



# Capstone Project Report On “Travel App”

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## **Abstract**

Salesforce, Inc. is an American cloud-based software company headquartered in San Francisco, California. It provides customer relationship management (CRM) software and applications focused on sales, customer service, marketing automation, analytics, and application development.

Salesforce's main technologies are tools for customer management. Other products enable customers to create apps, integrate data from other systems, visualize data, and offer training courses.

Force.com applications are built using declarative tools, backed by Lightning and Apex, a proprietary Java-like programming language for Force.com, as well as Visualforce, a framework including an XML syntax typically used to generate HTML. The Force.com platform typically receives three complete releases a year. As the platform is provided as a service to its developers, every single development instance also receives all these updates.

In here we work on how to Set up the Company Profile, Configuring the user Interface, setting up Activities and Calendars, Configuring Search Settings, Setting up Chatter Groups, Mobile Access with salesforce.

# Introduction

## About 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.

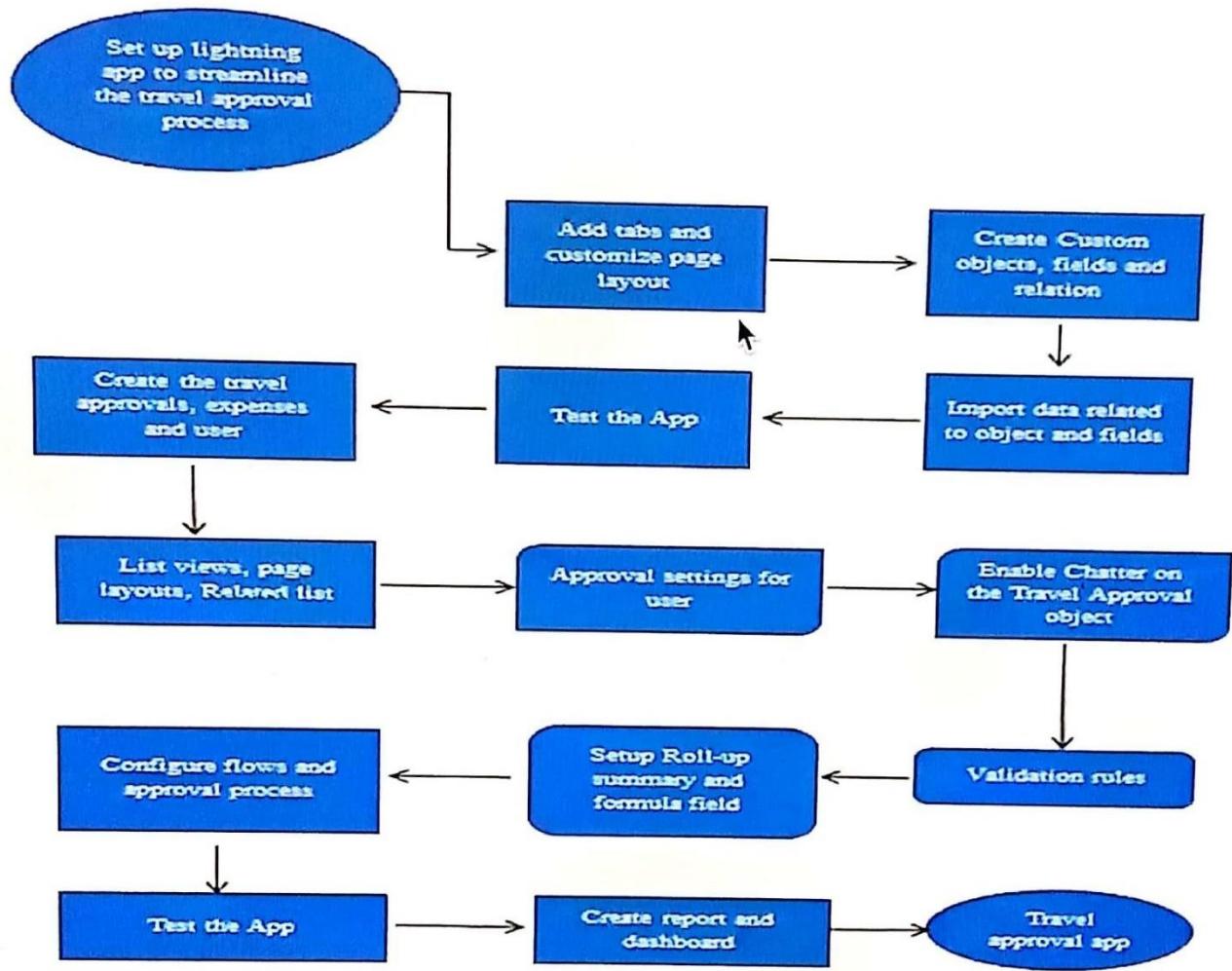
Salesforce is currently providing various software solutions and platforms for developers to create and distribute custom software/applications. Tech giants like Google, Twitter, Amazon, and Facebook are using Salesforce either in the form of SaaS or PaaS.



*Salesforce developers can make an application on the cloud and share it with multiple companies across multiple domains by using Salesforce.*

Talking about HR systems, every company across the globe has an HR team. Each HR team would require an HR application to store employee records. Almost all specifications for such an application would be common for all companies. So, as a developer, it would be very easy to create a Salesforce application for such specifications, post it onto the cloud, and provide it as a service to multiple clients at the same time. Maintenance of the same can be done altogether too. So basically, the problem of scalability gets eliminated.

## Flow of the Project



# Software Requirements

For the fastest and most stable experience, we recommend:

- An Octane 2.0 score of 30,000 or greater
- Network latency of 150 ms or less
- Download speed of 3 Mbps or greater
- At least 8 GB of RAM, with 3 GB available for Salesforce browser tabs

Minimum requirements are:

- An Octane 2.0 score of 20,000 or greater
- Network latency of 200 ms or less
- Download speed of 1 Mbps or greater
- At least 5 GB of RAM, with 2 GB available for Salesforce browser tabs

**OR**

Requirements	
Windows	
<b>Operating system</b>	<a href="#">Windows 8.1</a> 64-bit, <a href="#">Windows 8</a> 64-bit, Windows 7 Service Pack 1 64-bit, Windows Vista Service Pack 2 64-bit
<b>CPU</b>	<a href="#">Core 2 Quad</a> Q6600 at 2.4 GHz or <a href="#">AMD Phenom</a> 9850 at 2.5 GHz
<b>Memory</b>	4 GB <a href="#">RAM</a>
<b>Free space</b>	65 GB of free space
<b>Graphics hardware</b>	DirectX 10-compatible <a href="#">GPU: GeForce 9800GT</a> 1GB or <a href="#">ATI Radeon HD 4870</a> 1GB
<b>Sound hardware</b>	<a href="#">DirectX</a> 10 compatible <a href="#">sound card</a>

# Module – 1

Exercise 1: -

Step 1: - Create a new custom lightning App, name: **Travel App**

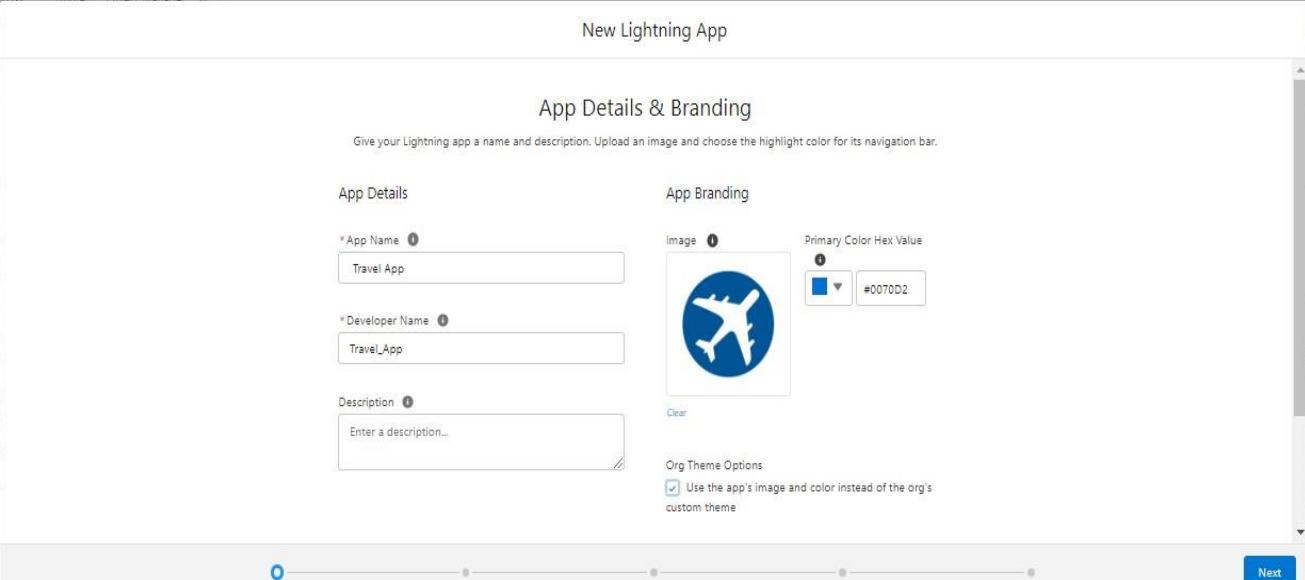
New Lightning App

### App Details & Branding

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

<b>App Details</b>	<b>App Branding</b>
* App Name <input type="text" value="Travel App"/>	Image <input type="file"/> Primary Color Hex Value <input type="text" value="#0070D2"/>
* Developer Name <input type="text" value="TravelApp"/>	Clear
Description <input type="text" value="Enter a description..."/>	Org Theme Options <input checked="" type="checkbox"/> Use the app's image and color instead of the org's custom theme

Next

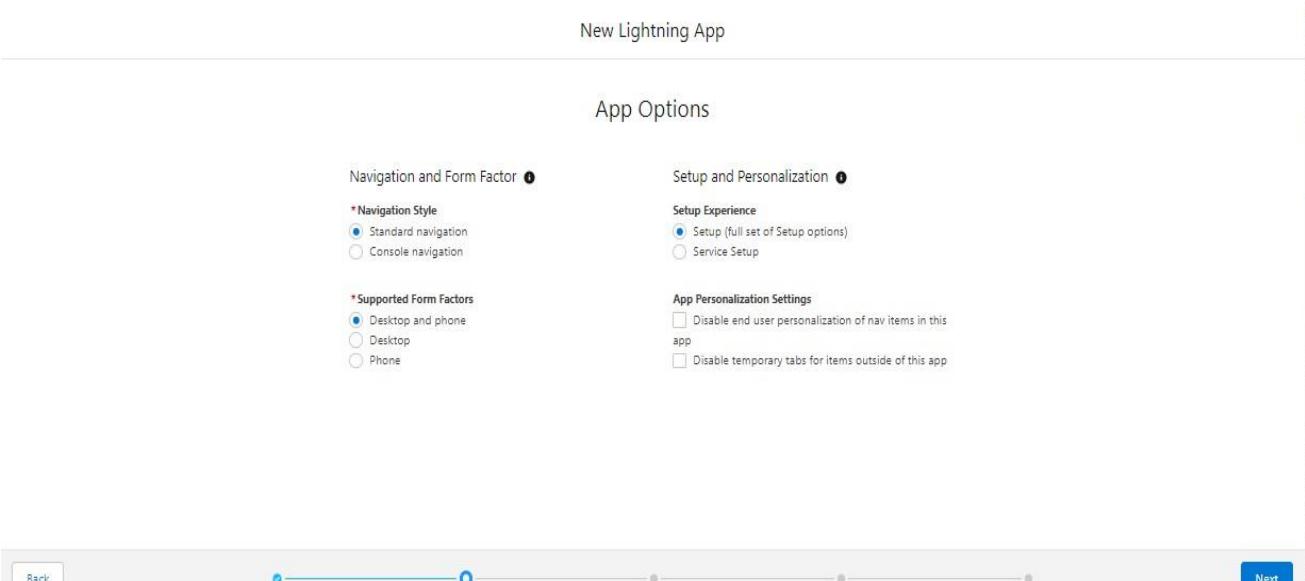


New Lightning App

### App Options

<b>Navigation and Form Factor</b>	<b>Setup and Personalization</b>
* Navigation Style <input checked="" type="radio"/> Standard navigation <input type="radio"/> Console navigation	Setup Experience <input checked="" type="radio"/> Setup (full set of Setup options) <input type="radio"/> Service Setup
* Supported Form Factors <input checked="" type="radio"/> Desktop and phone <input type="radio"/> Desktop <input type="radio"/> Phone	App Personalization Settings <input type="checkbox"/> Disable end user personalization of nav items in this app <input type="checkbox"/> Disable temporary tabs for items outside of this app

Back Next



New Lightning App

Available Items      Selected Items

Chatter  
Reports  
Dashboards

Back      Next

---

New Lightning App

Available Profiles      Selected Profiles

System Administrator

Back      Save & Finish

## Final output of step 1 -

The screenshot shows the Chatter Home page in a web browser. At the top, there are several tabs: 'Mgsa\_500\_Report.pdf', 'Deepak Yadav - Project Engineer', 'Create a Travel Approvals Dashb...', 'Chatter Home | Salesforce', and a new tab indicator. Below the tabs, the address bar shows the URL: 'wipocom-79d-dev-ed.lightning.force.com/lightning/page/chatter'. The navigation bar includes links for 'Gmail', 'Greatlearning login', 'Maps', 'Tenda Wireless Rou...', 'YouTube', 'Salesforce.com, Fo...', and 'Salesforce-DEX-450...'. On the left sidebar, there's a 'Travel App' icon and a 'Travel' section with links for 'What I Follow', 'To Me', 'Bookmarked', 'Company Highlights', and 'My Drafts'. Under 'STREAMS', it says 'You don't have any streams yet. Try creating one!'. Under 'RECENT GROUPS', it says 'Aw, you don't have any groups! Why not create or join some now?'. The main content area has a 'Post' tab selected. A post from 'TA-00001 — Deepak Yadav' dated '16 February 2023 at 11:07 pm' asks, '@Eric\_Executive Which department should I associate this travel request with?'. Eric Executive replies 'Technology is the correct department.' Below the post, there's a comment input field with the placeholder 'Write a comment...'. To the right, there's a sidebar titled 'Einstein Recommendations' featuring three suggestions: 'Eric Executive Your manager', 'Integration User Joined in the last month', and 'Security User Joined in the last month', each with 'Follow' and 'Skip' buttons.

## Step 2 : - Create a Department custom object.

Setup->Object Manager->Create Custom object (From top left dropdown button)

The screenshot shows the 'New Custom Object' page in the Salesforce Setup interface. The page title is 'SETUP New Custom Object'. The 'Custom Object Information' section includes fields for 'Label' (Department) and 'Plural Label' (Departments). There is also a checkbox for 'Starts with vowel sound'. The 'Object Name' field is set to 'Department'. A 'Description' text area is present. Under 'Context-Sensitive Help Setting', the 'Open the standard Salesforce.com Help & Training window' option is selected. The 'Content Name' dropdown is set to 'None'. The 'Enter Record Name Label and Format' section specifies 'Record Name' as 'Department Name' and 'Data Type' as 'Text'. A note states that the Record Name field is always called 'Name' when referenced via the API.

## Step 3 :-Create the following Custom Field in Department Object.

(a). Department Code, Text, Length = 10, Required, Select Unique & Case sensitive

The screenshot shows the 'Department' object details page in the Salesforce Setup interface. The 'Fields & Relationships' tab is selected. A new field is being created with the following settings: 'Field Label' is 'Department Code', 'Length' is '10', 'Field Name' is 'Department\_Code', and 'Required' is checked. The 'Unique' checkbox is checked, and the 'Case Sensitive' radio button is selected. Other options like 'Do not allow duplicate values' and 'Always require a value in this field in order to save a record' are also checked. The 'Default Value' field is empty. The 'Show Formula Editor' button is visible at the bottom.

(b). Location, Picklist, Value: Kolkata, Delhi.

Setup > OBJECT MANAGER  
Department

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  
Scoping Rules  
Triggers

Department  
New Custom Field

Step 2. Enter the details

Field Label: Location

Values:

Use global picklist value set  
 Enter values, with each value separated by a new line

Kolkata  
Delhi

Display values alphabetically, not in the order entered  
 Use first value as default value  
 Restrict picklist to the values defined in the value set

Field Name: Location  
Description:  
Help Text:

(c). Department Type, Picklist, Values: Banking, Finance, Education, Energy, IT.

Setup > OBJECT MANAGER  
Department

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  
Scoping Rules  
Triggers

Department  
New Custom Field

Step 2. Enter the details

Field Label: Department Type

Values:

Use global picklist value set  
 Enter values, with each value separated by a new line

Banking  
Finance  
Education  
Energy  
IT

Display values alphabetically, not in the order entered  
 Use first value as default value  
 Restrict picklist to the values defined in the value set

Field Name: Department\_Type  
Description:  
Help Text:

(d). Create Field Dependency, Controlling field =Location, Dependent field = Department Type

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

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

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

Location:	Kolkata	Delhi
	Banking	Banking
	Finance	Finance
	Education	Education
	Energy	Energy
	IT	IT

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

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

## Step 4 : - Create a Travel Approval custom object.

Setup->Object Manager->Create Custom object (From top left dropdown button)

SETUP

New Custom Object

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

Custom Object Definition Edit

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:

Now, Create the following Custom Field in Travel Approval Object.

- Purpose of Trip, Text Area.
- Status, Picklist, Values = New, Submitted, Pending Approval, Approved, Rejected, Draft.
- Trip Start Date, Date.
- Trip End Date, Date.
- Out of State, Checkbox.
- Destination State, Text, Length = 2.
- Department, Lookup, Related to = Department custom object.
- Save

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Fields & Relationships	Page Layouts	Created By	CreatedById	Lookup(User)		
	Lightning Record Pages	Department	Department_c	Lookup(Department)		
	Buttons, Links, and Actions	Destination State	Destination_State__c	Text(2)		
	Compact Layouts	Last Modified By	LastModifiedById	Lookup(User)		
	Field Sets	Out-of-State	Out_of_State__c	Checkbox		
	Object Limits	Owner	OwnerId	Lookup(User,Group)		
	Record Types	Purpose of Trip	Purpose_of_Trip__c	Text Area(255)		
	Related Lookup Filters	Status	Status__c	Picklist		
	Search Layouts					
	List View Button Layout					

Step 5 : - Import the data store in Department.csv by using “Data Import wizard” tool.

5(a) -

5(b) -

The screenshot shows the Salesforce Setup interface for mapping CSV data to Salesforce objects. At the top, there's a progress bar labeled 'Almost done' with steps 'Choose data', 'Edit mapping', and 'Start import'. Below the progress bar, the title 'Edit Field Mapping: Departments' is displayed, along with a note that the file has been auto-mapped to existing Salesforce fields. A table lists the mappings:

Edit	Mapped Salesforce Object	CSV Header	Example	Example	Example
Change	Department Name	Department Name	Audit Services	Contract Management	Division of Finance
Change	Department Code	Department Code	405-01	405-02	405-03

-Test the App, till yet what we have done.

The screenshot shows the Travel App interface with a navigation bar including 'Travel App', 'Chatter', 'Reports', 'Dashboards', 'Departments', and 'Travel Approvals'. The main area displays a list of departments under the 'Departments' tab, with 'All' selected. The list shows 16 items, sorted by Department Name, updated 5 minutes ago. The data 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
16	Technology

See the data is imported Successfully.

Note :- Before Importing the data make sure you clean the data otherwise some data will not be imported successfully.

### Exercise 2: -

Step 1: - Create Travel Approval Record.

The screenshot shows a Salesforce interface for a 'Travel Approval' record. The record ID is TA-00001. The 'Details' tab is selected. Key fields visible include:

- Travel Approval #: TA-00001
- Status: Draft
- Total Expenses: ₹1,320.00
- Status Indicator: A gear icon
- Owner: Deepak Yadav
- Department: Technology
- Trip Info section:
  - Purpose of Trip: Attend Dreamforce
  - Trip Start Date: 18/02/2023
  - Trip End Date: 24/02/2023
  - Out-of-State: Checked
  - Destination State: CA
- Created By: Deepak Yadav, 16/02/2023, 10:34 pm
- Last Modified By: Deepak Yadav, 17/02/2023, 8:11 pm

Step 2 : - Create a Expense Items custom object.

Setup->Object Manager->Create Custom object (From top left dropdown button)

The screenshot shows the Salesforce 'Object Manager' screen. A new custom object named 'Expense Item' is being created. The 'Details' tab is selected. The API Name is set to 'Expense\_Item\_\_c'. Other settings include:

- Description: (empty)
- Custom: Checked
- Singular Label: Expense Item
- Plural Label: Expense Items
- Enable Reports: Checked
- Track Activities: Checked
- Track Field History: Checked
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

The left sidebar lists various configuration tabs: 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, Triggers, Flow Triggers, and Validation Rules.

### Step 3 :-Create the following custom fields on Expense Item Object.

- Amount, Length = 16, Type = Currency, Decimal = 2, Required = True.
- Expense Type, Type = Picklist, Values = Airfare, Hotel, Rental Car, Meals, Other, Required = True.
- Travel Approval, Type = Master-Detail, Related To – Travel Approval.

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]		✓

### Step 4 :-Create the Expense Items .

- Amount = 870, Expense Type = “Hotel”.  Save.
- Amount = “450”, Expense Type = “Airfare”  Save.

## Step 5 :- Create a user.

- First Name = “Eric”, Last Name = “Executive”, Email = “Use your own email”,
- Username Name = “Choose a Unique username”
- Role = “CEO”
- License = Salesforce.
- Profile = System Administrator.
- Save.

The screenshot shows the Salesforce Setup interface with the 'Users' tab selected in the sidebar. The main window displays the 'New User' creation screen under the 'User Edit' tab. The 'General Information' section contains the following data:

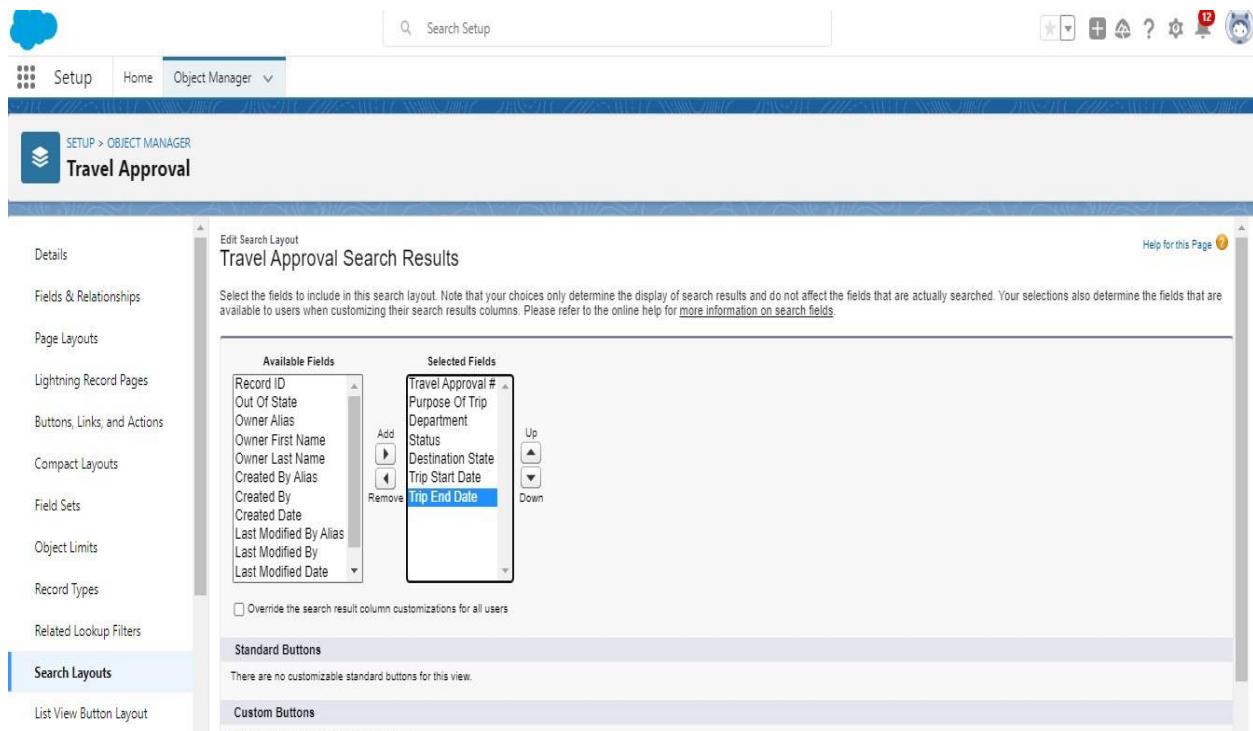
Field	Value
First Name	Eric
Last Name	Executive
Alias	exec
Email	sg2042wipro@gmail.com
Username	eric.gupta@wipro.com
Nickname	eric.exec
Title	
Company	
Department	
Division	

On the right side of the screen, there are several checkboxes for user types: Marketing User, Offline User, Knowledge User, Flow User, Service Cloud User, Site.com Contributor User, Site.com Publisher User, and WDC User. Below these checkboxes are dropdown menus for 'Role' (set to CEO), 'User License' (set to Salesforce), 'Profile' (set to System Administrator), and 'Data.com User Type' (set to None). There are also dropdown menus for 'Data.com Monthly Addition Limit' (set to Default Limit (300)) and 'Accessibility Mode (Classic Only)'.

## Step 6:- Add user Eric Executive as your manager as shown in the screen shot.

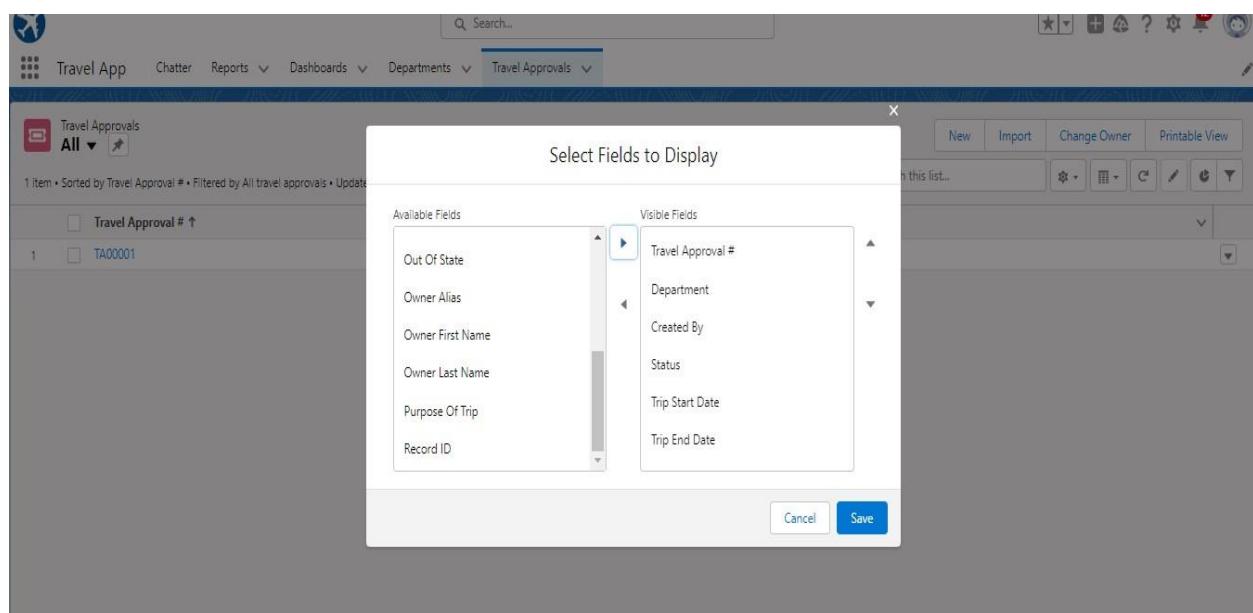
The screenshot shows the Salesforce Setup interface with the 'Users' tab selected in the sidebar. The main window displays the 'User' edit screen for the previously created user. In the 'Approver Settings' section, the 'Manager' field is populated with the name 'Eric Executive'. The 'Delegated Approver' field is empty. Below the manager field, there is a dropdown menu for 'Receive Approval Request Emails' with the option 'Only if I am an approver' selected.

Step 7 :- Customize the Travel Approval Default search layout as shown in the screen shot & Save.



The screenshot shows the 'Edit Search Layout' page for the 'Travel Approval' object in Salesforce's Object Manager. The left sidebar lists various customization options like Details, Fields & Relationships, Page Layouts, and Search Layouts, with 'Search Layouts' currently selected. The main area is titled 'Travel Approval Search Results' and contains a list of available fields on the left and selected fields on the right. The selected fields include 'Travel Approval #', 'Purpose Of Trip', 'Department', 'Status', 'Destination State', 'Trip Start Date', and 'Trip End Date'. The 'Trip End Date' field is highlighted with a blue selection bar. There are also sections for Standard Buttons and Custom Buttons, both of which are empty. A note at the top states: 'Select the fields to include in this search layout. Note that your choices only determine the display of search results and do not affect the fields that are actually searched. Your selections also determine the fields that are available to users when customizing their search results columns. Please refer to the online help for more information on search fields.'

Step 8:- Select fields to display in the Travel Approval “All” List view, as shown in the screen shot & Save.



The screenshot shows the 'Select Fields to Display' dialog box over a list view of 'Travel Approvals All'. The dialog box has two main sections: 'Available Fields' on the left and 'Visible Fields' on the right. The 'Available Fields' section lists 'Out Of State', 'Owner Alias', 'Owner First Name', 'Owner Last Name', 'Purpose Of Trip', and 'Record ID'. The 'Visible Fields' section lists 'Travel Approval #', 'Department', 'Created By', 'Status', 'Trip Start Date', and 'Trip End Date'. The 'Visible Fields' list is currently active, indicated by a blue selection bar around the 'Travel Approval #' field. At the bottom of the dialog box are 'Cancel' and 'Save' buttons.

Step 9 :- Create Travel approval custom List View “Open Out of State Travel Requests” as shown in the screen shot & Save.

- All users should be able to see this.

The screenshot shows a Salesforce custom list view for 'Travel Approvals'. The title of the view is 'Open Out of State Travel Requests'. The list contains one item, TA00001, sorted by Travel Approval #. The sidebar on the right shows filters applied: 'Out Of State\*' equals True and 'Status\*' not equal to Approved, Rejected.

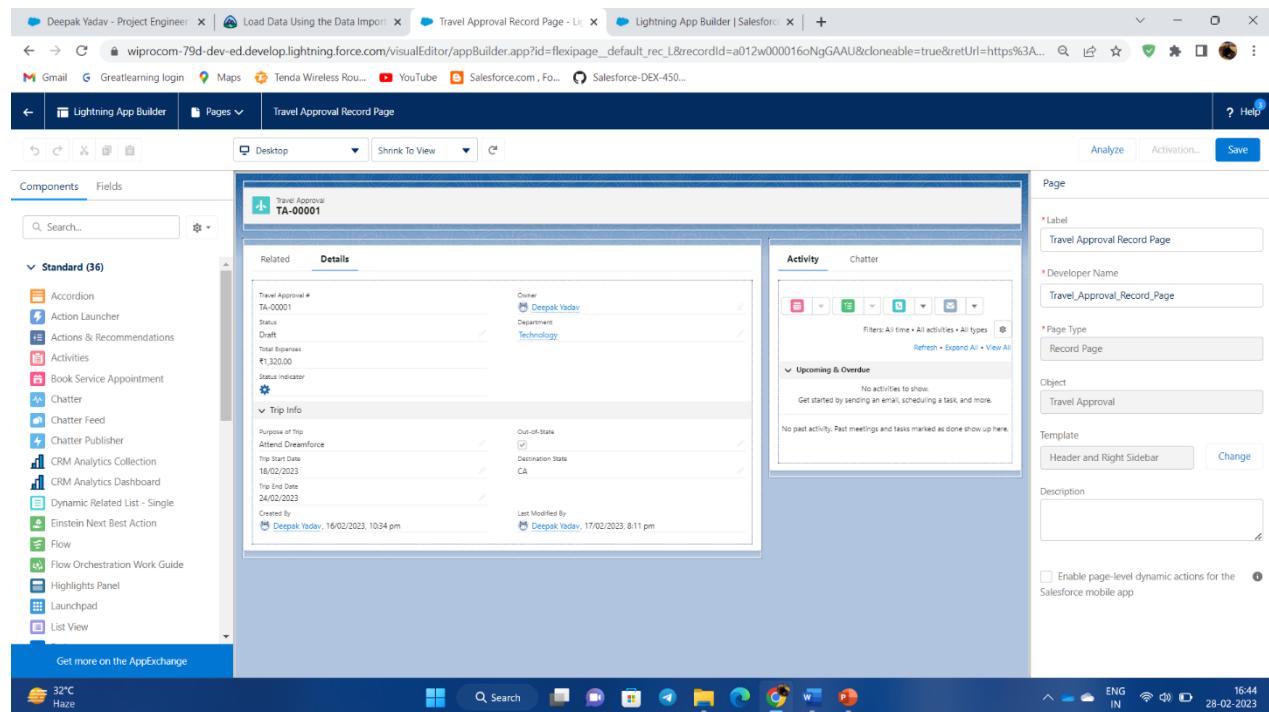
Step 10 :- Select fields to display in the Travel Approval “Open Out of State Travel Requests” List view, as shown in the screen shot & Save.

The screenshot shows the 'Select Fields to Display' dialog box. It lists available fields on the left and visible fields on the right. The visible fields are: Department, Created By, Status, Destination State, Trip Start Date, and Trip End Date. The available fields are: Owner Alias, Owner First Name, Owner Last Name, Purpose Of Trip, Record ID, and Travel Approval #.

## Step 11 :-

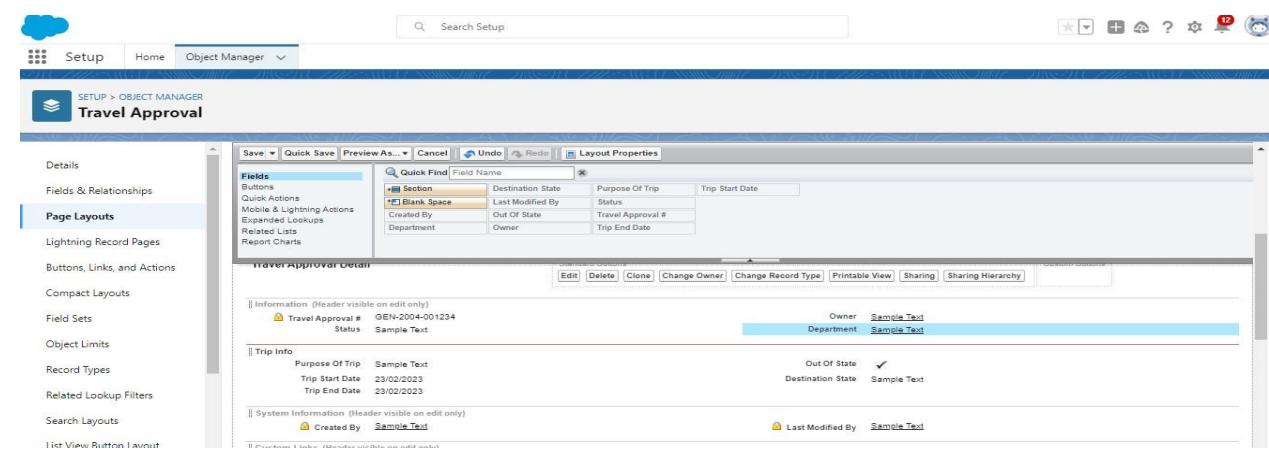
(a) Customize the Travel Approval Page Layout as shown in the screen shot.

- In the travel app, click travel approval tab and open TA-00001
- Then click Gear button and select “Edit Button” □ It will open as shown as screenshots.



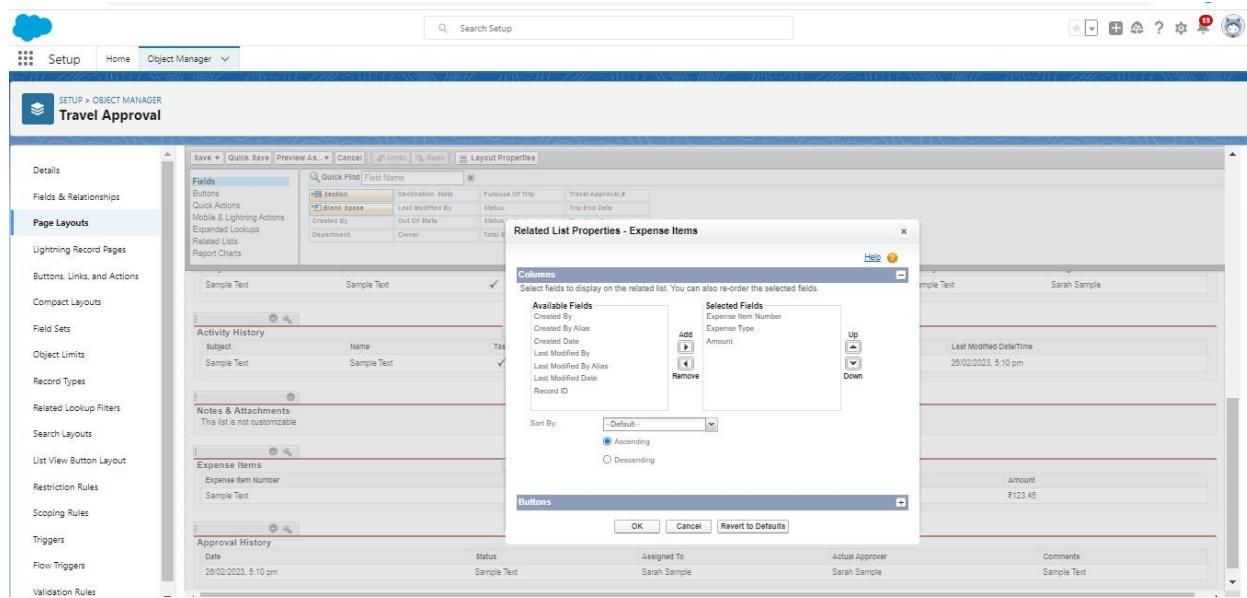
(b) :- Travel Approval Page Layout should look as shown in the screen shot.

Note: Add a section to the page layout called “Trip Info” and add the fields as shown. Click Save.

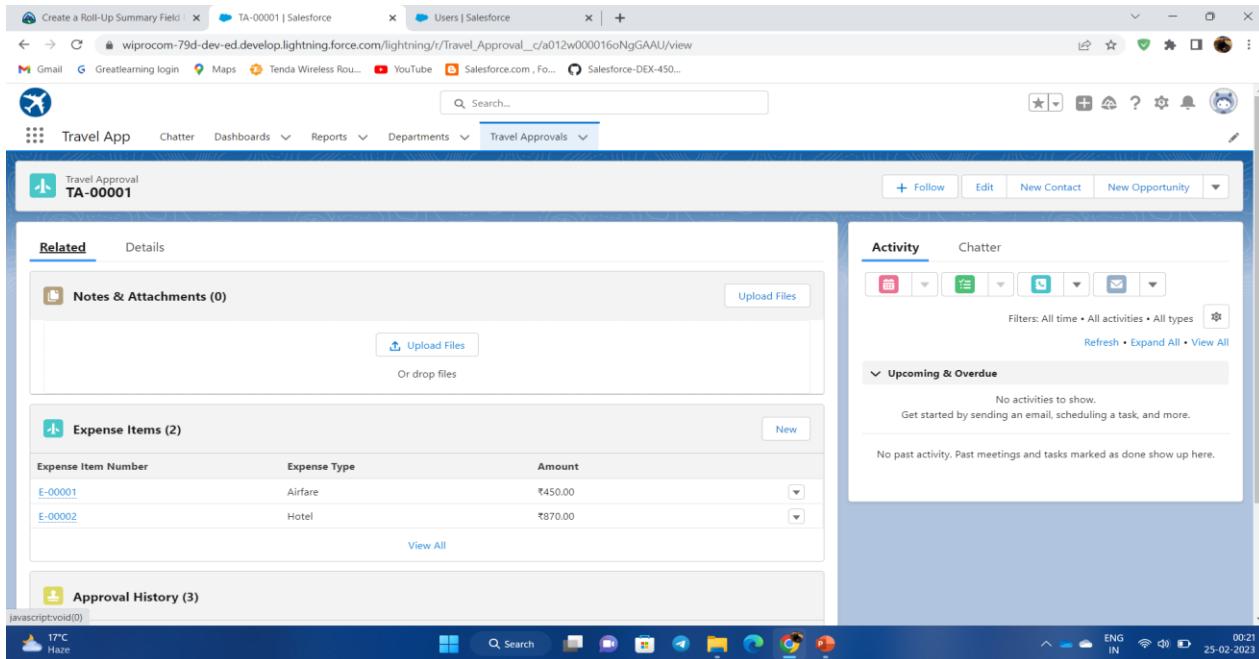


## Step 12 :-

- Customize the Expense Item Related List under the Travel Approval page layout as shown in the screen shots.

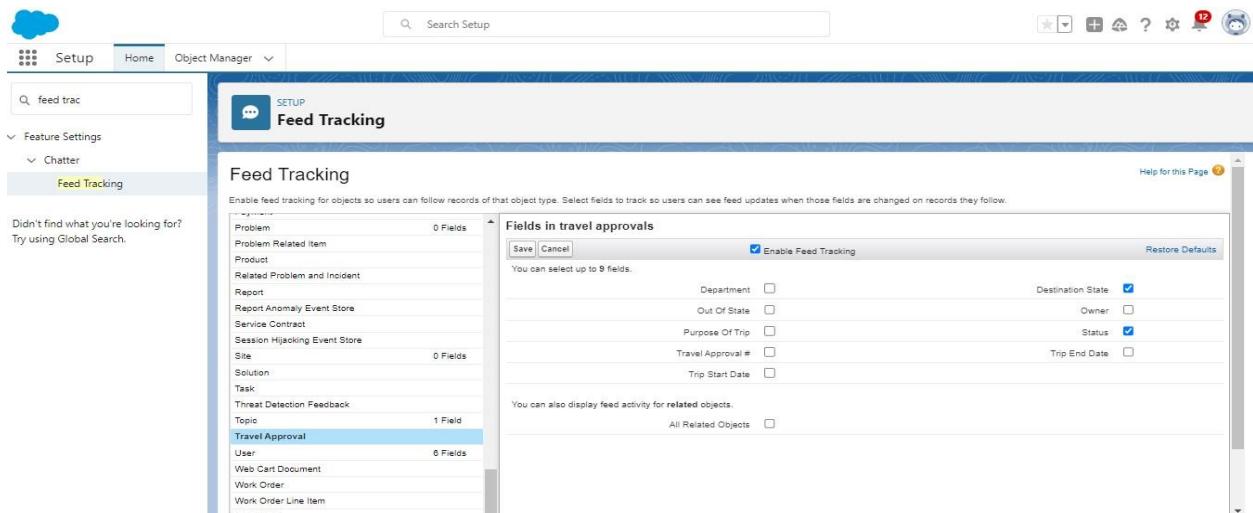


(b)- The Travel Approval App should look as shown in the screenshot.



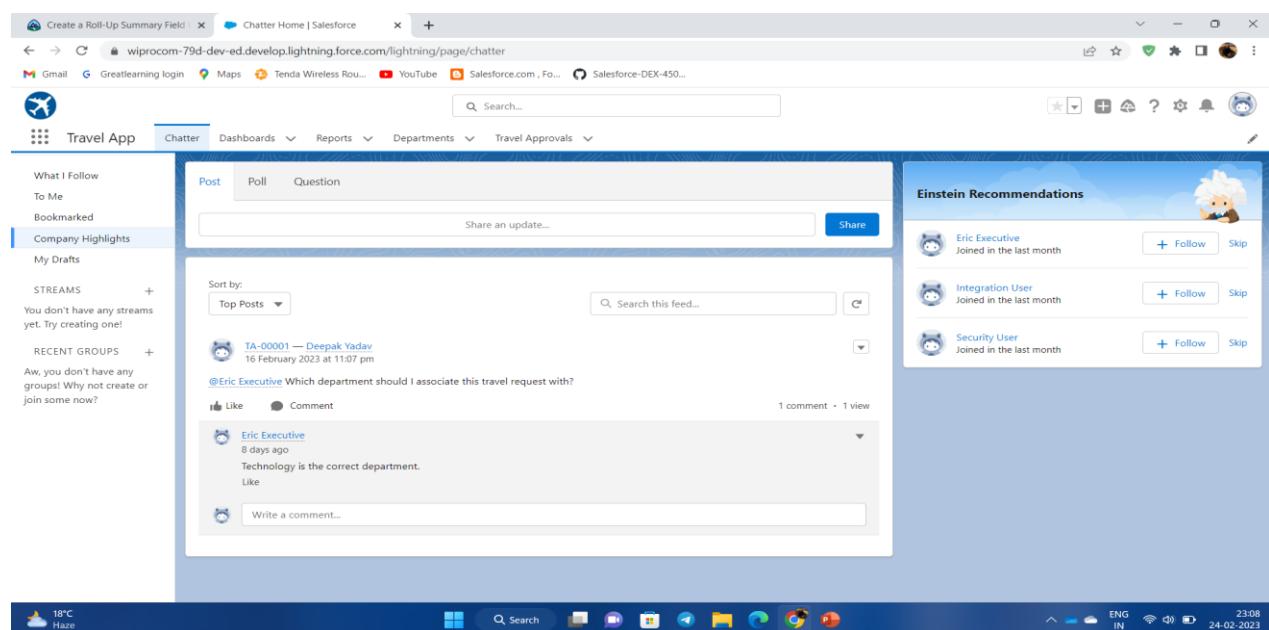
## Step 13 :-

- Enable Chatter on the Travel Approval Object.
- Enable “Feed Tracking” for Travel ApprovalObject. □ Select these 2 fields:
- Destination State □ Status □ Save.



## (b) Test Collaboration :-

- Open a Travel Approval record.
- Click on Chatter Tab.
- Share a post: Which Department should I associate this travel request with?
- Mention user Eric Executive on the Post using @.
- Note: Login in as Eric and reply to the email, saying: “Technology is the correct department”.
- Note: Enable “Administrator can Log in as any user.



:-

## Test the App , Let see how its look like

- The Travel Approval App should look as shown in the screenshot.

The screenshot shows a Salesforce application window titled "Travel App". The top navigation bar includes "Chatter", "Dashboards", "Reports", "Departments", and "Travel Approvals". A search bar is at the top right. The main content area displays a travel approval record for "TA-00001". The "Details" tab is selected. The record includes the following fields:

Field	Value
Travel Approval #	TA-00001
Status	Draft
Total Expenses	₹1,320.00
Status Indicator	(gear icon)
Trip Info	
Purpose of Trip	Attend Dreamforce
Trip Start Date	18/02/2023
Trip End Date	24/02/2023
Created By	Deepak Yadav, 16/02/2023, 10:34 pm
Owner	Deepak Yadav
Department	Technology
Out-of-State	<input checked="" type="checkbox"/>
Destination State	CA
Last Modified By	Deepak Yadav, 17/02/2023, 8:11 pm

After completing the exercise 2 you will see the user can post their query by using chatter and other can reply to that query. Now, Here Our module 1 is completed lets move to our next module 2.

:-

## Module – 2

Exercise 1: -

Step 1:- Create Validation Rule.

Business Logic: Trip end date must always be greater than ( $\geq$ ) the trip start date.

The screenshot shows the Salesforce Setup interface under the Object Manager for the 'Travel Approval' object. In the 'Validation Rules' section, a new rule is being created with the formula `Trip_End_Date__c < Trip_Start_Date__c`. A dropdown menu for functions is open, showing various mathematical and string functions like ABS, ACOS, ADDMONTHS, AND, ASCII, ASIN, etc. Below the formula, an 'Error Message' field contains the text 'Trip end date must be greater than or equal to start date'. The 'Error Location' is set to 'Field: Trip\_End\_Date'. The right side of the screen includes a sidebar for 'Restore records from the Recycle Bin'.

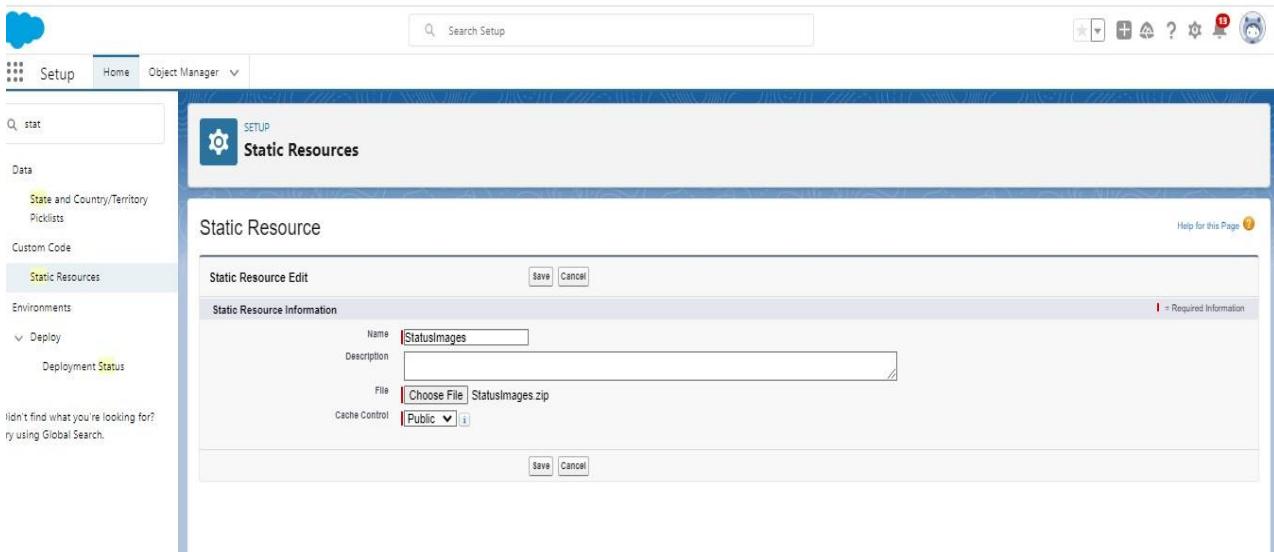
Step 2 :- Create a Roll-Up Summary Field on Travel Approval object.

The screenshot shows the Salesforce Setup interface under the Object Manager for the 'Travel Approval' object. In the 'Fields & Relationships' section, a new custom field is being created. The 'Step 3. Define the summary calculation' page is displayed, showing the 'Select Object to Summarize' section where 'Expense Items' is selected as the summarized object, and the 'Master Object' is 'Travel Approval'. Under 'Select Roll-Up Type', the 'SUM' option is selected with 'Amount' as the field to aggregate. The 'Filter Criteria' section has the 'All records should be included in the calculation' radio button selected. Navigation buttons for 'Previous', 'Next', and 'Cancel' are visible at the bottom right.

:-

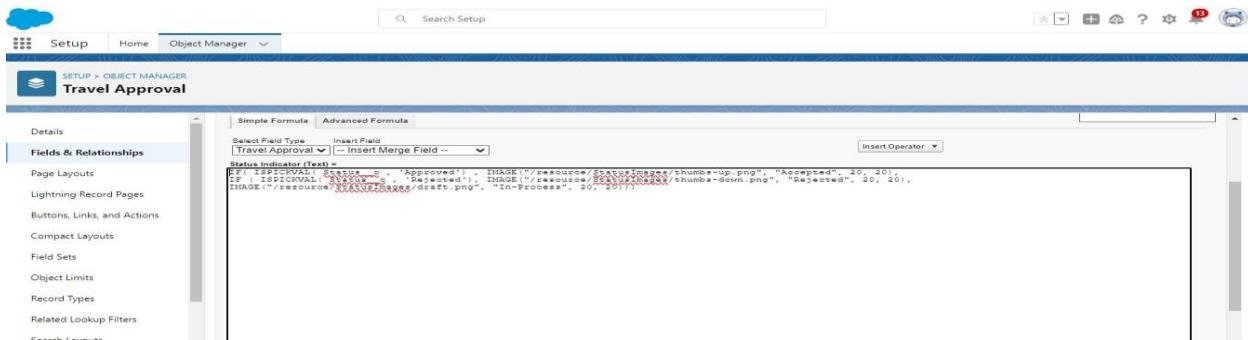
Step 3 :- Business Logic: Create a field that shows a visual indicator based on the value of the Status field

- Setup | Custom Code | Static Resource | New



Step 4 :- Create a Formula field on the Travel Approval object to show an image based on the Status field.

- Field Label: Status Indicator
- Formula Return Type = Text
- Formula:  
IF( ISPICKVAL( Status c , 'Approved') ,  
IMAGE("/resource/StatusImages/thumbs-up.png", "Accepted", 20, 20),  
IF ( ISPICKVAL( Status c , 'Rejected'),  
IMAGE("/resource/StatusImages/thumbs-down.png", "Rejected", 20, 20),  
IMAGE("/resource/StatusImages/draft.png", "In-Process", 20, 20)))
- Save

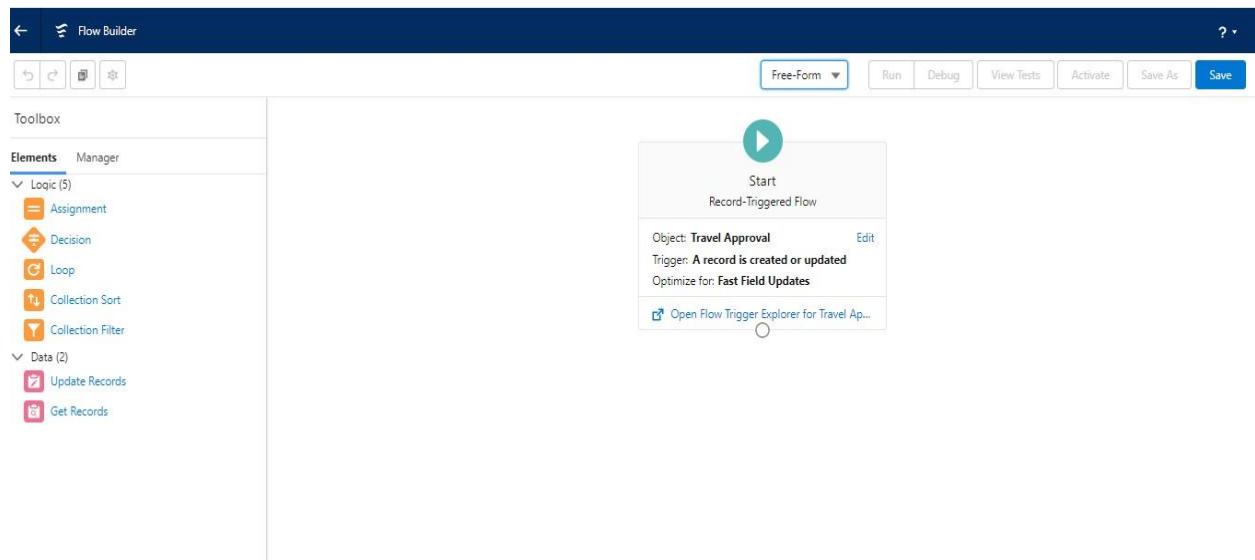


:-

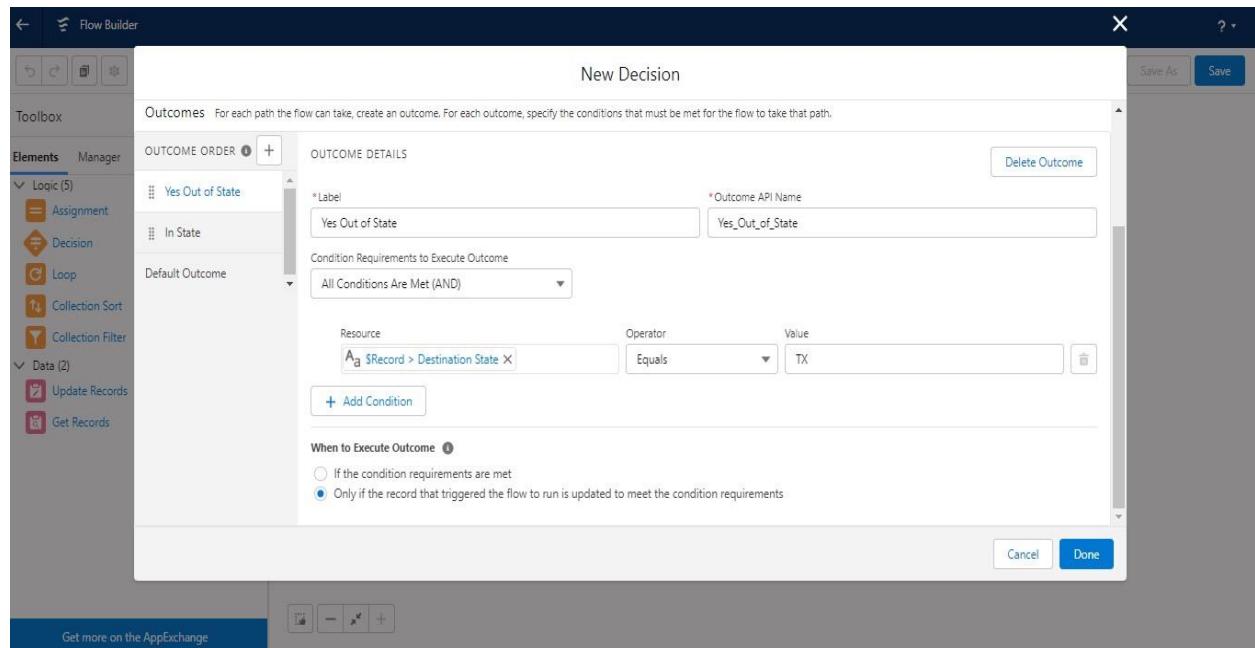
## Step 5 :-

### (a).Create a Record – Triggered Flow.

- Flow should look like this:



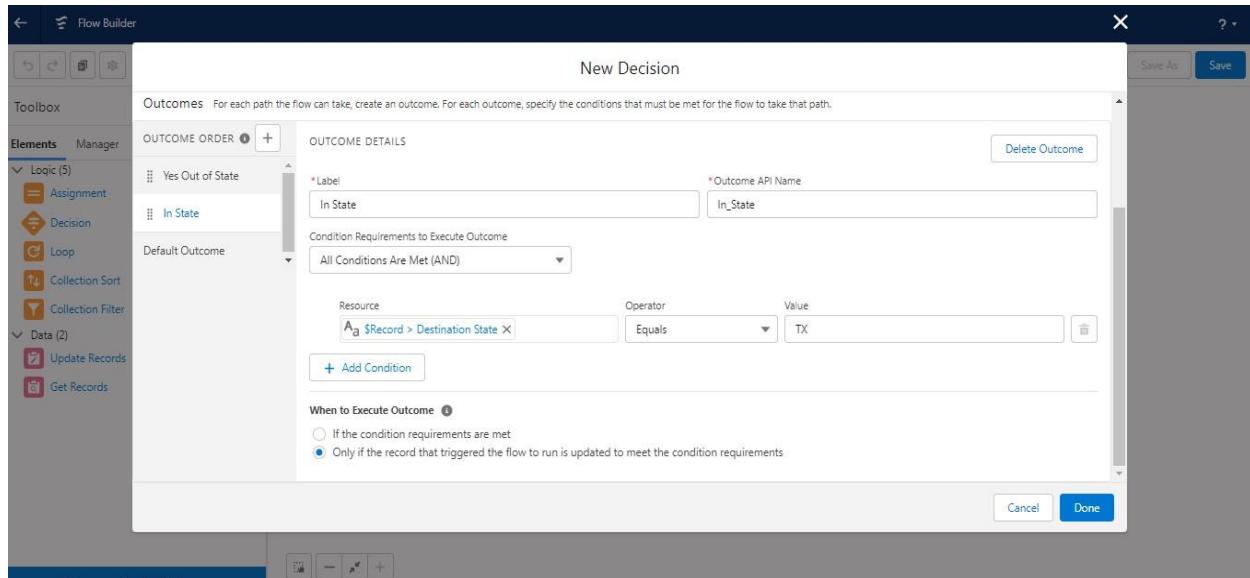
### (b). Add a Decision Element to the Flow.



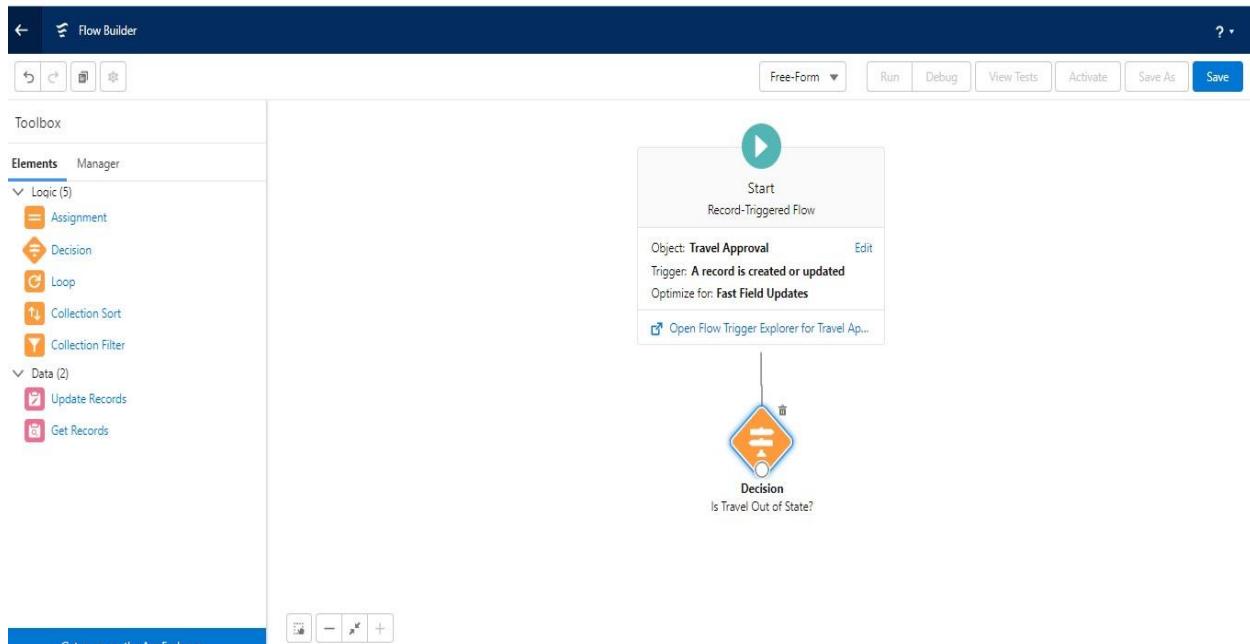
:-

(c). Next to Outcome Order click the + button to add another outcome.

- Flow should look like this:

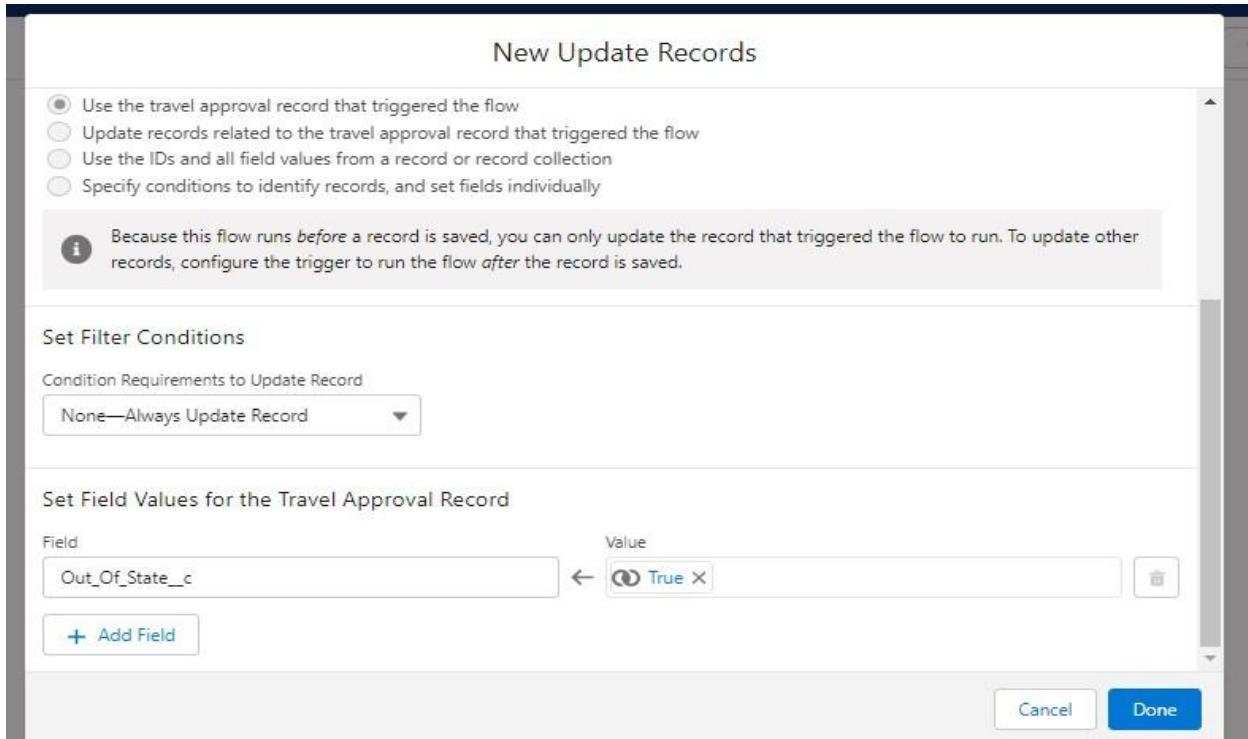


(d). Connect the Start Flow element to the Decision element.



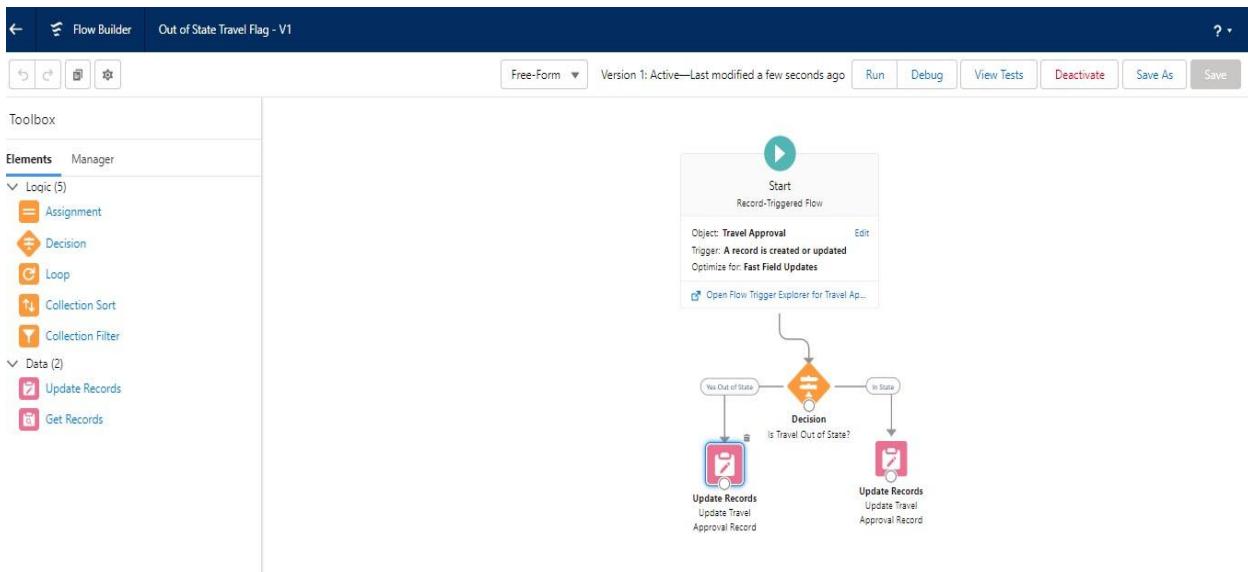
:-

### (e). Create an Action for the Flow Using Update Records Elements.



### (f). Test The Flow Screen

- Drag the white circle from the Decision Node to the Update Records you just created and select the decision In State | Done.
- Flow screen should look this:



:-

## Step 6 :-

- (a). Create an Approval Process to send Travel approvals to Manager or Travel coordinator.

The screenshot shows the Salesforce Setup interface with the 'Approval Processes' page open. The page title is 'Travel Approval: Travel Approval Request'. The 'Process Definition Detail' section includes fields like Process Name (Travel Approval Request), Unique Name (Travel\_Approval\_Request), Description (Travel Approval: Total Expenses GREATER THAN 0), and Record Editability (Administrator ONLY). The 'Initial Submission Actions' section contains an action type 'Record Lock' with a description 'Lock the record from being edited'. The 'Approval Steps' section is currently empty. The sidebar on the left lists various setup categories such as Home, Object Manager, Quick Find, and specific tools like Service Setup Assistant and Multi-Factor Authentication Assistant.

:-

### (b). Test The Approval Process

- Create few Travel Approval records and Submit for Approval.
- Login as Eric, approve and reject the records randomly as shown in the screen shot:

Exercise 2: -

#### Step 1 :- Use Data Import Wizard to import Travel Approval records.

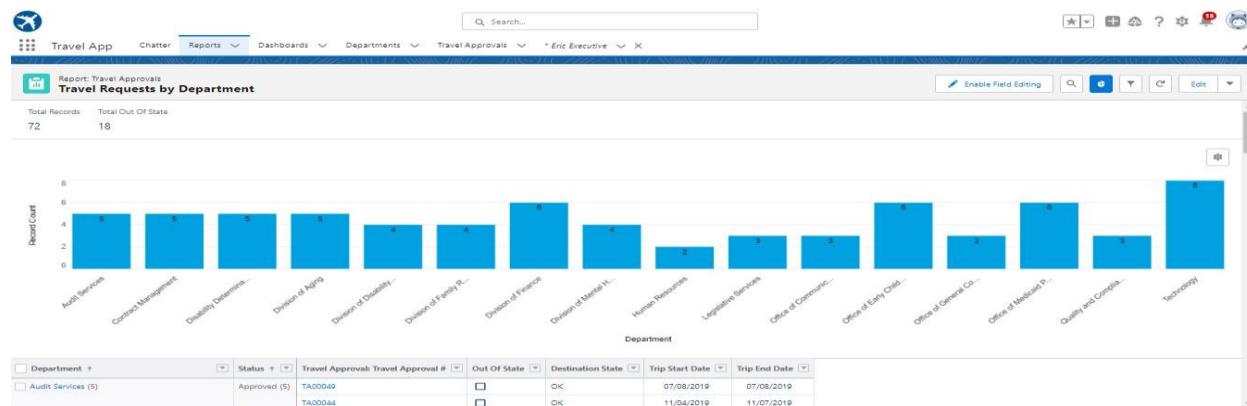
- Test The App
- Make sure all the Travel Approval records are successfully imported, check the screenshot:

The screenshot shows the Salesforce interface for the Travel Approvals list view. The top navigation bar includes 'Travel App', 'Chatter', 'Reports', 'Dashboards', 'Departments', 'Travel Approvals', and a user dropdown for 'Eric Executive'. The main area displays a table with 15 rows of travel approval records. The columns are: Travel Approval #, Department, Created By, Status, Trip Start Date, and Trip End Date. The records show various departments like Technology, Disability Determination Bureau, and Division of Finance, with statuses ranging from Draft to Approved and Rejected. A search bar at the top right allows filtering the list.

	Travel Approval #	Department	Created By	Status	Trip Start Date	Trip End Date
1	TA00001	Technology	Sagar Gupta	Draft	28/02/2023	05/03/2023
2	TA00002	Disability Determination Bureau	Sagar Gupta	Approved	10/01/2019	10/01/2019
3	TA00003	Division of Disability and Rehabilitative Services	Sagar Gupta	Rejected	04/03/2019	04/06/2019
4	TA00004	Division of Finance	Sagar Gupta	Rejected	03/09/2019	03/09/2019
5	TA00005	Division of Aging	Sagar Gupta	Approved	11/05/2019	11/11/2019
6	TA00006	Technology	Sagar Gupta	Approved	03/06/2019	03/09/2019
7	TA00007	Division of Disability and Rehabilitative Services	Sagar Gupta	Approved	11/06/2019	11/12/2019
8	TA00008	Disability Determination Bureau	Sagar Gupta	Rejected	03/06/2019	03/07/2019
9	TA00009	Contract Management	Sagar Gupta	Approved	05/11/2019	05/11/2019
10	TA00010	Division of Disability and Rehabilitative Services	Sagar Gupta	Approved	07/07/2019	07/07/2019
11	TA00011	Office of Communications and Media	Sagar Gupta	Approved	06/02/2019	06/12/2019
12	TA00012	Office of Medicaid Policy and Planning	Sagar Gupta	Approved	11/05/2019	11/11/2019
13	TA00013	Division of Family Resources	Sagar Gupta	Approved	04/01/2019	04/01/2019
14	TA00014	Human Resources	Sagar Gupta	Approved	07/09/2019	07/11/2019
15	TA00015	Division of Disabilities and Rehabilitation Services	Sagar Gupta	Approved	10/11/2019	10/12/2019

#### Step 2 :- Create a Travel Requests by Department Report. □ Test The Report

- Report might look as per the screen shot:



:-

### Step 3 :- Create a Travel Requests by Month Report

- Test The Report
- Report might look as per the screen shot:

The screenshot shows a Salesforce report titled "Travel Requests by Month". The report displays travel approvals for three months: January 2019, February 2019, and March 2019. The data is presented in a table format with columns for Trip End Date, Out Of State, Travel Approval, Travel Approval #, Department, Status, Destination State, and Trip Start Date.

Trip End Date	Out Of State	Travel Approval	Travel Approval #	Department	Status	Destination State	Trip Start Date
January 2019 (4)	(1)	TA00002	Disability Determination Bureau	Approved	OK	10/01/2019	
	Subtotal						
	(3)	TA000039	Division of Finance	Approved	TX	10/01/2019	
		TA000072	Office of General Counsel	Approved	TX	04/01/2019	
		TA00013	Division of Family Resources	Approved	TX	04/01/2019	
	Subtotal						
February 2019 (1)	(1)	TA000062	Division of Family Resources	Approved	FL	12/02/2019	
	Subtotal						
March 2019 (4)	(2)	TA000024	Audit Services	Approved	OK	09/03/2019	
		TA000023	Division of Finance	Approved	GA	09/03/2019	
	Subtotal						

### Step 4 :- Create a Travel Approvals Dashboard.

- Test The Dashboard
- Dashboard will look as per the screen shot:

The screenshot shows a Salesforce dashboard titled "Travel Requests Dashboard". The dashboard includes two main visualizations: a bar chart for "Travel Requests by Department" and a bar chart for "Travel Requests by Month".

**Travel Requests by Department:**

Department	Status	Record Count
Audit Ser...	Approved	5
Contract ...	Approved	5
Disability ...	Approved	3
	Rejected	2
Division o...	Approved	4
	Rejected	1
Division o...	Approved	3
	Rejected	1
Division o...	Approved	2
	Rejected	2

**Travel Requests by Month:**

Trip End Date	Record Count
January 2019	4
February 2019	1
March 2019	4
April 2019	10
May 2019	6
June 2019	3
July 2019	8
August 2019	6
September 2019	8
October 2019	7
November 2019	7
December 2019	7
March 2020	1

# Module 3

## Exercise 1

Lightning App :-

The screenshot shows the Lightning App Builder interface. The left sidebar has a blue header 'App Settings' with a vertical list of options: 'App Details & Branding' (selected), 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area is titled 'App Details & Branding' with the sub-section 'App Details & Branding'. It contains fields for 'App Name' (Code Playground), 'Developer Name' (Code\_Playground), 'Image' (a small placeholder image of a heart with code-like patterns), 'Primary Color Hex Value' (#0070D2), and a 'Description' field ('Enter a description...'). Below these are 'Org Theme Options' with a checked checkbox for 'Use the app's image and color instead of the org's custom theme'. At the bottom is an 'App Launcher Preview' section showing a card with the app icon and the name 'Code Playground'.

The screenshot shows the 'App Options' section of the Lightning App Builder. On the left, a sidebar lists 'App Settings' (App Details & Branding, App Options, Utility Items (Desktop Only), Navigation Items, User Profiles) and 'App Options' (Navigation and Form Factor, Setup and Personalization). Under 'Navigation and Form Factor', 'Navigation Style' is set to 'Standard navigation'. Under 'Setup and Personalization', 'Setup Experience' is set to 'Setup (full set of Setup options)'. Under 'App Personalization Settings', there are two checkboxes: 'Disable end user personalization of nav items in this app' (unchecked) and 'Disable temporary tabs for items outside of this app' (unchecked).

The screenshot shows the 'Navigation Items' section of the Lightning App Builder. On the left, a sidebar lists 'App Settings' (App Details & Branding, App Options, Utility Items (Desktop Only), Navigation Items, User Profiles) and 'Navigation Items'. The 'Navigation Items' section contains a 'Available Items' list and a 'Selected Items' list. The 'Available Items' list includes: Alert Settings, All Sites, Alternative Payment Methods, App Launcher, Appointment Invitations, Approval Requests, Asset Action Sources, Asset Actions, Asset State Periods, Assets, and Async Operation Logs. The 'Selected Items' list includes: Leads, Accounts, Contacts, Opportunities, Cases, Customers, and Billings.

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

- Page Title:** Create a Roll-Up Summary Field | Recently Viewed | Customers | Customer | Salesforce
- Search Bar:** Search Setup
- Header:** Setup > OBJECT MANAGER Customer
- Left Sidebar:** Details, Fields & Relationships (selected), 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.
- Table:** Fields & Relationships (7 items, Sorted by Field Label)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Active	Active__c	Checkbox		
Created By	CreatedById	Lookup(User)		
Customer	Customer__c	Master-Detail(Customer)		✓
Customer Name	Name	Text(80)		✓
Customer Type	Customer_Type__c	Picklist		
Description	Description__c	Text Area(255)		
Last Modified By	LastModifiedById	Lookup(User)		
- Bottom Bar:** Document.docx, Show desktop, Weather (29°C Haze), System tray (ENG IN, 15:41, 24.02.2023).

The screenshot shows the Lightning App Builder interface with the following details:

- Page Title:** Recently Viewed | Customers | Code Playground - Lightning A
- Header:** Lightning App Builder, App Settings, Pages, Code Playground
- Left Sidebar:** App Settings, App Details & Branding, App Options, Utility Items (Desktop Only), Navigation Items, User Profiles (selected).
- Section:** User Profiles
- Text:** Choose the user profiles that can access this app.
- Available Profiles:** Analytics Cloud Integration User, Analytics Cloud Security User, Authenticated Website, Authenticated Website, Contract Manager, Custom: Marketing Profile, Custom: Sales Profile, Custom: Support Profile, Customer Community Login User, Customer Community Plus Login User, Customer Community Plus User, Customer Community User.
- Selected Profiles:** System Administrator

Recently Viewed | Customers | Customer | Salesforce

wiprocom-7e0-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01l2w000003DEuW/FieldsAndRelationships/00N2w00000U4ZW7/view

Gmail playlist Olympus Algo AWS Skill Builder Modules | Salesforce MANIPAL Code help Salesforce Lightning Components... WebComponents... Tenda Wireless Ro...

Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER Customer

**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
- Scoping Rules
- Triggers

**Picklist Options**

Restrict picklist to the values defined in the value set ✓

Controlling Field [New]

**Picklist Values Used**

Active and inactive picklist values 2 (1,000 max)

**Field Dependencies**

New Field Dependencies Help

No dependencies defined.

**Validation Rules**

New Validation Rules Help

No validation rules defined.

**Values**

Action	Values	API Name	Default	Chart Colors	Modified By
[Edit]   Del   Deactivate	Premium	Premium	<input type="checkbox"/>	Assigned dynamically	Deepak Yadav, 20/02/2023, 10:51 pm
[Edit]   Del   Deactivate	Standard	Standard	<input type="checkbox"/>	Assigned dynamically	Deepak Yadav, 20/02/2023, 10:51 pm

**Inactive Values**

Delete Unused Values Inactive Values Help

No Inactive Values values defined.

Back To Top Always show me more records per related list

Create a Roll-Up Summary Field | Recently Viewed | Billings | Sales | Billing | Salesforce | Customer | Salesforce

wiprocom-7e0-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01l2w000003DEvZ/view

Gmail Greatlearning login Maps Tenda Wireless Ro... YouTube Salesforce.com, Fo... Salesforce-DEX-450...

Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER Billing

**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

**Details**

Description

API Name Billing\_c Custom

Singular Label Billing

Plural Label Billings

Enable Reports ✓

Track Activities

Track Field History

Deployment Status Deployed

Help Settings Standard salesforce.com Help Window

Edit Delete

Document.docx Show all

30°C Haze ENG IN 15:45 24-02-2023

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

- Tab Bar:** Create a Roll-Up Summary Field, Recently Viewed | Billings | Sales, Billing | Salesforce, Customer | Salesforce.
- Header:** wiprocom-7e0-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lw000003DEvZ/FieldsAndRelationships/view
- Search Bar:** Search Setup
- Left Sidebar:** Setup, Home, Object Manager.
- Section Header:** SETUP > OBJECT MANAGER Billing
- Table:** Fields & Relationships (8 items, Sorted by Field Label)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount Paid	Amount_Paid_c	Currency(18, 0)		
Bill Number	Name	Auto Number		
Created By	CreatedBy	Lookup(User)		
Customer	Customer__c	Lookup(Customer)		
Customer Type	Customer_Type__c	Picklist		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User/Group)		
Status	Status__c	Picklist		
- Bottom Navigation:** Document.docx, Show all, 30°C Haze, 15:45 24.02.2023.

## Exercise 2

The screenshot shows the Salesforce Developer Console with the following details:

- Tab Bar:** Recently Viewed | Customers, Billing | Salesforce, Developer Console.
- Header:** wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage
- Toolbar:** File, Edit, Debug, Test, Workspace, Help.
- Code Editor:** Enter Apex Code  

```
1 //problem 1
2 String name='Deepak Yadav';
3 System.debug('String Variable name is :'+ name);
4 System.debug('Checking endsWith method of String :'+ name.endsWith('Yadav'));
5 System.debug('Checking endsWith method of String :'+ name.endsWith('Deepak'));
```
- Log Area:** Logs, Tests, Checkpoints, Query Editor, View State, Progress, Problems.

User	Application	Operation	Time	Status	Read	Size

Filter: Click here to filter the log list.

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. The active tab is 'Developer Console'. Below the tabs is a navigation bar with links like Gmail, playlist, Olympus, Algo, AWS Skill Builder, Modules | Salesfor..., MANIPAL, Code help, Salesforce, Lightning Compon..., and WebComponents....

The main area displays the 'Execution Log' for an anonymous apex call executed at 21/02/2023, 00:32:02. The log entries are:

Timestamp	Event	Details
00:32:02:003	USER_DEBUG	[3]DEBUG String Variable name is :Deepak Yadav
00:32:02:003	USER_DEBUG	[4]DEBUG Checking endsWith method of String :true
00:32:02:003	USER_DEBUG	[5]DEBUG Checking endsWith method of String :false

Below the log, there is a toolbar with checkboxes for 'This Frame', 'Executable', 'Debug Only', and 'Filter', followed by a link 'Click here to filter the log'. A 'Logs' tab is selected in the navigation bar, showing a table of logs:

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

At the bottom, there is a 'Filter' link and another 'Click here to filter the log list' link.

This screenshot shows the 'Enter Apex Code' dialog box in the foreground, containing the following Apex code:

```
1 //problem 2
2 Date date1=Date.today();
3 Date date2=date1.addDays(30);
4 System.debug('date1 is :'+ date1);
5 System.debug('date2 is :'+ date2);
```

Below the dialog is the 'Logs' section of the developer console, which is identical to the one in the first screenshot, showing the same log entry and table.

At the bottom, there is a 'Filter' link and another 'Click here to filter the log list' link.

Recently Viewed | Customers | Billing | Salesforce | Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

Gmail playlist Olympus Algo AWS Skill Builder Modules | Salesfor... MANIPAL Code help Salesforce Lightning Compon... WebComponents...

File Edit Debug Test Workspace Help < >

Log executeAnonymous @21/02/2023, 00:36:57

Execution Log

Timestamp	Event	Details
00:36:57:004	USER_DEBUG	[4]DEBUG date1 is :2023-02-21 00:00:00
00:36:57:004	USER_DEBUG	[5]DEBUG date2 is :2023-03-23 00:00:00

This Frame Executable  Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

Filter Click here to filter the log list

Recently Viewed | Customers | Billing | Salesforce | Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

Gmail playlist Olympus Algo AWS Skill Builder Modules | Salesfor... MANIPAL Code help Salesforce Lightning Compon... WebComponents...

File Edit Debug Test Workspace Help < >

Log executeAnonymous @21/02/2023, 00:36:57

Execution Log

Timestamp	Event	Details
00:36:57:004	USER_DEBUG	[4]DEBUG Enter Apex Code
00:36:57:004	USER_DEBUG	[5]DEBUG 1 //problem 3 2 String num='10'; 3 Integer num1=Integer.valueOf(num); 4 Integer num2=num1+20; 5 System.debug('Integer From String is :'+ num1); 6 System.debug('Adding 20 to num1 :'+ num2);

Open Log Execute Execute Highlighted

This Frame Executable  Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

Filter Click here to filter the log list

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Execution Log' and the 'Log list'.

**Execution Log:**

Timestamp	Event	Details
00:39:18:003	USER_DEBUG	[5]DEBUG Integer From String is :10
00:39:18:003	USER_DEBUG	[6]DEBUG Adding 20 to num1 :30

**Log list:**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Enter Apex Code' editor and the 'Log list'.

**Enter Apex Code:**

```
1 //problem 4
2 String chant='Hare Krishna';
3 System.debug('length of chant is :'+ chant.length());
4
```

**Logs:**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Execution Log' for the expression `Log executeAnonymous @21/02/2023, 00:41:04`. The log table has columns: Timestamp, Event, and Details. One entry is shown: `00:41:04:002 USER_DEBUG [3]DEBUG|length of chant is :12`. Below the log is a 'Logs' tab section showing a list of logs from a user named Deepak Yadav. The logs are:

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Execution Log' for the expression `Log executeAnonymous @21/02/2023, 00:42:10`. The log table has columns: Timestamp, Event, and Details. The log table shows the following entries:

Timestamp	Event	Details
00:42:10:004	USER_DEBUG [8]DEBUG	
00:42:10:004	USER_DEBUG [9]DEBUG	
00:42:10:005	USER_DEBUG [11]DEBUG	
00:42:10:005	USER_DEBUG [18]DEBUG	
00:42:10:005	USER_DEBUG [20]DEBUG	

Below the log is a code editor titled 'Enter Apex Code' containing the following Apex code:

```
1 //prologue
2 List<Integer> list1=new List<Integer> ();
3 list1.add(4);
4 list1.add(8);
5 list1.add(12);
6 list1.add(28);
7 list1.add(40);
8 System.debug('list1 after using add() method :'+list1);
9 System.debug('Printing values of List using get() method ::');
10 for(Integer i=0;i<list1.size();i++){
11     system.debug(list1.get(i));
12 }
13 list1.set(0,44);
14 list1.set(1,88);
15 list1.set(2,1212);
16 list1.set(3,2828);
17 list1.set(4,4040);
18 System.debug('list1 after set() method :'+list1);
19 list1.clear();
20 System.debug('list1 after clear() method :'+list1);
```

At the bottom of the code editor, there are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. Below the code editor is another log table showing logs from Deepak Yadav:

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

Recently Viewed | Customers | Billing | Salesforce | Developer Console

File Edit Debug Test Workspace Help < >

Log executeAnonymous @21/02/2023, 00:41:04 Log executeAnonymous @21/02/2023, 00:42:10

**Execution Log**

Timestamp	Event	Details
00:42:10:004	USER_DEBUG	[8]  DEBUG  list1 after using add() method :(4, 8, 12, 28, 40)
00:42:10:004	USER_DEBUG	[9]  DEBUG  Printing values of List using get() method ::::
00:42:10:004	USER_DEBUG	[11]  DEBUG 4
00:42:10:005	USER_DEBUG	[11]  DEBUG 8
00:42:10:005	USER_DEBUG	[11]  DEBUG 12
00:42:10:005	USER_DEBUG	[11]  DEBUG 28
00:42:10:005	USER_DEBUG	[11]  DEBUG 40
00:42:10:005	USER_DEBUG	[18]  DEBUG  list1 after set() method :(44, 88, 1212, 2828, 4040)
00:42:10:005	USER_DEBUG	[20]  DEBUG  list1 after clear() method :()

This Frame Executable  Debug Only Filter Click here to filter the log

**Logs Tests Checkpoints Query Editor View State Progress Problems**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

Filter Click here to filter the log list

Get a Refresh on SOQL, SOSL | Home | Salesforce | Developer Console | Salesforce Capstone Project

File Edit Debug Test Workspace Help < >

**Enter Apex Code**

```

1
2 Integer x = 20;
3 v While(x > 12){
4     integer m=12;
5     x-- ;
6     if(x==12){
7         x=x-12;
8     }
9 }
10 integer i=x;
11
12 v For(integer x=i ; x < 10; x = x + 1){
13     system.debug('Value of x is: ' + x);
14 }
15
16

```

Open Log Execute Execute Highlighted

**Logs Tests Checkpoints Query Editor View**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 12:00:51	Success		9.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:59:40	Success		9.45 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:59:14	Success		5.91 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:58:16	Success		6.16 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:58:00	Success		5.84 KB

Filter Click here to filter the log list

The screenshot shows the Salesforce Developer Console interface. At the top, there are three tabs: 'Get a Refresh on SOQL, SOSL...' (active), 'Home | Salesforce', and 'Developer Console'. Below the tabs, the URL is 'wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage'. The menu bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. The main area has a title 'Log executeAnonymous @21/02/2023, 12:01:41'.

**Execution Log**

Timestamp	Event	Details
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 0
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 1
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 2
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 3
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 4
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 5
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 6
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 7
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 8
12:01:41:003	USER_DEBUG	[13]  DEBUG Value of x is: 9

**Logs**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 12:01:41	Success		9.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 12:00:51	Success		9.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:59:40	Success		9.45 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:59:14	Success		5.91 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:58:16	Success		6.16 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:58:00	Success		5.84 KB

## Exercise 3

The screenshot shows the Salesforce Developer Console interface. At the top, there are three tabs: 'Recently Viewed | Customers' (active), 'Billing | Salesforce', and 'Developer Console'. Below the tabs, the URL is 'wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage'. The menu bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. The main area has a title 'Log executeAnonymous @21/02/2023, 00:50:30'.

**Enter Apex Code**

```

1 Integer myluckyNumber = 15;
2 Integer myunluckyNumber = 7;
3 system.debug('Required Answer is :'+ ((myluckyNumber) != (myunluckyNumber + 8)));

```

**Logs**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:50:30	Success		2.58 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:32:02	Success		3.02 KB

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. The active tab is 'Developer Console'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The menu bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. A toolbar with icons for Gmail, YouTube, and various developer tools is also visible.

The main area displays two tabs: 'Execution Log' and 'Logs'. The 'Execution Log' tab is currently selected, showing a table with columns: Timestamp, Event, Details, and a large log entry:

Timestamp	Event	Details
00:50:30:004	USER_DEBUG	[3]  DEBUG Required Answer is :false

The 'Logs' tab is also visible, showing a table of log entries with columns: User, Application, Operation, Time, Status, Read, and Size. The logs show multiple entries from 'Deepak Yadav' with various operation types and success status.

## Exercise 4

This screenshot shows the Salesforce Developer Console with the 'Enter Apex Code' dialog open. The code entered is:

```
1 Boolean isFalse = false;
2 Boolean isTrue = True;
3 System.debug('Required Value is :'+ (isTrue || isFalse));
```

The 'Logs' tab is selected in the bottom left, showing the same execution log as the previous screenshot. The log entry for this code execution is:

Timestamp	Event	Details
00:50:30:004	USER_DEBUG	[3]  DEBUG Required Value is :true

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Execution Log' and 'Logs' tabs.

**Execution Log:**

Timestamp	Event	Details
00:54:13:004	USER_DEBUG	[3][DEBUG]Required Value is :true

**Logs Tab:**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:54:13	Success		2.52 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:50:30	Success		2.58 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB

## Exercise 5

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Recently Viewed | Customers' and 'Billing | Salesforce'. Below the tabs, the URL is `wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area displays the 'Execution Log' and 'Logs' tabs.

**Execution Log:**

```

1 Date tomorrow = Date.today().addDays(1);
2 Date today = Date.today();
3 System.debug('Required Answer is :'+ (today != tomorrow));

```

**Logs Tab:**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:54:13	Success		2.52 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:50:30	Success		2.58 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:36:57	Success		2.88 KB

Execution Log

Timestamp	Event	Details
00:56:17:004	USER_DEBUG	[3]DEBUG Required Answer is :true

This Frame Executable Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:56:17	Success		2.62 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:54:13	Success		2.52 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:50:30	Success		2.58 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:42:10	Success		6.6 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:41:04	Success		2.3 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 00:39:18	Success		3.08 KB

Filter Click here to filter the log list

## Exercise 6

```
1 public class Excercise6 {
2     public static void demo(Integer 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        }
15    }
16 }
17 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 13:10:05	Success		4.9 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	21/02/2023, 12:49:31	Success		2.29 KB

Filter Click here to filter the log list

Get a Refresh on SOSL, SOSL... | Home | Salesforce | Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

Excercise6.apxc Log executeAnonymous @21/02/2023, 13:10:05

Code Coverage: None API Version: 57 Go To

Enter Apex Code

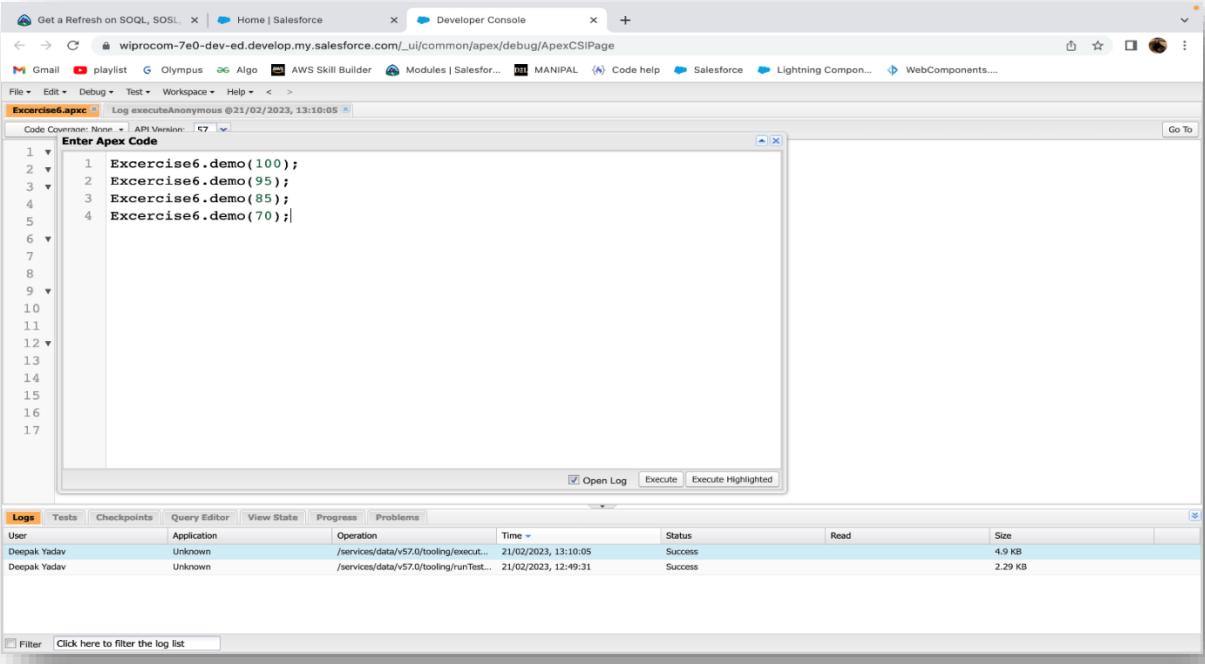
```
1 Excercise6.demo(100);
2 Excercise6.demo(95);
3 Excercise6.demo(85);
4 Excercise6.demo(70);
```

Open Log Execute Execute Highlighted

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 13:10:05	Success		4.9 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	21/02/2023, 12:49:31	Success		2.29 KB

Filter Click here to filter the log list



Get a Refresh on SOSL, SOSL... | Home | Salesforce | Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

Excercise6.apxc Log executeAnonymous @21/02/2023, 13:10:05

Execution Log

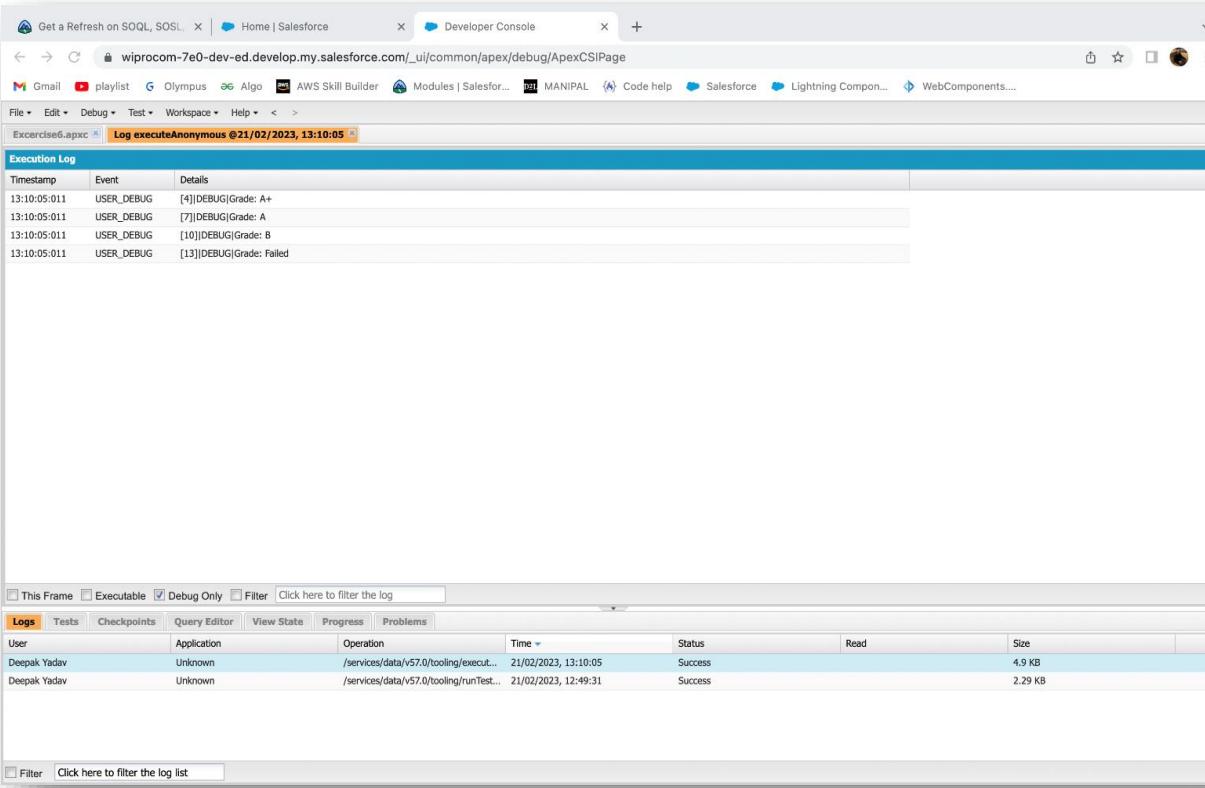
Timestamp	Event	Details
13:10:05:011	USER_DEBUG	[4]  DEBUG Grade: A+
13:10:05:011	USER_DEBUG	[7]  DEBUG Grade: A
13:10:05:011	USER_DEBUG	[10]  DEBUG Grade: B
13:10:05:011	USER_DEBUG	[13]  DEBUG Grade: Failed

This Frame Executable Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 13:10:05	Success		4.9 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	21/02/2023, 12:49:31	Success		2.29 KB

Filter Click here to filter the log list



## Exercise 7

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes links for Home | Salesforce, Developer Console, and various developer tools like Gmail, Playlist, Olympus, Algo, AWS Skill Builder, Modules | Salesforce, MANIPAL, Code help, Salesforce, Lightning Components, and WebComponents.... The main area displays the Apex code for Exercise 7:

```
1 public class Excercise7 {  
2     public static void demoex7(){  
3         //Initializing the Billing_List list to store the Billing Records  
4         List<Billing__c> Billing_List=[SELECT Id, Name, Amount_Paid__c, Status__c FROM Billing__c WHERE CreatedDate = today];  
5         List<String> Paid_bill =new List<String>();  
6  
7         for(Billing__c bill_var:Billing_List){  
8             System.debug('Value of Current Record on which Loop is iterating is Billing__c :'+ bill_var);  
9             //if Status is paid then add the Billings into a List Paid_bill  
10            if(bill_var.Status__c == 'Paid'){  
11                Paid_bill.add(bill_var.Name);  
12            }  
13        }  
14        System.debug('Billing Record are :'+Paid_bill );  
15  
16    }  
17 }  
18 }  
19 }
```

Below the code editor is a log viewer tab labeled "Logs". It shows a single log entry from Deepak Yadav:

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 17:58:13	Success		5.63 KB

At the bottom of the log viewer, there is a "Filter" button and a link to "Click here to filter the log list".

This screenshot shows the same Developer Console interface as the previous one, but with a modal dialog titled "Enter Apex Code" overlaid. The dialog contains the same Apex code as before:

```
1 public class Excercise7 {  
2     public static void demoex7(){  
3         //Initializing the Billing_List list to store the Billing Records  
4         List<Billing__c> Billing_List=[SELECT Id, Name, Amount_Paid__c, Status__c FROM Billing__c WHERE CreatedDate = today];  
5         List<String> Paid_bill =new List<String>();  
6  
7         for(Billing__c bill_var:Billing_List){  
8             System.debug('Value of Current Record on which Loop is iterating is Billing__c :'+ bill_var);  
9             //if Status is paid then add the Billings into a List Paid_bill  
10            if(bill_var.Status__c == 'Paid'){  
11                Paid_bill.add(bill_var.Name);  
12            }  
13        }  
14        System.debug('Billing Record are :'+Paid_bill );  
15  
16    }  
17 }  
18 }  
19 }
```

The modal has three buttons at the bottom: "Open Log", "Execute", and "Execute Highlighted". The "Execute" button is highlighted with a blue border.

Below the modal, the log viewer shows the same log entry from Deepak Yadav. At the bottom of the log viewer, there is a "Filter" button and a link to "Click here to filter the log list".

The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links like Home | Salesforce, Gmail, playlist, Olympus, Algo, AWS Skill Builder, Modules | Salesfor..., MANIPAL, Code help, Salesforce, Lightning Compon..., and WebComponents.... Below the navigation bar, the main area has two tabs: "Execution Log" and "Logs".

**Execution Log:**

Timestamp	Event	Details
17:58:13:040	USER_DEBUG	[8]DEBUGValue of Current Record on which Loop is Iterating is Billing_c:Billing__c:(Id=a012w000017eRagAAG, Name=B - 0002, Amount_Paid__c=2000, Status__c=Paid)
17:58:13:040	USER_DEBUG	[8]DEBUGValue of Current Record on which Loop is Iterating is Billing_c:Billing__c:(Id=a012w000017eRabAAG, Name=B - 0001, Amount_Paid__c=1000, Status__c=Paid)
17:58:13:040	[14]DEBUGBilling Record are :B - 0002, B - 0001	

**Logs Tab:**

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 17:58:13	Success		5.63 KB

## Exercise 8

The screenshot shows the Salesforce Developer Console with an Apex class named "DiscountClass.apxc" open. The code is as follows:

```

1  public class DiscountClass{
2      static final decimal regularDiscount = 0.1;
3      static decimal finalPrice = 0;
4
5      public static decimal calculateDiscount(Integer price) {
6          //calculating the discount
7          finalPrice = price- price *regularDiscount ;
8          return finalPrice;
9      }
10 }

```

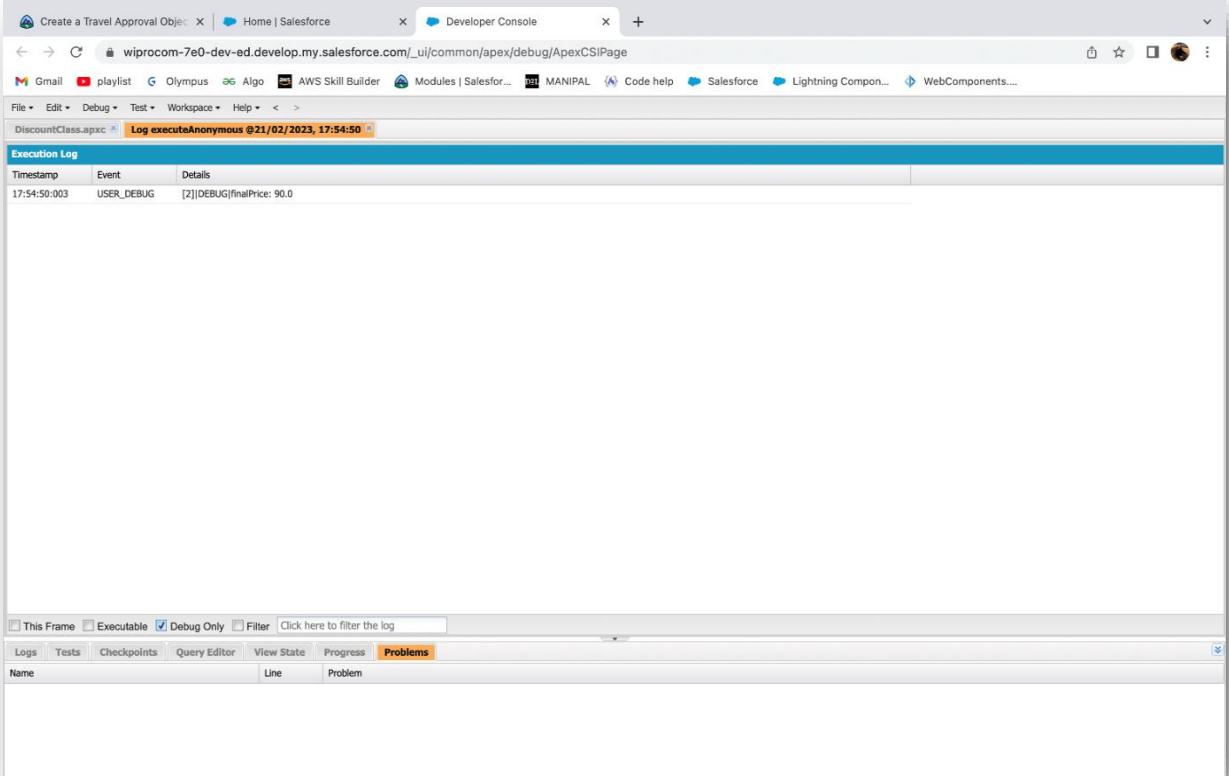
To the right of the code editor, there is a modal window titled "Enter Apex Code" containing the following code:

```

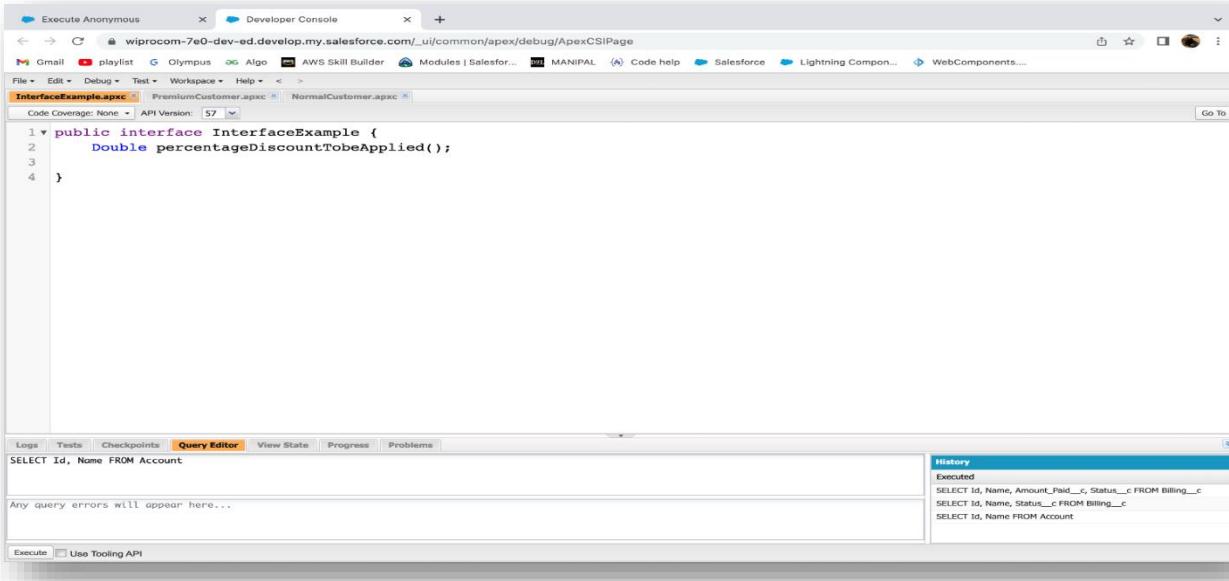
1 decimal finalPrice =DiscountClass.calculateDiscount(100);
2 System.debug('finalPrice: '+ finalPrice);

```

At the bottom of the developer console, there are tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The Problems tab is currently selected.



## Exercise 9



The screenshot shows the Salesforce Developer Console interface. At the top, there are two tabs: "Execute Anonymous" and "Developer Console". The "Developer Console" tab is active, displaying the URL [wiprocom-7e0-dev-ed.develop.my.salesforce.com/\\_ui/common/apex/debug/ApexCSIPage](https://wiprocom-7e0-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage). Below the tabs, the menu bar includes File, Edit, Debug, Test, Workspace, Help, and a Go To button. The main workspace shows three tabs: "InterfaceExample.apxc", "PremiumCustomer.apxc" (which is selected), and "NormalCustomer.apxc". The "PremiumCustomer.apxc" tab contains the following Apex code:

```
1 ▼ public class PremiumCustomer implements InterfaceExample {
2     //Implementing interface method
3     ▼ public Double percentageDiscountToBeApplied(){
4         //30% Discount for Premium Customer
5         return 0.30 ;
6     }
7 }
```

Below the code editor is a "Logs" section with tabs for Logs, Tests, Checkpoints, and Query Editor. The "Query Editor" tab is selected, showing the query `SELECT Id, Name FROM Account`. The results pane displays the history of executed queries:

History
Executed
SELECT Id, Name, Amount_Paid__c, Status__c FROM Billing__c
SELECT Id, Name, Status__c FROM Billing__c
SELECT Id, Name FROM Account

This screenshot shows the same developer console interface as the previous one, but with a different Apex class selected. The "NormalCustomer.apxc" tab is now active. The code in the editor is:

```
1 ▼ public class NormalCustomer implements InterfaceExample {
2     //Implementing interface method
3     ▼ public Double percentageDiscountToBeApplied(){
4         //10% Discount for Normal Customer
5         return 0.10 ;
6     }
7 }
```

The "Logs" section shows the same query `SELECT Id, Name FROM Account` in the "Query Editor" tab. The results pane shows the same history of executed queries as the previous screenshot.

Execute Anonymous      Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexExecAnon

Gmail playlist Olympus Algo AWS Skill Builder Modules | Salesforce MANIPAL Code help Salesforce Lightning Components... WebComponents...

```
1 PremiumCustomer pc=new PremiumCustomer();
2 normalCustomer nc=new normalCustomer();
3 System.debug('Discount for Premium Customer : '+ pc.percentageDiscountToBeApplied());
4 System.debug('Discount for Normal Customer : '+ nc.percentageDiscountToBeApplied());|
```

Open Log Execute Execute Highlighted

Developer Console

wiprocom-7e0-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

Gmail playlist Olympus Algo AWS Skill Builder Modules | Salesforce MANIPAL Code help Salesforce Lightning Components... WebComponents...

File Edit Debug Test Workspace Help < >

InterfaceExample.apxc PremiumCustomer.apxc NormalCustomer.apxc Log executeAnonymous @21/02/2023, 19:11:51

Execution Log

Timestamp	Event	Details
19:11:51:023	USER_DEBUG	[3]DEBUG Discount for Premium Customer : 0.3
19:11:51:023	USER_DEBUG	[4]DEBUG Discount for Normal Customer : 0.1

This Frame Executable  Debug Only Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 19:11:51	Success		5.97 KB

Filter Click here to filter the log list

# Exercise 10

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes File, Edit, Debug, Test, Workspace, Help, and various links like Gmail, playlist, Olympus, Algo, AWS Skill Builder, Modules | Salesforce, MANIPAL, Code help, Salesforce, Lightning Components, WebComponents, and Tenda Wireless Ro... The main area displays the following Apex code:

```
1 *public class Excercise10 {
2     public void insert_ex10(){
3         Customer__c customer1 = new Customer__c();
4         customer1.Name='Wipro';
5         customer1.Customer_Type__c='Premium';
6         try{
7             insert customer1; //Inserting a Customer Record
8         }
9
10        Catch(Exception e){
11            System.debug(e);
12        }
13
14        List<Billing__c> bills1 = new List<Billing__c>();
15        Billing__c bill_obj =new Billing__c();
16        bill_obj.Status__c='Paid';
17        bill_obj.Amount__c=500000;
18        bill_obj.Customer__c=customer1.Id;
19        bills1.add(bill_obj);
20
21
22        if(!bills1.isEmpty()){
23            // storing results in arList
24            Database.SaveResult[] arlist=Database.insert(bills1,false); //Inserting Billing record using Database method
25            for(Database.SaveResult bill_vararlist){
26                if(bill_var.isSuccess()){
27                    System.debug('get Id Of Success '+ bill_var.getId());
28                }
29            }
30        }
31    }
32
33
34
35
36
37
38
39
40
41 }
```

The code implements a class named Excercise10 with a single method insert\_ex10. It creates a Customer\_\_c record for 'Wipro' with a Premium status. It then creates a Billing\_\_c record with an amount of 500000 and associates it with the newly created customer. Finally, it inserts both records into the database.

The screenshot shows the Salesforce Developer Console interface with the Execution Log tab selected. The log details the execution of the code from 00:22:28:039 to 00:22:28:084. The log entries are:

Timestamp	Event	Details
00:22:28:039	USER_DEBUG	[11]DEBUG[System.DmlException: Insert failed. First exception on row 0; first error: REQUIRED_FIELD_MISSING, Required fields are missing: [Customer__c]; [Customer__c]]
00:22:28:084	USER_DEBUG	[27]DEBUG[get Id Of Success a012w000017c3JTAAY]

The log shows that the first error occurred at timestamp 00:22:28:039 due to a REQUIRED\_FIELD\_MISSING error for the Customer\_\_c field. The successful insertion of the Billing\_\_c record is shown at timestamp 00:22:28:084.

## Exercise 11

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'All Opportunities | Opportunity' and 'Developer Console'. The main area displays a query result grid titled 'Query Results - Total Rows: 10'. The columns are: Id, Amount, StageName, Account.Name, Account.Industry, Account.Website, and Account.AnnualRevenue. The results show 10 rows of opportunities from the 'Energy' industry with annual revenues above \$5000. Below the grid is a 'Logs' tab with the message 'Any query errors will appear here...'. To the right is a 'History' panel showing executed queries related to Billing and Account tables. At the bottom, there are buttons for 'Execute' and 'Use Tooling API'.

## Exercise 12

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'CustomerTriggerTest.apxc' and 'CustomerTrigger.apxc'. The main area displays the Apex trigger code for 'CustomerTrigger'. The code triggers on 'Customer\_\_c' after insert or update. It creates a list of 'Billing\_\_c' objects named 'bill\_ex12' and adds new records to it based on certain conditions. The code coverage is shown as 'None' and the API version as '57'. Below the code is a 'Logs' tab showing a table of log entries. The table has columns: User, Application, Operation, Time, Status, Read, and Size. There are multiple entries from a user named 'Deepak Yadav' showing various API calls and their outcomes.

## Exercise 13

The screenshot shows the Salesforce Developer Console with the following details:

- Code Editor:** The file `CustomerTriggerTest.apxc` contains the following Apex test class:

```
1  @isTest
2  public class CustomerTriggerTest{
3    public static testMethod void ex_13Test(){
4      Customer__c c13=new Customer__c();
5      c13.Active__c=true;
6      c13.Customer__c='0o62w00000XZTEAA4';
7      c13.Customer_Type__c='Premium';
8      insert c13;
9
10     Test.startTest();
11     c13.Active__c=true;
12     update c13;
13     Test.stopTest();
14
15     system.assertEquals(true,c13.Active__c);
16     system.assertEquals('Premium',c13.Customer_Type__c);
17   }
18 }
19
20 }
```
- Logs Tab:** Shows a list of test runs with their status, time, and duration.
- Tests Tab:** Displays the overall code coverage report. The report includes the following data:

Class	Percent	Lines
Overall	17%	
CustomerTrigger	100%	10/10
DiscountClass	0%	0/5
DisqualifyTestLeads	0%	0/8
Exercise10	0%	0/19
Exercise5	0%	0/4

## Exercise 14

The screenshot shows the Salesforce Developer Console with the following details:

- Code Editor:** The file `DisqualifyTestLeads.apxc` contains the following Apex trigger:

```
1  trigger DisqualifyTestLeads on Lead (before insert) {
2    List<Lead> llist = new List<Lead>();
3    for(Lead le:Trigger.new)
4    {
5      if(le.FirstName.containsIgnoreCase('test')|| string.isBlank(le.FirstName)
6          || le.LastName.containsIgnoreCase('test')|| string.isBlank(le.LastName))
7      {
8        system.debug(le.FirstName + ' ' + le.LastName + ' Will be disqualified!');
9        llist.add(le);
10      }
11    }
12    for(Lead l :llist){
13      l.status='Disqualified';
14    }
15 }
```
- Logs Tab:** Shows a detailed log history with columns for User, Application, Operation, Time, Status, Read, and Size.

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:46:51	Success	Unread	12.13 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:47:37	Success	Unread	9.85 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:41:40	Success	Unread	11.53 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:40:45	Update failed. First exception on ro...	Unread	4.51 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:39:11	Update failed. First exception on ro...	Unread	4.49 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:37:00	Update failed. First exception on ro...	Unread	4.5 KB

## Exercise 15

```
1 @isTest
2 public class DisqualifyTestLeadsTest {
3     public static testMethod void ex_14Test()
4     {
5         Lead lead_ex_14=new Lead();
6         lead_ex_14.FirstName = 'Nyawi';
7         lead_ex_14.LastName = 'Test';
8         lead_ex_14.Company = 'Wipro';
9         lead_ex_14.Status ='Open - Not Contacted';
10
11
12     Test.startTest();
13     insert lead_ex_14;
14     Test.stopTest();
15
16     system.assertEquals('Wipro', lead_ex_14.Company);
17     system.assertEquals('Nyawi', lead_ex_14.FirstName);
18 }
19 }
```

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	TestRun @ 12:41:39 am			0	1	Class
✓	TestRun @ 12:42:36 am			0	1	Percent
✓	TestRun @ 12:46:50 am			0	1	Lines
✗	TestRun @ 12:32:49 am			1	1	DisqualifyTestLeads
✗	TestRun @ 12:34:26 am			1	1	Excercise10
✗	TestRun @ 12:35:22 am			1	1	Excercises6
✗	TestRun @ 12:36:59 am			1	1	Excercise7
✗	TestRun @ 12:39:11 am			1	1	NormalCustomer
				1	1	PremiumCustomer

## Exercise 16

```
1 <apex:page standardController="Opportunity">
2     <apex:pageBlock title="Opportunity Details">
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
9         </apex:pageBlockSection>
10    </apex:pageBlock>
11 </apex:page>
```

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	24/02/2023, 01:26:47	Success		7.55 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	24/02/2023, 01:26:23	Success		7.55 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:52:19	Success		10.47 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:46:51	Success	Unread	12.13 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:42:37	Success	Unread	9.85 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/runTest...	24/02/2023, 00:41:40	Success	Unread	11.53 KB

## Exercise 17

```

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>

```

Logs

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Browser	/apex/OppView	24/02/2023, 02:36:43	Success	Unread	1.16 KB
Deepak Yadav	Browser	/apex/NewCaseList	24/02/2023, 02:33:09	Success	Unread	3.24 KB
Deepak Yadav	Browser	/apex/AccountList	24/02/2023, 02:28:49	Success	Unread	1.17 KB
Deepak Yadav	Browser	/apex/OppView	24/02/2023, 02:26:34	Success	Unread	1.17 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	24/02/2023, 01:26:47	Success		7.55 KB
Deepak Yadav	Unknown	/services/data/v57.0/tooling/execut...	24/02/2023, 01:26:23	Success		7.55 KB

Burlington Textiles Corp of America  
Dickens plc  
Express Communications  
Express Logistics and Transport  
GenePoint  
Global Materials & Resources Ltd  
Pyramid Construction Inc  
Sample Account for Entitlements  
sfForce  
United Oil & Gas Corp.  
United Oil & Gas, Singapore  
United Oil & Gas, UK  
University of Arizona

## Exercise 18

```
public class NewCaseListController {
    Public List<case> getNewCases(){
        List<case>results =Database.query('SELECT ID, CaseNumber from Case where Status = \'New\'');
        return results;
    }
}
```

Developer Console https://wiprocom-7e0-dev-ed https://wiprocom-7e0-dev-ed

NewCaseList.vfp

```
<apex:page controller="NewCaseListController">
    <apex:repeat value="{!NewCases}" var="case">
        <li><apex:outputLink value="/{!case.id}" target="_new"> {!case.CaseNumber}</apex:outputLink></li>
    </apex:repeat>
</apex:page>
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Deepak Yadav	Browser	/setup/build/viewApexClass.apexp	24/02/2023, 02:41:38	Success	Unread	1.02 KB
Deepak Yadav	Browser	/setup/build/viewApexClass.apexp	24/02/2023, 02:40:18	Success	Unread	1.03 KB
Deepak Yadav	Browser	/apex/NewCaseList	24/02/2023, 02:38:45	Success	Unread	3.27 KB
Deepak Yadav	Browser	/apex/AccountList	24/02/2023, 02:37:29	Success	Unread	1.17 KB
Deepak Yadav	Browser	/apex/OppView	24/02/2023, 02:36:43	Success	Unread	1.16 KB
Deepak Yadav	Browser	/apex/NewCaseList	24/02/2023, 02:33:09	Success	Unread	3.24 KB

Filter Click here to filter the log list

Developer Console https://wiprocom-7e0-dev-ed

wiprocom-7e0-dev-ed--c.develop.vf.force.com/apex/NewCaseList?core.apexpages.request.devconsole=1

- 00001002
- 00001016
- 00001024

## References

1. [Manage sales - Salesforce IN](#)
2. [Salesforce - ADX201 Administrative Essentials for New Admins in Lightning Experience \(SFADX201\) \(qa.com\)](#)
3. [Understand the Salesforce Architecture Unit | Salesforce Trailhead](#)