



# Capstone Project Report

## On

### **“Travel approval app”**

Github link:

<https://github.com/VIJAYA123-BIT/Salesforce-Capstone.git>

Submitted by:

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**Date:** 27/02/2023

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## **Abstract**

Every travel organization requires a Travel Approval Application. This department deals with the approval of travel requests. It also allows for prime levels of control and oversight over travel bookings, policy and budget. The approval process is usually often lengthy and requires a lot of paperwork. It requires so much of time and work efforts to complete it. To eradicate human errors and achieve perfect data and procedures, the use of software is considered a smart choice.

Therefore, with the help of Customer Relation Management (CRM) software services provided by Salesforce, we are making a travel approval application. It starts with building of data model where the objects and fields comes into picture follows by customizing the user interface where we Use list views and page layouts to streamline an app user's experience. Every application generally needed a business logic so in this it is achieved by validation rules , formula fields and approval process. Finally, to analyze travel approvals we add reports and dashboards. This application will help them in keeping track of the complete travel approval process.

## Introduction

In today's fast-paced business environment, sales teams often need to travel frequently to meet with clients, attend conferences, and conduct business. However, managing travel requests and approvals can be a time-consuming and error-prone process, particularly when done manually. To address this challenge, many organizations are turning to technology solutions such as the Travel Approval App for Salesforce.



This app is a powerful tool that allows sales teams to easily submit and manage travel requests directly within the Salesforce platform. By automating the travel approval process, the app saves time and reduces the risk of errors and delays. It also provides sales managers with real-time visibility into their teams' travel plans, enabling them to make informed decisions about resource allocation and budgeting.



In this report, we will provide an overview of the Travel Approval App for Salesforce, including its features, benefits, and potential use cases. We will also explore how this app can help organizations improve their travel management processes, increase efficiency, and reduce costs. Finally, we will discuss best practices for implementing and using the app effectively.

## Flow of the Project

The flow of the Travel Approval App for Salesforce typically involves several steps, which are as follows:

1. **Travel Request Submission:** Sales representatives submit travel requests using the Travel Approval App within the Salesforce platform. The request includes details such as travel dates, destinations, budgets, and purpose.

**Automated Routing of Requests:** The app automatically routes the travel request to the appropriate approvers based on pre-defined rules and workflows. This ensures that requests are reviewed by the right people, in the right order

1. **Review and Approval:** Approvers receive notifications when a travel request requires their approval. They can review the request details and approve or reject it within the app.
2. **Notification and Feedback:** Sales representatives are notified of the approval or rejection of their travel request. If rejected, the app may allow the representative to revise and resubmit the request.
3. **Real-Time Reporting:** The app provides real-time visibility into travel requests and approvals, allowing sales managers to monitor travel spend and make informed decisions about their teams' travel plans.

Overall, the Travel Approval App for Salesforce automates and streamlines the travel request and approval process, providing a seamless experience for sales representatives and managers while ensuring compliance and cost-effectiveness

## 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>

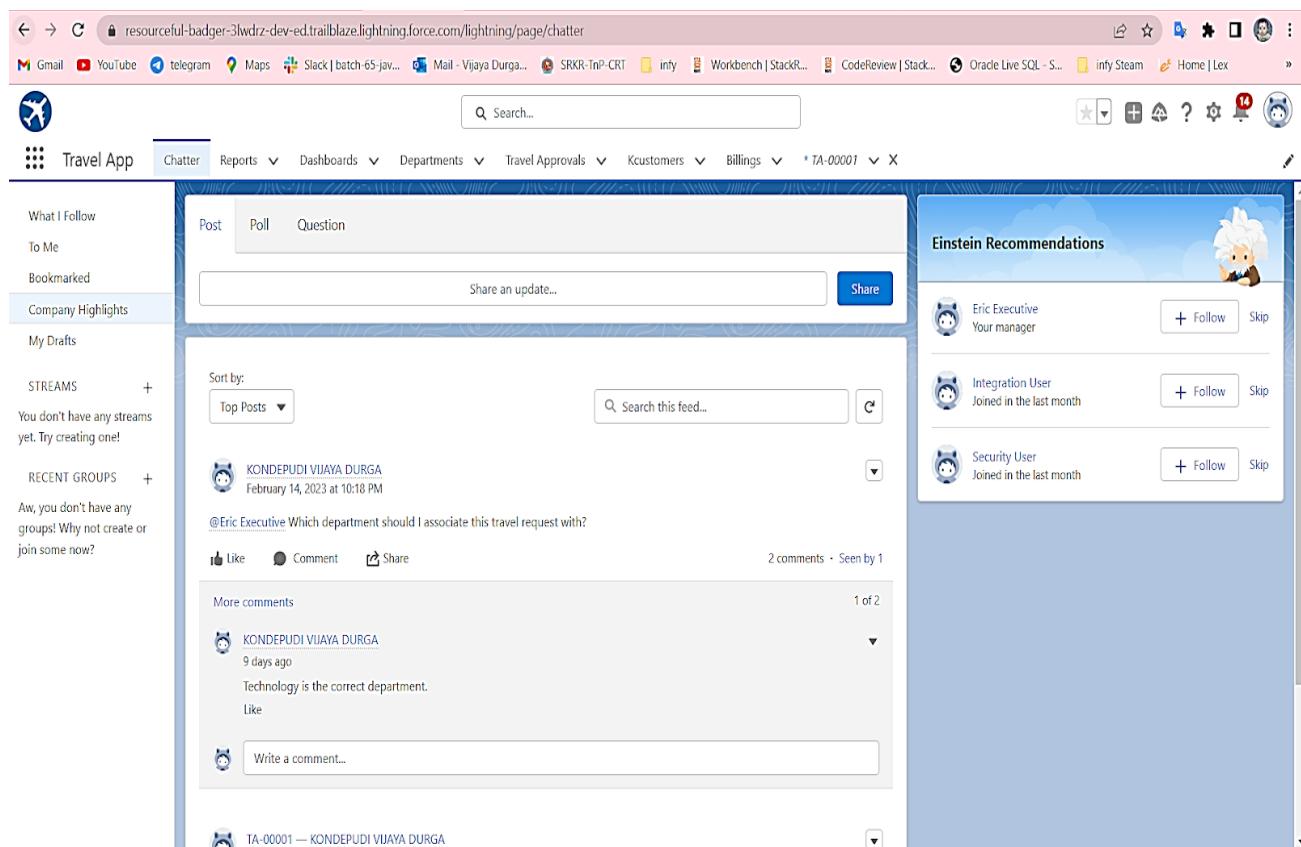
# Module 1

## Screen Shots

### Exercise 1

Step 1:

Create a new custom lightning App, name: Travel App.



## Step 2:

### Create a Department Custom Object

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Gmail, YouTube, telegram, Maps, Slack, Mail - Vijaya Durga..., SRKR-TnP-CRT, infy, Workbench | StackR..., CodeReview | Stack..., Oracle Live SQL - S..., Inty Steam, Home | Lex, and a search bar labeled "Search Setup". Below the navigation is a toolbar with icons for star, plus, minus, question mark, and other setup functions.

The main area displays the "Object Manager" page for the "Department" object. 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, Search Layouts, List View Button Layout, and Restriction Rules. The "Details" tab is selected and expanded, showing fields for API Name ("Department\_\_c"), Singular Label ("Department"), and Plural Label ("Departments"). On the right side, there are sections for "Enable Reports" (with a checked checkbox), "Track Activities", "Track Field History", "Deployment Status" (set to "Deployed"), and "Help Settings" (linking to "Standard salesforce.com Help Window"). At the bottom right of the main area are "Edit" and "Delete" buttons.

Created new custom object tabs

Custom Object Tab  
**Departments**

Below is the information for the custom tab. Click Edit to change the custom tab.

Custom Tab Definition Detail	Object	Description	Created By	Modified By
	Department		KONDEPUDI VIJAYA DURGA 2/14/2023, 7:32 PM	KONDEPUDI VIJAYA DURGA 2/14/2023, 7:32 PM

## Step 3:

### Created all the required Custom Fields

**Department**

**Fields & Relationships**

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Created By	CreatedById	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	LastModifiedById	Lookup(User)	
Location	Location__c	Picklist	✓
Owner	OwnerId	Lookup(User.Group)	✓

## Create Field Dependency

**Edit Field Dependency**

Location:	Kolkata	Delhi
Department Type:	Banking <b>Finance</b> Education Energy <b>IT</b>	Banking Finance <b>Education</b> Energy IT

## STEP 4:

### Created the required Travel Approval Object

**Travel Approval**

**Details**

Description	Enable Reports
API Name Travel_Approval_c	✓ Track Activities
Custom	✓ Track Field History
✓ Singular Label Travel Approval	Deployment Status
Plural Label Travel Approvals	Deployed
	Help Settings
	Standard salesforce.com Help Window

## Custom Fields in Travel Approval Object

The screenshot shows the Salesforce Object Manager interface for the 'Travel Approval' object. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Buttons, Links, and Actions. The main area displays a table titled 'Fields & Relationships' with 13 items. The columns are 'FIELD LABEL', 'FIELD NAME', 'DATA TYPE', and 'CONTROLLING'. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING
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)	

A context menu on the right is open, showing options like 'DISPLAY DENSITY' (set to 'Comfy'), 'OPTIONS', and links to 'Switch to Salesforce Classic' and 'Add Username'.

## After testing the App

The screenshot shows the 'Travel App' interface with the 'Travel Approval' object selected. The top navigation bar includes Chatter, Reports, Dashboards, Departments, Travel Approvals, Customers, and Billings. The main view shows a travel approval record with ID TA-00001. The 'Details' tab is active, displaying fields such as:

- Travel Approval #: TA-00001
- Status: Approved
- Total Expenses: ₹1,320.00
- Status Indicator: Accepted
- Trip Info:
  - Purpose of Trip: Attend Dreamforce
  - Trip Start Date: 2/14/2023
  - Trip End Date: 2/17/2023
  - Created By: KONDEPUDI VIJAYA DURGA
  - Last Modified By: KONDEPUDI VIJAYA DURGA

The right side of the screen shows the 'Activity' section, which is currently empty. A context menu on the right is open, showing options like 'DISPLAY DENSITY' (set to 'Comfy'), 'OPTIONS', and links to 'Switch to Salesforce Classic' and 'Add Username'.

## Step 5:

### Imported Department CSV file using Data Import Wizard

Departments

All

17 items • Sorted by Department Name • Filtered by All departments • Updated a minute ago

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

## Exercise 2

### Step -1

#### Created Travel Approval record

Travel Approval

TA-00001

Related Details

Travel Approval # TA-00001

Status Approved

Total Expenses ₹1,320.00

Status Indicator Accepted

Trip Info

Purpose of Trip Attend Dreamforce

Trip Start Date 2/14/2023

Trip End Date 2/17/2023

Created By KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:01 PM

Last Modified By KONDEPUDI VIJAYA DURGA, 2/20/2023, 7:50 PM

DISPLAY DENSITY

✓ Comfy

Compact

OPTIONS

Switch to Salesforce Classic

Add Username

Activity

No activities to show.

No past activity. Past meetings and tasks marked as done show up here.

## Step-2

### Created Expense Item Custom Object

The screenshot shows the Salesforce Object Manager interface. On the left, a sidebar lists various object configuration options like Fields & Relationships, Page Layouts, and Buttons, Links, and Actions. The main area displays the 'Expense Item' object details. The API Name is set to 'Expense\_Item\_\_c'. The singular label is 'Expense Item' and the plural label is 'Expense Items'. On the right, a user profile for 'KONDEPUDI VIJAYA DURGA' is shown, along with settings for 'DISPLAY DENSITY' (set to 'Comfy') and 'OPTIONS' (with links to 'Switch to Salesforce Classic' and 'Add Username').

## Step 3

### Created Custom Fields

The screenshot shows the 'Fields & Relationships' section of the Salesforce Object Manager for the 'Expense Item' object. It lists six fields: Amount (Currency(16, 2)), Created By (Lookup(User)), Expense Item Number (Auto Number), Expense Type (Picklist), Last Modified By (Lookup(User)), and Travel Approval (Master-Detail(Travel Approval)). The 'Fields & Relationships' tab is selected in the sidebar. The right side of the screen shows the same user profile and settings as the previous screenshot.

## Step 4 Created Records

Expense Item Number: E-00001  
Amount: ₹450.00  
Expense Type: Airfare  
Travel Approval: TA-00001  
Created By: KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:02 PM  
Last Modified By: KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:02 PM

Expense Item Number: E-00002  
Amount: ₹870.00  
Expense Type: Hotel  
Travel Approval: TA-00001  
Created By: KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:02 PM  
Last Modified By: KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:02 PM

Created User Eric

User Detail

Eric Executive

Name: Eric Executive  
Alias: eexec  
Email: vijayadurga278@gmail.com  
Username: eric.durga@wipro.com  
Nickname: eric.exec  
Title:   
Company:   
Department:   
Division:   
Address:   
Time Zone: (GMT+05:30) India Standard Time (Asia/Kolkata)  
Locale: English (India)  
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  
Status: Active  
Marketing User:   
Offline User:   
Knowledge User:   
Flow User:   
Service Cloud User:   
Site.com Contributor User:   
Site.com Publisher User:   
WDC User:   
Mobile Push Registrations:  View  
Data.com User Type:    
Accessibility Mode (Classic Only):    
Debug Mode:    
High-Contrast Palette on Charts:

## Step 6

### Added Eric Executive as manager to System Administrator

User Detail

Eric Executive

Name: Eric Executive  
Alias: eexec  
Email: vijayadurga278@gmail.com  
Username: eric.durga@wipro.com  
Nickname: eric.exec  
Title:   
Company:   
Department:   
Division:   
Address:   
Time Zone: (GMT+05:30) India Standard Time (Asia/Kolkata)  
Locale: English (India)  
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  
Status: Active  
Marketing User:   
Offline User:   
Knowledge User:   
Flow User:   
Service Cloud User:   
Site.com Contributor User:   
Site.com Publisher User:   
WDC User:   
Mobile Push Registrations:  View  
Data.com User Type:    
Accessibility Mode (Classic Only):    
Debug Mode:    
High-Contrast Palette on Charts:

## Step 7

### Customized the Travel Approval Default Search

The screenshot shows the Salesforce Setup interface with the 'Search Layouts' page open. The page title is 'Travel Approval Search Results for System Administrator'. Under 'Available Fields', there is a list of various travel approval fields like Record ID, Out-of-State, Status Indicator, Total Expenses, etc. On the right, under 'Selected Fields', 'Travel Approval #' and 'Purpose of Trip' are listed. There are 'Add' and 'Remove' buttons between the two lists. At the bottom are 'Save' and 'Cancel' buttons. A sidebar on the right displays the user's name (KONDEPUDI VIJAYA DURGA), profile picture, and options for 'DISPLAY DENSITY' (set to 'Comfy'), 'OPTIONS', and links to 'Switch to Salesforce Classic' and 'Add Username'.

## Step 8

### Selected all the fields to display

The screenshot shows the 'Travel App' interface with a 'Select Fields to Display' dialog box overlaid. The dialog lists 'Available Fields' and 'Visible Fields'. The 'Visible Fields' list contains 'Travel Approval #', 'Department', 'Created By', 'Status', 'Trip Start Date', and 'Trip End Date'. The 'Available Fields' list includes 'Created By Alias', 'Created Date', 'Destination State', 'Last Activity Date', 'Last Modified By', and 'Last Modified By Alias'. A 'Save' button is located at the bottom right of the dialog. In the background, a list of travel approvals is visible, showing items like TA-00001 through TA-00015 with their respective details and status.

## Step -9

Created Travel approval custom List view Open Out of State Travel Requests

Travel Approvals  
Open Out of State Travel Requests

1 item • Sorted by Travel Approval # • Filtered by My travel approvals - Status: Out-of-State • Updated a few seconds ago

Travel Approval #	Department	Created By	Status	Destination State	Trip Start
TA-01353	Technology	KONDEPUDI VIJAYA DURGA	New	go	2/25/2023

Search this list...

DISPLAY DENSITY

✓ Comfy

Compact

OPTIONS

Switch to Salesforce Classic

Add Username

KONDEPUDI VIJAYA DURGA  
resourceful-badger-3lwdrz-dev-ed.trailblaze.lightning.force.com/lightning/o/Travel\_Approval\_\_c/list?filterName=00B2w00000YWPiVEAX

Settings Log Out

## Step 10

Selected fields to display in the Travel approval Open Out of State Travel Requests

Travel Approvals  
Open Out of State Travel Requests

1 item • Sorted by Travel Approval # • Filtered by My travel approvals - Status: Out-of-State • Updated a few seconds ago

New Travel Approval

Information

Travel Approval # TA-01353

Status --None--

Owner KONDEPUDI VIJAYA DURGA

Department Search Departments...

Trip Info

Purpose of Trip

Out-of-State

Trip Start Date

Destination State

Trip End Date

Cancel Save & New Save

Expense Items Import Change Owner Printable View

Trip End Date 3/3/2023

## Step 11

### Customized Travel Approval Page Layout

The image consists of two screenshots demonstrating the customization of a Travel Approval Record Page in Salesforce.

**Top Screenshot (Lightning App Builder):** This screenshot shows the "Travel Approval Record Page" in the Lightning App Builder. The page layout includes a "Related" section with fields like "Travel Approval #", "Status", "Total Expense", and "Status Indicator". Below it is a "Trip Info" section with fields for "Purpose of Trip", "End Date", "Out-of-State", "Destination State", and "Last Modified By". To the right is an "Activity" sidebar showing a timeline and a "Chatter" feed. On the right side of the page, there is a "Page" configuration panel where settings like "Label", "Page Type", "Object", and "Template" are being configured.

**Bottom Screenshot (Object Manager):** This screenshot shows the "Travel Approval" object in the Object Manager. It displays a table of "Page Layouts" with one item: "Travel Approval Layout". The "MODIFIED BY" column shows "KONDEPUDI VIJAYA DURGA, 2/14/2023, 7:37 PM". A context menu is open over this row, showing options like "Switch to Salesforce Classic" and "Add Username". The left sidebar lists various setup categories such as "Page Layouts", "Buttons, Links, and Actions", "Compact Layouts", and "Field Sets".

## Step 12

Customized the Expense Item Related list Under Travel Approval page Layout

Expense Item Number	Expense Type	Amount
E-00001	Airfare	₹450.00
E-00002	Hotel	₹870.00
E-00003	Airfare	₹450.00

## Step 13

### Enabled Feed Tracking

The screenshot shows the Salesforce Setup interface under the Chatter section. The left sidebar is expanded to show 'Feature Settings' and 'Feed Item'. Under 'Feed Item', 'Feed Tracking' is selected. The main content area displays the 'Feed Tracking' configuration page. It includes a sub-section titled 'Fields in travel approvals' where the 'Enable Feed Tracking' checkbox is checked. A note says 'You can select up to 9 fields.' Below this, there's a section for related objects with a 'All Related Objects' button. The right sidebar shows user information for 'KONDEPUDI VIJAYA DURGA' and options for 'DISPLAY DENSITY' (set to 'Comfy'), 'OPTIONS', and links to 'Switch to Salesforce Classic' and 'Add Username'.

The screenshot shows the 'Travel App' interface. The top navigation bar includes links for 'Reports', 'Dashboards', 'Travel Approvals', 'Customers', and 'Billings'. The main content area displays a table titled 'Travel Approvals' with a sub-section 'Open Out of State Travel Requests'. The table has columns: 'Travel Approval #', 'Department', 'Created By', 'Status', 'Destination State', and 'Trip Start'. One row is visible: 'TA-01353', 'Technology', 'KONDEPUDI VIJAYA DURGA', 'New', 'go', and '2/25/2023'. The right sidebar is identical to the one in the previous screenshot, showing user information and setup options.

## **MODULE 2**

Exercise 1

Step 1

Create Trip end date after start date Validation Rule

The screenshot shows the Salesforce Setup interface for creating a Validation Rule. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main area is titled "Travel Approval Validation Rule". It defines a validation rule by specifying an error condition and a corresponding error message. The error condition is written as a Boolean formula expression that returns true if the save will be aborted and the error message will be displayed. The user can correct the error and try again.

**Validation Rule Edit**

Rule Name: Trip\_end\_date\_after\_start\_date  
Active:   
Description:

**Error Condition Formula**

Example: Discount\_Percent\_\_c>0.30 More Examples...  
Display an error if Discount is more than 30%  
If this formula expression is true, display the text defined in the Error Message area

Trip\_End\_Date\_\_c < Trip\_Start\_Date\_\_c

Functions

-- All Function Categories --  
ABS  
ACOS  
ADDMONTHS  
AND  
ASCII  
ASIN  
Insert Selected Function  
ABS(number)  
Returns the absolute value of a number

**DISPLAY DENSITY**  
✓ Comfy  
Compact  
**OPTIONS**  
Switch to Salesforce Classic ?  
Add Username  
Operators & Functions

The screenshot shows the details of the created Validation Rule. The left sidebar lists various setup categories. The main area is titled "Travel Approval Validation Rule". It displays the validation rule details, including the rule name, error condition formula, error message, and other metadata like active status, error location, and created/modified by.

**Validation Rule Detail**

Rule Name: Trip\_end\_date\_after\_start\_date  
Error Condition Formula: Trip\_End\_Date\_\_c < Trip\_Start\_Date\_\_c  
Error Message: Trip end date must be greater than or equal to start date  
Description:   
Created By: KONDEPUDI VIJAYA DURGA 2/14/2023, 10:44 PM  
Modified By: KONDEPUDI VIJAYA DURGA 2/23/2023, 9:26 PM

**DISPLAY DENSITY**  
✓ Comfy  
Compact  
**OPTIONS**  
Switch to Salesforce Classic ?  
Add Username

Step 2  
Created a Roll Up Summary Field Total Expenses

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named "Total Expenses" has been created for the "Travel Approval" object. The field is of type "Roll-Up Summary" and aggregates "Expense Item" amounts. The "Field Information" section includes details like Field Label, Field Name, API Name, Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The "Roll-Up Summary Options" section specifies the summary type as "SUM". The right sidebar shows user profile information and display density settings.

## Step 3

### Created a formula field Status Images

The screenshot shows the Salesforce Setup interface under the Custom Code category. A static resource named "StatusImages" is being edited. The "Static Resource Edit" form includes fields for Name (set to "StatusImages"), Description, File (with a "Choose File" button), and Cache Control (set to "Public"). The right sidebar shows user profile information and display density settings.

Setup Home Object Manager ▾

custom

Feature Settings

Service

Customer Contact Requests

Customer Service Incident Management

User Interface

Custom Labels

Sites and Domains

Custom URLs

Custom Code

Apex Classes

Apex Settings

Apex Test Execution

Apex Test History

Apex Triggers

Canvas App Previewer

Custom Metadata Types

Custom Permissions

Static Resource StatusImages

Static Resource Detail

Name: StatusImages

Namespace Prefix:

Description:

MIME Type: application/x-zip-compressed

Cache Control: Public

Size: 57,029 bytes

Created By: KONDEPUDI VIJAYA DURGA 2/14/2023, 10:56 PM

Last Modified By: KONDEPUDI VIJAYA DURGA 2/23/2023, 9:36 PM

Edit Delete Where is this used?

KONDEPUDI VIJAYA DURGA  
resourceful-badger-3lwdz-dev-ed.trailblaze...  
Settings Log Out

DISPLAY DENSITY

✓ Comfy

Compact

OPTIONS

Switch to Salesforce Classic Add Username

## Step 4

### Created a formula field Status Indicator

Setup Home Object Manager ▾

Travel Approval

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

Travel Approval Custom Field Status Indicator Back to Travel Approval

Custom Field Definition Detail

Field Information

Field Label: Status Indicator

Field Name: Status\_Indicator

API Name: Status\_Indicator\_\_c

Description: Help Text Data Owner

Field Usage: Data Sensitivity Level

Compliance Categorization

Created By: KONDEPUDI VIJAYA DURGA 2/14/2023, 10:56 PM

Object Name: TravelApproval

Modified By: KONDEPUDI VIJAYA DURGA 2/14/2023, 10:58 PM

Formula Options

Data Type: 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)) )
```

KONDEPUDI VIJAYA DURGA  
resourceful-badger-3lwdz-dev-ed.trailblaze...  
Settings Log Out

DISPLAY DENSITY

✓ Comfy

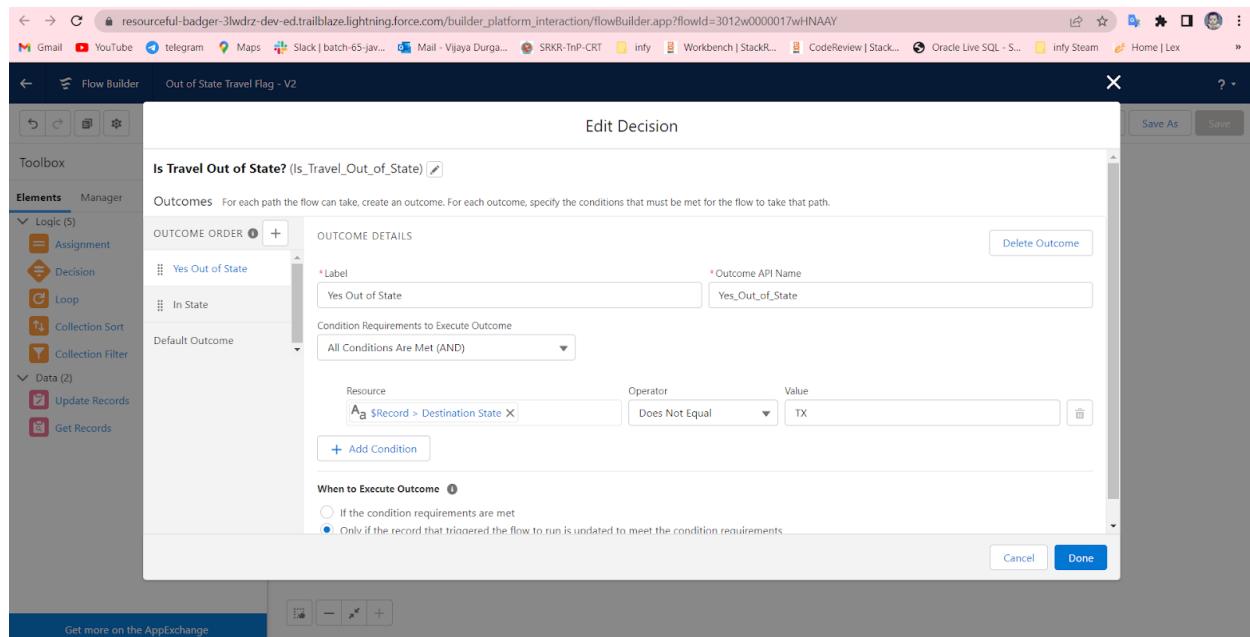
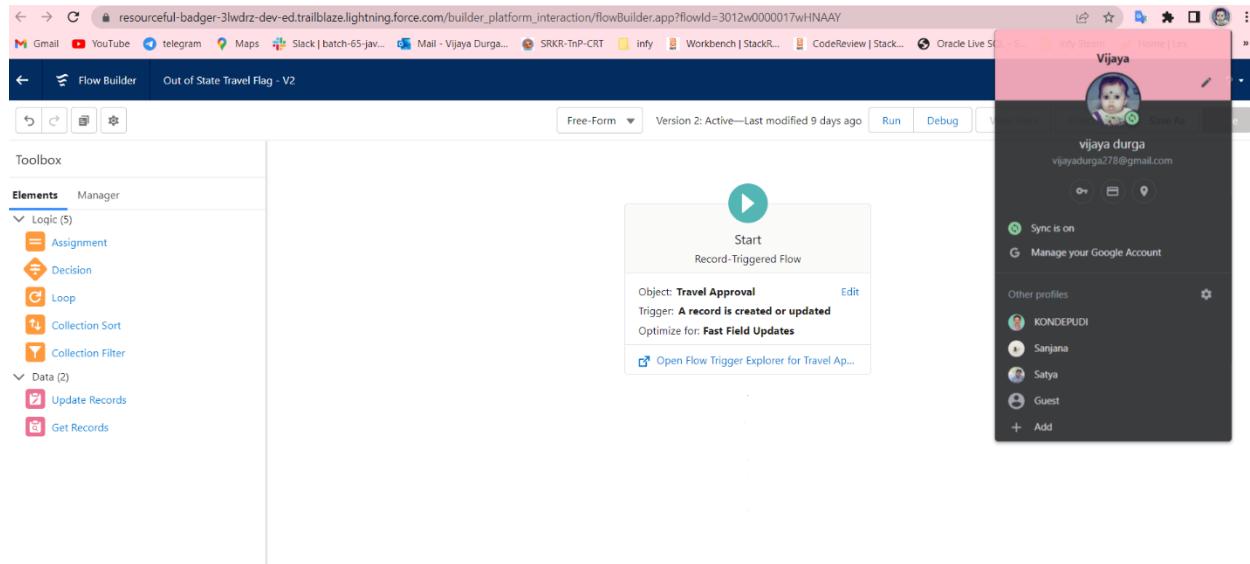
Compact

OPTIONS

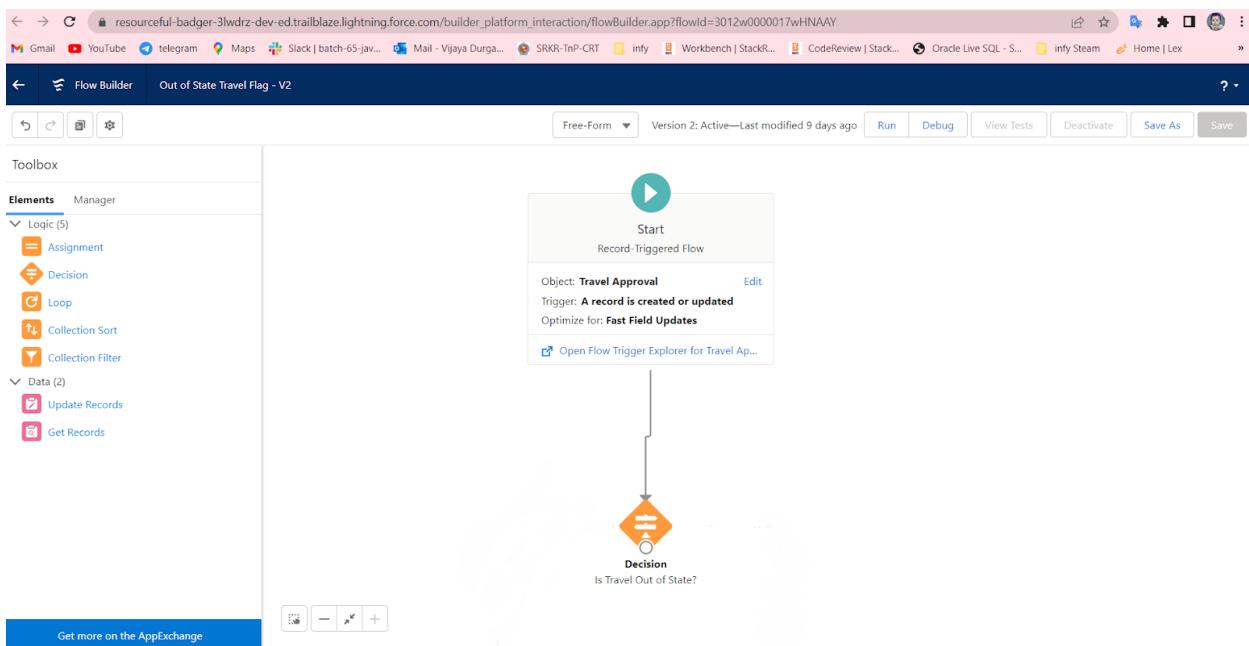
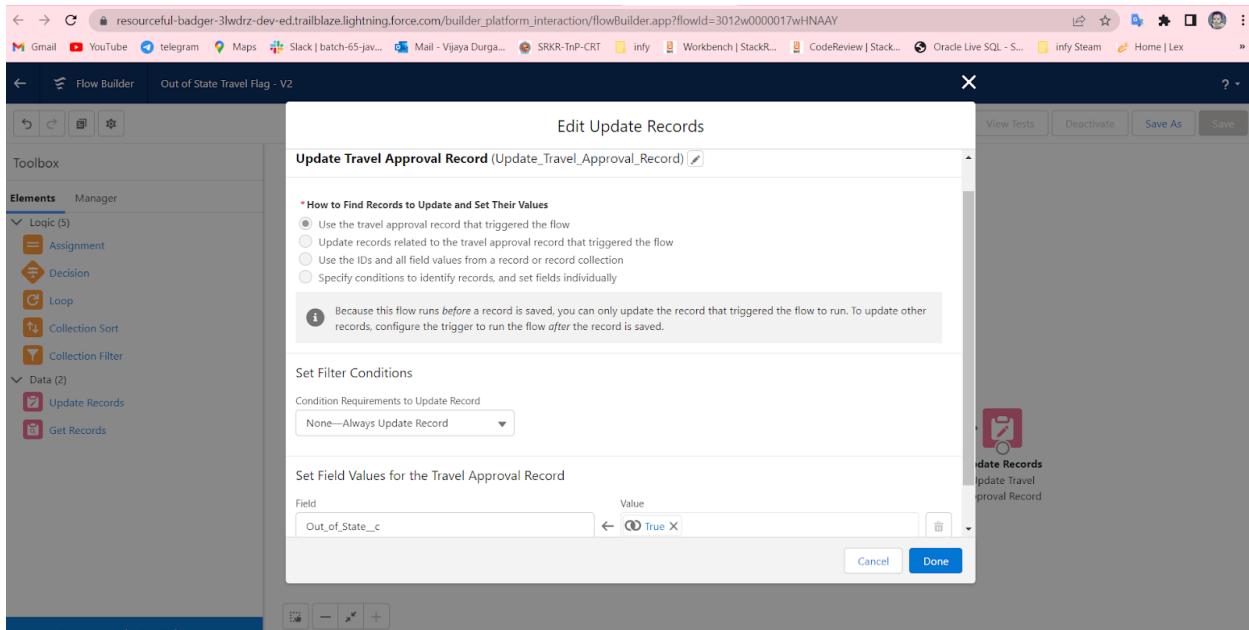
Switch to Salesforce Classic Add Username

## Step 5

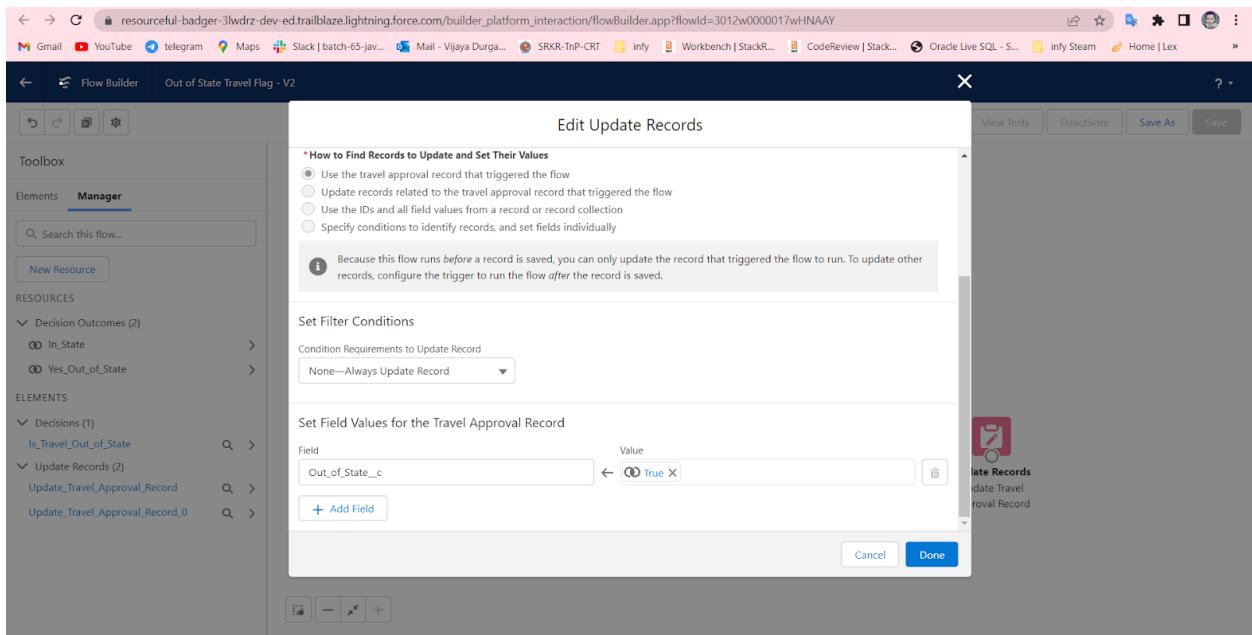
### Created a Record – Trigger flow Decision block

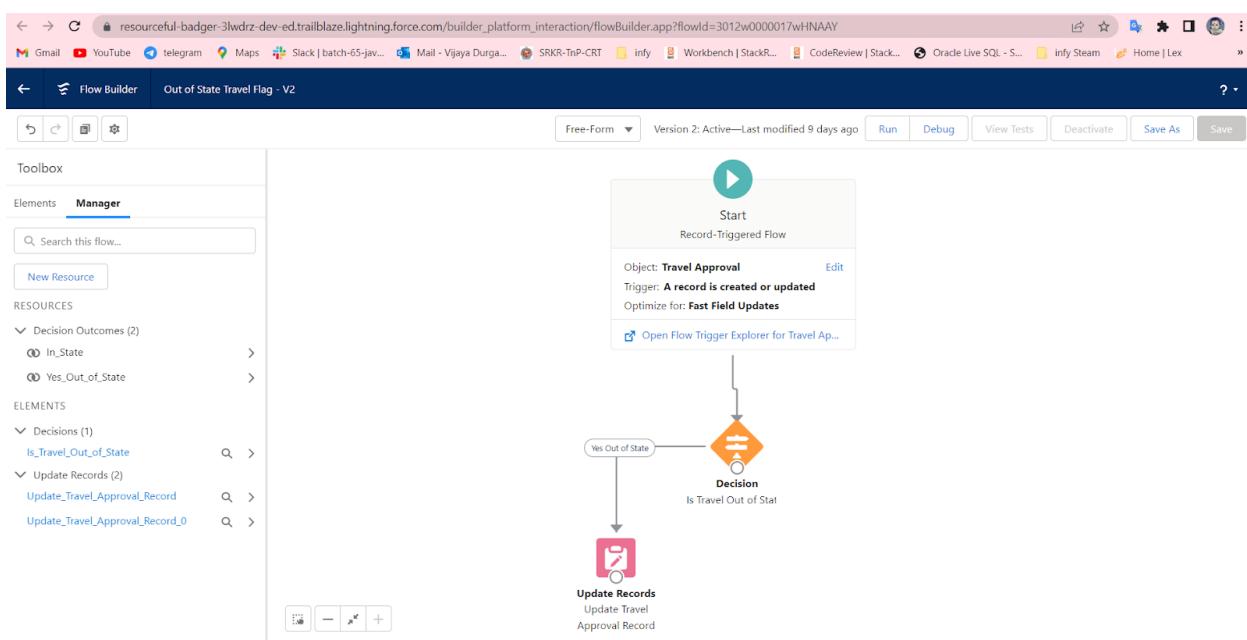
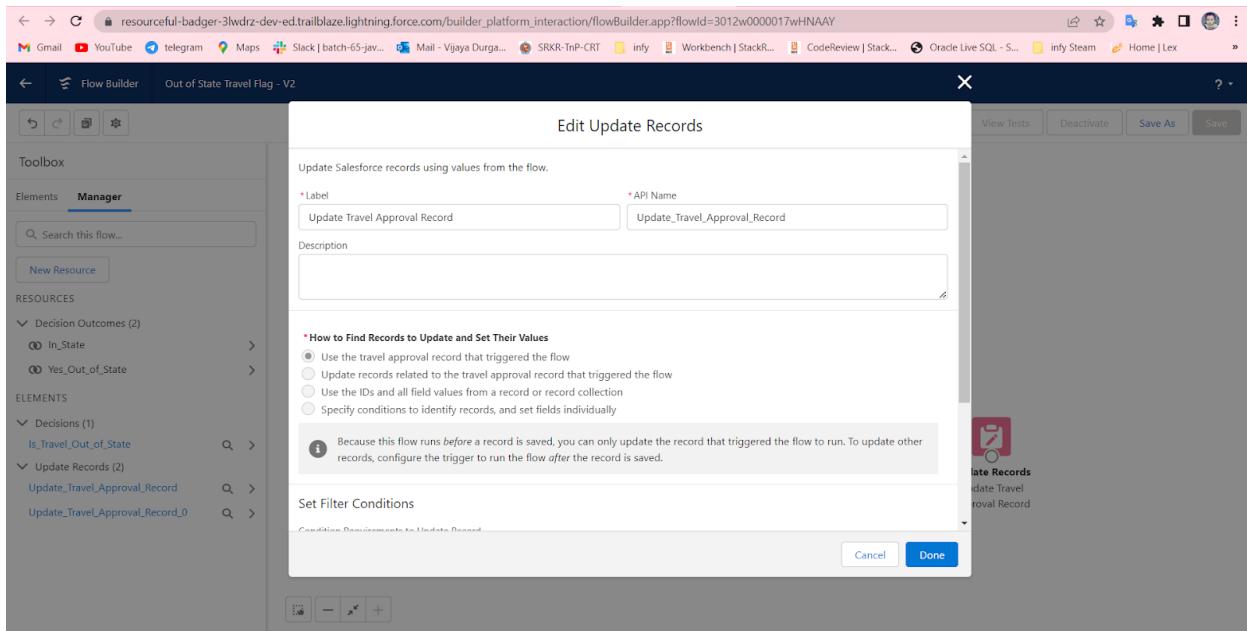


## Update Travel Approval Record (Yes out of State)

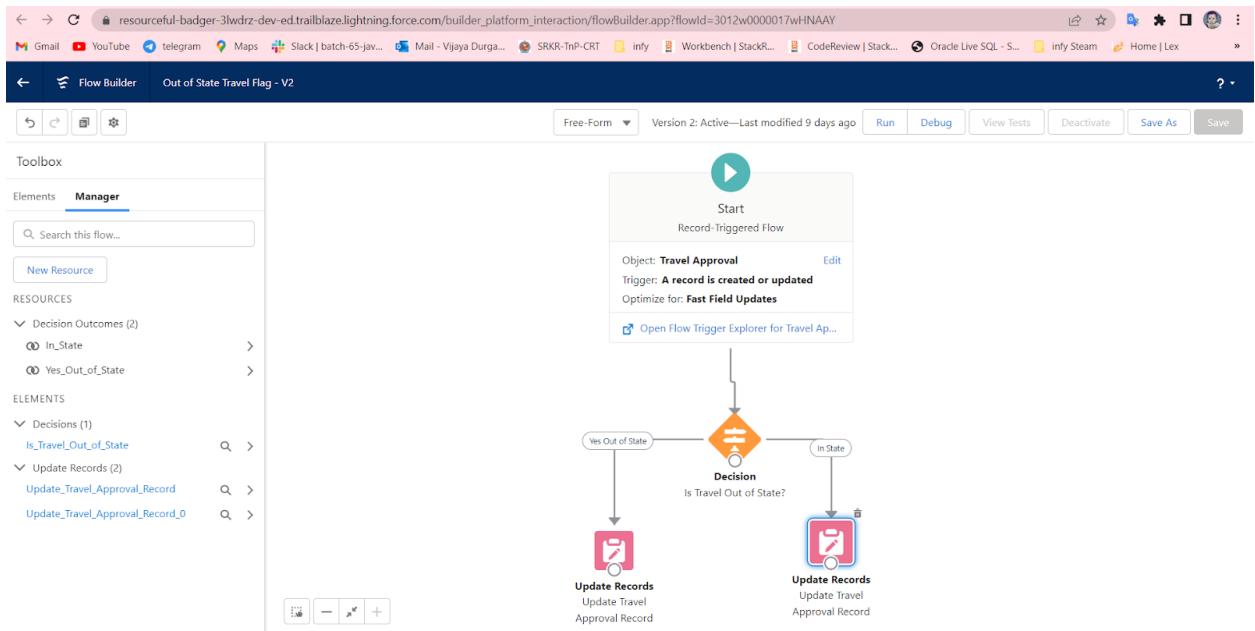


## Update Travel Approval Record (In State)





## Out of State Travel Flag(flow)



## Step -6

Created an approval process Travel Approval Request

The screenshot shows the Salesforce Setup interface under the Approval Processes section. A context menu is open on the right side, showing the user's profile (KONDEPUDI VIJAYA DURGA) and options like 'DISPLAY DENSITY' (set to 'Comfy'), 'OPTIONS', and links to 'Switch to Salesforce Classic' and 'Add Username'. The main content area displays the 'Travel Approval: Travel Approval Request' process definition. It includes fields for Process Name (Travel Approval Request), Unique Name (Travel\_Approval\_Request), Description, Entry Criteria (Travel Approval: Total Expenses GREATER THAN 0), Record Editability (Administrator ONLY), and various status indicators. Below this is the 'Initial Submission Actions' section, which contains an action named 'Record Lock' with the description 'Lock the record from being edited'. The final section shown is 'Approval Steps', which lists one step: Action 'Set Status to Approved' with Step Number 1, Name 'Approved', Description 'Approved', Criteria 'Approved', Assigned Approver 'Manager', and Reject Behavior 'Final Rejection'.

## Final Approved actions

The screenshot shows the Salesforce Setup interface under the Field Updates section. A context menu is open on the right side, identical to the one in the previous screenshot. The main content area displays the 'Set Status to Approved' field update. It includes fields for Name (Set Status to Approved), Unique Name (Set\_Status\_to\_Approved), Description, Object (Travel Approval), Field to Update (Travel Approval: Status), Field Data Type (Picklist), and Re-evaluate Workflow Rules after Field Change (unchecked). Below this is the 'Rules Using This Field Update' section, which states 'This field update is currently not used by any rules'. The final section shown is 'Approval Processes Using This Field Update', which lists one entry: Action 'Approval Process Name' (Travel Approval Request), Description 'Approved', Type 'Travel Approval', and State 'Active'.

## Final Rejection Actions

**Field Update Detail**

Name	Set Status to Rejected
Unique Name	Set_Status_to_Rejected
Description	Travel Approval
Object	Travel Approval
Field to Update	Travel Approval Status
Field Data Type	Picklist
Re-evaluate Workflow Rules after Field Change	<input type="checkbox"/>
New Field Value	Rejected

**Rules Using This Field Update**

This field update is currently not used by any rules.

**Approval Processes Using This Field Update**

Action	Approval Process Name	Description	Type	Status
Edit   Del	Travel Approval Requests	Travel Approval		Active

**Process Automation Settings**

The default workflow user is required for scheduled paths in record-triggered flows and time-dependent actions in workflow rules. If the user who triggered the automation is no longer active, the default workflow user is associated with the actions that are executed by the automation. The default workflow user always runs schedule-triggered flows.

**Default Workflow User:** KONDEPUDI VIJAYA DURGA

By default, no email address is set for the Automated Process User. Event processes and auto-launched flows with triggers use the email address to send emails for actions and errors. Orchestrations use the email address to send notifications. To set the email address for the Automated Process User, specify an organization-wide email address for the system administrator profile.

**Automated Process User Email Address:** [Input Field]

By default, the email approval sender is the approval submitter. To override the default sender, select an organization-wide email address.

**Email Approval Sender:** Approval Submitter

Enabling email approval response lets users reply to email approval requests by typing APPROVE or REJECT in the first line and adding comments in the second line.

**Enable email approval response:**

**Warning Message:** By enabling the email approval response feature, you agree to allow Salesforce to process email approval responses, update approval requests for all active users in your organization, and update the approval object on behalf of your organization's users.

**Flow Configuration Options:**

- Let users pause flows when they need to wait for more information. Once you enable this setting, the Pause button appears on every screen that has Pause enabled.
- Let users resume interviews that are shared with them, either directly or via the role hierarchy. When disabled, interviews can be resumed only by the user who paused the interview or a flow admin who has view access.
- Flows launched from a URL or from Setup use the Lightning runtime experience instead of the classic runtime experience. Only Lightning runtime supports two-column flow screens, custom screen components, and local actions.

Assigned to Eric Executive

Travel Approval # TA-00001

Status Approved

Total Expenses ₹1,320.00

Status Indicator Accepted

Purpose of Trip Attend Dreamforce

Trip Start Date 2/14/2023

Trip End Date 2/17/2023

Created By KONDEPUDI VIJAYA DURGA, 2/14/2023, 8:01 PM

Last Modified By KONDEPUDI VIJAYA DURGA, 2/20/2023, 7:50 PM

## Exercise 2

### Step 1

#### Imposed Travel Approval Records

Job ID	7502w000000OLi6S	Job Type	Bulk V1	Status	Closed
Submitted By	KONDEPUDI VIJAYA DURGA	Operation	Insert	Total Processing Time (ms)	1184
Start Time	2/23/2023, 10:54 PM IST	Queued Batches	0	API Active Processing Time (ms)	976
End Time	2/23/2023, 10:54 PM IST	In Progress Batches	0	Apex Processing Time (ms)	0
Time to Complete ([hh]:mm:ss)	00:02	Completed Batches	1		
Object	TravelApproval	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	300		
Concurrency Mode	Parallel	Records Failed	1		
API Version	57.0	Retries	0		

### Step 2

## Created a Report on Travel Requests by Department

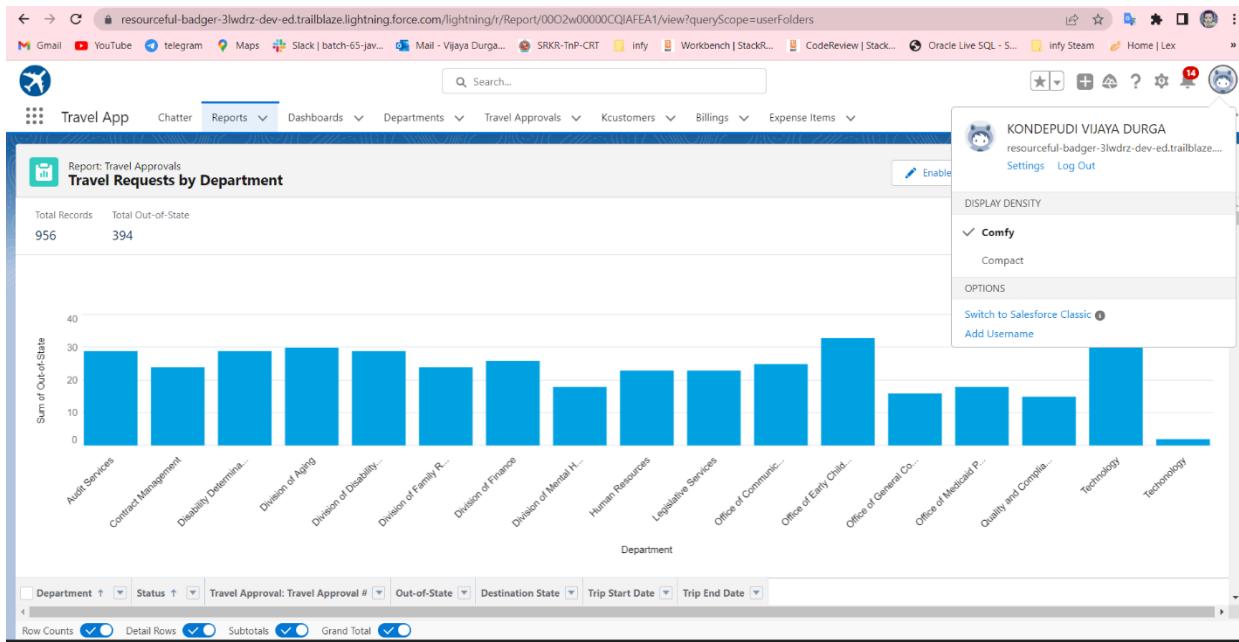
**Report: Travel Approvals**  
**Travel Requests by Department**

Department	Travel Approval: Travel Approval #	Status	Out-of-State	Destination State	Trip Start Date	Trip End Date
Audit Services (57)	TA-00166	Approved	<input checked="" type="checkbox"/>	OK	3/9/2019	3/9/2019
	TA-00174	Approved	<input checked="" type="checkbox"/>	OK	8/7/2019	9/7/2019
	TA-00182	Approved	<input checked="" type="checkbox"/>	FL	7/8/2019	7/8/2019
	TA-00186	Approved	<input checked="" type="checkbox"/>	OK	4/11/2019	7/11/2019
	TA-00191	Approved	<input checked="" type="checkbox"/>	OK	8/7/2019	8/7/2019
	TA-00605	Approved	<input type="checkbox"/>	TX	4/30/2019	5/10/2019
	TA-00624	Approved	<input checked="" type="checkbox"/>	OK	12/27/2019	1/10/2020
	TA-00633	Approved	<input checked="" type="checkbox"/>	FL	9/21/2019	10/6/2019
	TA-00636	Approved	<input checked="" type="checkbox"/>	OK	9/3/2019	9/3/2019
	TA-00638	Approved	<input checked="" type="checkbox"/>	CA	3/20/2019	4/10/2019
	TA-00673	Approved	<input checked="" type="checkbox"/>	OK	7/8/2019	7/9/2019
	TA-00783	Approved	<input checked="" type="checkbox"/>	FL	4/15/2019	4/15/2019
	TA-00699	Approved	<input checked="" type="checkbox"/>	FL	8/7/2019	8/7/2019
	TA-00725	Approved	<input checked="" type="checkbox"/>	FL	2/18/2019	2/20/2019

## After Testing

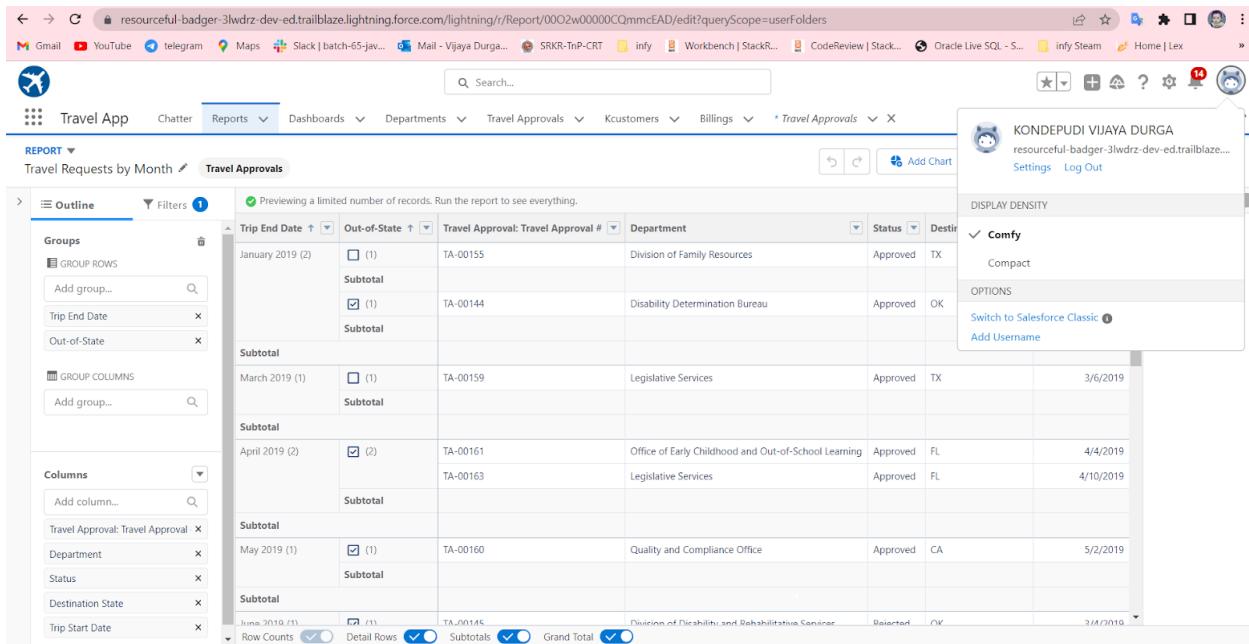
**Report: Travel Approvals**  
**Travel Requests by Department**

Department	Travel Approval: Travel Approval #	Status	Out-of-State	Destination State	Trip Start Date	Trip End Date
Audit Services (57)	Approved (49)	Approved	<input checked="" type="checkbox"/>	OK	3/9/2019	3/9/2019
	TA-00166	Approved	<input checked="" type="checkbox"/>	OK	8/7/2019	9/7/2019
	TA-00174	Approved	<input checked="" type="checkbox"/>	OK	7/8/2019	7/8/2019
	TA-00182	Approved	<input checked="" type="checkbox"/>	FL	4/11/2019	7/11/2019
	TA-00186	Approved	<input checked="" type="checkbox"/>	OK	8/7/2019	8/7/2019
	TA-00191	Approved	<input checked="" type="checkbox"/>	OK	8/7/2019	8/7/2019
	TA-00605	Approved	<input type="checkbox"/>	TX	4/30/2019	5/10/2019
	TA-00624	Approved	<input checked="" type="checkbox"/>	OK	12/27/2019	1/10/2020
	TA-00633	Approved	<input checked="" type="checkbox"/>	FL	9/21/2019	10/6/2019
	TA-00636	Approved	<input checked="" type="checkbox"/>	OK	9/3/2019	9/3/2019
	TA-00638	Approved	<input checked="" type="checkbox"/>	CA	3/20/2019	4/10/2019
	TA-00673	Approved	<input checked="" type="checkbox"/>	OK	7/8/2019	7/9/2019
	TA-00783	Approved	<input checked="" type="checkbox"/>	FL	4/15/2019	4/15/2019
	TA-00699	Approved	<input checked="" type="checkbox"/>	FL	8/7/2019	8/7/2019
	TA-00725	Approved	<input checked="" type="checkbox"/>	FL	2/18/2019	2/20/2019



## Step -3

### Created a Travel Requests by Monthly Report



## Step 4

### Created a Report and Dashboard for Travel Approvals

The screenshot shows the Salesforce Lightning interface with the URL <https://resourceful-badger-3lwdrz-dev-ed.trailblaze.lightning.force.com/lightning/o/Report/home?queryScope=mru>. The page title is "Travel Approvals". The left sidebar lists categories like "Reports", "Recent", "Created by Me", "Private Reports", "Public Reports", "All Reports", "Folders", "All Folders", "Created by Me", "Shared with Me", and "Favorites". The main content area displays a table of reports:

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Travel Requests by Month		Public Reports	KONDEPUDI VIJAYA DURGA	2/15/2023, 4:06 PM	
	Travel Requests by Department		Public Reports	KONDEPUDI VIJAYA DURGA	2/15/2023, 3:02 PM	
	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	2/14/2023, 7:18 PM	

The screenshot shows the Salesforce Lightning interface with the URL <https://resourceful-badger-3lwdrz-dev-ed.trailblaze.lightning.force.com/lightning/r/Dashboard/01Z2w000000jyBEEA0/view?queryScope=userFolders>. The page title is "Travel Requests Dashboard". The dashboard header includes "Refresh", "Edit", and "Subscribe" buttons. The dashboard displays two charts:

- Travel Requests by Department**: A horizontal bar chart showing the record count for various departments. The data is as follows:

Department	Record Count
Audit Services	57
Contract Management	65
Disability Determination Bur...	63
Division of Aging	65
Division of Disability and Re...	62
Division of Family Resources	56
Division of Finance	68
Division of Mental Health an...	54
Human Resources	46
Legislative Services	53
Office of Communications a...	61
Office of Early Childhood an...	68
- Travel Requests by Month**: A stacked bar chart showing the record count for each month, categorized by "Out-of-State" status. The data is as follows:

Trip End Date	Out-of-State: false	Out-of-State: true
Jan..	40	14
Feb..	29	21
Mar..	46	22
Apr..	54	50
May..	42	32
Jun..	26	24
July..	57	41
Aug..	38	28
Sep..	28	6

## **Module 3**

Exercise -1

Created Code Playground App

Recently Viewed

Leads

0 items • Updated a minute ago

Name Title Company Phone Mobile Email Lead

You haven't viewed any Leads recently.  
Try switching list views.

KONDEPUDI VIJAYA DURGA  
resourceful-badger-3lwdrz-dev-ed.trailblaze.lightning.force.com/lightning/o/Lead/list?filterName=Recent  
Settings Log Out

DISPLAY DENSITY

✓ Comfy

Compact

OPTIONS

Switch to Salesforce Classic Add Username

Created the Custom Object Customer as (Scustomer) as there is already a Standard Object named Customer

Setup > OBJECT MANAGER

Scustomer

Details

Description

API Name  
Scustomer\_\_c

Custom

Singular Label  
Scustomer

Plural Label  
Scustomers

Enable Reports

Track Activities

Track Field History

Deployment Status  
Deployed

Help Settings  
Standard salesforce.com Help Window

KONDEPUDI VIJAYA DURGA  
resourceful-badger-3lwdrz-dev-ed.trailblaze.lightning.force.com/lightning/setup/ObjectManager/01l2w000003DNS3/view  
Settings Log Out

DISPLAY DENSITY

✓ Comfy

Compact

OPTIONS

Switch to Salesforce Classic Add Username

Created all the Custom Fields

The screenshot shows the Salesforce Object Manager interface. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Fields & Relationships. The main area is titled 'Fields & Relationships' and displays seven items. A table lists the field details:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Active	Active_c	Checkbox	
Created By	CreatedBy	Lookup(User)	
Customer Type	Customer_Type_c	Picklist	
Description	Description_c	Text Area(255)	
Last Modified By	LastModifiedBy	Lookup(User)	
Owner	OwnerId	Lookup(User,Group)	
Scustomer Name	Name	Text(80)	

A context menu on the right is open, showing 'DISPLAY DENSITY' set to 'Comfy' and 'OPTIONS' which include 'Switch to Salesforce Classic' and 'Add Username'.

## Created a Custom Object named Billing

The screenshot shows the Salesforce Object Manager interface for the custom object 'Billing'. The sidebar on the left is identical to the previous screenshot. The main area is titled 'Details' and shows the following configuration:

Setting	Value
Description	
API Name	Billing_c
Singular Label	Billing
Plural Label	Billings
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	
Standard salesforce.com Help Window	

A context menu on the right is open, showing 'DISPLAY DENSITY' set to 'Comfy' and 'OPTIONS' which include 'Switch to Salesforce Classic' and 'Add Username'.

## Created Custom fields for billing object

The screenshot shows the Salesforce Object Manager interface for the 'Billing' object. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, etc. The main area is titled 'Fields & Relationships' and displays seven items sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, and CONTROLLING FIELD. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Amount Paid	Amount_Paid__c	Currency(18, 0)	
Bill Number	Name	Auto Number	
Created By	CreatedById	Lookup(User)	
Customer Type	Customer_Type__c	Picklist	
Last Modified By	LastModifiedById	Lookup(User)	
Scustomer	Scustomer__c	Master-Detail(Scustomer)	
Status	Status__c	Picklist	

A context menu on the right is open, showing options like 'Comfy' (selected), 'Compact', 'OPTIONS', 'Switch to Salesforce Classic', and 'Add Username'.

## Code playground App

The screenshot shows the 'Code playground' application interface. The top navigation bar includes links for Leads, Accounts, Contacts, Opportunities, Cases, Kcustomers, Billings, Kcustomers, and Scustomers. The main area is titled 'Recently Viewed' and shows a table with columns: Name, Title, Company, Phone, Mobile, Email, and Lead. A message at the bottom states: 'You haven't viewed any Leads recently. Try switching list views.' A context menu on the right is open, showing options like 'Comfy' (selected), 'Compact', 'OPTIONS', 'Switch to Salesforce Classic', and 'Add Username'.

## Exercise 2

## String Variable using endsWith() method

The screenshot shows the Salesforce Dev Console interface. The top navigation bar includes links like Gmail, YouTube, telegram, Maps, Slack, Mail - Vijaya Durga, SRKR-TnP-CRT, infy, Workbench | StackR..., CodeReview | Stack..., Oracle Live SQL - S..., infy Steam, Home | Lex, and more. The main area has tabs for DisqualifyTestLeads.apex and DisqualifyTestLeadtest.apxc. A central window titled "Enter Apex Code" contains the following code:

```
1 String x = 'Kondepudi Vijaya Durga';
2 system.debug(x.endsWith('a'));
```

Below this is the "Execution Log" table:

Timestamp	Event	Details
11:02:04:005	USER_DEBUG	[2]DEBUG[true]

At the bottom, there's a "Logs" tab selected, showing a log entry:

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/executeAn...	2/25/2023, 11:02:04 AM	Success		2.17 KB

## Used Date Method and displayed the date

The screenshot shows the Salesforce Dev Console interface on a Mac OS X desktop. The top navigation bar includes links like Chatter Home, Home | Salesforce, Developer Console, myTime | myWif..., Mail - Vijaya Durga, Salesforce Caps, Join conversation, Home | Salesforce, and more. The main area has tabs for Log executeAnonymous @21/02/2023, 09:46:44 and Log executeAnonymous @21/02/2023, 09:55:25. A central window titled "Enter Apex Code" contains the following code:

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

Below this is the "Execution Log" table:

Timestamp	Event	Details
09:55:25:003	USER_DEBUG	[2]DEBUG[2023-02-21 00:00:00]
09:55:25:003	USER_DEBUG	[4]DEBUG[2023-03-23 00:00:00]

At the bottom, there's a "Logs" tab selected, showing two log entries:

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/executeAn...	21/02/2023, 09:55:25	Success		2.51 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/executeAn...	21/02/2023, 09:46:44	Success		2.17 KB

Converted the string to integer and added 20 to it

The screenshot shows the Salesforce Trailhead debugger interface. At the top, there are three tabs: 'Log executeAnonymous @21/02/2023, 09:46:44', 'Log executeAnonymous @21/02/2023, 09:55:25', and 'Log executeAnonymous @21/02/2023, 11:04:57'. The third tab is active. Below the tabs is an 'Execution Log' table:

Timestamp	Event	Details
11:04:57:003	USER_DEBUG	[3]DEBUG 10
11:04:57:003	USER_DEBUG	[4]DEBUG 30

In the center, there is an 'Enter Apex Code' window containing the following code:

```
1 String s='10';
2 Integer a= Integer.valueOf(s);
3 system.debug(a);
4 system.debug(a+20);
```

At the bottom, there is a toolbar with various icons and a log list.

Used length method to display String length

The screenshot shows the Salesforce Trailhead debugger interface. At the top, there are three tabs: 'Log executeAnonymous @21/02/2023, 09:46:44', 'Log executeAnonymous @21/02/2023, 09:55:25', and 'Log executeAnonymous @21/02/2023, 11:04:57'. The third tab is active. Below the tabs is an 'Execution Log' table:

Timestamp	Event	Details
11:06:46:002	USER_DEBUG	[2]DEBUG size:22

In the center, there is an 'Enter Apex Code' window containing the following code:

```
1 String a='Kondepudi Vijaya Durga';
2 system.debug('size:' +a.length());
```

At the bottom, there is a toolbar with various icons and a log list.

## Defined a list and displayed the outputs using different methods

The screenshot shows the Salesforce Apex Dev Console interface. At the top, there's a navigation bar with links like 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help'. Below the navigation bar is a tab bar with several tabs, the last one being 'Log executeAnonymous @21/02/2023, 11:19:18' which is highlighted in orange.

The main area has three sections:

- Execution Log:** A table with columns 'Timestamp', 'Event', and 'Details'. It contains the following log entries:

Timestamp	Event	Details
11:19:18:003	USER_DEBUG	[7]  DEBUG After using add() method(0, 1, 2, 3, 4)
11:19:18:003	USER_DEBUG	[8]  DEBUG After using get() method0
11:19:18:003	USER_DEBUG	[10]  DEBUG After using set() method(0, 100, 2, 3, 4)
11:19:18:003	USER_DEBUG	[12]  DEBUG After clearing all elements()
- Enter Apex Code:** A modal window containing the following Apex code:

```
1 List<Integer> ll= new List<Integer>();
2 ll.add(0);
3 ll.add(1);
4 ll.add(2);
5 ll.add(3);
6 ll.add(4);
7 System.debug('After using add() method'+ll);
8 system.debug('After using get() method'+ll.get(0));
9 ll.set(1,100);
10 system.debug('After using set() method'+ll);
11 ll.clear();
12 system.debug('After clearing all elements'+ll);
```
- Logs:** A table showing log details. The columns are 'User', 'Application', 'Operation', 'Time', 'Status', 'Read', and 'Size'. There are six rows of data, all marked as 'Success':

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:19:18	Success		4.42 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:18:55	Success		4.02 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:18:15	Success		3.61 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:17:55	Success		3.25 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:06:46	Success		2.37 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:04:57	Success		2.43 KB

At the bottom, there's a toolbar with various icons and a Mac-style dock at the very bottom.

Printed numbers between 0 to 9

```

1: Integer a=20;
2: while(a>12){
3:   for(a=0;a<10;a++){
4:     system.debug('Value of a is: '+a);
5:
6:   }
7: }

```

**Execution Log**

Timestamp	Event	Details
11:24:46:002	USER_DEBUG	[4]DEBUG Value of a is: 0
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 1
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 2
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 3
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 4
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 5
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 6
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 7
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 8
11:24:46:003	USER_DEBUG	[4]DEBUG Value of a is: 9

**Logs**

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:24:46	Success		5.65 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:22:52	Apex CPU time limit exceeded	Unread	18.09 MB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:19:18	Success		4.42 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:18:55	Success		4.02 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:18:15	Success		3.61 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:17:55	Success		3.25 KB

## Exercise 3

```

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

```

**Execution Log**

Timestamp	Event	Details
11:35:26:002	USER_DEBUG	[7]DEBUG True

**Logs**

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:35:26	Success		2.64 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:34:01	Success		2.64 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:31:04	Success		5.62 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:29:27	Success		31.54 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:28:43	Apex CPU time limit exceeded	Unread	17.59 MB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	21/02/2023, 11:28:15	Apex CPU time limit exceeded	Unread	18.25 MB

## Exercise 4

The screenshot shows the Salesforce Apex Dev Console interface. At the top, there's a navigation bar with links like File, Edit, Debug, Test, Workspace, Help, and a search bar. Below the navigation bar is the Execution Log section, which displays a table of log entries. One entry is selected, showing a timestamp of 11:40:33:013 and an event of USER\_DEBUG with details [3] DEBUG|true. Below the log is an Enter Apex Code dialog box containing the following code:

```

1 Boolean.isTrue = True;
2 Boolean.isFalse = false;
3 System.debug(isTrue || isFalse);

```

At the bottom of the page, there are several filter options: This Frame, Executable, Debug Only, Filter, Click here to filter the log, Open Log, Execute, and Execute Highlighted. Below these is a table of logs with columns for User, Application, Operation, Time, Status, Read, and Size. The table shows multiple entries from the user KONDEPUDI VIJAYA DURGA, all of which were successful.

## Exercise 5

This screenshot is similar to the previous one but shows a different set of log entries. The Execution Log table now includes a new entry at the top with a timestamp of 11:43:56:003 and an event of USER\_DEBUG with details [3] DEBUG|true. The Apex code in the editor is as follows:

```

1 Date today = Date.today();
2 Date tomorrow = Date.today().addDays(1);
3 System.debug(today != tomorrow);
4

```

The rest of the interface, including the filter options and the log table, remains the same.

## Exercise 6

## Program for Finding the Grade based on Score

The screenshot shows the Salesforce Dev Console interface. At the top, the URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The tab bar includes `Log executeAnonymous @21/02/2023, 16:18:28`, `DisqualifyTestLeads.apxt`, `DisqualifyTestLeadsTest.apxc`, `CustomerTriggerTest.apxc`, `7072w00008Kgxoa`, `Log ApexTestHandler @22/02/2023, 11:59:18`, and `studentGrades.apxc`. The API Version is set to 57. The code editor contains the following Apex code:

```
1 public class studentGrades {
2     public static void gradesScored(){
3         Integer Score=100;
4         System.debug('Score is '+ Score);
5         if(Score==100){
6             System.debug('Grade: A+');
7         }
8         else if(Score>=90){
9             System.debug('Grade : A');
10        }
11        else if(Score>=80){
12            System.debug('Grade : B');
13        }
14        else{
15            System.debug('Grade : Failed');
16        }
17    }
18 }
```

Below the code editor is a log table:

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/runTest...	22/02/2023, 12:27:22	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Insert failed. First exception on row ...	Unread	14.28 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	996 bytes

At the bottom is a toolbar with various icons.

The screenshot shows the Salesforce Dev Console interface. At the top, the URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The tab bar includes `DisqualifyTestLeads.apxt`, `DisqualifyTestLeadsTest.apxc`, `CustomerTriggerTest.apxc`, `7072w00008Kgxoa`, `Log ApexTestHandler @22/02/2023, 11:59:18`, `studentGrades.apxc`, and `Log executeAnonymous @22/02/2023, 13:05:07`. The API Version is set to 57. The execution log table shows the following entries:

Timestamp	Event	Details
13:05:07:003	USER_DEBUG	[4]DEBUG Score is 100
13:05:07:003	USER_DEBUG	[6]DEBUG Grade: A+

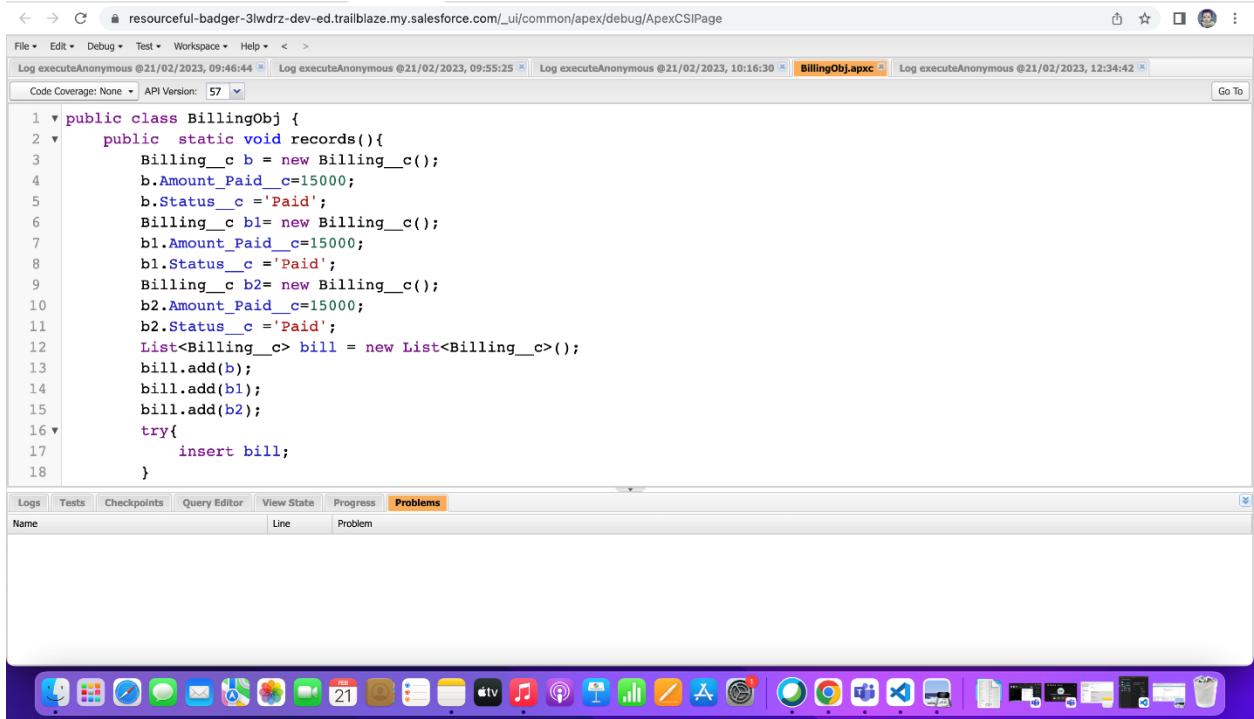
Below the execution log is a log table:

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 13:05:07	Success	Unread	3.06 KB
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/runTest...	22/02/2023, 12:27:22	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Insert failed. First exception on row ...	Unread	14.28 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	996 bytes

At the bottom is a toolbar with various icons.

Exercise 7

## Program to execute Apex – for loop

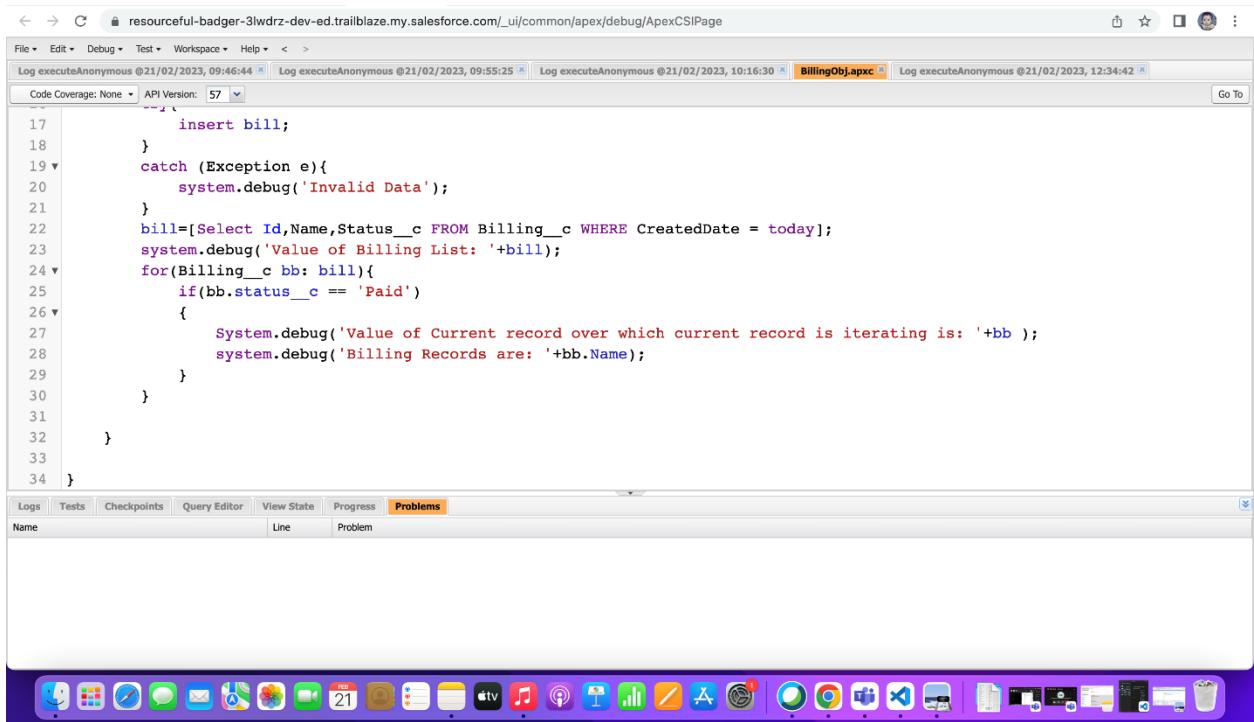


The screenshot shows a Mac desktop with two instances of the Salesforce Trailhead IDE open. Both windows have the URL `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The top window displays the following Apex code:

```
1 public class BillingObj {
2     public static void records(){
3         Billing__c b = new Billing__c();
4         b.Amount_Paid__c=15000;
5         b.Status__c ='Paid';
6         Billing__c b1= new Billing__c();
7         b1.Amount_Paid__c=15000;
8         b1.Status__c ='Paid';
9         Billing__c b2= new Billing__c();
10        b2.Amount_Paid__c=15000;
11        b2.Status__c ='Paid';
12        List<Billing__c> bill = new List<Billing__c>();
13        bill.add(b);
14        bill.add(b1);
15        bill.add(b2);
16        try{
17            insert bill;
18        }
```

The bottom window shows the same code with additional logic added:

```
17           insert bill;
18     }
19     catch (Exception e){
20         system.debug('Invalid Data');
21     }
22     bill=[Select Id,Name,Status__c FROM Billing__c WHERE CreatedDate = today];
23     system.debug('Value of Billing List: '+bill);
24     for(Billing__c bb: bill){
25         if(bb.status__c == 'Paid')
26         {
27             System.debug('Value of Current record over which current record is iterating is: '+bb );
28             system.debug('Billing Records are: '+bb.Name);
29         }
30     }
31 }
32 }
33 }
34 }
```



The screenshot shows a Mac desktop with two instances of the Salesforce Trailhead IDE open. Both windows have the URL `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The top window displays the following Apex code:

```
17           insert bill;
18     }
19     catch (Exception e){
20         system.debug('Invalid Data');
21     }
22     bill=[Select Id,Name,Status__c FROM Billing__c WHERE CreatedDate = today];
23     system.debug('Value of Billing List: '+bill);
24     for(Billing__c bb: bill){
25         if(bb.status__c == 'Paid')
26         {
27             System.debug('Value of Current record over which current record is iterating is: '+bb );
28             system.debug('Billing Records are: '+bb.Name);
29         }
30     }
31 }
32 }
33 }
34 }
```

The bottom window shows the same code with additional logic added:

```
17           insert bill;
18     }
19     catch (Exception e){
20         system.debug('Invalid Data');
21     }
22     bill=[Select Id,Name,Status__c FROM Billing__c WHERE CreatedDate = today];
23     system.debug('Value of Billing List: '+bill);
24     for(Billing__c bb: bill){
25         if(bb.status__c == 'Paid')
26         {
27             System.debug('Value of Current record over which current record is iterating is: '+bb );
28             system.debug('Billing Records are: '+bb.Name);
29         }
30     }
31 }
32 }
33 }
34 }
```

Execution Log

Timestamp	Event	Details
12:34:42:055	USER_DEBUG	[23]DEBUG Value of Billing List: (Billing__c:{Id=a042w00000xtDOLAA2, Name=B - 0019, Status__c=Paid}, Billing__c:{Id=a042w00000xDOMAA2, Name=B - 0020, Status__c=Paid}, Billing__c:{Id=a042w00000xDONAA2, Name=B - 0021, Status__c=Paid})
12:34:42:055	USER_DEBUG	[27]DEBUG Value of Current record over which current record is iterating is: Billing__c:{Id=a042w00000xtDOLAA2, Name=B - 0019, Status__c=Paid}
12:34:42:055	USER_DEBUG	[28]DEBUG Billing Records are: B - 0019
12:34:42:055	USER_DEBUG	[27]DEBUG Value of Current record over which current record is iterating is: Billing__c:{Id=a042w00000xDOMAA2, Name=B - 0020, Status__c=Paid}
12:34:42:056	USER_DEBUG	[28]DEBUG Billing Records are: B - 0020
12:34:42:056	USER_DEBUG	[27]DEBUG Value of Current record over which current record is iterating is: Billing__c:{Id=a042w00000xDONAA2, Name=B - 0021, Status__c=Paid}
12:34:42:056	USER_DEBUG	[28]DEBUG Billing Records are: B - 0021

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

Logs Tests Checkpoints Query Editor View State Progress Problems

Name Line Problem

## Exercise 8

### Created a Class to demonstrate constants in Apex

```

1 public class DiscountClass {
2     Decimal regularDiscount =5.50;
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 
```

Enter Apex Code

```

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

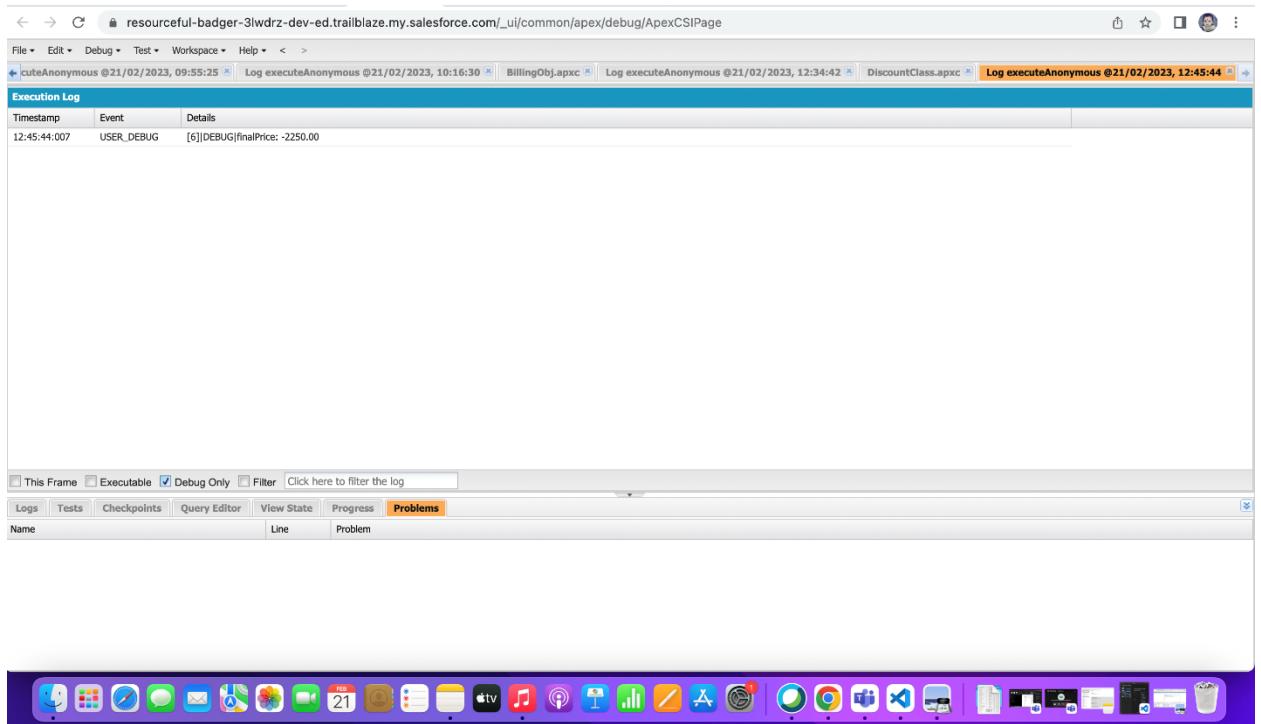
```

Open Log Execute Execute Highlighted

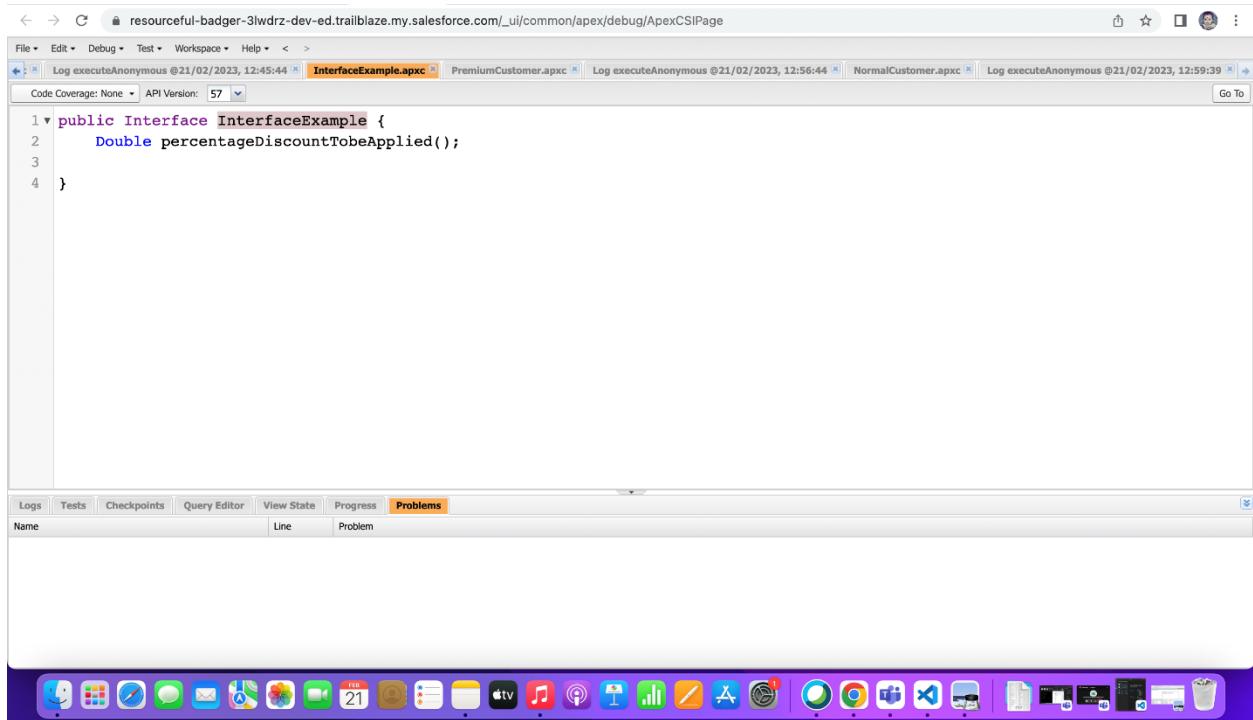
Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:49	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:47	Insert failed. First exception on row ...	Unread	14.39 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:44	Success	Unread	8.89 KB

Filter Click here to filter the log list



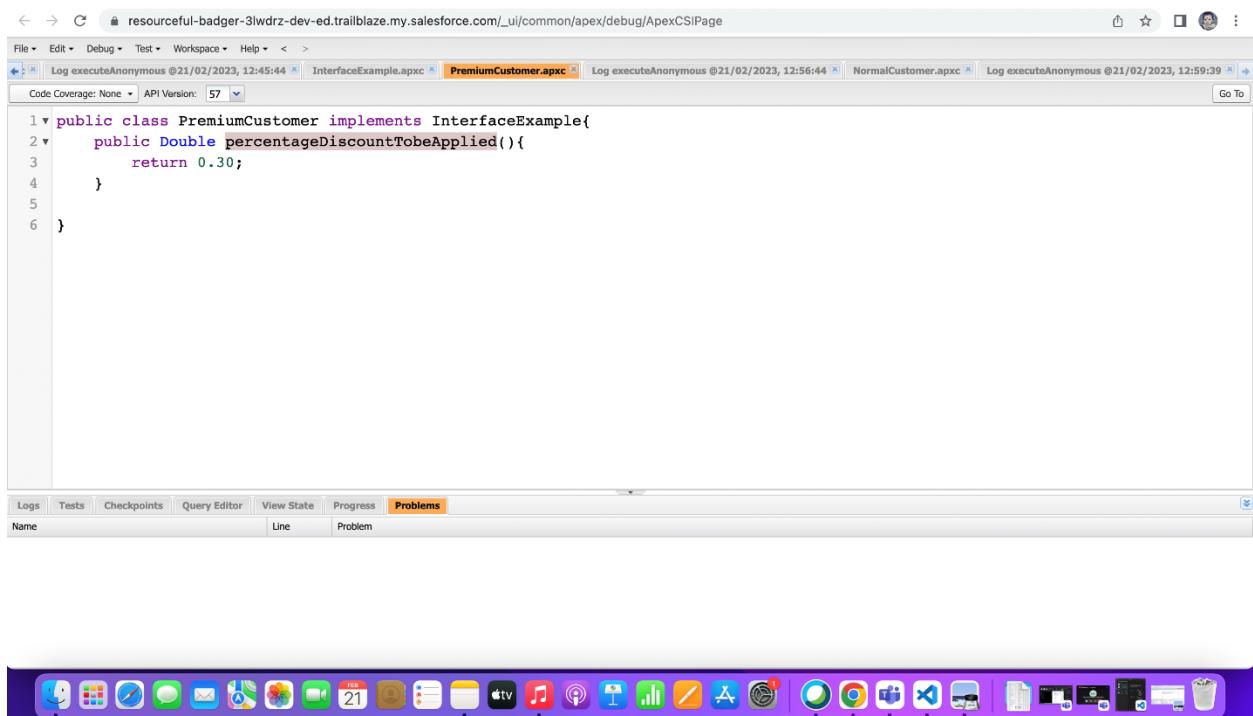
## Exercise 9



The screenshot shows the Salesforce Trailhead developer console interface. The URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The tab bar at the top has five tabs: Log executeAnonymous @21/02/2023, 12:45:44, InterfaceExample.apxc (highlighted in orange), PremiumCustomer.apxc, Log executeAnonymous @21/02/2023, 12:56:44, NormalCustomer.apxc, and Log executeAnonymous @21/02/2023, 12:59:39. Below the tabs, there's a dropdown for 'Code Coverage: None' and 'API Version: 57'. The main code editor area contains the following Apex code:

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

Below the code editor is a navigation bar with tabs: Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems (which is highlighted in orange). A toolbar below the navigation bar contains icons for various Salesforce features like Log, Test, Checkpoint, and Query Editor.



The screenshot shows the Salesforce Trailhead developer console interface. The URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The tab bar at the top has five tabs: Log executeAnonymous @21/02/2023, 12:45:44, InterfaceExample.apxc, PremiumCustomer.apxc (highlighted in orange), Log executeAnonymous @21/02/2023, 12:56:44, NormalCustomer.apxc, and Log executeAnonymous @21/02/2023, 12:59:39. Below the tabs, there's a dropdown for 'Code Coverage: None' and 'API Version: 57'. The main code editor area contains the following Apex code:

```
1 ▼ public class PremiumCustomer implements InterfaceExample{
2     public Double percentageDiscountToBeApplied(){
3         return 0.30;
4     }
5
6 }
```

Below the code editor is a navigation bar with tabs: Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems (which is highlighted in orange). A toolbar below the navigation bar contains icons for various Salesforce features like Log, Test, Checkpoint, and Query Editor.

← → ⌂ resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

↳ pxc Log executeAnonymous @21/02/2023, 12:34:42 DiscountClass.apxc Log executeAnonymous @21/02/2023, 12:45:44 InterfaceExample.apxc PremiumCustomer.apxc Log executeAnonymous @21/02/2023, 12:56:44

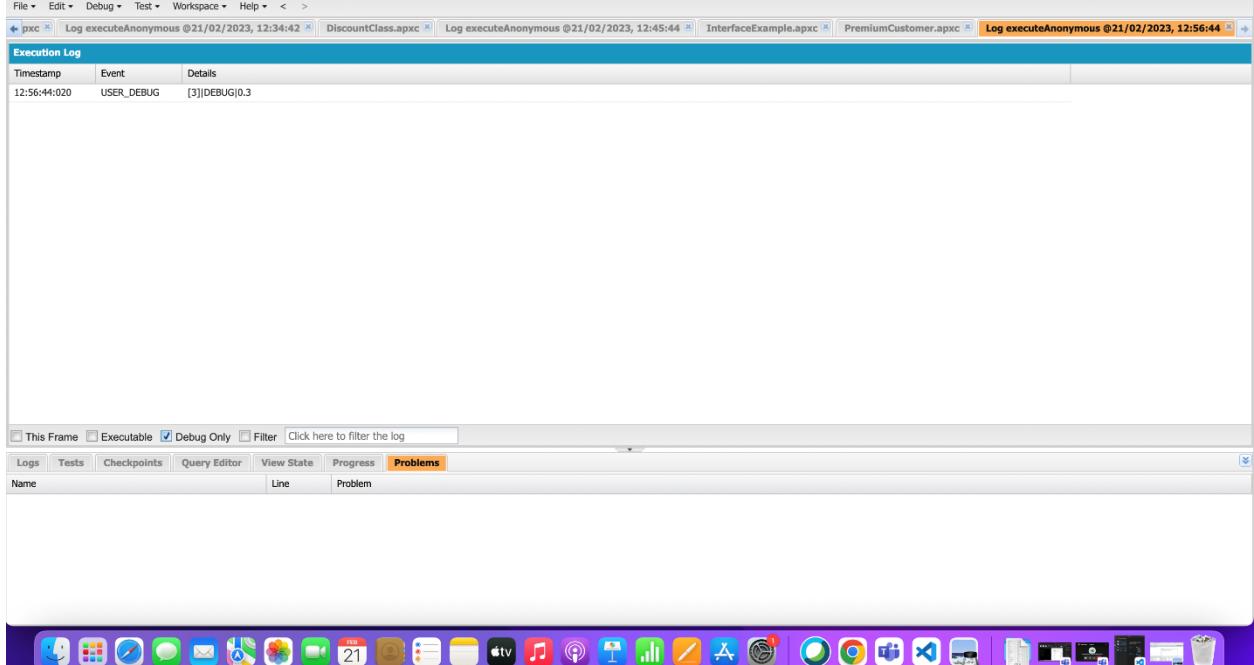
**Execution Log**

Timestamp	Event	Details
12:56:44:020	USER_DEBUG	[3]DEBUG[0.3]

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

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

Name Line Problem



A screenshot of a web browser window displaying the Salesforce Trailhead execution log. The URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The page shows a table of logs with one entry: "12:56:44:020 USER\_DEBUG [3]DEBUG[0.3]". Below the table are filtering options ("This Frame", "Executable", "Debug Only", "Filter") and tabs for "Logs", "Tests", "Checkpoints", "Query Editor", "View State", "Progress", and "Problems" (which is selected). The "Problems" tab has sub-tabs "Name", "Line", and "Problem". At the bottom of the page is a standard Mac OS X-style dock with various application icons.

← → ⌂ resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

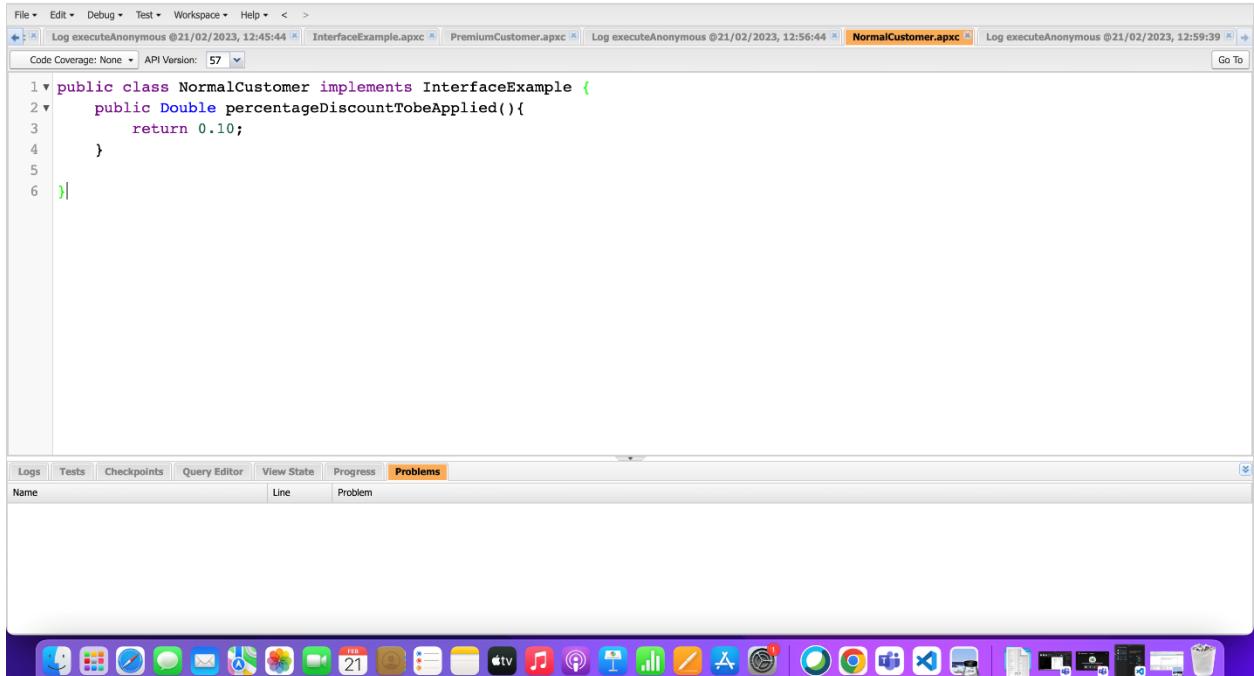
↳ pxc Log executeAnonymous @21/02/2023, 12:45:44 InterfaceExample.apxc PremiumCustomer.apxc Log executeAnonymous @21/02/2023, 12:56:44 **NormalCustomer.apxc** Log executeAnonymous @21/02/2023, 12:59:39

Code Coverage: None API Version: 57 Go To

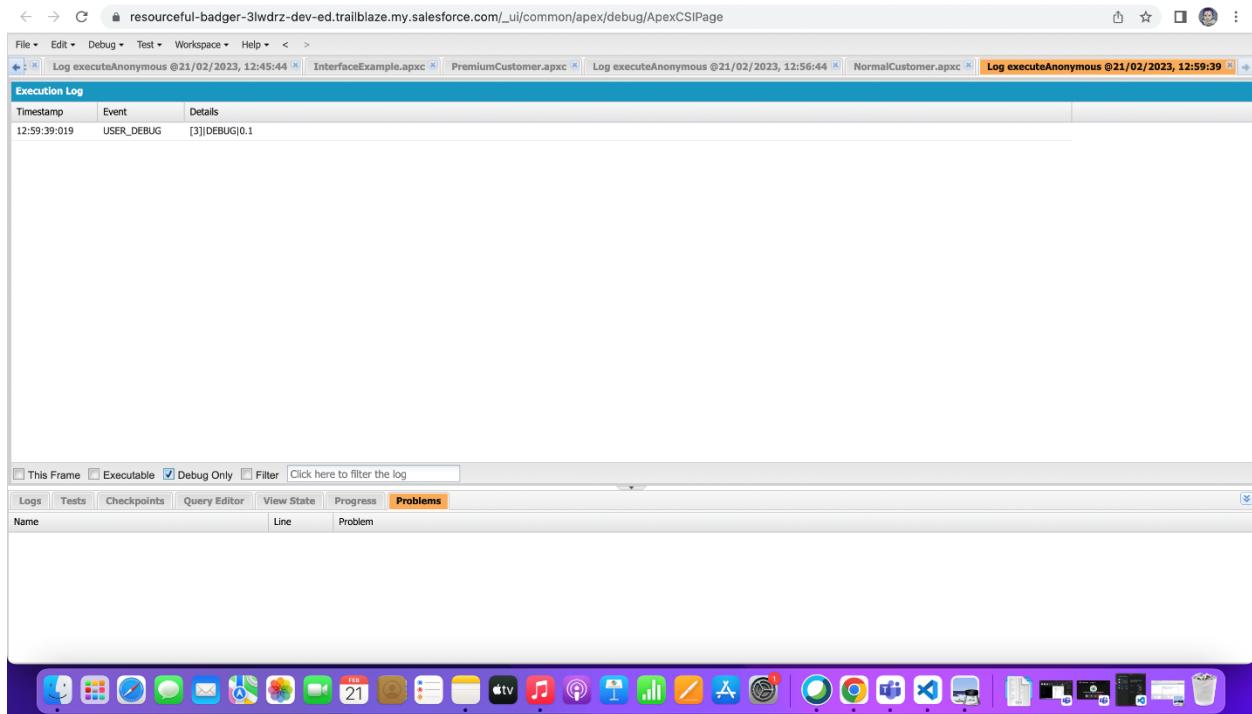
```
1 public class NormalCustomer implements InterfaceExample {
2     public Double percentageDiscountTobeApplied(){
3         return 0.10;
4     }
5 }
6 }
```

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

Name Line Problem

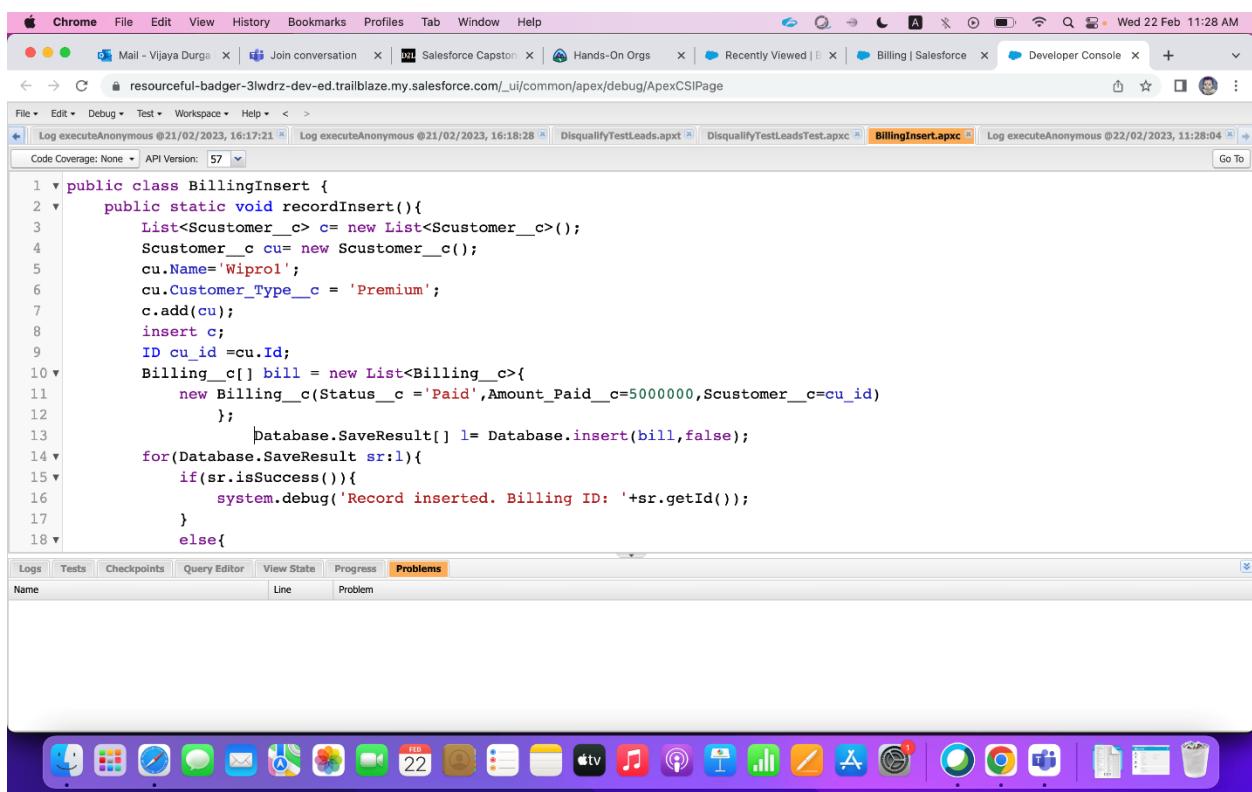


A screenshot of a web browser window displaying the Salesforce Trailhead code editor. The URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The page shows the code for the `NormalCustomer` class:public class NormalCustomer implements InterfaceExample {  
 public Double percentageDiscountTobeApplied(){  
 return 0.10;  
 }  
}  
The "Problems" tab is selected. At the bottom of the page is a standard Mac OS X-style dock with various application icons.



## Exercise 10

### Demo on DML Insert Operation Using Database Methods



resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

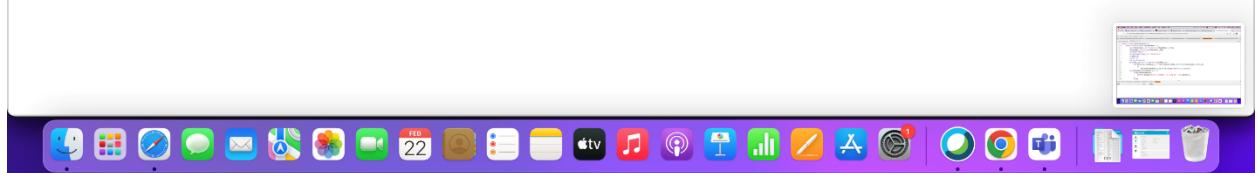
Log executeAnonymous @21/02/2023, 16:17:21 Log executeAnonymous @21/02/2023, 16:18:28 DisqualifyTestLeads.apxt DisqualifyTestLeadsTest.apxc BillingInsert.apxc Log executeAnonymous @22/02/2023, 11:28:04 Go To

Code Coverage: None API Version 57

```
9     ID cu_id =cu.Id;
10    Billing_c[] bill = new List<Billing_c>{
11        new Billing_c(Status_c ='Paid',Amount_Paid__c=5000000,sCustomer__c=cu_id)
12    };
13    Database.SaveResult[] l= Database.insert(bill,false);
14    for(Database.SaveResult sr:l){
15        if(sr.isSuccess()){
16            system.debug(' Record inserted. Billing ID: '+sr.getId());
17        }
18        else{
19            for(Database.Error e: sr.getErrors()){
20                system.debug(e.getStatusCode() + ': ' + e.getMessage());
21                system.debug('Billing fields which have error: '+e.getFields());
22            }
23        }
24    }
25 }
26 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

Name Line Problem



resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit View History Bookmarks Profiles Tab Window Help

Mail - Vijaya Durga Join conversation Salesforce Capstone Hands-On Orgs Recently Viewed Billing | Salesforce Developer Console

Log executeAnonymous @21/02/2023, 16:17:21 Log executeAnonymous @21/02/2023, 16:18:28 DisqualifyTestLeads.apxt DisqualifyTestLeadsTest.apxc BillingInsert.apxc Log executeAnonymous @22/02/2023, 11:28:04

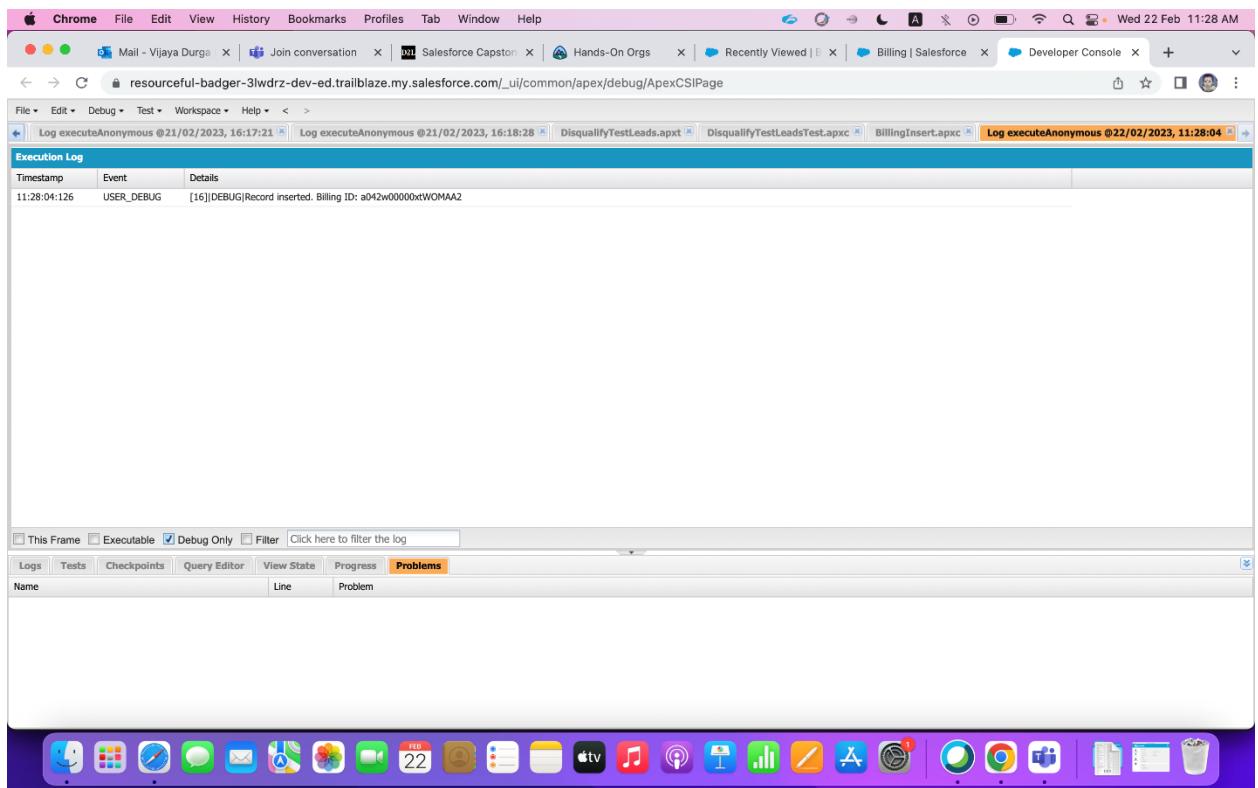
Execution Log

Timestamp	Event	Details
11:28:04:126	USER_DEBUG	[16][DEBUG]Record inserted. Billing ID: a042w00000xWOMAA2

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

Logs Tests Checkpoints Query Editor View State Progress Problems

Name Line Problem



## Exercise 11

### Displaying Records According to the According to the required conditions

The screenshot shows the Salesforce Apex CS Page interface. At the top, there are tabs for 'DisqualifyTestLeads.apxt' and 'DisqualifyTestLeadsTest.apxc'. The title bar displays 'Opportunity@7:14 PM'. Below the title bar, a query is displayed:

```
Select AccountId, Amount, Name, StageName, Account.Industry, Account.website From Opportunity Where Account.Industry = 'Energy' AND Account.AnnualRevenue >5000
```

The main area shows a 'Query Results - Total Rows: 10' table with the following data:

AccountId	Amount	Name	StageName	Account.Industry	Account.website
0012w00001Kvfk8AAJ	125000	United Oil Portable Generators	Negotiation/Review	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	270000	United Oil Refinery Generators	Proposal/Price Quote	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	120000	United Oil SLA	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	270000	United Oil Installations	Negotiation/Review	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	270000	United Oil Installations	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	915000	United Oil Refinery Generators	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	235000	United Oil Installations	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	440000	United Oil Emergency Generators	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	120000	United Oil Standby Generators	Closed Won	Energy	http://www.uos.com
0012w00001Kvfk8AAJ	675000	United Oil Plant Standby Generators	Needs Analysis	Energy	http://www.uos.com

Below the table, there are buttons for 'Query Grid', 'Save Rows', 'Insert Row', 'Delete Row', and 'Refresh Grid'. The status bar at the bottom shows 'Access in Salesforce: Create New | Open Detail Page | Edit Page'.

## Exercise 12

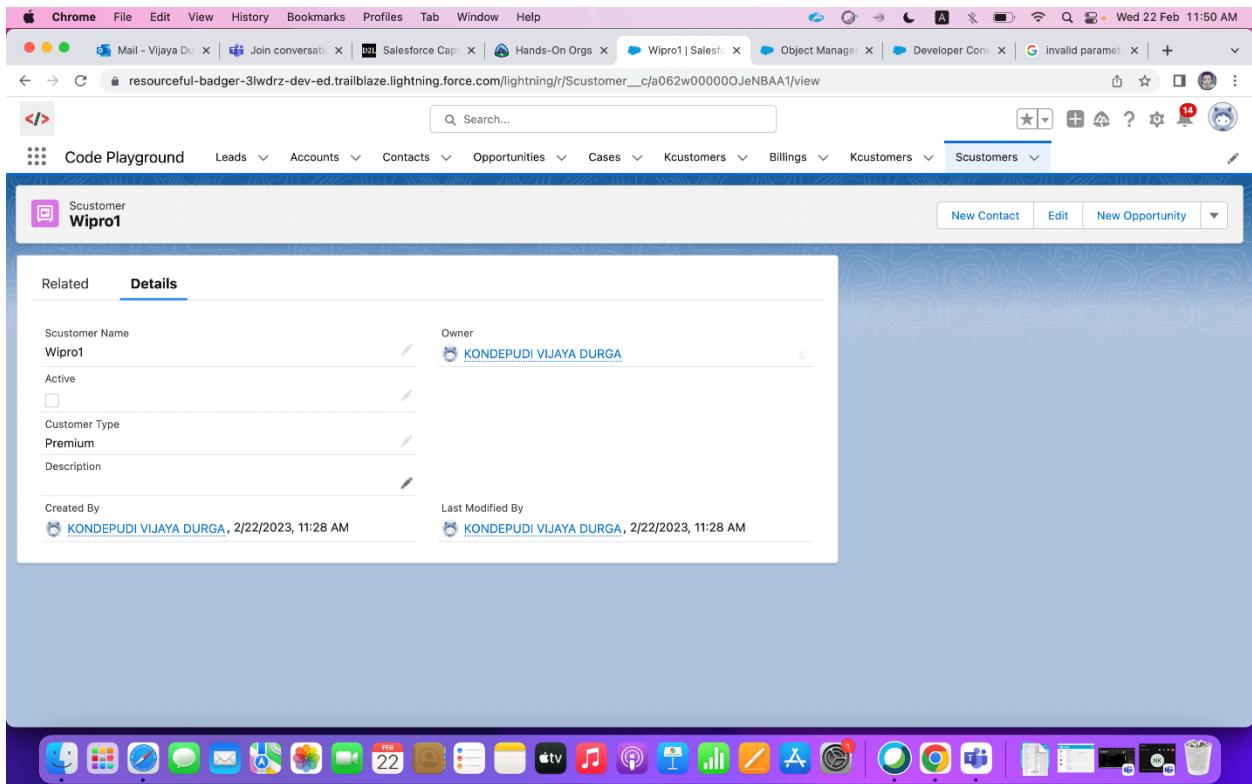
### Created a Trigger for Billing Named Customer Trigger

The screenshot shows the Salesforce Developer Console interface. The title bar displays 'CustomerTrigger.apxt'. The main area shows the Apex code for the 'CustomerTrigger' trigger:

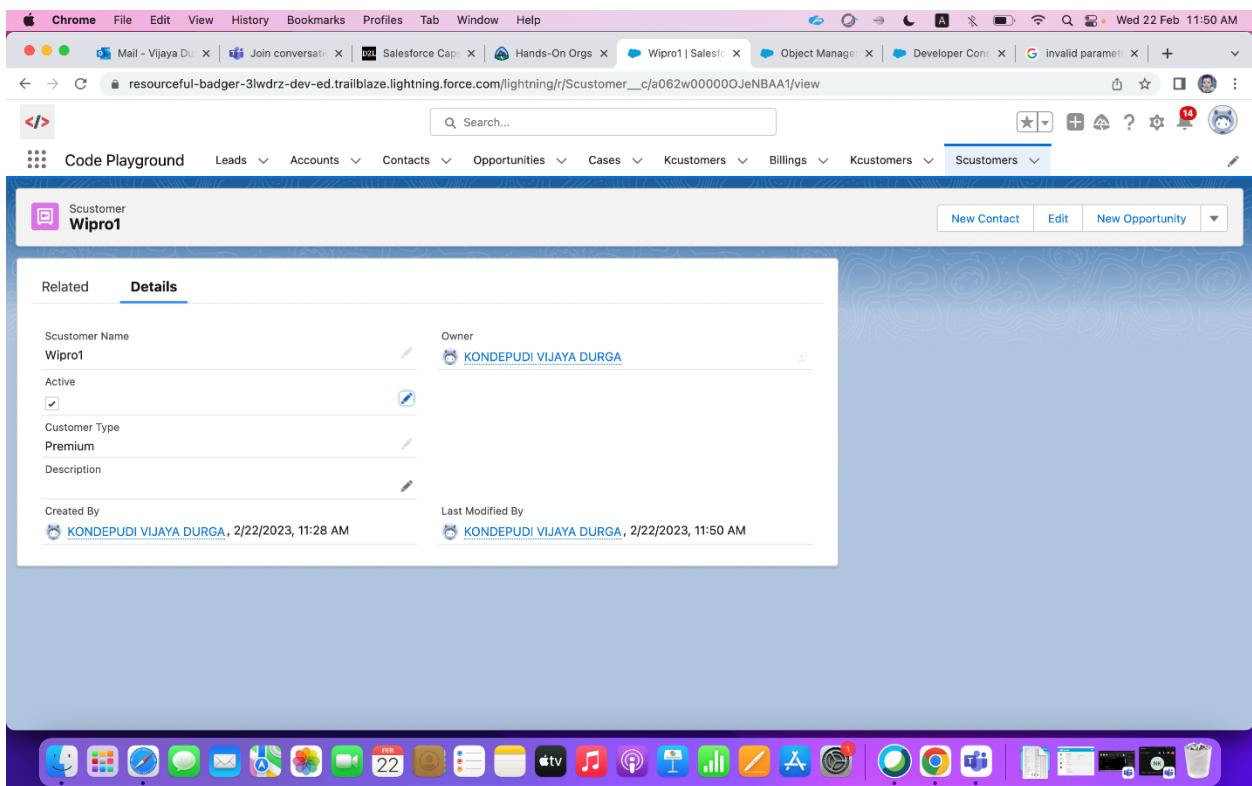
```
trigger CustomerTrigger on Scustomer__c (after update) {
    if(Trigger.isUpdate){
        List<Scustomer__c> c=Trigger.new;
        for(Scustomer__c sc:c){
            if(sc.Active__c == True){
                Billing__c b=new Billing__c();
                b.Status__c='Paid';
                b.Amount_Paid__c=1000000 ;
                b.Scusomer__c='a062w000000JeNBAAl';
                insert b;
            }
        }
    }
}
```

Below the code, there are tabs for 'Logs', 'Progress', and 'Problems'. The 'Problems' tab is selected, showing a table with columns 'Name', 'Line', and 'Problem'. The status bar at the bottom shows the date and time: 'Wed 22 Feb 11:50 AM'.

## Updated Salesforce Customer from in-active to active



The screenshot shows a Salesforce Lightning record page for a customer named "Wipro1". The "Active" checkbox is currently unchecked, meaning the customer is inactive. Other fields visible include "Customer Type: Premium" and "Description". The page is titled "Scustomer Wipro1" and includes tabs for "Related" and "Details". The "Owner" is listed as "KONDEPUDI VIJAYA DURGA". The "Created By" and "Last Modified By" fields both show "KONDEPUDI VIJAYA DURGA" on 2/22/2023, 11:28 AM.



The screenshot shows the same Salesforce Lightning record page for the customer "Wipro1". This time, the "Active" checkbox is checked, indicating the customer is now active. All other fields remain the same as in the previous screenshot. The "Owner" is still "KONDEPUDI VIJAYA DURGA", and the "Created By" and "Last Modified By" fields are still "KONDEPUDI VIJAYA DURGA" on 2/22/2023, 11:28 AM.

## New Record Created in Billing Object with Salesforce as Customer

The screenshot shows a Chrome browser window with multiple tabs open, including 'Salesforce Cap' and 'B - 0026 | Sales'. The main content area displays a Salesforce Lightning record detail page for a 'Billing' object. The record ID is 'B - 0026'. The 'Details' tab is selected, showing the following fields:

- Bill Number: B - 0026
- Amount Paid: ₹10,00,000
- Customer Type: Scustomer
- Status: Paid
- Created By: KONDEPUDI VIJAYA DURGA, 2/22/2023, 11:50 AM
- Last Modified By: KONDEPUDI VIJAYA DURGA, 2/22/2023, 11:50 AM

The browser's top bar shows the date as 'Wed 22 Feb 11:51 AM'. The bottom of the screen shows the Mac OS X Dock with various application icons.

### Exercise 13

Created a Test class for CustomTrigger

```

1  @IsTest
2  public class CustomerTriggerTest {
3    @IsTest static void custTest(){
4      List<Scustomer__c> c=new List<Scustomer__c>();
5      Scustomer__c cu= new Scustomer__c();
6      cu.Name='Wipro1';
7      cu.Customer_Type__c = 'Premium';
8      if(cu.Active__c == True){
9        Test.startTest();
10     Billing__c b = new Billing__c();
11     b.Status__c='Paid';
12     b.Amount_Paid__c=1000000 ;
13     Test.stopTest();
14   }
15 }
16

```

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	/services/data/v57.0/tooling/runTest...	22/02/2023, 12:27:22	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	2.83 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Insert failed. First exception on row ...	Unread	14.28 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	22/02/2023, 12:01:48	Success	Unread	996 bytes

## Exercise14

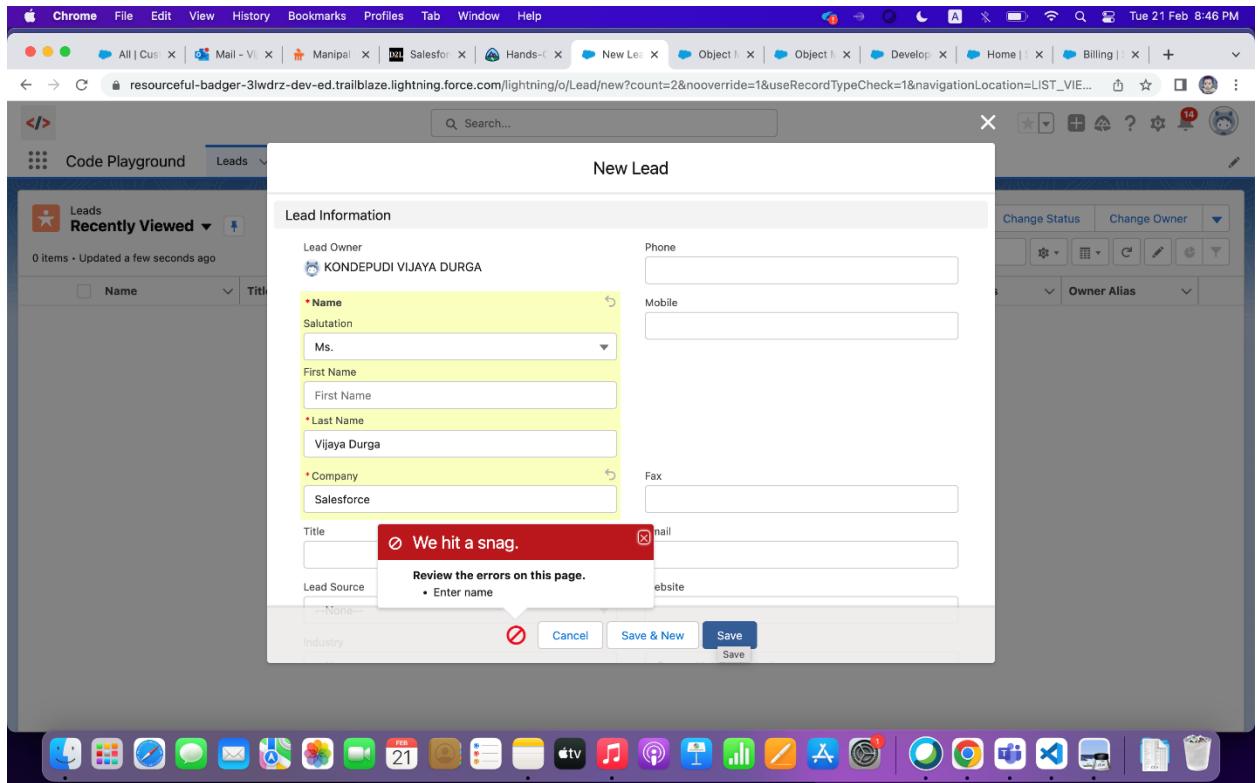
### Created a Trigger for Leads Named DisqualifyTestLeads

```

1 trigger DisqualifyTestLeads on Lead (after insert) {
2   List<Lead> l=new List<Lead>();
3   for(Lead mylead: Trigger.new){
4     if(mylead.FirstName=='test' && mylead.FirstName.length()!=0 || mylead.LastName=='test' && mylead.LastName.length()!=0){
5       System.debug(mylead.FirstName +' '+mylead.LastName+' '+Will be Disqualified');
6       l.add(mylead);
7     if(mylead.FirstName==null){
8       mylead.addError('Enter name');
9     }
10   }
11   for(Lead mylead2:l){
12     mylead2.Status ='Disqualified';
13   }
14 }
15

```

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Insert failed. First exception on row 0; ...	Unread	20.16 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Success	Unread	8.88 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Success	Unread	1009 bytes



## Exercise 15

Created a test class for DisqualifyTestLeads trigger

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < ▾

DisqualifyTestLeads.aptx | DisqualifyTestLeadsTest.apxc | Opportunity@7:14 PM | Go To

Code Coverage: None ▾ API Version: 57 ▾

```

1 trigger DisqualifyTestLeads on Lead (after insert) {
2     List<Lead> l= new List<Lead>();
3     for (Lead mylead: Trigger.new){
4         if(mylead.FirstName== 'test' && mylead.FirstName.length()!=0 || mylead.LastName == 'test' && mylead.LastName.length()!=0){
5             System.debug(mylead.FirstName +' '+mylead.LastName+' '+'Will be Disqualified');
6             l.add(mylead);
7         }
8         if(mylead.FirstName ==null){
9             mylead.addError('Enter name');
10        }
11    }
12    for(lead mylead2:l{
13        mylead2.Status ='Disqualified';
14    }
15 }

```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Insert failed. First exception on row 0; ...	Unread	20.16 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Success	Unread	8.88 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	2/25/2023, 7:35:39 PM	Success	Unread	1009 bytes

Filter Click here to filter the log list

← → C | resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < ▾

02/2023, 16:16:22 | Log executeAnonymous @21/02/2023, 16:17:21 | Log executeAnonymous @21/02/2023, 16:18:28 | DisqualifyTestLeads.apxt \* | DisqualifyTestLeadsTest.apxc | Log executeAnonymous @21/02/2023, 23:05:05 | Run Test | Go To

Code Coverage: None ▾ API Version: 57 ▾

```

1 @isTest
2 public class DisqualifyTestLeadsTest {
3     @isTest
4     private static void insertData(){
5         List<Lead> leadList = new List<Lead>();
6         Lead l = new Lead();
7         l.FirstName ='Test';
8         l.LastName ='Test';
9         l.Company ='Test';
10        leadList.add(l);
11        Test.startTest();
12        insert leadList;
13        Test.stopTest();
14        Lead updateLead =[Select FirstName,LastName,Company From Lead order by CreatedDate];
15        system.Assert(updateLead.LastName!= Null, 'Record cannot be created');
16        Database.SaveResult res = Database.insert(l,false);
17        System.assertEquals('Will be Disqualified', res.getErrors()[0].getMessage());
18    }

```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Insert failed. First exception on row ...		14.4 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Success	Unread	997 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 21:02:43	Success	Unread	997 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 21:02:03	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Browser	/aura	21/02/2023, 20:46:19	Success	Unread	3.61 KB
KONDEPUDI VIJAYA DURGA	Browser	/aura	21/02/2023, 20:45:33	Success	Unread	4.27 KB

Filter Click here to filter the log list



The screenshot shows the Salesforce Debug Console interface. At the top, there are tabs for 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. Below the tabs, the URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. There are several tabs open in the browser, including 'Log executeAnonymous @21/02/2023, 16:17:21', 'Log executeAnonymous @21/02/2023, 16:18:28', 'DisqualificationTestLeads.apxt\*', 'DisqualificationTestLeadsTest.apxt', and 'Log executeAnonymous @21/02/2023, 23:05:05' (the active tab).

**Execution Log**

Timestamp	Event	Details
23:05:127	USER_DEBUG	[5]DEBUG Test Test Will be Disqualified
23:05:233	USER_DEBUG	[5]DEBUG Test Test Will be Disqualified

**Logs**

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Insert failed. First exception on row ...	Unread	14.4 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Success	Unread	997 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 21:02:43	Success	Unread	997 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 21:02:03	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Browser	/aura	21/02/2023, 20:46:19	Success	Unread	3.61 KB
KONDEPUDI VIJAYA DURGA	Browser	/aura	21/02/2023, 20:45:33	Success	Unread	4.27 KB

## Exercise 16

Created a Visualforce Page OppView and displayed four apex: outputfields

The screenshot shows the Salesforce Debug Console interface. At the top, there are tabs for 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. Below the tabs, the URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. There are several tabs open in the browser, including 'OppView.vfp' (the active tab), 'Log executeAnonymous @21/02/2023, 23:14:56', 'Log executeAnonymous @21/02/2023, 23:14:46', 'Log executeAnonymous @21/02/2023, 23:14:46', 'Log executeAnonymous @21/02/2023, 23:14:02', 'Log executeAnonymous @21/02/2023, 23:05:05', and 'Log executeAnonymous @21/02/2023, 23:05:05'.

**OppView.vfp**

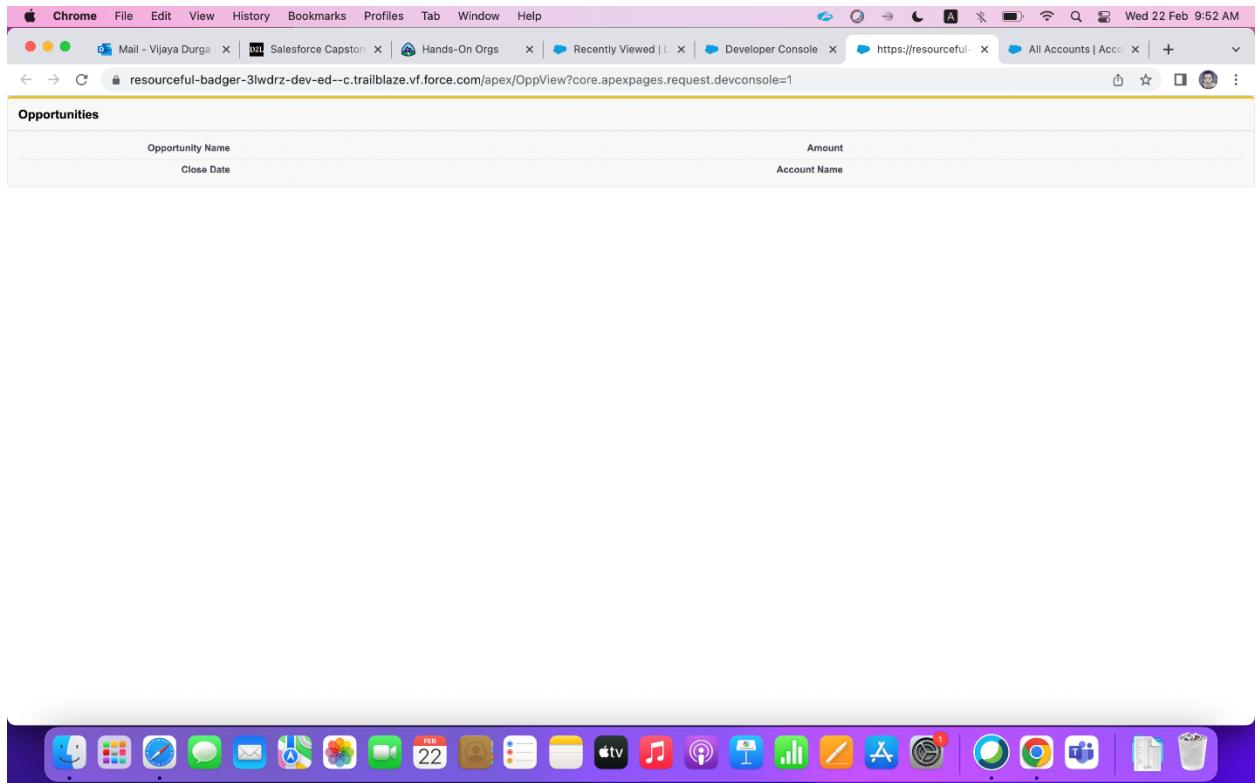
```

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>

```

**Logs**

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Browser	/apex/OppView	21/02/2023, 23:14:56	Success	Unread	1.18 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:14:46	Insert failed. First exception on row ...	Unread	14.38 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:14:46	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Browser	/apex/OppView	21/02/2023, 23:14:02	Success	Unread	1.19 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Success	Unread	997 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	21/02/2023, 23:05:05	Insert failed. First exception on row ...	Unread	14.4 KB



## Exercise 17

Created a Visualforce Page that shows a list of Accounts linked to their record pages

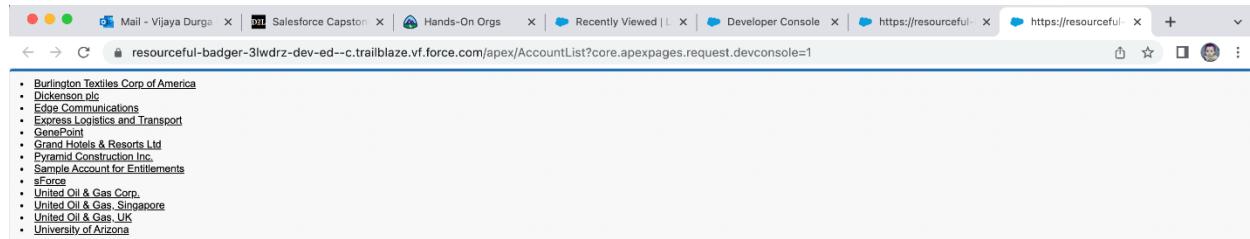
The screenshot shows the Salesforce IDE interface. At the top, the URL is `resourceful-badger-3lwdrz-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the URL is a menu bar with File, Edit, Debug, Test, Workspace, Help, and a preview button. The main area displays the Visualforce page code:

```
<apex:page standardController="Account" recordSetVar="Accounts">
    <apex:pageBlock>
        <apex:repeat var="a" value={!Accounts} rendered="true" id="account_list">
            <li>
                <apex:outputLink value="/{!a.ID}">
                    <apex:outputText value="{!!a.Name}" />
                </apex:outputLink>
            </li>
        </apex:repeat>
    </apex:pageBlock>
</apex:page>
```

Below the code is a table titled "Logs" showing log entries:

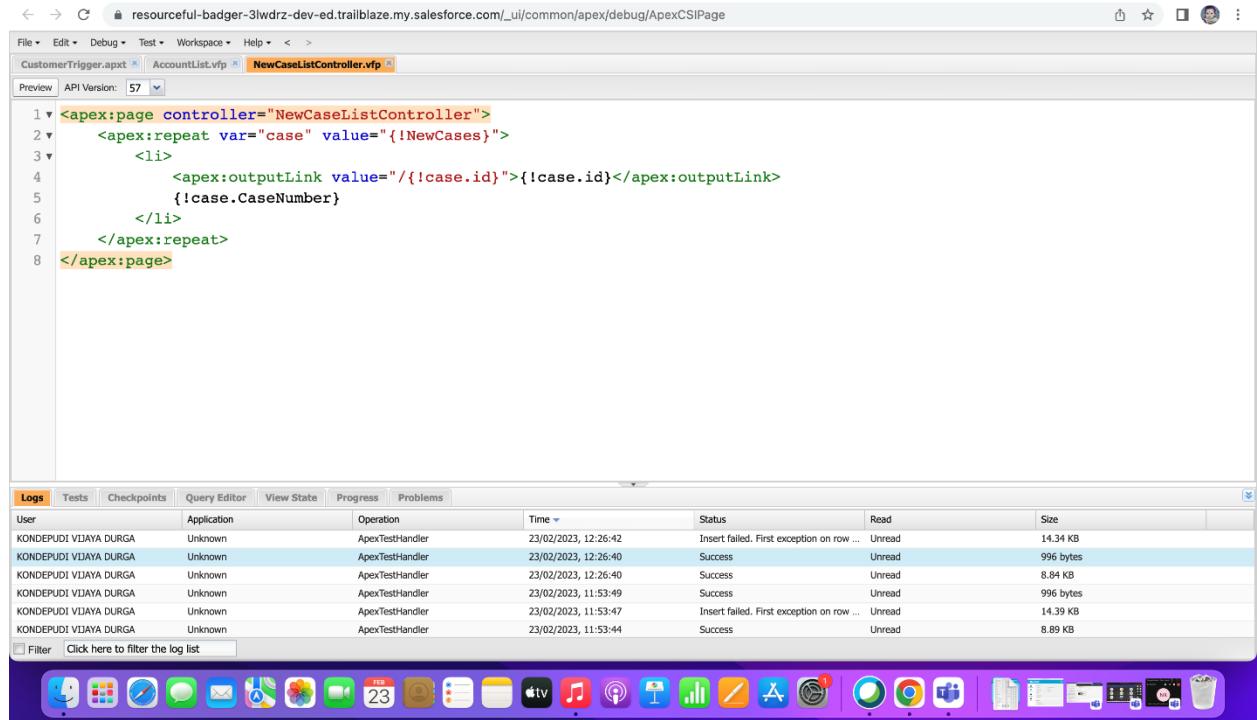
User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:42	Insert failed. First exception on row ...	Unread	14.34 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:40	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:40	Success	Unread	8.84 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:49	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:47	Insert failed. First exception on row ...	Unread	14.39 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:44	Success	Unread	8.89 KB

At the bottom of the IDE is a toolbar with various icons.



Exercise 18

Created a VF page that uses an Apex class to display a list of cases with the status of 'New'



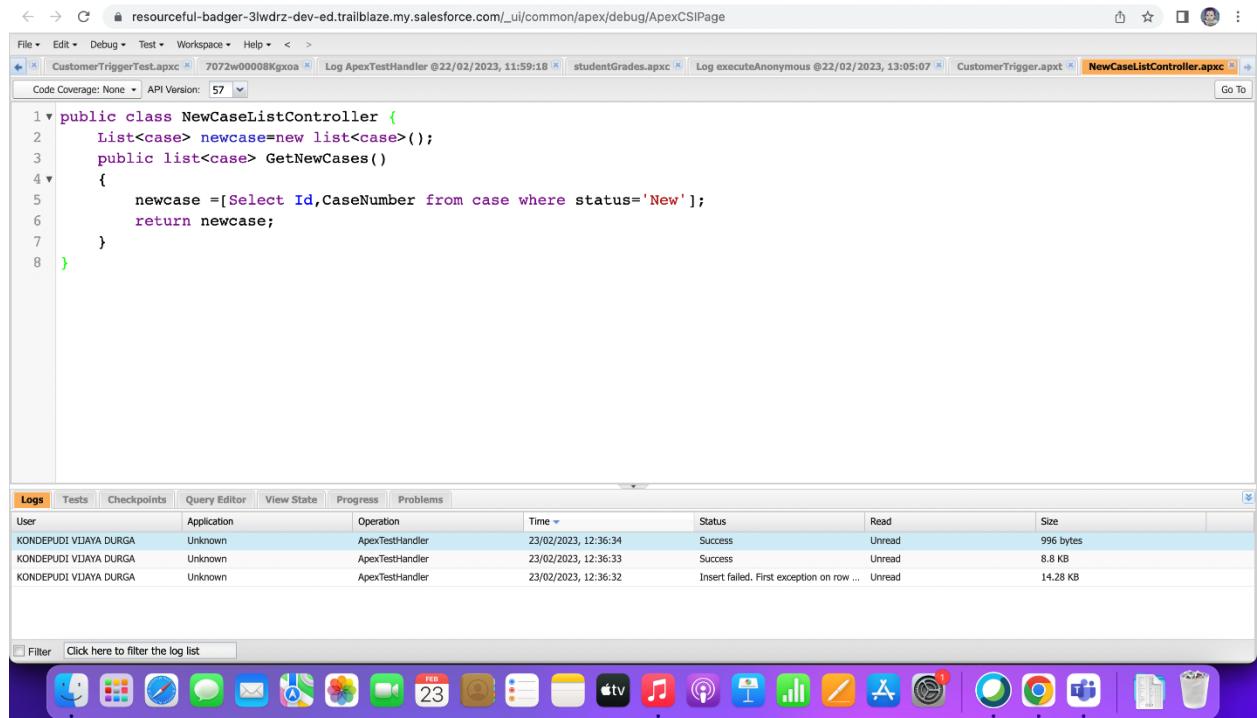
```

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

```

The screenshot shows the Salesforce Trailhead IDE interface. At the top, there are tabs for 'CustomerTrigger.apxc', 'AccountList.vfp', and 'NewCaseListController.vfp'. Below the tabs, the 'Preview' tab is selected, showing the VF page code. The code displays a list of cases with their IDs and Case Numbers. At the bottom of the preview area, there is a 'Logs' tab which contains a table of log entries. The table has columns for User, Application, Operation, Time, Status, Read, and Size. There are six log entries from the user 'KONDEPUDI VIJAYA DURGA'.

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:42	Insert failed. First exception on row ...	Unread	14.34 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:40	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:26:40	Success	Unread	8.84 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:49	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:47	Insert failed. First exception on row ...	Unread	14.39 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 11:53:44	Success	Unread	8.89 KB



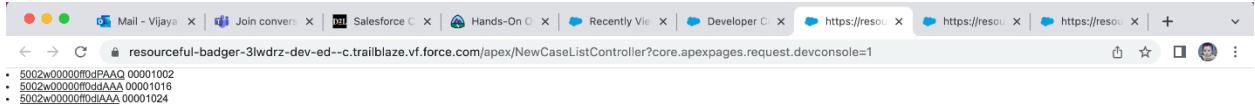
```

public class NewCaseListController {
    List<case> newcase=new list<case>();
    public list<case> GetNewCases()
    {
        newcase =[Select Id,CaseNumber from case where status='New'];
        return newcase;
    }
}

```

The screenshot shows the Salesforce Trailhead IDE interface. At the top, there are tabs for 'CustomerTriggerTest.apxc', '7072w000008Kgxoa', 'Log ApexTestHandler @22/02/2023, 11:59:18', 'studentGrades.apxc', 'Log executeAnonymous @22/02/2023, 13:05:07', 'CustomerTrigger.apxc', and 'NewCaseListController.apxc'. Below the tabs, the 'Code Coverage: None' and 'API Version: 57' are visible. The main area shows the Apex class code for 'NewCaseListController'. At the bottom of the code editor, there is a 'Logs' tab which contains a table of log entries. The table has columns for User, Application, Operation, Time, Status, Read, and Size. There are three log entries from the user 'KONDEPUDI VIJAYA DURGA'.

User	Application	Operation	Time	Status	Read	Size
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:36:34	Success	Unread	996 bytes
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:36:33	Success	Unread	8.8 KB
KONDEPUDI VIJAYA DURGA	Unknown	ApexTestHandler	23/02/2023, 12:36:32	Insert failed. First exception on row ...	Unread	14.28 KB



## 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](#)