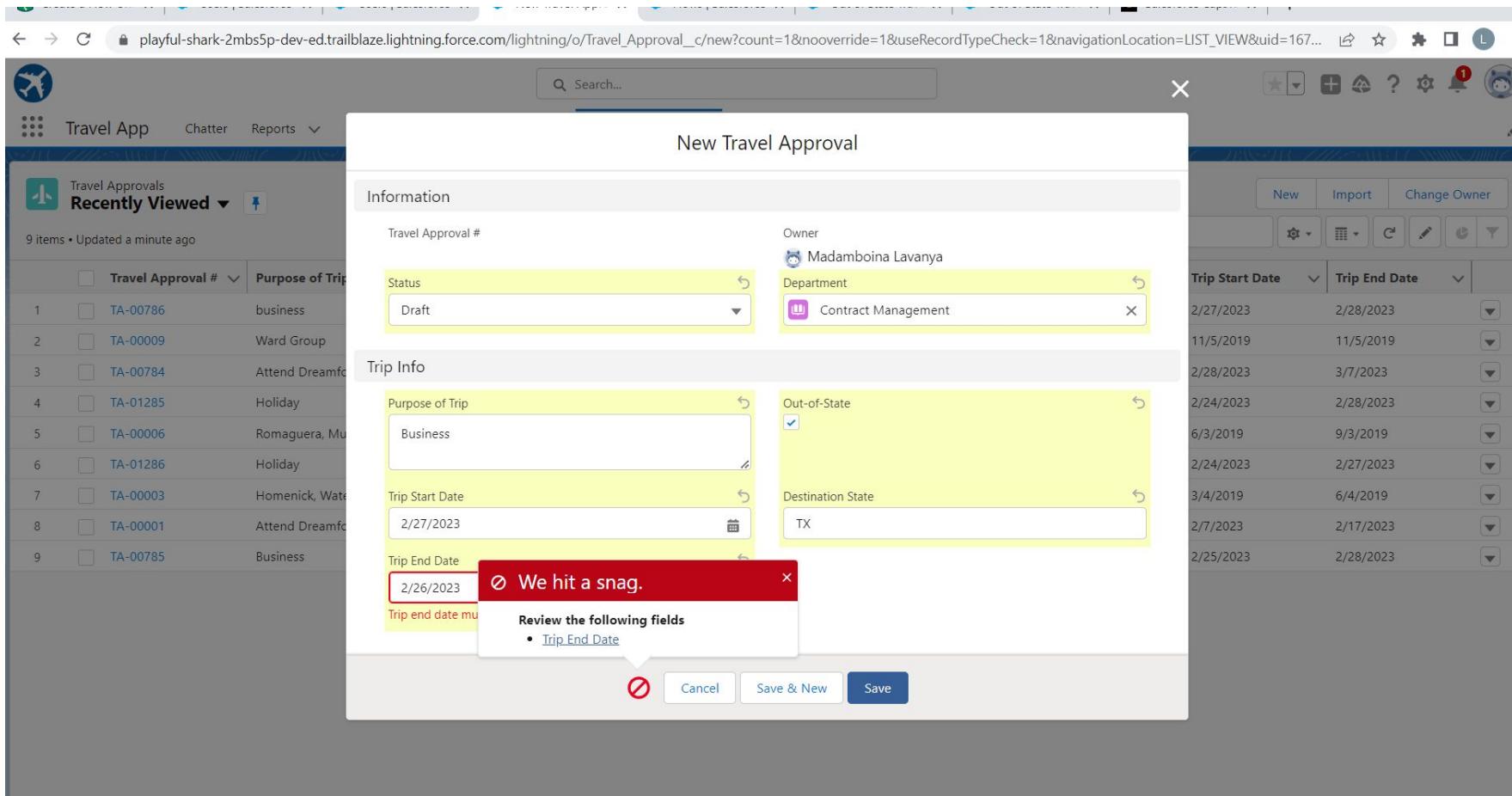


MODULE 2

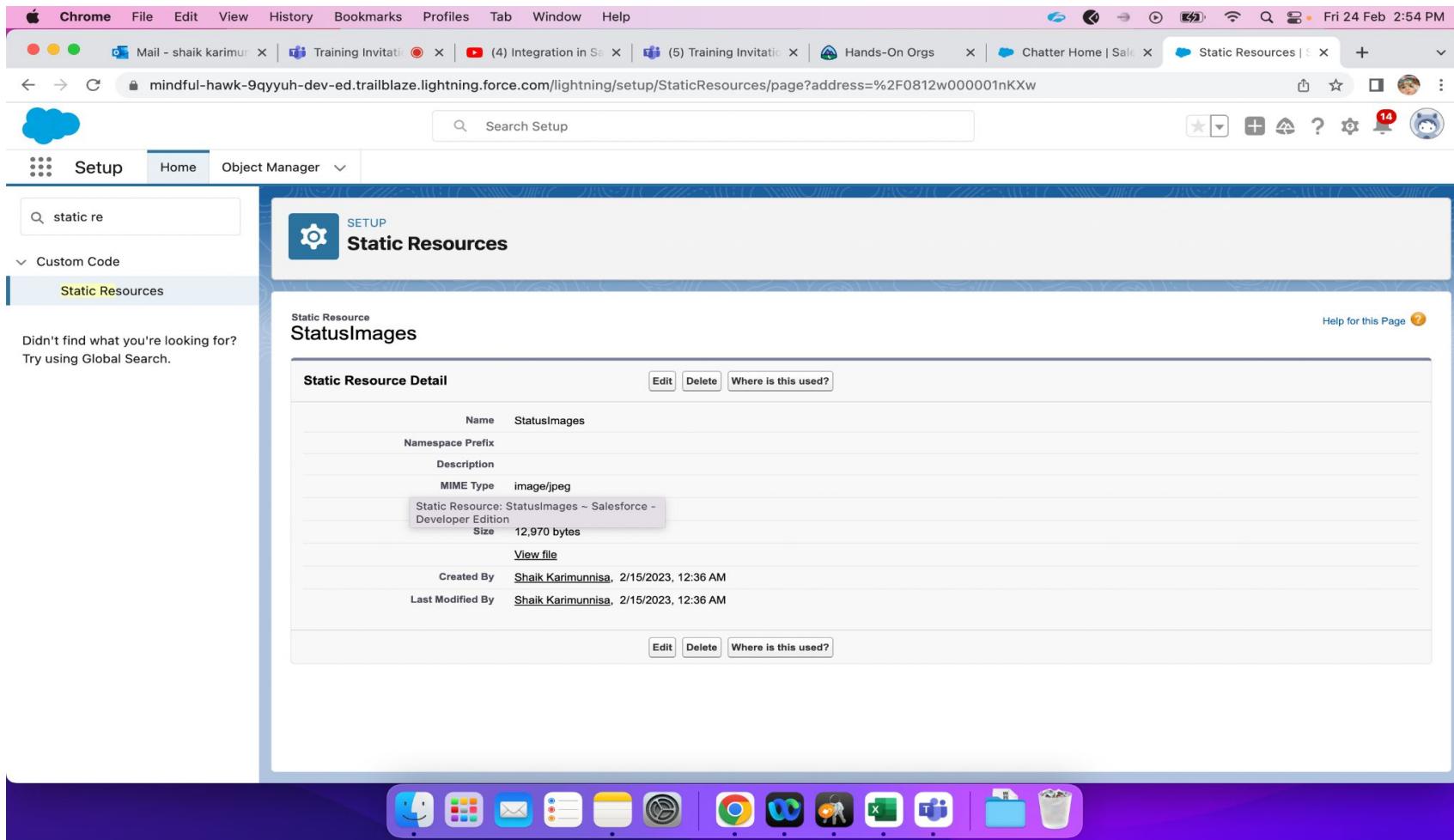
- This project module focuses on the Automation and Analytics Tools to enhance your custom App development.
- Define Business logic using Validation rules, Roll-up summary fields, Formulas, Flows & how you track Travel Approvals using Reports and Dashboards.



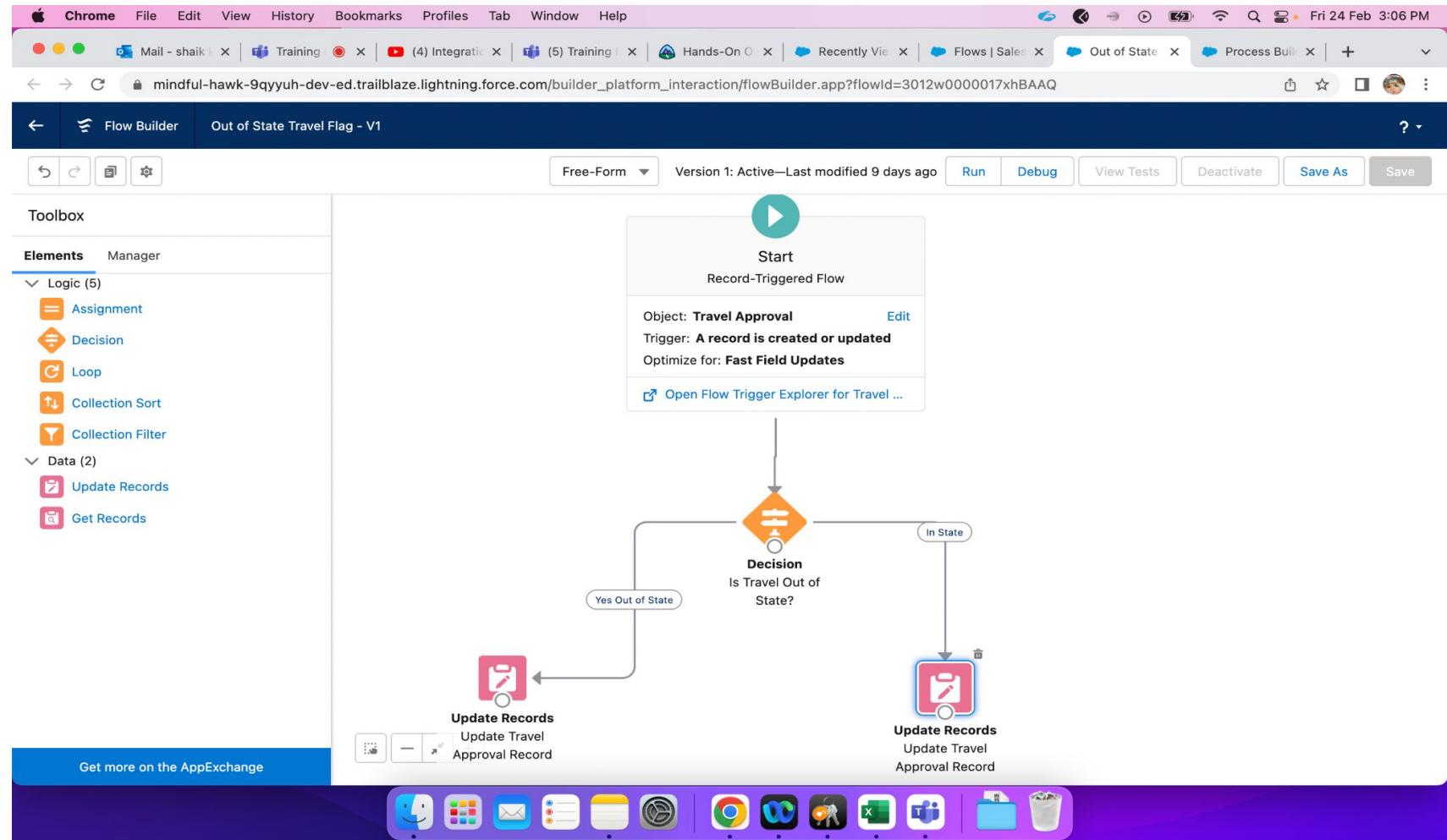
Validation Rule that trip end date always \geq start date



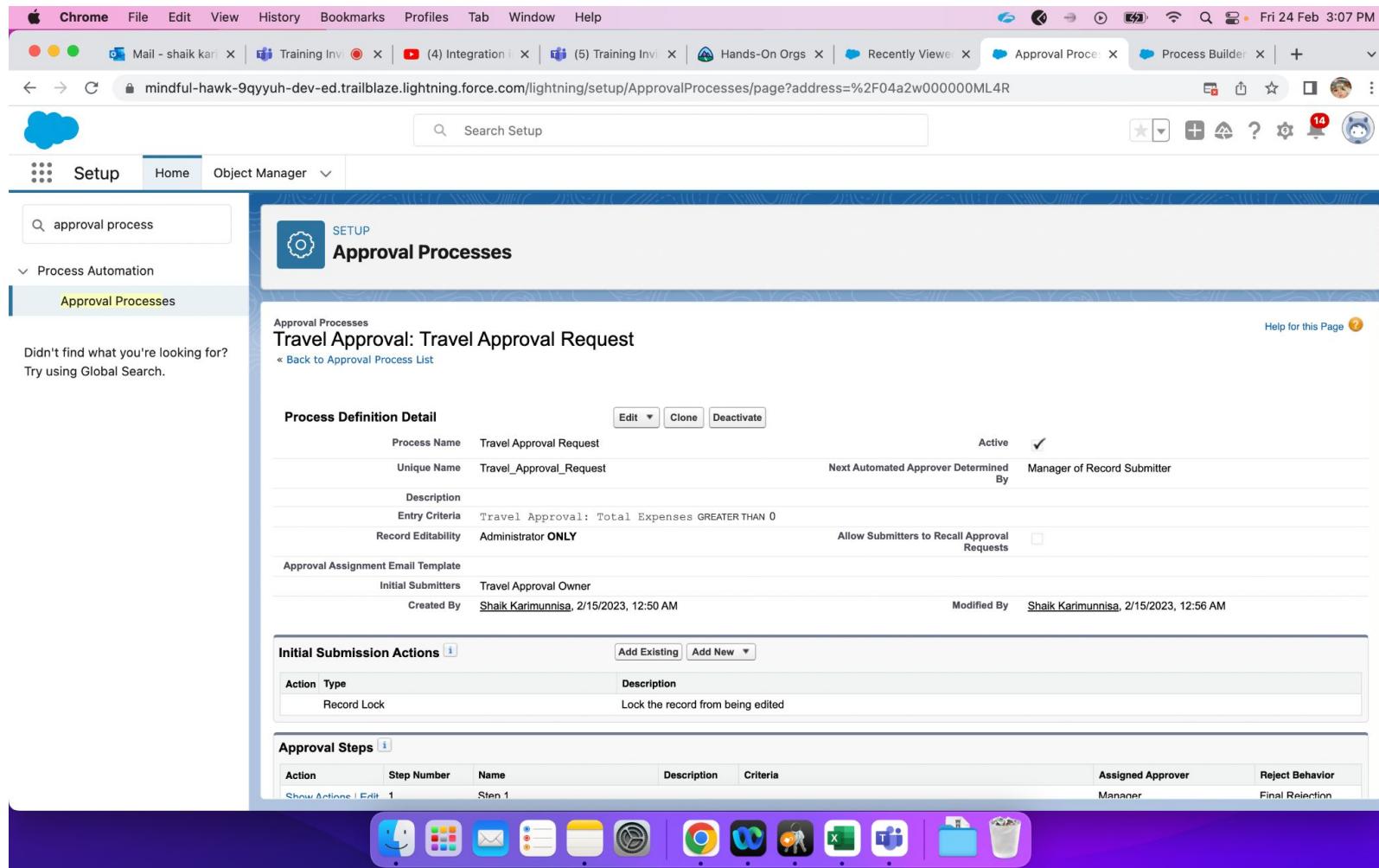
Creating Formula Fields Static Resource with name Status Images



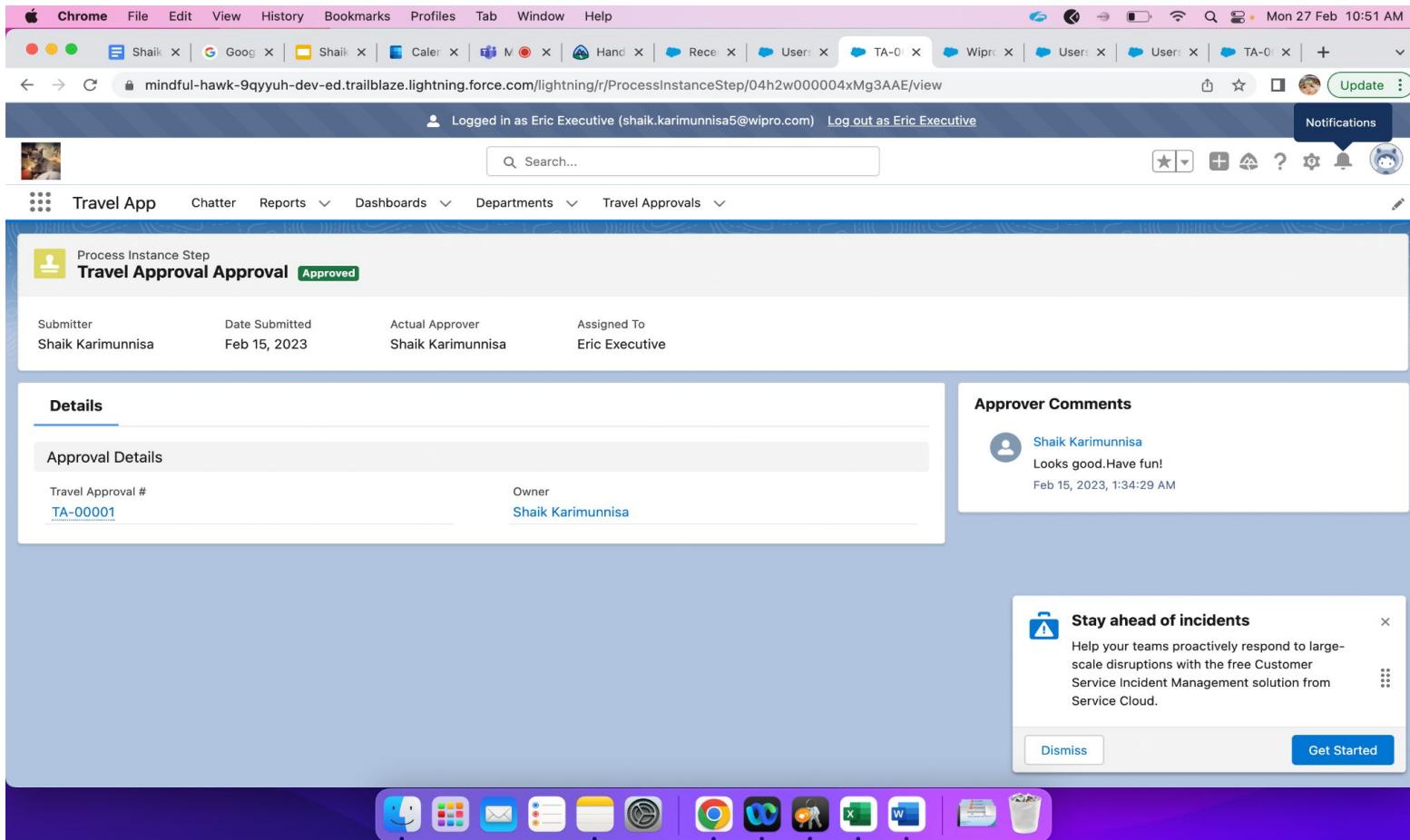
Create a flow looks as shown, save and activate



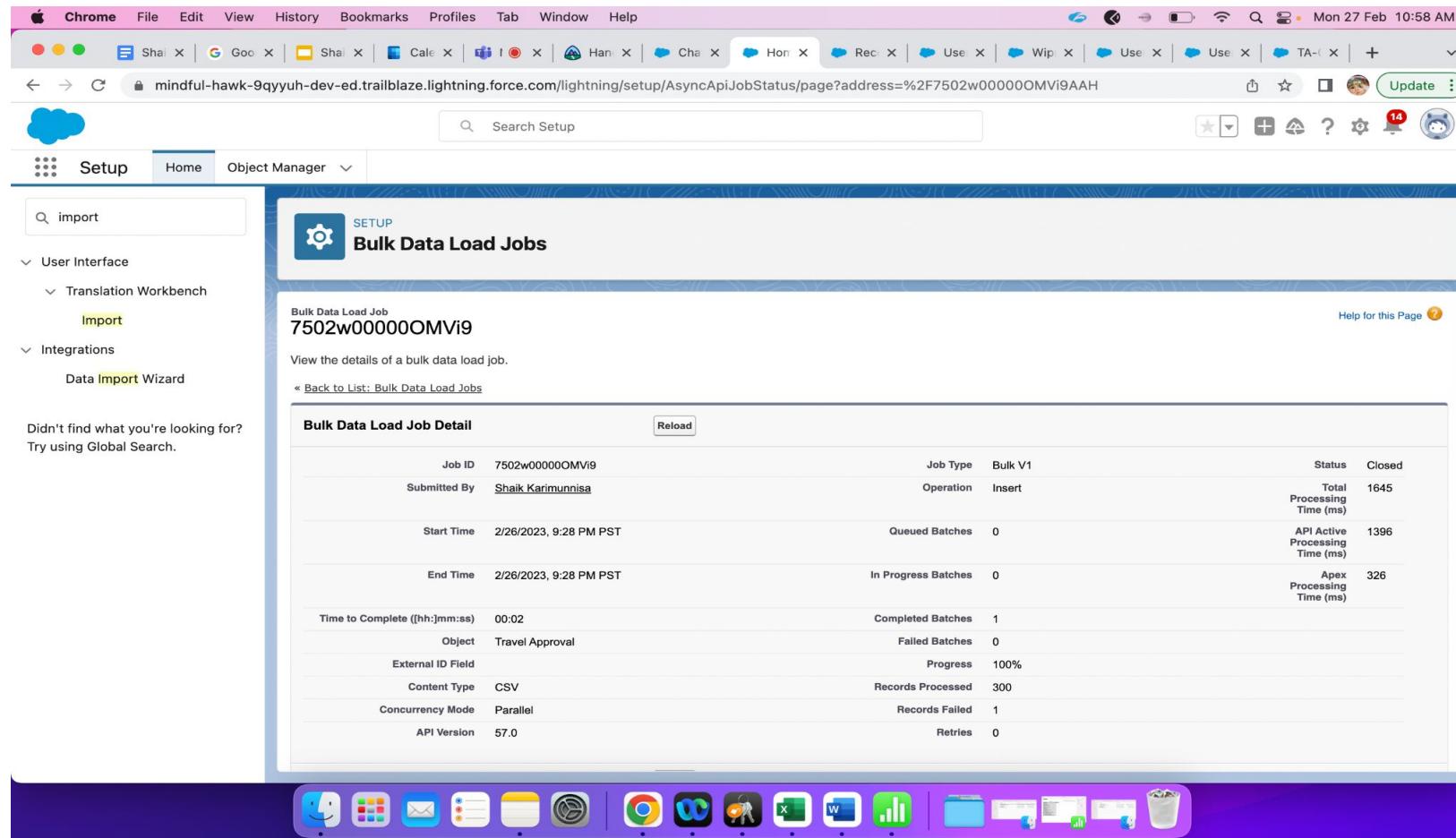
Creating an Approval Process to send travel approvals to manager or travel coordinator



Testing the Approval Process Status is Pending Here, Next Submit For Approval



Using Data import wizard to import travel approval records , later the Records imported successfully



Created Reports and Dashboard

Chrome File Edit View History Bookmarks Profiles Tab Window Help

mindful-hawk-9qyyuh-dev-ed.lightning.force.com/lightning/o/Report/home?queryScope=mrn

Travel App Chatter Reports Dashboards Departments Travel Approvals

Reports Recent 10 items

REPORTS Report Name Description Folder Created By Created On Subscribed

Report Name	Description	Folder	Created By	Created On	Subscribed
Travel Requests by Month		Public Reports	Shaik Karimunnisa	2/15/2023, 1:48 AM	
Travel Requests by Department		Public Reports	Shaik Karimunnisa	2/15/2023, 1:42 AM	
Sample Flow Report: Screen Flows	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	1/16/2023, 9:35 PM	
SolarBot Warranty Call Sheet		SolarBot Sales Reports	Shaik Karimunnisa	1/31/2023, 3:30 AM	
Accounts Without SolarBot Opportunities		SolarBot Sales Reports	Shaik Karimunnisa	1/31/2023, 3:35 AM	
SolarBot High-Case Candidates		SolarBot Sales Reports	Shaik Karimunnisa	1/31/2023, 3:21 AM	
Erin's SB Opp Matrix for Sales		SolarBot Sales Reports	Shaik Karimunnisa	1/31/2023, 1:13 AM	
Potential SB Product Names for R&D		SolarBot R&D Reports	Shaik Karimunnisa	1/31/2023, 1:13 AM	
Lincoln's SolarBot Research to remove		Report Recycle Bin	Shaik Karimunnisa	1/31/2023, 1:13 AM	
Marketing's SB Lead Report for Sales		SolarBot Sales Reports	Shaik Karimunnisa	1/31/2023, 1:13 AM	

Search... New Report New Folder

Favorites: 10 items

Icons: Home, Report, User, Wipro, TA-00

Chrome File Edit View History Bookmarks Profiles Tab Window Help

mindful-hawk-9qyyuh-dev-ed.lightning.force.com/lightning/r/Dashboard/01Z2w000000JyAGEA0/view?queryScope=userFolders

Travel App Chatter Reports Dashboards Departments Travel Approvals

Dashboard Travel Requests Dashboard As of Feb 26, 2023, 9:38 PM Viewing as Shaik Karimunnisa Refresh Edit Subscribe

Travel Requests by Department

Sum of Out-of-State

Department	Sum of Out-of-State
Audit Services	28
Contract Management	30
Disability Determination ...	26
Division of Aging	36
Division of Child and Family Resource...	34
Division of Finance	21
Division of Mental Health ...	34
Human Resources	34
Legislative Services	34
Office of Communication...	32
Office of Early Childhood ...	30

View Report (Travel Requests by Department)

Travel Requests by Month

Record Count

Trip End Date > Out-of-State

Trip End Date	Out-of-State (false)	Out-of-State (true)
Jan.. false	22	22
Feb.. false	6	36
Mar.. false	14	42
Apr.. false	12	52
May.. false	10	34
Jun.. false	6	39
Jul.. false	12	46
Aug.. false	10	10

View Report (Travel Requests by Month)

Icons: Home, Report, User, Wipro, TA-00

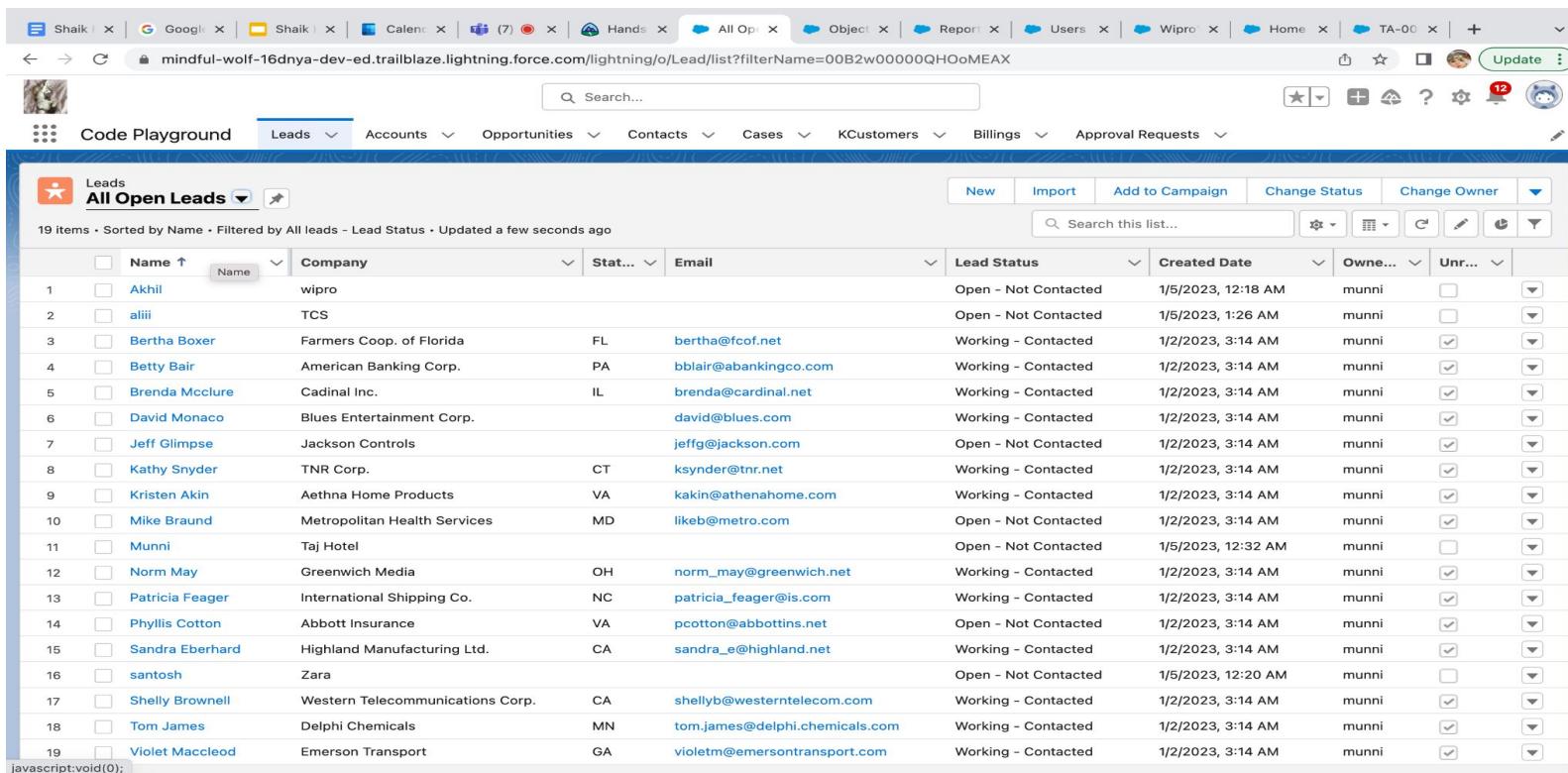
MODULE 3

- This project module focuses on the coding approach to extend the functional capabilities of your custom App.



Exercise - 01

Creating Code Playground Lightning App with Lead, Account, Contact, Opportunity, Case to navigation profile as system admin.



The screenshot shows a Salesforce Lightning App interface titled "Code Playground". The main section is titled "Leads" and "All Open Leads". The table below lists 19 items, each representing a lead. The columns are: Name, Company, Status, Email, Lead Status, Created Date, Owner, and Unsubscribe. The "Owner" column shows "munni" for most leads, except for Jeff Glimpse, Kathy Snyder, Kristen Akin, Mike Braund, Norm May, Patricia Feager, Sandra Eberhard, santosh, Shelly Brownell, Tom James, and Violet Macleod.

	Name	Company	Status	Email	Lead Status	Created Date	Owner	Unsub...
1	Akhil	wipro			Open - Not Contacted	1/5/2023, 12:18 AM	munni	
2	aliii	TCS			Open - Not Contacted	1/5/2023, 1:26 AM	munni	
3	Bertha Boxer	Farmers Coop. of Florida	FL	bertha@fcf.net	Working - Contacted	1/2/2023, 3:14 AM	munni	
4	Betty Bair	American Banking Corp.	PA	bblair@abankingco.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
5	Brenda McClure	Cadinal Inc.	IL	brenda@cardinal.net	Working - Contacted	1/2/2023, 3:14 AM	munni	
6	David Monaco	Blues Entertainment Corp.		david@blues.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
7	Jeff Glimpse	Jackson Controls		jeffg@jackson.com	Open - Not Contacted	1/2/2023, 3:14 AM	munni	
8	Kathy Snyder	TNR Corp.	CT	ksynder@tnr.net	Working - Contacted	1/2/2023, 3:14 AM	munni	
9	Kristen Akin	Aethna Home Products	VA	kakin@athenahome.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
10	Mike Braund	Metropolitan Health Services	MD	likeb@metro.com	Open - Not Contacted	1/2/2023, 3:14 AM	munni	
11	Munni	Taj Hotel			Open - Not Contacted	1/5/2023, 12:32 AM	munni	
12	Norm May	Greenwich Media	OH	norm_may@greenwich.net	Working - Contacted	1/2/2023, 3:14 AM	munni	
13	Patricia Feager	International Shipping Co.	NC	patricia_feager@is.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
14	Phyllis Cotton	Abbott Insurance	VA	pcotton@abbottins.net	Open - Not Contacted	1/2/2023, 3:14 AM	munni	
15	Sandra Eberhard	Highland Manufacturing Ltd.	CA	sandra_e@highland.net	Working - Contacted	1/2/2023, 3:14 AM	munni	
16	santosh	Zara			Open - Not Contacted	1/5/2023, 12:20 AM	munni	
17	Shelly Brownell	Western Telecommunications Corp.	CA	shellyb@westerntelecom.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
18	Tom James	Delphi Chemicals	MN	tom.james@delphi.chemicals.com	Working - Contacted	1/2/2023, 3:14 AM	munni	
19	Violet Macleod	Emerson Transport	GA	violetm@emersontransport.com	Working - Contacted	1/2/2023, 3:14 AM	munni	

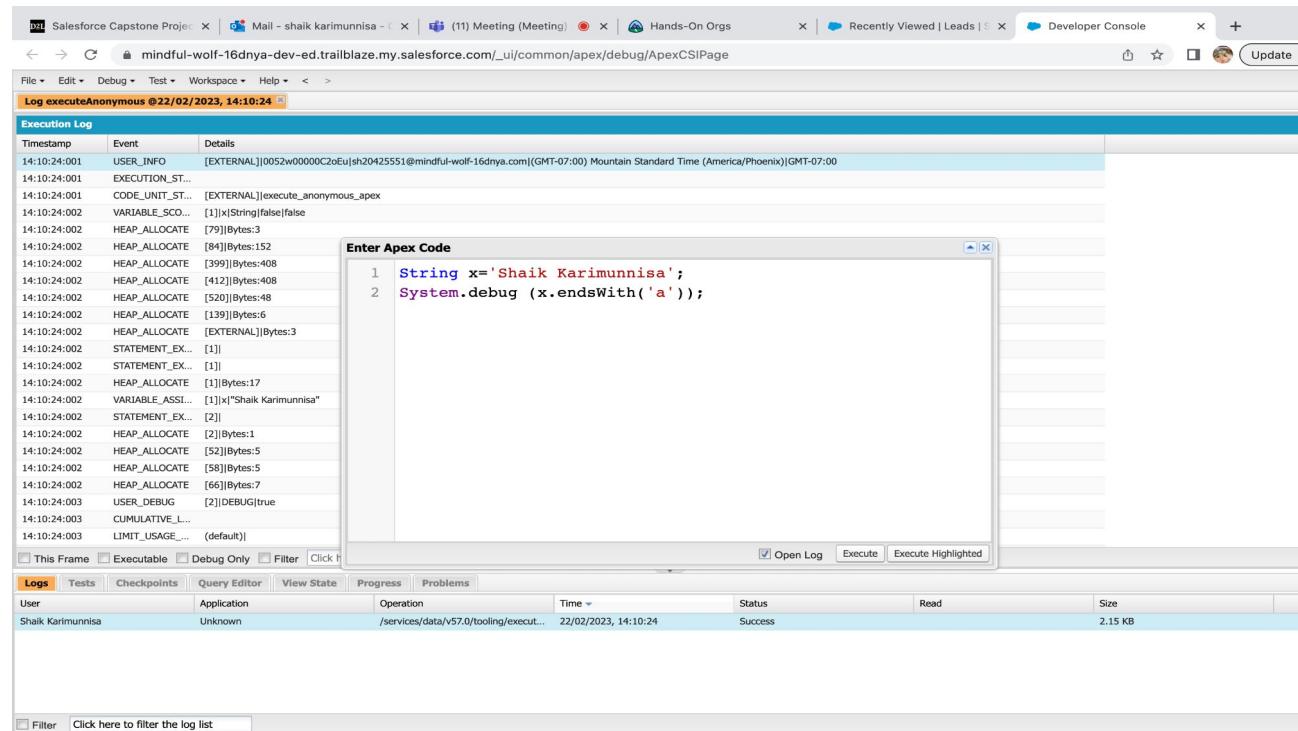
Creating custom objects Customer , Billing and add related fields

This screenshot shows the Salesforce Object Manager interface for the 'Customer' object. The left sidebar contains navigation links for 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, and Restriction Rules. The main content area is titled 'Fields & Relationships' and lists seven fields: Active (checkbox), Created By (Lookup(User)), Customer (Master-Detail(Customer)), Customer Name (Text(80)), Customer Type (Picklist), Description (Text Area(255)), and Last Modified By (Lookup(User)). The table includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

This screenshot shows the Salesforce Object Manager interface for the 'Billing' object. The left sidebar contains navigation links for 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, and Restriction Rules. The main content area is titled 'Fields & Relationships' and lists seven fields: Amount Paid (Currency(18, 0)), Bill Number (Auto Number), Created By (Lookup(User)), Customer Type (Picklist), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), and Status (Picklist). The table includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

Exercise - 02

Define a String Variable & use string method 'endsWith' to display the output.



The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for SalesForce Capstone Project, Mail, Meeting, Hands-On Orgs, Recently Viewed, Leads, and Developer Console. The main area displays the Execution Log for an anonymous apex execution. The log table has columns for Timestamp, Event, and Details. The log details the execution of the code below:

```
1 String x='Shaik Karimunnisa';
2 System.debug (x.endsWith('a'));
```

The log shows various heap allocations and statement executions. The final entry is a success message from the developer tool.

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:10:24	Success		2.15 KB

2. Define 2 Date type variables, use Date method today() & addDays(30) to display the output

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help', and tabs for 'CustomerTriggerTest.apxc', 'DisqualificationTestLeads.apxc', 'Log executeAnonymous @23/02/2023, 14:54:04', '7072w00008LRoSI', 'OppView.vfp', and 'Log executeAnonymous @26/02/2023, 22:49:20'. The main area has a 'Logs' tab selected, showing a detailed execution log with timestamp, event, and details. Below the log is a table of recent logs. An 'Enter Apex Code' window is open, containing the following Apex code:

```
1 Date s1 = Date.today();
2 System.debug(s1);
3 Date s2 = s1.addDays(30);
4 System.debug(s2);
```

3. Display the Output of an integer variable from string '10' and then add 20 to it.

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help', and tabs for 'Salesforce Capstone Project', 'Mail - shaik.karimunnisa -', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads |', and 'Developer Console'. The main area has a 'Logs' tab selected, showing a detailed execution log with timestamp, event, and details. Below the log is a table of recent logs. An 'Enter Apex Code' window is open, containing the following Apex code:

```
1 String a='10';
2 Integer i=Integer.valueOf(a);
3 System.debug(a);
4 System.debug(i);
5 System.debug(i+20);
```

4. Define a string variable & Use String method length() to Display the output

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs including "Salesforce Capstone Project", "Mail - shaik.karimunnisa -", "(12) Meeting (Meeting)", "Hands-On Orgs", "Recently Viewed | Leads", and "Developer Console". The main area is titled "Execution Log" with a sub-section "Logs". The log table has columns for "Timestamp", "Event", and "Details". A single entry is shown: "14:15:16:003 USER_DEBUG [2]DEBUG|Length:16". Below the log is a code editor window titled "Enter Apex Code" containing the following code:

```
1 String str='length of string';
2 System.debug ('Length:' +str.length());
```

At the bottom of the developer console, there is a toolbar with buttons for "This Frame", "Executable", "Debug Only", "Filter", "Click It", "Open Log", "Execute", and "Execute Highlighted".

5. Define a list of integer and display the output using add(), get(), set() , clear() , Methods

The screenshot shows the Salesforce Developer Console interface. The title bar indicates it's running in a Chrome browser on a Mac, with the date and time as Sun 26 Feb 10:54 PM. The main area is titled "Execution Log" with a sub-section "Logs". The log table has columns for "Timestamp", "Event", and "Details". Multiple entries are listed, all under the "USER_INFO" event category, showing various heap allocations and system statements. A code editor window titled "Enter Apex Code" is open, showing the following code:

```
1 List<Integer> l = new List<Integer>();
2 l.add(0);
3 l.add(1);
4 l.add(2);
5 l.add(3);
6 l.add(4);
7 System.debug('After using add() method'+1);
8 l.get(0);
9 System.debug('After using get() method'+1);
10 l.set(1,100);
11 System.debug('After using set() method'+1);
12 l.clear();
13 System.debug('After clearing all elements'+1);
```

At the bottom of the developer console, there is a toolbar with buttons for "This Frame", "Executable", "Debug Only", "Filter", "Click here to filter the log list", "Open Log", "Execute", and "Execute Highlighted".

Use Execute Anonymous to define and execute the following code to display the value of x = 0 to 9.

The screenshot shows the Salesforce Developer Console interface. In the center, there is a modal window titled "Enter Apex Code" containing the following Apex code:

```
1 Integer x=20;
2 while(x>12) {
3   for(x=0;x<10;x++) {
4     System.debug('Valye of x is: '+x);
5   }
6 }
```

Below the code, the "Logs" tab is selected in the navigation bar. On the left side of the logs, there is a table with columns: User, Application, Operation, Time, Status, Read, and Size. The "Logs" section displays the following log entries:

User	Application	Operation	Time	Status	Read	Size

The "Details" column of the logs shows the output of the debug statements from the executed code:

Timestamp	Event	Details
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 0
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 1
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 2
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 3
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 4
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 5
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 6
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 7
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 8
14:20:25:003	USER_DEBUG	[4] DEBUG Valye of x is: 9

Exercise -03

Answer the following in True or False:

**Integer myunluckyNumber = 7; Integer myluckyNumber = 15;
myluckyNumber != myunluckyNumber + 8.**

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs: 'Salesforce Capstone Project', 'Mail - shaik karimunnisa', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads | S', and 'Developer Console'. Below the tabs, the URL is mindful-wolf-16dnya-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The main area has a toolbar with 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help', and various icons. A sub-menu bar shows 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help', and 'Logs' (which is selected). The 'Logs' tab is open, showing the 'Execution Log' with the following entries:

Timestamp	Event	Details
14:22:11:002	USER_DEBUG	[7]DEBUG True

Below the log is an 'Enter Apex Code' window containing the following Apex code:

```
1 Integer myunluckyNumber=7;
2 Integer myluckyNumber=15;
3 if (myluckyNumber != myunluckyNumber + 8) {
4     System.debug('False');
5 }
6 else{
7     System.debug('True') ;
8 }
```

At the bottom of the developer console, there are several tabs: 'Logs' (selected), 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. There is also a 'Filter' button. The 'Logs' table shows the following data:

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:22:11	Success		2.64 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:20:25	Success		5.68 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:15:16	Success		2.25 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:13:23	Success		2.55 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:10:24	Success		2.15 KB

Exercise-04

Answer the following in True Or False:
Boolean isFalse = false; Boolean isTrue = true;

The screenshot shows the Salesforce Developer Console interface. In the center, there is an 'Enter Apex Code' window containing the following code:

```
1 Boolean istrue=True;
2 Boolean isfalse=False;
3 System.debug (istrue||isfalse);
```

Below the code editor, there is a toolbar with checkboxes for 'This Frame', 'Executable', 'Debug Only' (which is checked), 'Filter', and 'Click Here'. There are also buttons for 'Open Log', 'Execute', and 'Execute Highlighted'.

At the bottom of the interface, there is a table titled 'Logs' with the following data:

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:23:03	Success		2.35 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:22:11	Success		2.64 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:20:25	Success		5.68 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:15:16	Success		2.25 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:13:23	Success		2.55 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:10:24	Success		2.15 KB

Exercise -05

Answer the following in True Or False:

**Date tomorrow = Date.today().addDays(1); Date today = Date.today();
today != tomorrow**

The screenshot shows a Chrome browser window with several tabs open, including 'Salesforce Capstone Project', 'Mail - shaik karimunnisa - c', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads | S', 'Developer Console', and 'Log executeAnonymous @22/02/2023, 14:25:00'. The 'Developer Console' tab is active, displaying the 'Execution Log' and the 'Enter Apex Code' panel.

Execution Log

Timestamp	Event	Details
14:25:00:003	USER_DEBUG	[3] DEBUG true

Enter Apex Code

```
1 Date today = Date.today() ;
2 Date tomorrow = Date.today().addDays(1);
3 System.debug (today!=tomorrow);
```

Logs

User	Application	Size
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	2.45 KB
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	2.35 KB
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	2.64 KB
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	5.68 KB
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	2.25 KB
Shaik Karimunnisa	/services/data/v57.0/tooling/execut...	2.55 KB

Exercise-06

Write a program and execute to demo the use of “If..else if...else”

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs: 'Salesforce Capstone Project', 'Mail - shaik karimunnisa - C', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads', and 'Developer Console'. Below the tabs, the URL is mindful-wolf-16dnya-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage.

The main area contains three panes:

- Execution Log:** A table showing logs from the execution. It has columns for 'Timestamp', 'Event', and 'Details'. The logs show:
 - 14:28:42:002 USER_DEBUG [2]DEBUG|Score is:100
 - 14:28:42:002 USER_DEBUG [4]DEBUG|Grade: A+
- Enter Apex Code:** A code editor window containing the following Apex code:

```
1 Integer Score=100;
2 System.debug('Score is:'+Score);
3 if (score==100){
4     System.debug('Grade: A+');
5 }
6 else if (Score>=90) {
7     System.debug('Grade: A');
8 }
9 else if (Score>=80) {
10    System.debug('Grade: B');
11 }
12 else{
13     System.debug('Grade: Failed');
14 }
```
- Logs:** A table showing a list of log entries. The 'Logs' tab is selected. The table has columns for 'User', 'Application', 'Operation', 'Time', 'Status', 'Read', and 'Size'. The entries are:

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:28:42	Success		2.84 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:25:00	Success		2.45 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:23:03	Success		2.35 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:22:11	Success		2.64 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:20:25	Success		5.68 KB
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:15:16	Success		2.25 KB

Exercise-07

Write a program to execute and demo the use of “Apex – for Loop”

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs: "Salesforce Capstone Project", "Mail - shaik karimunnisa", "(12) Meeting (Meeting)", "Hands-On Orgs", "Recently Viewed | Leads", and "Developer Console". The "Developer Console" tab is active.

The main area displays the "Execution Log" and the "Enter Apex Code" editor.

Execution Log:

Timestamp	Event	Details
14:31:17:031	USER_DEBUG	[20] DEBUG Invalid Data
14:31:17:049	USER_DEBUG	[23] DEBUG Value of Billing List: (Billing__c:{Id=a0T2w000014jgdgEAA, Name=B - 0009, Status__c=Paid}, Billing__c:{Id=a0T2w000014jgdbEAA, Name=B - 0008, Status__c=Paid})
14:31:17:050	USER_DEBUG	[27] DEBUG Value of Current record over which current record is iterating is: Billing__c:{Id=a0T2w000014jgdgEAA, Name=B - 0009, Status__c=Paid}
14:31:17:050	USER_DEBUG	[28] DEBUG Billing Records are: B - 0009
14:31:17:050	USER_DEBUG	[27] DEBUG Value of Current record over which current record is iterating is: Billing__c:{Id=a0T2w000014jgdbEAA, Name=B - 0008, Status__c=Paid}
14:31:17:050	USER_DEBUG	[28] DEBUG Billing Records are: B - 0008

Enter Apex Code:

```
1 BillingObject.createRecords();
```

Below the code editor are several filter options: "This Frame", "Executable", "Debug Only" (which is checked), "Filter", and "Click here to filter the log list". There are also buttons for "Open Log", "Execute", and "Execute Highlighted".

Logs:

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:31:17	Success		8.7 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:30:04	Success	Unread	24.13 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:30:04	Success	Unread	43.6 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:30:04	Insert failed. First exception on row ...	Unread	9.52 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:30:04	Success	Unread	2.83 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:30:04	Success	Unread	989 bytes

Exercise-08

Write a Class to demo the use of Constants in Apex

The screenshot shows the Salesforce Developer Console interface. On the left, the code editor displays the `DiscountClass.apxc` file:

```
1 public class DiscountClass {
2     Decimal regularDiscount= 1.56;
3     Decimal FinalPrice;
4     public Decimal calculateDiscount(Integer price){
5         finalprice = price - price*regularDiscount;
6         System.debug('finalPrice: '+finalPrice);
7         return finalPrice;
8     }
9 }
10 }
```

Below the code editor is the **Logs** panel, which lists several log entries from the developer console:

User	Application	Operation	Time	Status	Read	Size
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	46.22 KB
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	988 bytes
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	2.83 KB
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	18.53 MB
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	43.59 KB
Shak Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:32:13	Success	Unread	24.09 KB

At the bottom of the logs panel is a filter input field: Click here to filter the log list.

The screenshot shows the Salesforce Developer Console interface. In the center, the **Execution Log** window displays a single log entry:

Timestamp	Event	Details
14:33:33:005	USER_DEBUG	[6]DEBUG finalPrice: -112.00

To the right, a modal window titled **Enter Apex Code** contains the following code:

```
1 DiscountClass x = new DiscountClass();
2 x.calculateDiscount (200);
```

Below the modal are two tabs: **Logs** and **Tests**. The **Logs** tab shows a table of log entries, and the **Tests** tab shows a table of test results. At the bottom of the page is a global search bar: Click here to filter the log list.

Exercise-09

Write a Class to demo the use of Interface in Apex

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs: 'Salesforce Capstone Project', 'Mail - shaik karimunnisa -', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads |', and 'Developer Console'. Below the tabs, the URL is 'mindful-wolf-16dnya-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage'. The main area displays the code for 'InterfaceExample.apxc':

```
1 public Interface InterfaceExample {  
2     Double percentageDiscountToBeApplied();  
3 }  
4 }
```

Below the code editor, the 'Logs' tab is selected in the navigation bar. The logs table shows the following data:

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	17.61 MB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	46.19 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	24.12 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	43.58 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	988 bytes
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:34:58	Success	Unread	2.81 KB

At the bottom of the logs table, there is a 'Filter' input field and the placeholder text 'Click here to filter the log list'.

Exercise-10

Demo on DML Insert Operation Using Database methods

Insert a Customer Record First using simple DML Statement

The screenshot shows the Salesforce Developer Console interface. At the top, there are several tabs: 'Salesforce Capstone Project', 'Mail - shaik.karimunnisa - C', '(12) Meeting (Meeting)', 'Hands-On Orgs', 'Recently Viewed | Leads | S', and 'Developer Console'. Below the tabs, the URL is 'mindful-wolf-16dnya-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage'. The main area has a title bar 'Execution Log' with columns for 'Timestamp', 'Event', and 'Details'. A single log entry is shown: '14:42:22:087 USER_DEBUG [16]|DEBUG|Record inserted. Billing ID: a0T2w000014jhqeEAA'. Below this is a code editor window titled 'Enter Apex Code' containing the Apex code: 'BillingInsert.recordInsert();'. At the bottom of the developer console, there is a 'Logs' tab selected, showing a table of log entries. The table includes columns for 'User', 'Application', 'Operation', 'Time', 'Status', 'Read', and 'Size'. The logs show multiple entries from 'Shaik Karimunnisa' and 'ApexTestHandler' at various times between 14:42:18 and 14:42:22, with statuses like Success, Unread, and Read.

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:42:22	Success		5.88 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:38:19	Success		17.66 MB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:38:19	Success		46.21 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:38:18	Success		2.83 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:38:18	Success	Unread	988 bytes
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:38:18	Success	Unread	43.58 KB

Exercise-11

Write and execute SOQL queries from Developer Console

The screenshot shows a Chrome browser window with the URL `mindful-wolf-16dnya-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The developer console interface is visible, showing a query results grid and a query editor.

Query Results - Total Rows: 10

AccountId	Amount	Name	StageName	Account.Industry	Account.Website
0012w00001FdipYAAJ	125000	United Oil Office Portable Generators	Negotiation/Review	Energy	http://www.uos.com
0012w00001FdipYAAJ	270000	United Oil Refinery Generators	Proposal/Price Quote	Energy	http://www.uos.com
0012w00001FdipYAAJ	120000	United Oil SLA	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	270000	United Oil Installations	Negotiation/Review	Energy	http://www.uos.com
0012w00001FdipYAAJ	270000	United Oil Installations	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	915000	United Oil Refinery Generators	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	235000	United Oil Installations	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	440000	United Oil Emergency Generators	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	120000	United Oil Standby Generators	Closed Won	Energy	http://www.uos.com
0012w00001FdipYAAJ	675000	United Oil Plant Standby Generators	Needs Analysis	Energy	http://www.uos.com

Query Editor

```
Select AccountId, Amount, Name, StageName, Account.Industry, Account.Website FROM Opportunity WHERE Account.Industry = 'Energy' AND Account.AnnualRevenue >5000
```

History

Executed

```
Select AccountId, Amount, Name, StageName, Account.Industry, Ac...
```

Buttons

Query Grid: Save Rows Insert Row Delete Row Refresh Grid

Access in Salesforce: Create New Open Detail Page Edit Page

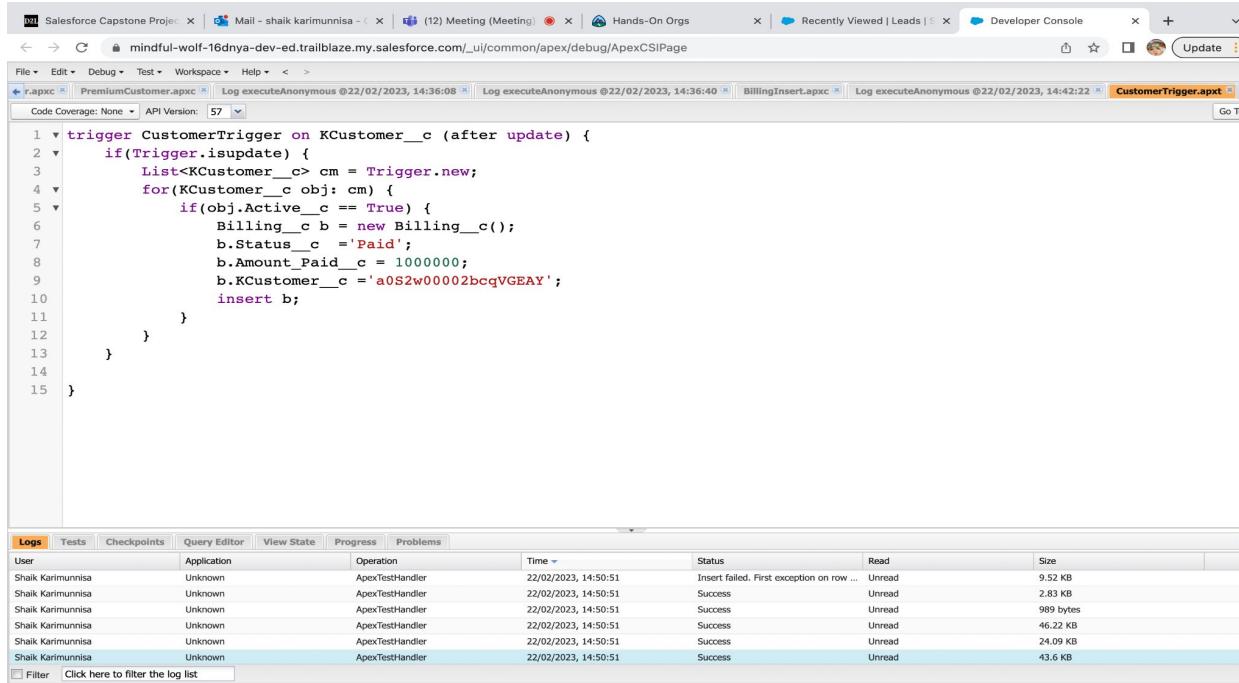
Logs Tests Checkpoints Query Editor View State Progress Problems

Any query errors will appear here...

Execute Use Tooling API

Exercise-12

Write an Apex Trigger, Name = CustomerTrigger.

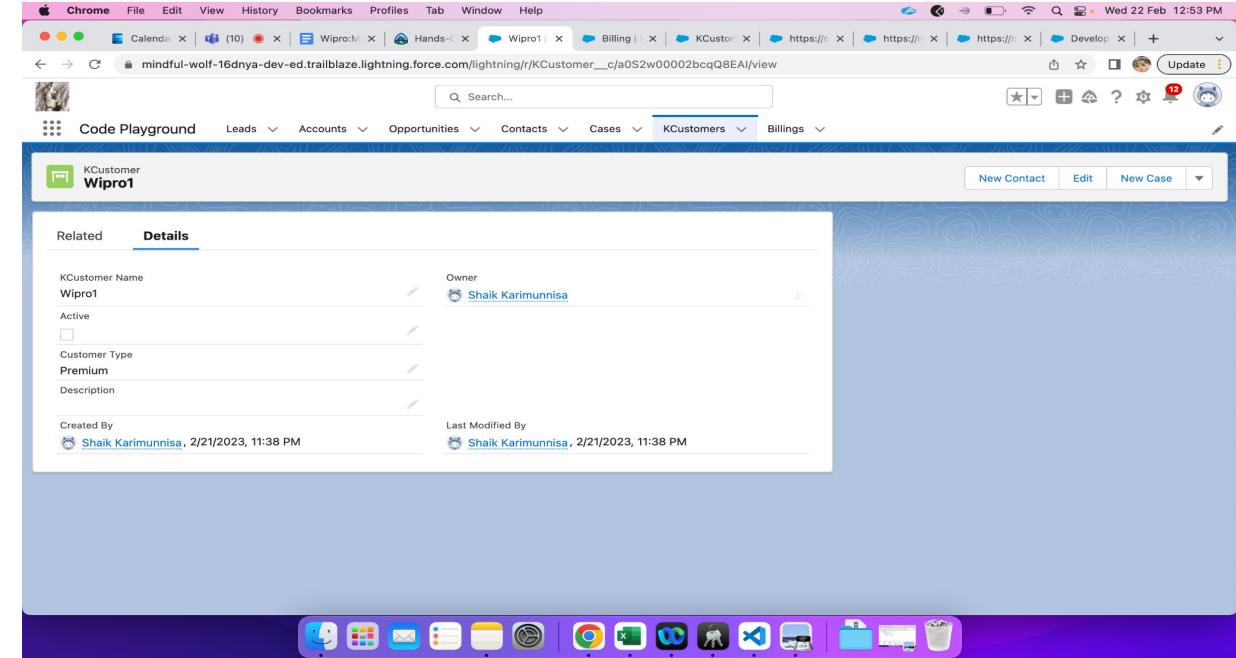


The screenshot shows the Salesforce Developer Console with the code for CustomerTrigger.apxc. The code is an Apex trigger that inserts a Billing__c record for each KCustomer__c record where Active__c is true. The Billing__c record has Status__c set to 'Paid', Amount_Paid__c set to 1000000, and KCustomer__c set to the current record's ID.

```
trigger CustomerTrigger on KCustomer__c (after update) {
    if(Trigger.isupdate) {
        List<KCustomer__c> cm = Trigger.new;
        for(KCustomer__c obj: cm) {
            if(obj.Active__c == True) {
                Billing__c b = new Billing__c();
                b.Status__c ='Paid';
                b.Amount_Paid__c = 1000000;
                b.KCustomer__c ='a0S2w00002bcqVGEAY';
                insert b;
            }
        }
    }
}
```

Below the code editor is a log table showing several failed ApexTestHandler operations, indicating that the trigger is not yet properly tested.

User	Application	Operation	Time	Status	Read	Size
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Insert failed. First exception on row ...	Unread	9.52 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Success	Unread	2.83 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Success	Unread	989 bytes
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Success	Unread	46.22 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Success	Unread	24.09 KB
Shaik Karimunnisa	Unknown	ApexTestHandler	22/02/2023, 14:50:51	Success	Unread	43.6 KB



Exercise-13

Write a Test Class for CustomerTrigger.

```
1 @isTest
2 public class CustomerTriggerTest {
3     @isTest
4     static void testCustomer(){
5         KCustomer__c cust1 = new KCustomer__c();
6         cust1.Name='test1';
7         cust1.Customer_Type__c = 'Premium';
8         insert cust1;
9         cust1.Active__c = True;
10        update cust1;
11        if(cust1.Active__c == True){
12            Test.startTest();
13            Billing__c billing = new Billing__c();
14            billing.Status__c = 'Paid';
15            billing.Amount_Paid__c = 1000000;
16            Test.stopTest();
17            system.assertEquals('Paid', billing.Status__c);
18            system.assertEquals(1000000, billing.Amount_Paid__c);
}
Logs Tests Checkpoints Query Editor View State Progress Problems
User Application Operation Time Status Read Size
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Success Unread 8.79 KB
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Success Unread 46.23 KB
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Success Unread 988 bytes
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Success Unread 24.09 KB
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Success Unread 43.61 KB
Shaik Karimunnisa Unknown ApexTestHandler 23/02/2023, 10:47:43 Insert failed. First exception on row ... Unread 9.51 KB
Filter Click here to filter the log list
```

Exercise -14

ApexTrigger ,Name = DisqualifytestLeads

```

trigger DisqualifyTestLeads on Lead (after insert, before insert, before update) {
    List<Lead> l= new List<Lead>();
    for(Lead mylead: Trigger.new){
        if(mylead.FirstName== 'test' && mylead.FirstName.length()!=0 || mylead.LastName == 'test' && mylead.LastName.length()!=0){
            System.debug(mylead.FirstName +' '+ mylead.LastName+' '+Will be Disqualified');
            l.add(mylead);
        }
        if(mylead.FirstName ==null){
            mylead.addError('Enter name');
        }
    }
    for(Lead mylead2:l){
        mylead2.Status ='Disqualified';
    }
}

```

The log viewer shows the following entries:

User	Application	Operation	Time	Status	Read	Size
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:35	Success	Unread	9.53 KB
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:35	Success	Unread	43.6 KB
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:34	Success	Unread	991 bytes
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:34	Success	Unread	24.79 KB
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:34	Success	Unread	46.11 KB
Shak Karimunisa	Unknown	ApexTestHandler	22/02/2023, 14:51:34	Success	Unread	2.81 KB

Exercise -15

Write a test class for Disqualifytestleads

```

@isTest
public class DisqualifyTestLeadsTest {
    @isTest
    private static void insertData(){
        Lead l1 = new Lead();
        l1.FirstName = 'Test';
        l1.LastName = 'Test';
        l1.Company = 'Test';
        Test.startTest();
        insert l1;
        Test.stopTest();
        System.assertEquals('Test', l1.FirstName);
        System.assertEquals('Test', l1.LastName);
        System.assertEquals('Test', l1.Company);
    }
    @isTest
    private static void insertData2(){
        Lead l2 = new Lead();
        l2.LastName = 'Test';
    }
}

```

The log viewer shows the following entries:

User	Application	Operation	Time	Status	Read	Size
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:37	Success	Unread	46.86 KB
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:34	Success	Unread	43.62 KB
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:34	Success	Unread	991 bytes
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:34	Success	Unread	18.09 MB
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:34	Success	Unread	8.84 KB
Shak Karimunisa	Unknown	ApexTestHandler	27/02/2023, 11:56:34	Insert failed. First exception on row ...	Unread	18.2 KB

Exercise-16

Create a Visualforce page which displays Opportunity fields as output fields.

The screenshot shows the Salesforce Developer Console interface. On the left, the code editor displays the following Visualforce page code:

```
1 <apex:page standardController="Opportunity" >
2   <apex:pageBlock title="Opportunities">
3     <apex:pageBlockSection >
4       <apex:outputField value="{!Opportunity.Name}" />
5       <apex:outputField value="{!Opportunity.Amount}" />
6       <apex:outputField value="{!Opportunity.CloseDate}" />
7       <apex:outputField value="{!Opportunity.Account.Name}" />
8     </apex:pageBlockSection>
9   </apex:pageBlock>
10 </apex:page>
```

Below the code editor is the Logs tab of the developer console, showing a list of log entries:

User	Application	Operation	Time	Status	Read	Size
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Success	Unread	8.84 KB
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Insert failed. First exception on row ...	Unread	18.23 KB
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Success	Unread	43.33 KB
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Success	Unread	24.11 KB
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Success	Unread	46.26 KB
Shak Karimunisa	Unknown	ApexTestHandler	26/02/2023, 22:40:12	Success	Unread	1004 bytes

The bottom of the screen shows the Mac OS X dock with various application icons.

The screenshot shows a browser window displaying the Visualforce page. The page has a simple layout with the following fields:

Opportunity Name	Close Date	Amount	Account Name
Opportunity Name	Close Date	Amount	Account Name

The page content is currently empty, showing only the field labels.

Exercise-17

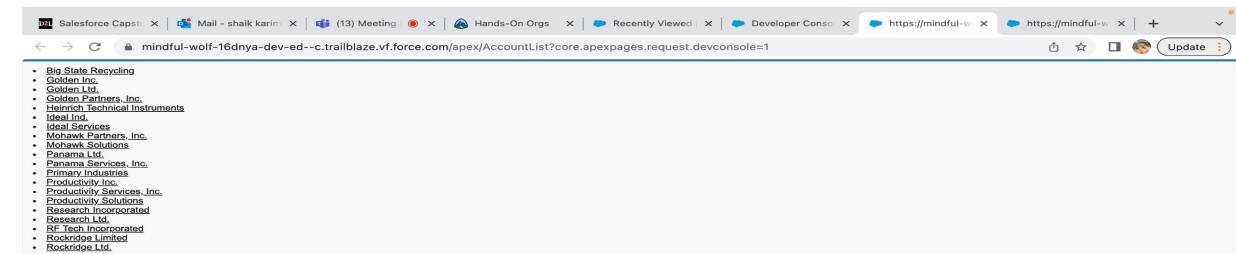
Create a Visualforce page which shows a list of Accounts linked to their record pages

The screenshot shows the Salesforce Developer Console interface. On the left, the code for `AccountList.vfp` is displayed:

```
1 <apex:page standardController="Account" recordSetVar="Accounts">
2   <apex:pageBlock>
3     <apex:repeat var="a" value="{!Accounts}" rendered="true" id="account_list">
4       <li>
5         <apex:outputLink value="/{!a.ID}">
6           <apex:outputText value="{!a.Name}" />
7         </apex:outputLink>
8       </li>
9     </apex:repeat>
10   </apex:pageBlock>
11 </apex:page>
```

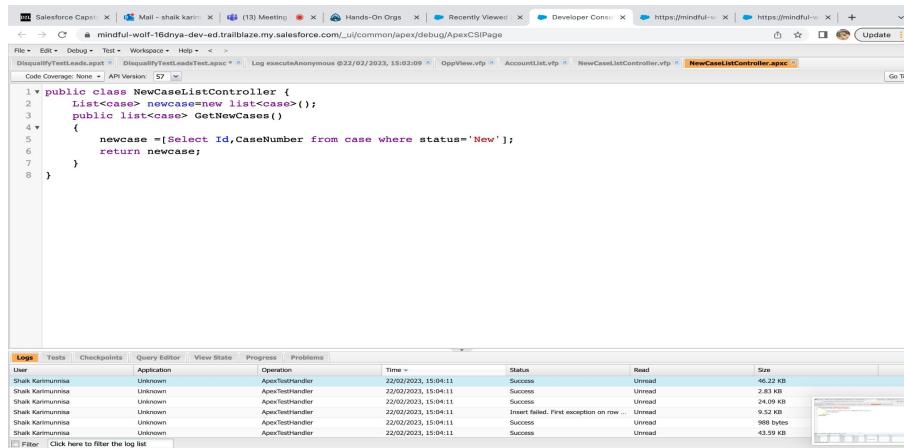
On the right, the execution results are shown, displaying a list of account names:

- Big State Recycling
- Golden Inc.
- Golden Ltd.
- Golden Partners, Inc.
- Haus Technical Instruments
- Ideal Ind.
- Ideal Services
- Mohawk Partners, Inc.
- Mohawk Solutions
- Pearlma Ltd.
- Paragon Services, Inc.
- Primary Industries
- Productivity Solutions
- Productivity Services, Inc.
- Productivity Solutions
- R&B Incorporated
- Research Llc
- RF Tech Incorporated
- Rockford Limited
- Rockridge Llc

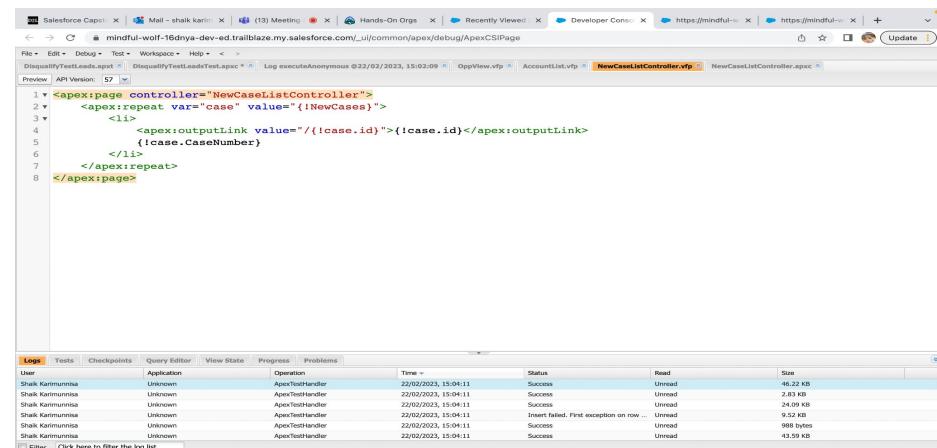


Exercise-18

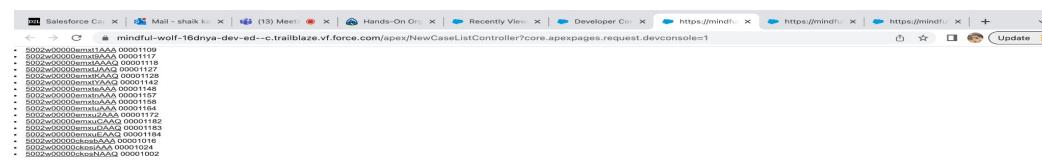
Create a Visualforce page that uses a custom controller to display a list of cases with the status of 'New'. The page must be named NewCaseList.



```
1 * public class NewCaseListController {
2     List<case> newcase=new list<case>();
3     public list<case> GetNewCases()
4     {
5         newcase =[Select id,CaseNumber from case where status='New'];
6         return newcase;
7     }
8 }
```



```
1 <apex:page controller="NewCaseListController">
2     <apex:repeat var="case" value="!NewCases">
3         <li>
4             <apex:outputLink value="/{!case.id}">{!case.id}</apex:outputLink>
5             {!case.CaseNumber}
6         </li>
7     </apex:repeat>
8 </apex:page>
```



User	Application	Operation	Time	Status	Read	Size
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Success	Unread	46.22 KB
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Success	Unread	24.09 KB
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Success	Unread	24.09 KB
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Insert failed. First exception on row 0:	Unread	9.52 KB
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Success	Unread	988 bytes
Shak Kamruzz	Unknown	ApexTestHandler	22/02/2023, 15:04:11	Success	Unread	43.59 KB

Thank You