



Capstone Project Report On **“Salesforce application”**

Submitted by:

Name: Bahatam Amulya

Batch WIP-SF-13

LMS Id: MGSA_512

Date: 27/02/2023

GitHub: <https://github.com/BahatamAmulya/TravelApp.git>

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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

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.

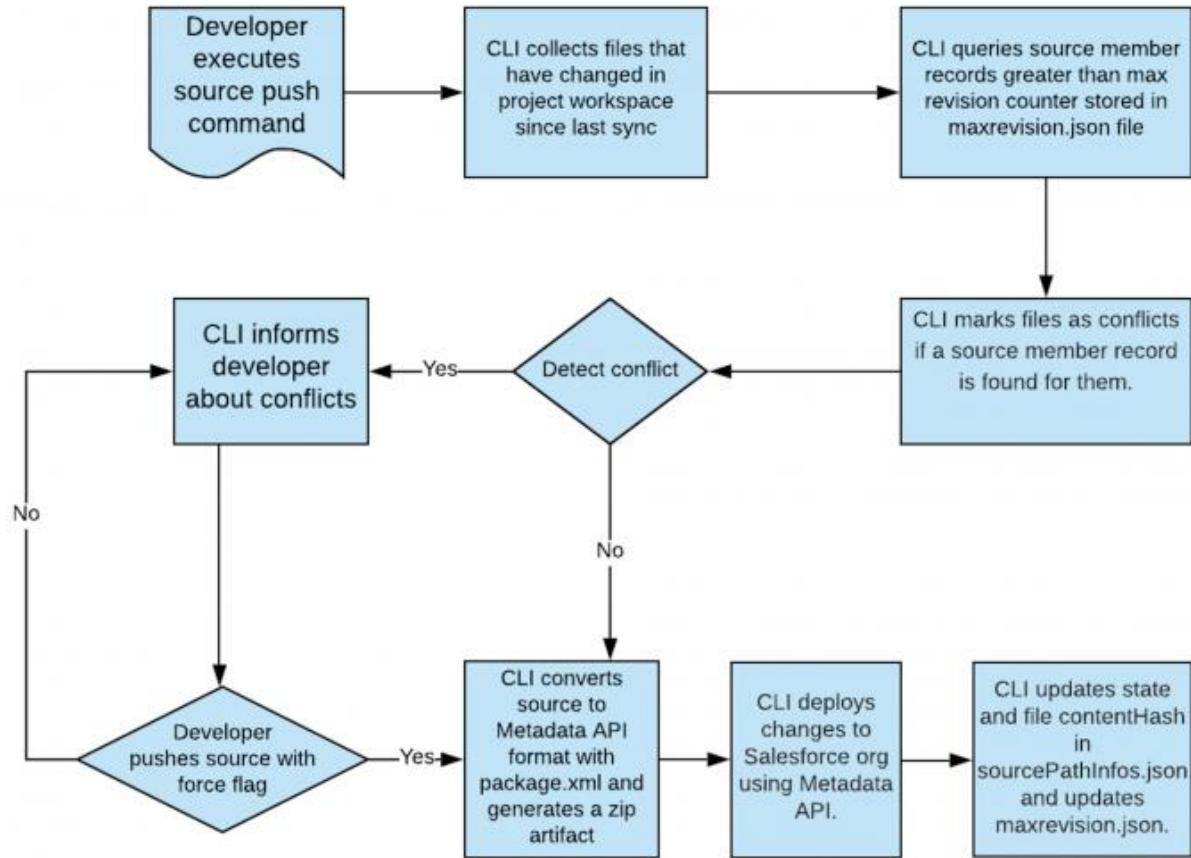
Salesforce is currently providing various software solutions and platforms for developers to create and distribute custom software/applications. Tech giants like Google, Twitter, Amazon, and Facebook are using Salesforce either in the form of SaaS or PaaS.



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



Screenshots

Capstone Module 1
On
“Salesforce application”

EXERCISE 1



BUILD

Build a Lightning app, add tabs, and customize page layouts



CREATE

Create custom objects, fields and define relationship between Objects.



CONTROL

Import Data.



TEST

Test the app.

Exercise 1 :

Step 1:

Created Custom Lightning app – “ Travel App ”

The screenshot shows the Salesforce Chatter Home page within a custom lightning application. The top navigation bar includes links for Travel Approval, Chatter Home, Reports, Dashboards, Departments, Travel Approvals, and Customers. The left sidebar for the "Travel App" shows sections for What I Follow, To Me, Bookmarked, Company Highlights (which is selected), and My Drafts. It also displays STREAMS and RECENT GROUPS.

The main content area features a post from user TA-0001 - Bahatam Amulya, dated February 21, 2023 at 2:24 PM. The post asks, "@Eric Executive Which department should I associate this travel request with?". Below the post are "Like" and "Comment" buttons, and a comment from Eric Executive stating, "Technology is the correct department." A "Write a comment..." input field is also present.

To the right, there is an "Einstein Recommendations" sidebar listing three users: Eric Executive (Your manager), Integration User (Joined in the last week), and Security User (Joined in the last week). Each entry has "+ Follow" and "Skip" buttons.

Step 2 :**Created a “ Department ” Custom Object**

The screenshot shows the Salesforce Setup interface, specifically the Object Manager section for the 'Department' custom object. The top navigation bar includes tabs for 'Setup', 'Home', and 'Object Manager'. The main title is 'SETUP > OBJECT MANAGER' followed by 'Department'. On the left, a sidebar lists various configuration categories: 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, and Flow Triggers. The right panel displays the 'Details' tab for the 'Department' object. It contains the following fields and their values:

Field	Value
Description	
API Name	Department__c
Custom	✓
Singular Label	Department
Plural Label	Departments
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

At the bottom right of the details panel are 'Edit' and 'Delete' buttons.

Step 3 :

Created Custom Fields :

Department Code , Location , Department Type , Field Dependency

The screenshot shows the Salesforce Object Manager interface for the 'Department' object. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, Buttons, etc. The main area is titled 'Fields & Relationships' and displays seven items. The table columns are: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data is as follows:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
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)		✓

The screenshot shows the 'Edit Field Dependency' page for the 'Department' object. The left sidebar is identical to the previous screenshot. The main area has a title 'Edit Field Dependency'. It shows two picklist columns: 'Controlling Field' (Location) and 'Dependent Field' (Department Type). Below this is an 'Instructions' section with a legend: 'Excluded Value' (grey cell) and 'Included Value' (yellow cell). There are two tables for selecting values:

- Location:** Shows 'Kolkata' as an included value. A tooltip says: 'Click button to include or exclude selected values from the dependent picklist.' Buttons: 'Include Values' (grey), 'Exclude Values' (yellow).
- Department Type:** Shows 'Banking', 'Finance', 'Education', 'Energy', and 'IT' as included values. A tooltip says: 'Click button to include or exclude selected values from the dependent picklist.' Buttons: 'Include Values' (grey), 'Exclude Values' (yellow).

Step 4 :

Created “ Travel Approval ” Custom Object and
Custom Fields : **Purpose of Trip , Status , Trip Start Date , Trip End Date ,
Out of State , Destination State , Department**

The screenshot shows the Salesforce Setup interface, specifically the Object Manager. A custom object named "Travel Approval" is selected. The left sidebar lists various configuration tabs: Details & 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, and Flow Triggers. The main content area displays the "Details" tab for the "Travel Approval" object. It includes fields for Description, API Name (set to "Travel_Approval__c"), Singular Label ("Travel Approval"), Plural Label ("Travel Approvals"), and several checkboxes for reporting and tracking features like "Enable Reports" and "Track Activities". At the bottom right of the main area are "Edit" and "Delete" buttons.

CAPSTONE MODULE 1

The screenshot shows the Salesforce Object Manager interface for the 'Travel Approval' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, and Page Headers. The main area is titled 'Fields & Relationships' and displays 13 items, sorted by Field Label. Each item shows the field name, its type, and its description. For example, 'Department' is a Lookup(Department) field, and 'Total Expenses' is a Roll-Up Summary (SUM Expense Item) field.

Field Name	Type	Description
Department	Lookup(Department)	
Destination State	Text(2)	
Last Modified By	Lookup(User)	
Out-of-State	Checkbox	
Owner	Lookup(User,Group)	
Purpose of Trip	Text Area(255)	
Status	Picklist	
Status Indicator	Formula (Text)	
Total Expenses	Roll-Up Summary (SUM Expense Item)	
Travel Approval #	Name	Auto Number
Trip End Date	Date	
Trip Start Date	Date	

The screenshot shows the Travel App's Lightning Record Page for a travel approval record with ID TA-00001. The top navigation bar includes Chatter, Reports, Dashboards, Departments, Travel Approvals, and Customers. The main content area displays the travel approval details, including the travel approval number, status (Rejected), total expenses (₹1,320.00), and a trip info section with start and end dates. On the right side, there is an Activity timeline showing no upcoming or overdue activities, and a Chatter feed.

Travel Approval TA-00001

Related Details

Travel Approval # TA-00001

Status Rejected

Total Expenses ₹1,320.00

Status Indicator

Trip Info

Purpose of Trip Attend Dreamforce

Trip Start Date 2/24/2023

Trip End Date 2/28/2023

Created By Bahatam Amulya, 2/21/2023, 11:52 AM

Out-of-State

Destination State CA

Last Modified By Bahatam Amulya, 2/21/2023, 4:00 PM

Activity Chatter

No activities to show. Get started by sending an email, scheduling a task, and more.

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

Step 5 :**Imported “Department.csv” File**

The screenshot shows a Salesforce Lightning interface for a "Travel App" organization. The top navigation bar includes links for Travel Approval, All Departments, Chatter, Reports, Dashboards, Departments (which is the active tab), Travel Approvals, and Customers. A search bar and various icons are also present.

The main content area displays a list of 16 departments, each with a checkbox and a downward arrow icon. The list is sorted by Department Name (A-Z) and filtered by All departments. The departments listed are:

- 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

At the bottom of the list, there is a large empty space.

EXERCISE 2



Create

Travel Approvals,
Travel
Expenses & Users.



Customise

List views, Page
Layouts,
Related Lists.



Setup

Approval
settings for
User.



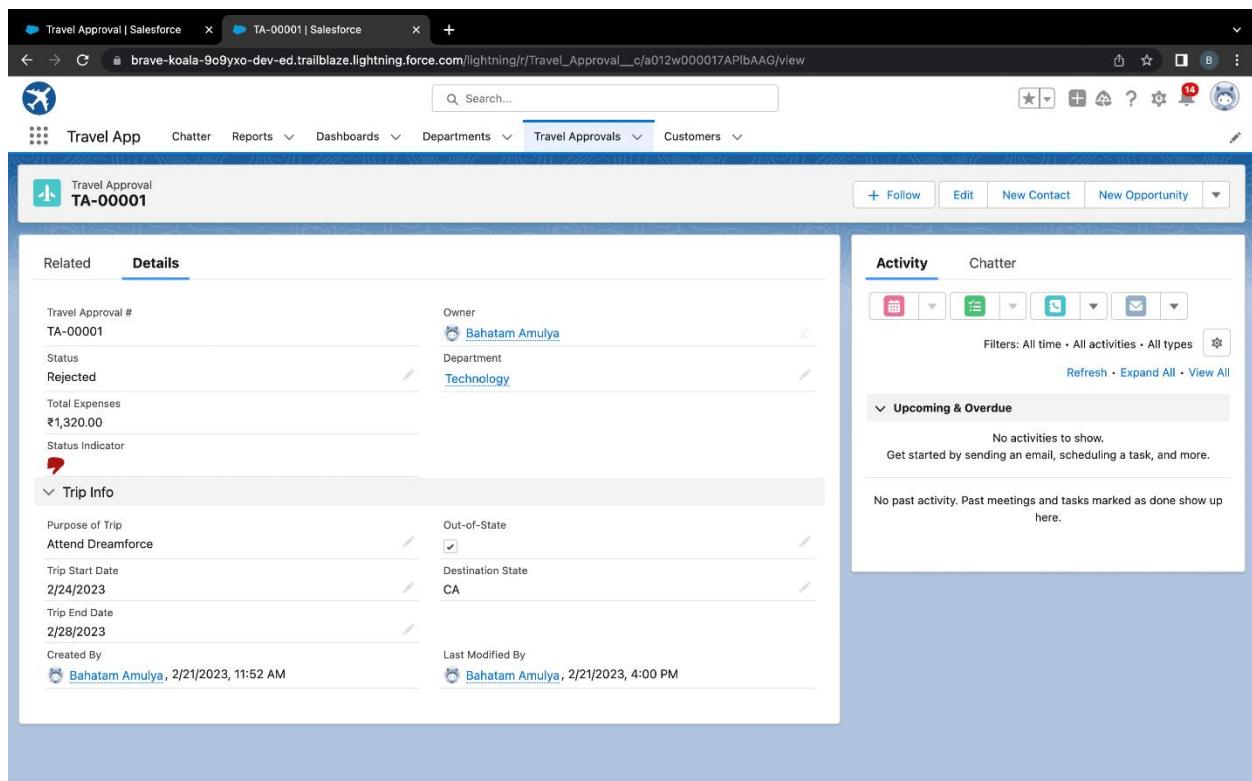
Enable

Chatter on the
Travel
Approval
Object.

Exercise 2 :

Step 1:

Created “ Travel Approval Record ” .



The screenshot shows a Salesforce Lightning interface for a Travel Approval record. The URL in the browser is brave-koala-9c9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval__c/a012w000017APlbAAG/view. The page title is "Travel Approval | Salesforce". The top navigation bar includes links for Travel App, Chatter, Reports, Dashboards, Departments, Travel Approvals (which is the active tab), and Customers.

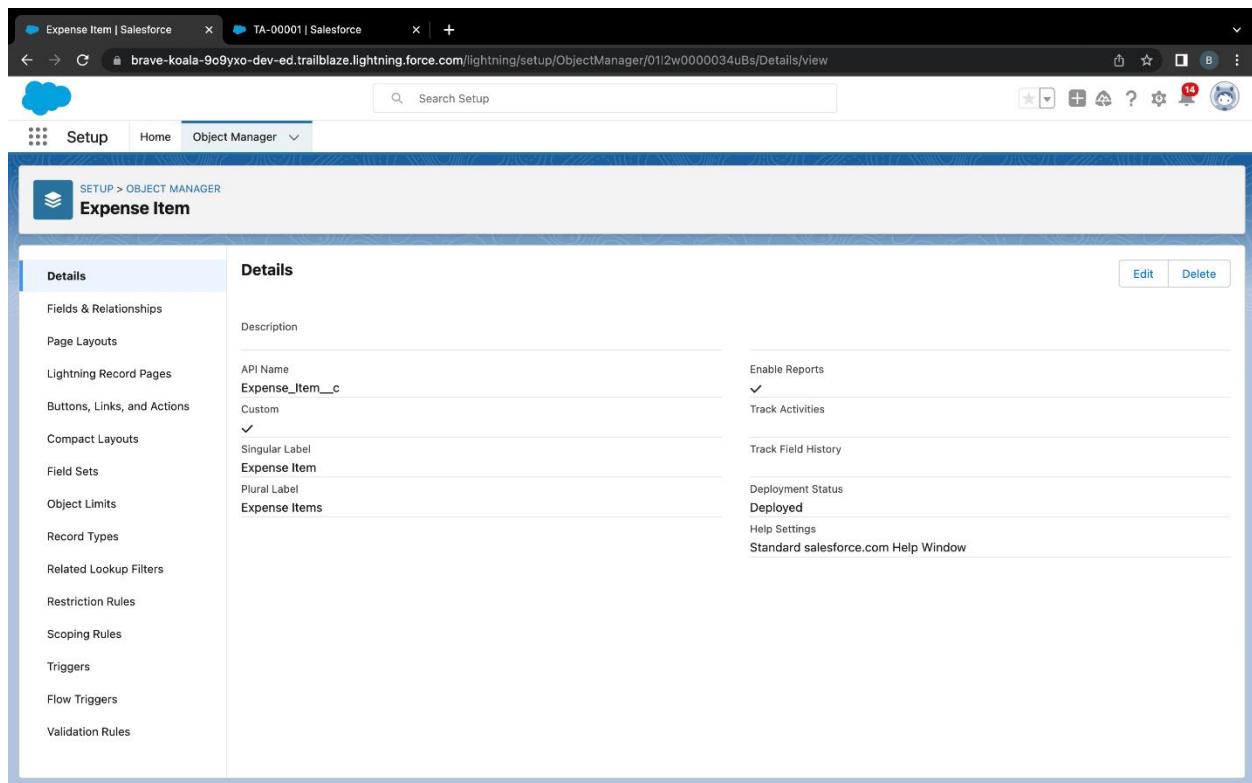
The main content area displays the "Travel Approval" record with ID TA-00001. The "Details" tab is selected. Key fields shown include:

- Travel Approval #: TA-00001
- Status: Rejected
- Total Expenses: ₹1,320.00
- Status Indicator: Red (indicating rejection)
- Trip Info:
 - Purpose of Trip: Attend Dreamforce
 - Trip Start Date: 2/24/2023
 - Trip End Date: 2/28/2023
 - Created By: Bahatam Amulya (Last modified by same user at 2/21/2023, 4:00 PM)
- Owner: Bahatam Amulya
- Department: Technology
- Out-of-State: Checked
- Destination State: CA

The right side of the screen shows the "Activity" and "Chatter" panels. The "Activity" panel is currently empty, displaying a message: "No activities to show. Get started by sending an email, scheduling a task, and more." The "Chatter" panel also shows no activity.

Step 2 :

Created “Expense Item” Custom Object.

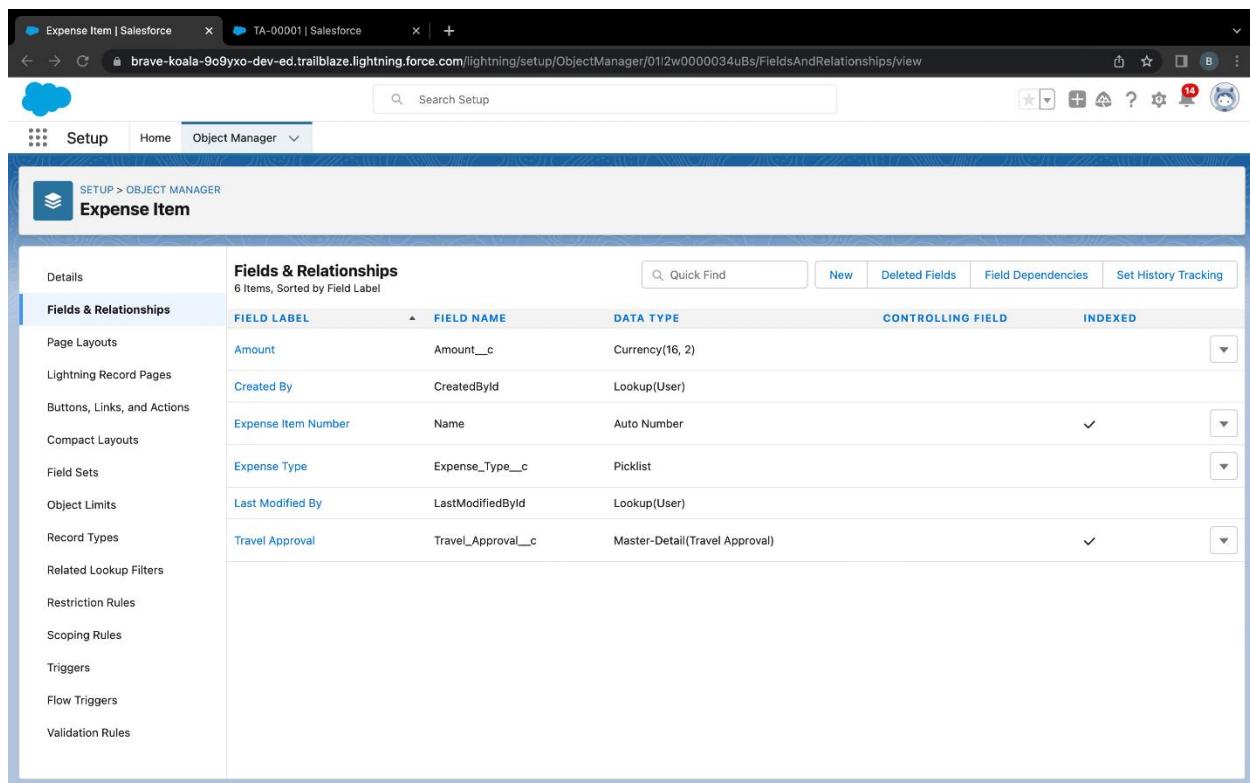


The screenshot shows the Salesforce Setup interface for managing objects. The top navigation bar includes tabs for 'Expense Item | Salesforce' and 'TA-00001 | Salesforce'. The main title is 'SETUP > OBJECT MANAGER' followed by 'Expense Item'. The left sidebar lists various configuration options: Fields & 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. The right panel displays the 'Details' section for the Expense Item object. It includes fields for Description, API Name (Expense_Item__c), Singular Label (Expense Item), Plural Label (Expense Items), and several status and tracking settings. Buttons for 'Edit' and 'Delete' are located at the top right of the details panel.

Details	
Description	
API Name	Expense_Item__c
Custom	✓
Singular Label	Expense Item
Plural Label	Expense Items
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Step 3 :

Created Custom Fields for Expense Item :
Amount , Expense Type , Travel Approval



The screenshot shows the Salesforce Object Manager interface for the 'Expense Item' object. The 'Fields & Relationships' tab is selected. The table displays the following custom fields:

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

Step 4 :**Created Expense Items .**

Expense Item | Salesforce E-00001 | Salesforce

brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Expense__Item__c/a022w00000l44qtAAA/view

Travel App Chatter Reports Dashboards Departments Travel Approvals Customers

Expense Item E-00001

New Contact Edit New Opportunity

Related Details

Expense Item Number
E-00001

Amount
₹450.00

Expense Type
Airfare

Travel Approval
TA-00001

Created By
Bahatam Amulya, 2/21/2023, 11:54 AM

Last Modified By
Bahatam Amulya, 2/21/2023, 11:54 AM

Expense Item | Salesforce E-00002 | Salesforce

brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Expense__Item__c/a022w00000l44qyAAA/view

Travel App Chatter Reports Dashboards Departments Travel Approvals Customers

Expense Item E-00002

New Contact Edit New Opportunity

Related Details

Expense Item Number
E-00002

Amount
₹870.00

Expense Type
Hotel

Travel Approval
TA-00001

Created By
Bahatam Amulya, 2/21/2023, 11:54 AM

Last Modified By
Bahatam Amulya, 2/21/2023, 11:54 AM

Step 5 :

Created a User named “ Eric Executive ”

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

- Page Header:** Users | Salesforce
- Tab:** E-00002 | Salesforce
- Search Bar:** Search Setup
- Left Sidebar:**
 - Setup
 - Home
 - Object Manager
 - Users (selected)
 - Permission Set Groups
 - Permission Sets
 - Profiles
 - Public Groups
 - Queues
 - Roles
 - User Management Settings
 - Users (selected)
 - Feature Settings
 - Data.com
 - Prospector Users
 - User Interface
 - Action Link Templates
 - Actions & Recommendations
 - App Menu
 - Custom Labels
 - Density Settings
 - Global Actions
 - Global Actions
 - Publisher Layouts
- Page Content:**
 - Section:** Users
 - User Detail:** Eric Executive

	Name	Role
Name	Eric Executive	CEO
Alias	exec	User License
Email	bamulya528@gmail.com	Profile
Username	eric.amulya@wipro.com	Active
Nickname	eric.exec	Marketing User
Title		Offline User
Company		Knowledge User
Department		Flow User
Division		Service Cloud User
Address		Site.com Contributor User
Time Zone	(GMT+05:30) India Standard Time (Asia/Kolkata)	Site.com Publisher User
Locale	English (India)	WDC User
Language	English	Mobile Push Registrations
Delegated Approver		Data.com User Type
Manager		Accessibility Mode (Classic Only)
Receive Approval Request Emails	Only if I am an approver	Debug Mode
Federation ID		High-Contrast Palette on Charts
App Registration: One-Time Password Authenticator		Load Lightning Pages While Scrolling
App Registration: Salesforce Authenticator		Send Apex Warning Emails
Security Key (U2F or WebAuthn)		Salesforce CRM Content User

Step 6 :

Added Eric Executive as my Manager.

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

- Left Sidebar:** Shows the navigation menu under "Users". The "User Management Settings" section is expanded, and "Users" is selected.
- Right Panel:** The "Users" setup page is displayed with the following configuration:
 - Mailing Address:** Fields for Street, City, State/Province, Zip/Postal Code, and Country (IN).
 - Single Sign On Information:** Federation ID field.
 - Locale Settings:** Time Zone (GMT+05:30 India Standard Time (Asia/Kolkata)), Locale (English (United States)), and Language (English).
 - Approver Settings:** Delegated Approver (empty), Manager (Eric Executive), and Receive Approval Request Emails (Only if I am an approver).

The URL in the browser bar is: <https://brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/setup/ManageUsers/page?address=%2F0052w00000EjjoN%2Fe%3FisUserEntityOverride%3D1%2...>

Step 7 :

Customized Travel Approval Default Search Layout

The screenshot shows the Salesforce Setup interface for customizing the 'Travel Approval' object. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc., with 'Search Layouts' currently selected. The main content area is titled 'Edit Search Layout' for 'Travel Approval Search Results'. It displays two columns: 'Available Fields' (Record ID, Out-of-State, Status Indicator, Total Expenses, Owner Alias, Owner First Name, Owner Last Name, Created By Alias, Created By, Created Date, Last Modified By Alias) and 'Selected Fields' (Travel Approval #, Purpose of Trip, Department, Status, Destination State, Trip Start Date, Trip End Date). Buttons for 'Add' (right arrow), 'Remove' (left arrow), 'Up' (up arrow), and 'Down' (down arrow) are visible between the columns. A checkbox at the bottom left allows overriding search result column customizations for all users. Below the fields, sections for 'Standard Buttons' (no customizable standard buttons) and 'Custom Buttons' (link to create a new custom list button) are shown. At the bottom right are 'Save' and 'Cancel' buttons.

Step 8 :**Selected Fields to Display in Travel Approval**

The screenshot shows a Salesforce Lightning interface for a 'Travel Approvals' list. A modal window titled 'Select Fields to Display' is open, allowing users to choose which fields are visible in the list. The 'Available Fields' section contains: Created By Alias, Created Date, Destination State, Last Activity Date, Last Modified By, and Last Modified By Alias. The 'Visible Fields' section contains: Department, Created By, Status, Trip Start Date, and Trip End Date. The main list on the right shows travel approvals with columns for Trip Start Date, Trip End Date, Status, and Last Modified. The status column shows values like Approved, Pending, and Rejected.

Field	Value	Field	Value
Trip Start Date	3/9/2019	Trip End Date	3/9/2019
Trip Start Date	9/7/2019	Trip End Date	9/7/2019
Trip Start Date	7/8/2019	Trip End Date	7/8/2019
Trip Start Date	7/11/2019	Trip End Date	7/11/2019
Trip Start Date	8/7/2019	Trip End Date	8/7/2019
Trip Start Date	3/9/2019	Trip End Date	8/15/2019
Trip Start Date	9/7/2019	Trip End Date	3/6/2019
Trip Start Date	7/8/2019	Trip End Date	5/10/2019
Trip Start Date	7/11/2019	Trip End Date	1/10/2020
Trip Start Date	8/7/2019	Trip End Date	10/6/2019
Trip Start Date	9/3/2019	Trip End Date	9/3/2019
Trip Start Date	3/20/2019	Trip End Date	4/10/2019
Trip Start Date	7/8/2019	Trip End Date	7/9/2019
Trip Start Date	8/7/2019	Trip End Date	8/7/2019

Step 9 :

Created Travel Approval List View as “Open Out of State travel requests”

The screenshot shows a Salesforce Lightning interface. At the top, there are two tabs: "Travel Approval | Salesforce" and "Open Out of State Travel Request". The URL in the browser is "brave-koala-9c9yxo-dev-ed.lightning.force.com/lightning/o/Travel_Approval__c/list?filterName=00B2w00000YN8eZEA". The main navigation bar includes "Travel App", "Chatter", "Reports", "Dashboards", "Departments", "Travel Approvals", and "Customers". The "Travel Approvals" tab is currently selected.

The main content area displays a list view titled "Travel Approvals Open Out of State Travel Requests". It shows a single message: "No items to display." Above the list, there are sorting and filtering options: "Department ↑", "Created By", "Status", "Destination State", "Trip Start Date", "Trip End Date". To the right of the list, there is a "Filters" sidebar. The filters applied are:

- Filter by Owner: All travel approvals
- Matching all of these filters:
 - Out-of-State equals True
 - Status not equal to Approved, Rejected

At the bottom of the sidebar, there are buttons for "Add Filter" and "Remove All".

Step 10 :

Select fields to display in the Travel Approval “**Open Out of State Travel Requests**”

The screenshot shows a Salesforce Lightning page titled "Travel Approvals" with a sub-tab "Open Out of State Travel Requests". The page displays a list of travel approvals, with a modal dialog box open in the foreground titled "Select Fields to Display". The "Available Fields" section contains "Created By Alias", "Created Date", "Last Activity Date", "Last Modified By", "Last Modified By Alias", and "Last Modified Date". The "Visible Fields" section contains "Department", "Created By", "Status", "Destination State", "Trip Start Date", and "Trip End Date". A "Filters" sidebar on the right shows two filters: "Filter by Owner All travel approvals" and "Matching all of these filters: Out-of-State equals True" and "Status not equal to Approved, Rejected". Buttons for "Cancel" and "Save" are at the bottom of the dialog.

Step 11 :

Customize the Travel Approval Page Layout as below

The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The left sidebar lists various configuration options like Details, Fields & Relationships, Page Layouts (which is selected), 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, and Flow Triggers.

In the main workspace, the 'Page Layouts' tab is active. A 'Fields' section is displayed, containing a table with columns: Section, Field Name, and Type. The table includes rows for 'Section' (Section), 'Blank Space' (Blank Space), 'Destination State' (Text), 'Purpose of Trip' (Text), 'Travel Approval #' (Text), 'Last Modified By' (Text), 'Status' (Text), 'Trip End Date' (Text), 'Created By' (Text), 'Out-of-State' (Text), 'Status Indicator' (Text), 'Trip Start Date' (Text), 'Department' (Text), 'Owner' (Text), and 'Total Expenses' (Text).

Below the fields, there are several sections of visualforce markup:

- Information**:
 - Travel Approval # : GEN-2004-001234
 - Status : Sample Text
 - Out-of-State : ✓
 - Destination State : Sample Text
- Trip Info**:
 - Purpose of Trip : Sample Text
 - Trip Start Date : 2/25/2023
 - Trip End Date : 2/25/2023
- System Information**:
 - Created By : Sample Text
 - Last Modified By : Sample Text
- Custom Links**: (Header visible on edit only)
- Mobile Cards (Salesforce mobile only)**: Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Step 12 :

Customized the Expense Item Related List under the Travel Approval page layout

The screenshot shows the Salesforce Lightning Experience interface for a Travel Approval record. The top navigation bar includes tabs for Travel Approval, Travel Approval Record Page, Travel Approval | Salesforce, TA-00001 | Salesforce, and a plus sign. Below the navigation is a header with a search bar and various icons. The main content area is titled "Travel Approval TA-00001". It features three main related lists: "Notes & Attachments (0)", "Expense Items (2)", and "Approval History (3)". The "Expense Items" section displays two items: E-00001 (Airfare, ₹450.00) and E-00002 (Hotel, ₹870.00). The "Approval History" section shows two steps: "Travel Coordinator Approval" (Approved, 2/21/2023, 4:00 PM, assigned to Bahatam Amulya) and "Step 1" (Approved, 2/21/2023, 3:59 PM, assigned to Eric Executive). To the right of these lists is an "Activity" sidebar with a "Chatter" tab, activity icons, and a message stating "No activities to show. Get started by sending an email, scheduling a task, and more." The bottom of the page has a footer with a "javascript:void(0)" link.

Step 13 :

Enabled Chatter on the Travel Approval Object

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

- Setup Home:** The user is in the "Feed Tracking" section under "Chatter".
- Search Bar:** The search bar contains "feed tr".
- Left Sidebar:** A sidebar lists various objects: API Anomaly Event Store, Account (2 Fields), Activity, Analytics Asset, Asset, Asset Relationship, Authorization Form Text, Badge, Batch Job, Batch Job Part, Batch Job Part Failed Record, Billing, Campaign, Case (2 Fields), Case Related Issue, Change Request (0 Fields), Change Request Related Issue, Change Request Related Item, Communication Subscription, Communication Subscription Channel Type, and Communication Subscription Consent.
- Feed Tracking Page:** The main page title is "Feed Tracking". It includes a "Help for this Page" link. A message states: "Enable feed tracking for objects so users can follow records of that object type. Select fields to track so users can see feed updates when those fields are changed on records they follow." Below this, a table titled "Fields in travel approvals" lists fields to be tracked:

Object	Tracked
Account	2 Fields
Activity	
Case	2 Fields
Change Request	0 Fields
Communication Subscription	

Buttons include "Save" and "Cancel" at the top right, and "Restore Defaults" at the bottom right. A note says "Your changes have been saved." The tracked fields listed are: Department (unchecked), Out-of-State (unchecked), Purpose of Trip (unchecked), Travel Approval # (unchecked), Trip Start Date (unchecked), Destination State (checked), Owner (unchecked), Status (checked), and Trip End Date (unchecked). There is also an option "All Related Objects" (unchecked) for displaying feed activity for related objects.

CAPSTONE MODULE 1

This screenshot shows a Salesforce Lightning interface for a Travel Approval record. The record ID is TA-00001. The left pane displays the travel details: Purpose of Trip (Attend Dreamforce), Trip Start Date (2/24/2023), Trip End Date (2/28/2023), and Created By (Bahatam Amulya). The right pane shows the status as Draft to Rejected. A sidebar on the right contains a comment feed. The first comment is from Bahatam Amulya (@Eric Executive) asking which department to associate the travel request with. Eric Executive replies that Technology is the correct department. Both comments have a 'Like' button and a 'Comment' button.

Purpose of Trip
Attend Dreamforce

Trip Start Date
2/24/2023

Trip End Date
2/28/2023

Created By
Bahatam Amulya, 2/21/2023, 11:52 AM

Out-of-State

Destination State
CA

Last Modified By
Bahatam Amulya, 2/21/2023, 4:00 PM

Status
Draft to Rejected

1 view

Like Comment

Bahatam Amulya February 21, 2023 at 2:24 PM
@Eric Executive Which department should I associate this travel request with?

1 comment · 1 view

Like Comment

Eric Executive 4 days ago
Technology is the correct department.

Write a comment...

This screenshot shows the same Salesforce Lightning interface for the same Travel Approval record (TA-00001). The left pane displays the travel details: Purpose of Trip (Attend Dreamforce), Trip Start Date (2/24/2023), Trip End Date (2/28/2023), and Created By (Bahatam Amulya). The right pane shows the status as Draft to Rejected. The sidebar on the right contains a comment feed. The first comment is from Bahatam Amulya (@Eric Executive) asking which department to associate the travel request with. Eric Executive replies that Technology is the correct department. Both comments have a 'Post' button, a 'Share' button, and a 'Search this feed...' field.

Travel Approval #
TA-00001

Status
Rejected

Total Expenses
₹1,320.00

Status Indicator
Red

Trip Info

Purpose of Trip
Attend Dreamforce

Trip Start Date
2/24/2023

Trip End Date
2/28/2023

Created By
Bahatam Amulya, 2/21/2023, 11:52 AM

Owner
Bahatam Amulya

Department
Technology

Out-of-State

Destination State
CA

Last Modified By
Bahatam Amulya, 2/21/2023, 4:00 PM

Activity Chatter

Post Poll Question

Share an update... Share

Search this feed...

Bahatam Amulya updated this record.
February 21, 2023 at 4:00 PM

Status
Draft to Rejected

1 view

Like Comment

Bahatam Amulya February 21, 2023 at 2:24 PM
@Eric Executive Which department should I associate this travel request with?



Capstone Module 2
On
“Salesforce application”

EXERCISE 1



CREATE

Validation
Rules



SETUP

Setup Roll-up summary
&
Formula field



CONFIGURE

Flows &
Approval
Process.



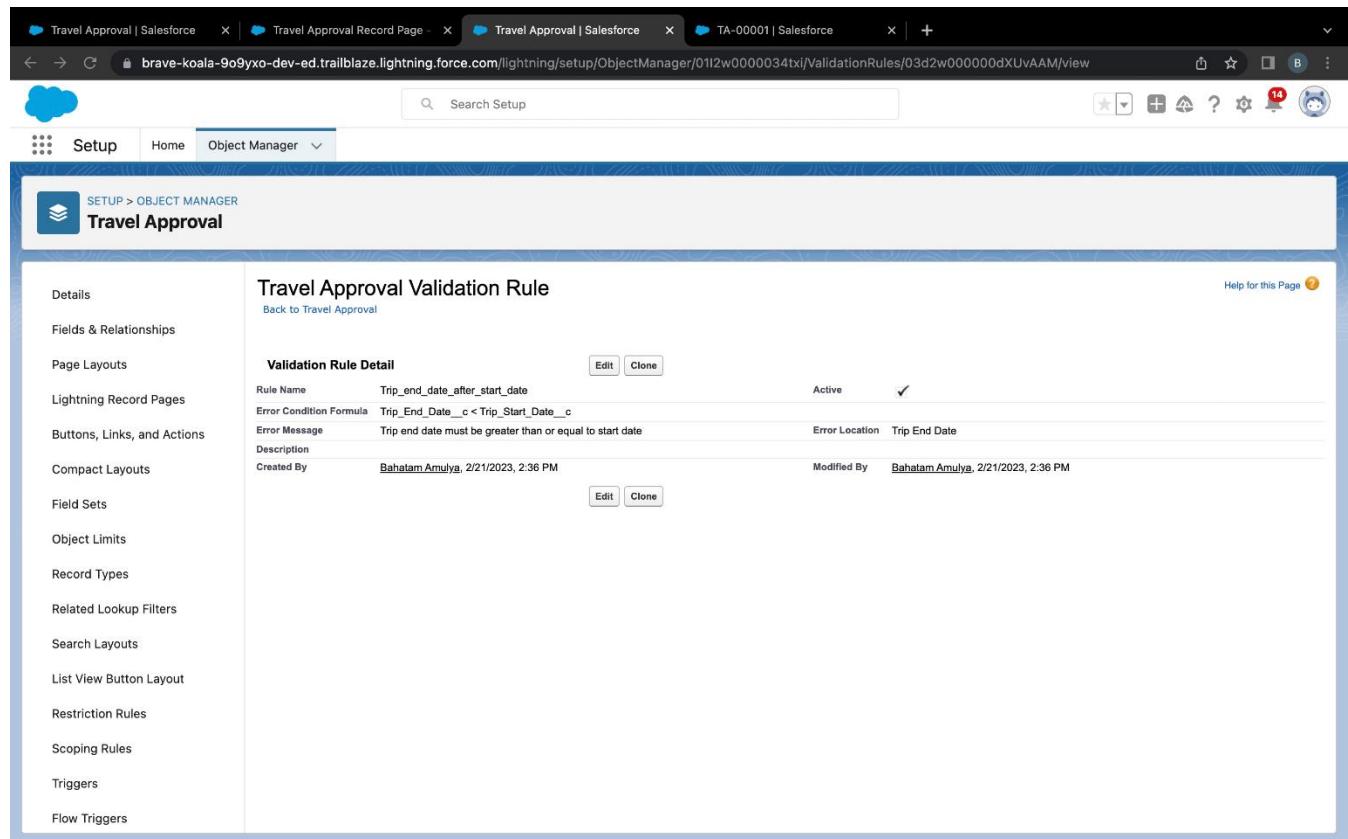
TEST

Test the app.

Exercise 1 :

Step 1:

Created Validation Rule



The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The left sidebar lists various configuration options like Details, Fields & Relationships, Page Layouts, etc. The main content area displays the 'Travel Approval Validation Rule' detail page. The rule is named 'Trip_end_date_after_start_date' and is active. The error condition formula is '`Trip_End_Date__c < Trip_Start_Date__c`'. The error message is 'Trip end date must be greater than or equal to start date'. The error location is 'Trip End Date'. The rule was created by 'Bahatam Amulya' on 2/21/2023 at 2:36 PM and modified by the same user on the same date.

Validation Rule Detail	
Rule Name	Trip_end_date_after_start_date
Error Condition Formula	<code>Trip_End_Date__c < Trip_Start_Date__c</code>
Error Message	Trip end date must be greater than or equal to start date
Description	
Created By	Bahatam Amulya, 2/21/2023, 2:36 PM
Modified By	Bahatam Amulya, 2/21/2023, 2:36 PM

Step 2 :

Created Roll Up Summary Field on Travel Approval Object

The screenshot shows the Salesforce Setup interface for creating a custom field. The left sidebar is titled 'Fields & Relationships' under 'Object Manager'. The main content area is titled 'Custom Field Definition Detail' for a field named 'Total Expenses' on the 'Travel Approval' object. The 'Field Information' section shows the field label as 'Total Expenses', API name as 'Total_Expenses__c', and object name as 'Travel Approval'. The 'Roll-Up Summary Options' section shows the data type as 'Roll-Up Summary', summarized object as 'Expense Item', field to aggregate as 'Expense Item: Amount', and summary type as 'SUM'. The page includes standard Salesforce navigation and status bars at the top.

Step 3 :

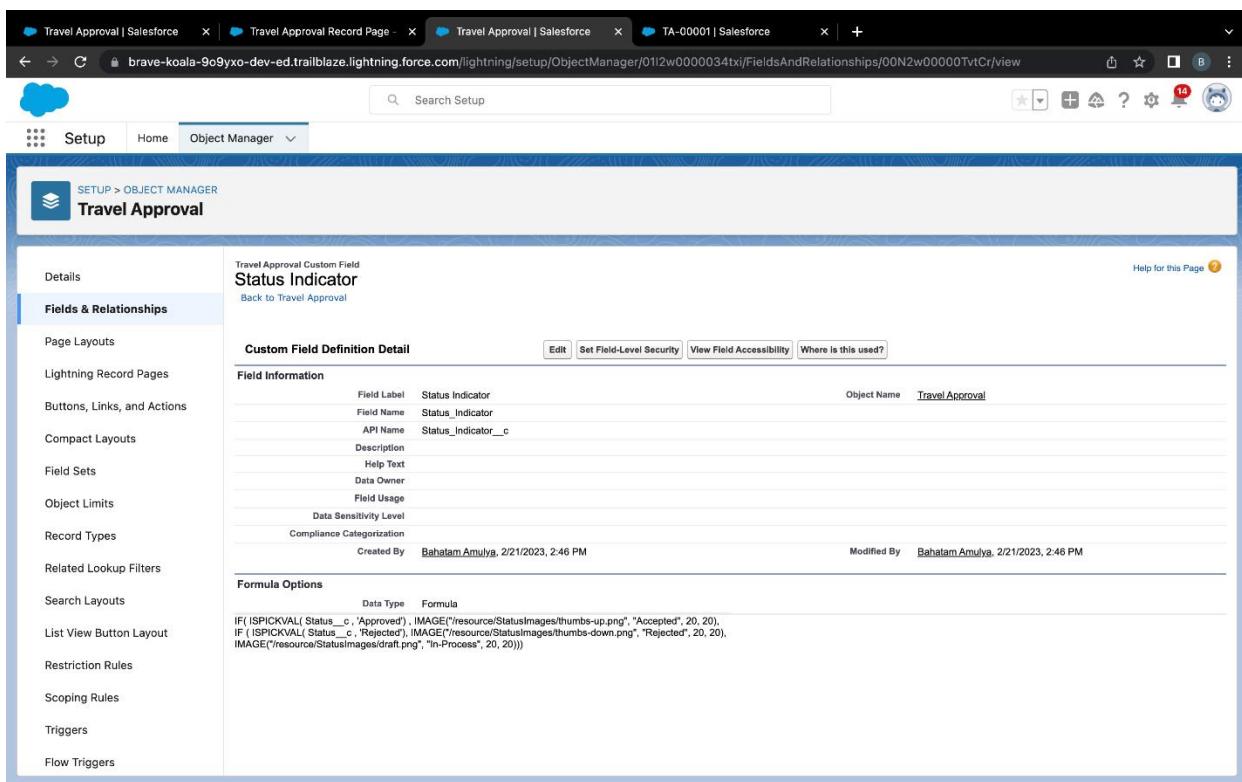
Created Formula Fields.

The screenshot shows the Salesforce Setup interface for managing Static Resources. On the left, the navigation sidebar is open, showing sections like Data, Custom Code, and Deploy. Under Custom Code, 'Static Resources' is selected. The main content area is titled 'Static Resource Edit' for a resource named 'StatusImages'. The form includes fields for Name (StatusImages), Description (empty), File (Choose file, StatusImages.zip), and Cache Control (Public). Buttons for Save and Cancel are at the bottom.

The screenshot shows the same Salesforce Setup interface, but now the 'StatusImages' resource has been saved and is displayed in the list. The 'Static Resource Detail' page for 'StatusImages' shows the following information:

Name	StatusImages
Namespace Prefix	
Description	
MIME Type	application/zip
Cache Control	Public
Size	39,130 bytes
View file	
Created By	Bahatam Amulya, 2/21/2023, 2:43 PM
Last Modified By	Bahatam Amulya, 2/25/2023, 2:35 PM

Buttons for Edit, Delete, and Where is this used? are at the bottom of the detail page.

Step 4 :**Created Formula Field “Status Indicator”**


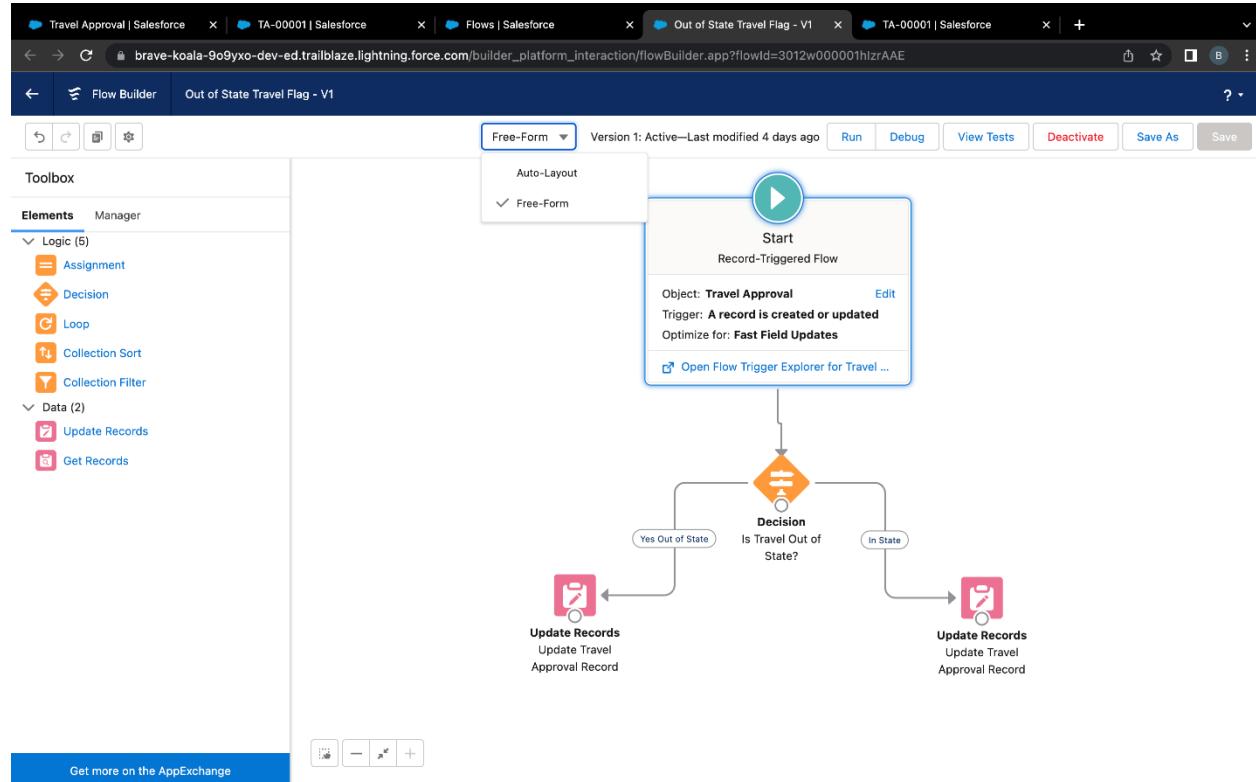
The screenshot shows the Salesforce Setup interface in the Object Manager. A custom formula field named "Status Indicator" has been created for the "Travel Approval" object. The field's API name is "Status_Indicator__c". The formula is defined as follows:

```

IF( ISNULL(Status__c), IMAGE("/resource/Status/Images/draft.png", "In-Process", 20, 20),
IF( ISVAL(Status__c, 'Approved'), IMAGE("/resource/Status/Images/thumbs-up.png", "Accepted", 20, 20),
IF( ISVAL(Status__c, 'Rejected'), IMAGE("/resource/Status/Images/thumbs-down.png", "Rejected", 20, 20),
IMAGE("/resource/Status/Images/draft.png", "In-Process", 20, 20)))
)

```

The formula uses the ISNULL function to handle null values, and nested IF statements to map status codes ('Approved', 'Rejected') to corresponding image URLs and descriptions.

Step 5 :**Created a Record – Triggered Flow**

The screenshot shows the "Edit Decision" dialog box with the following configuration:

Decision Name: Is Travel Out of State? (is_Travel_Out_of_State)

Outcomes: For each path the flow can take, create an outcome. For each outcome, specify the conditions that must be met for the flow to take that path.

OUTCOME ORDER: In State

OUTCOME DETAILS:

- Label:** In State
- Outcome API Name:** In_State

Condition Requirements to Execute Outcome: All Conditions Are Met (AND)

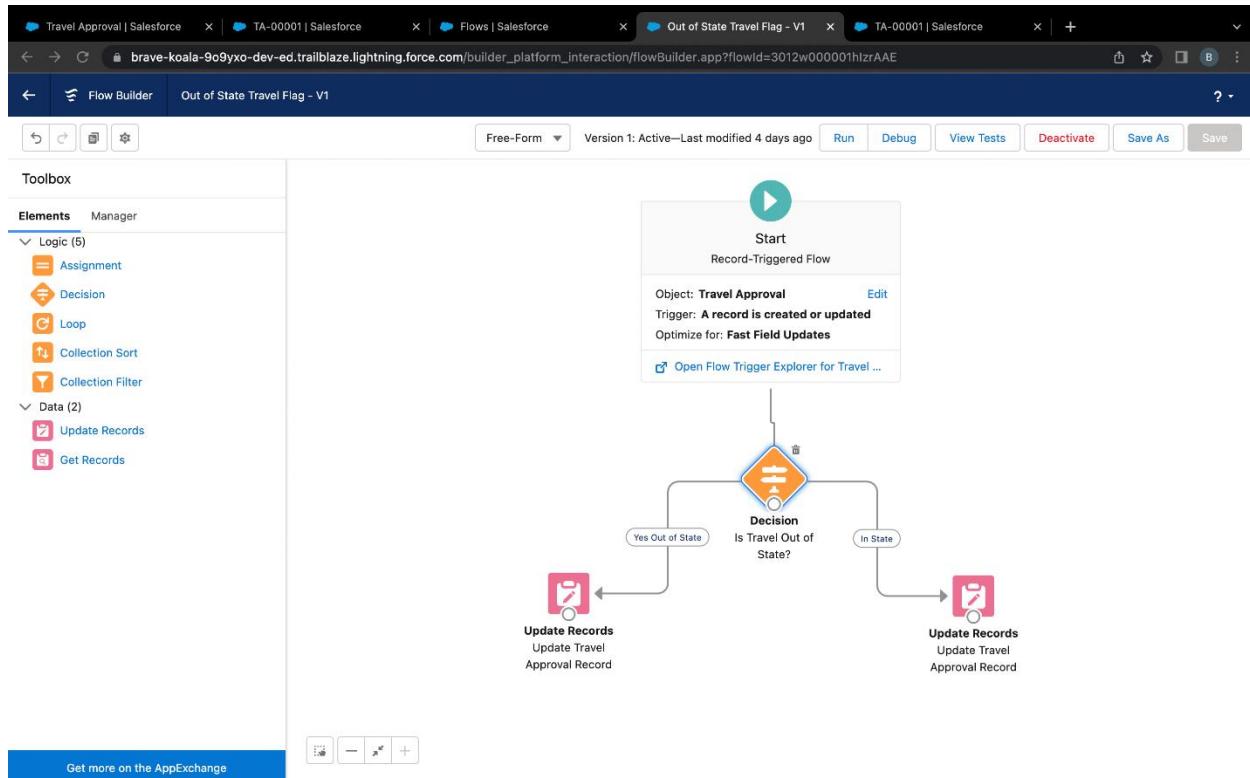
Resource	Operator	Value
\$Record > Destination State	Equals	TX

When to Execute Outcome:

- If the condition requirements are met
- Only if the record that triggered the flow to run is updated to meet the condition requirements

Buttons: Cancel, Done

CAPSTONE MODULE 2



Step 6 :

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 process definition detail includes:

- Process Name:** Travel Approval Request
- Description:** Travel Approval: Total Expenses GREATER THAN 0
- Record Editability:** Administrator ONLY
- Initial Submitters:** Travel Approval Owner
- Created By:** Bahatam Amulya, 2/21/2023, 3:26 PM
- Modified By:** Bahatam Amulya, 2/25/2023, 3:06 PM
- Active:** checked
- Next Automated Approver Determined By:** Manager of Record Submitter
- Allow Submitters to Recall Approval Requests:** unchecked

The 'Initial Submission Actions' section contains a single entry: Action Type: Record Lock; Description: Lock the record from being edited.

The 'Approval Steps' section contains two steps:

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Show Actions Edit	1	Step 1			Manager	Final Rejection
Show Actions Edit	2	Travel Coordinator Approval	Travel Approval: Out-of-State EQUALS True		User:Eric Executive	Final Rejection

The 'Final Approval Actions' section contains two entries:

Action	Type	Description
Edit	Record Lock	Lock the record from being edited
Edit Remove	Field Update	Set Status to Approved

The screenshot shows the same Approval Processes page with additional sections:

Final Rejection Actions:

Action	Type	Description
Edit	Record Lock	Unlock the record for editing
Edit Remove	Field Update	Set Status to Rejected

Recall Actions:

Action	Type	Description
	Record Lock	Unlock the record for editing

CAPSTONE MODULE 2

The screenshot shows a Salesforce Lightning interface for a travel approval request. The title bar includes tabs for Travel Approval, TA-00001 Approval, Users, Out of State Travel Flag - V1, Recently Viewed, and a search bar. The main content area displays the following details:

Approval Request
Travel Approval Approval Pending

Submitter	Date Submitted	Actual Approver	Assigned To
Bahatam Amulya	Feb 25, 2023	Eric Executive	Eric Executive

Details

Approval Details

Travel Approval #	Owner
TA-00001	Bahatam Amulya

No Comments

The screenshot shows the same Salesforce Lightning interface, but the approval status has changed to **Approved**. The main content area displays the following details:

Process Instance Step
Travel Approval Approval Approved

Submitter	Date Submitted	Actual Approver	Assigned To
Bahatam Amulya	Feb 25, 2023	Bahatam Amulya	Eric Executive

Details

Approval Details

Travel Approval #	Owner
TA-00001	Bahatam Amulya

No Comments

CAPSTONE MODULE 2

The screenshot shows a Salesforce Lightning interface for a travel approval process. The top navigation bar includes tabs for Travel Approval, TA-00001 Approval, Users, Out of State Travel Flag - V1, Recently Viewed, and Travel App. The main content area displays a "Process Instance Step" titled "Travel Approval Approval" with a status of "Rejected". The step details show the Submitter as Bahatam Amulya, Date Submitted as Feb 25, 2023, Actual Approver as Bahatam Amulya, and Assigned To Eric Executive. A "Details" section contains "Approval Details" for Travel Approval # TA-00001, showing the Owner as Bahatam Amulya. A "No Comments" section is also present.

The screenshot shows a Salesforce Lightning interface for a travel approval record. The top navigation bar includes tabs for Travel Approval, TA-00001, Users, Out of State Travel Flag - V1, Recently Viewed, and Travel App. The main content area displays a "Travel Approval" record for TA-00001. It shows an "Expense Items (2)" section with two entries: E-00001 (Airfare, ₹450.00) and E-00002 (Hotel, ₹870.00). An "Approval History (6+)" section lists the following steps:

- Travel Coordinator Approval: Approved by Eric Executive on 2/25/2023, 3:19 PM
- Step 1: Approved by Eric Executive on 2/25/2023, 3:18 PM
- Approval Request Submitted: Submitted by Bahatam Amulya on 2/25/2023, 3:18 PM
- Step 1: Rejected by Eric Executive on 2/25/2023, 3:17 PM
- Approval Request Submitted: Submitted by Bahatam Amulya on 2/25/2023, 3:16 PM
- Travel Coordinator Approval: Approved by Eric Executive on 2/25/2023, 3:14 PM

A "Upcoming & Overdue" section indicates no activities to show. The URL at the bottom is https://brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval_c/a012w000017APlbAAG/related/Expense_Items__r/view.

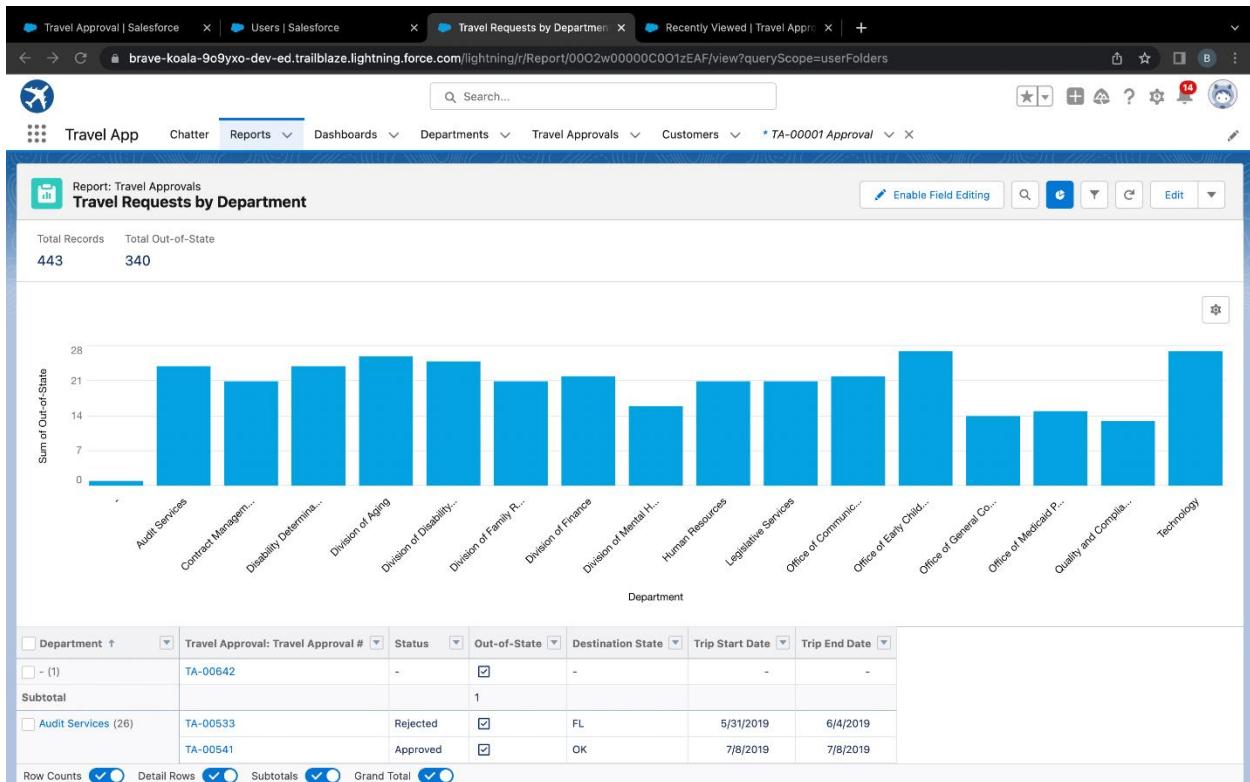
EXERCISE 2

Exercise 2 :

Step 1:

Added New Records.

Department ↑	Created By	Status	Trip Start Date	Trip End Date
233 Human Resources	Bahatam Amulya	Approved	11/30/2019	12/5/2019
234 Human Resources	Bahatam Amulya	Approved	7/9/2019	7/11/2019
235 Human Resources	Bahatam Amulya	Approved	11/29/2019	12/5/2019
236 Human Resources	Bahatam Amulya	Approved	5/2/2019	5/12/2019
237 Human Resources	Bahatam Amulya	Rejected	8/27/2019	9/8/2019
238 Human Resources	Bahatam Amulya	Approved	3/24/2019	3/29/2019
239 Human Resources	Bahatam Amulya	Approved	7/11/2019	7/26/2019
240 Human Resources	Bahatam Amulya	Rejected	11/17/2019	11/26/2019
241 Human Resources	Bahatam Amulya	Approved	9/24/2019	9/30/2019
242 Human Resources	Bahatam Amulya	Approved	10/29/2019	11/1/2019
243 Human Resources	Bahatam Amulya	Approved	2/28/2019	3/14/2019
244 Human Resources	Bahatam Amulya	Rejected	4/21/2019	4/21/2019
245 Human Resources	Bahatam Amulya	Approved	2/23/2019	3/6/2019
246 Human Resources	Bahatam Amulya	Approved	4/14/2019	4/15/2019
247 Human Resources	Bahatam Amulya	Approved	9/26/2019	9/28/2019
248 Human Resources	Bahatam Amulya	Approved	12/29/2019	1/2/2020
249 Human Resources	Bahatam Amulya	Approved	3/6/2019	3/6/2019
250 Legislative Services	Bahatam Amulya	Approved	4/10/2019	4/10/2019
251 Legislative Services	Bahatam Amulya	Approved	4/10/2019	5/10/2019
252 Legislative Services	Bahatam Amulya	Approved		

Step 2 :**Created a Travel Requests by Department Report**

Step 3 :

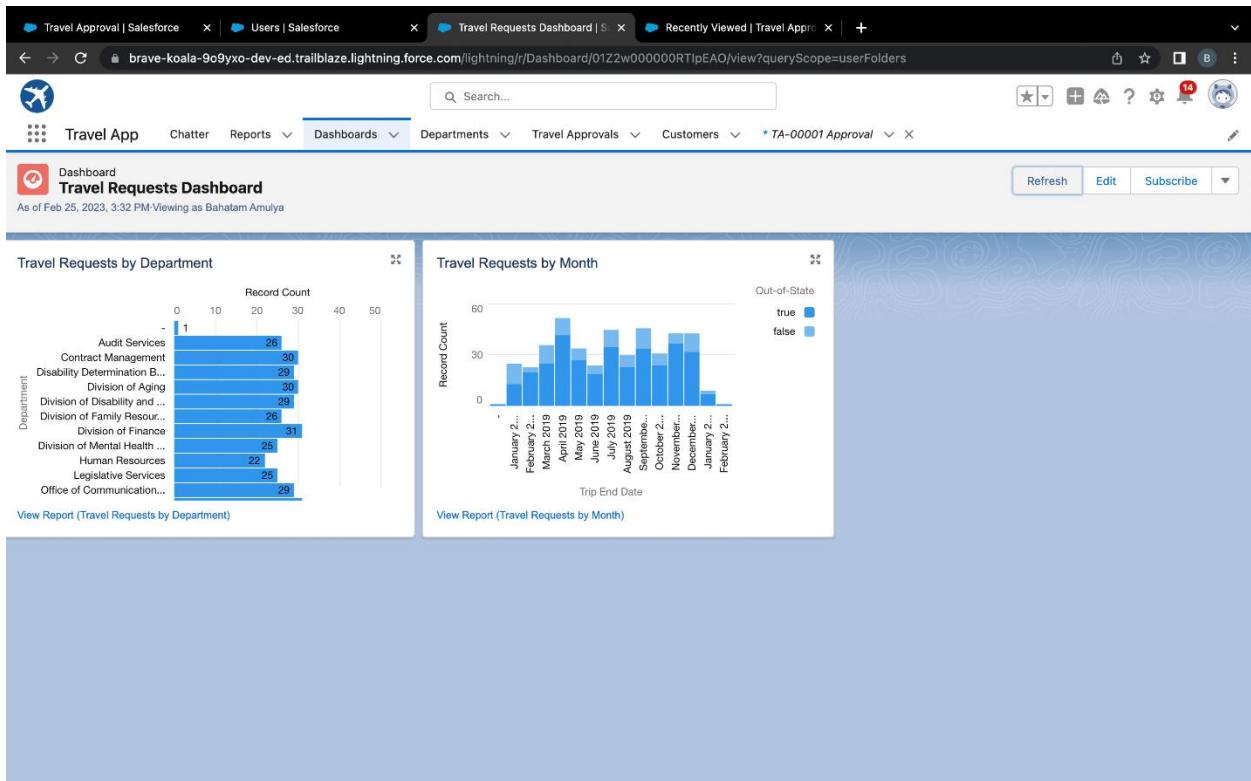
Create a Travel Requests by Month Report

The screenshot shows a Salesforce Lightning report titled "Travel Requests by Month". The report displays travel approvals for January 2019, with a total of 443 records. The columns include Trip End Date, Out-of-State, Travel Approval: Travel Approval #, Department, Status, Destination State, and Trip Start Date. The data shows various departments like Division of Aging, Quality and Compliance Office, Contract Management, etc., with most trips being approved and starting in TX.

Trip End Date	Out-of-State	Travel Approval: Travel Approval #	Department	Status	Destination State	Trip Start Date
January 2019 (25)	(12)	TA-00578 TA-00590 TA-00599 TA-00013 TA-00039 TA-00408 TA-00072 TA-00431 TA-00444 TA-00084 TA-00110 TA-00143 Subtotal	Division of Aging Quality and Compliance Office Contract Management Division of Family Resources Division of Finance Legislative Services Office of General Counsel Office of General Counsel Disability Determination Bureau Division of Family Resources Division of Finance Office of General Counsel	Approved Approved Approved Approved Approved Approved Approved Rejected Approved Approved Approved Approved	TX TX TX TX TX TX TX TX TX TX TX FL	1/22/2019 1/14/2019 1/18/2019 1/4/2019 1/10/2019 1/20/2019 1/4/2019 1/27/2019 1/12/2019 1/4/2019 1/10/2019 1/4/2019
	(13)	TA-00537	Contract Management	Approved	FL	1/29/2019

Step 4 :

Create a Travel Approvals Dashboard

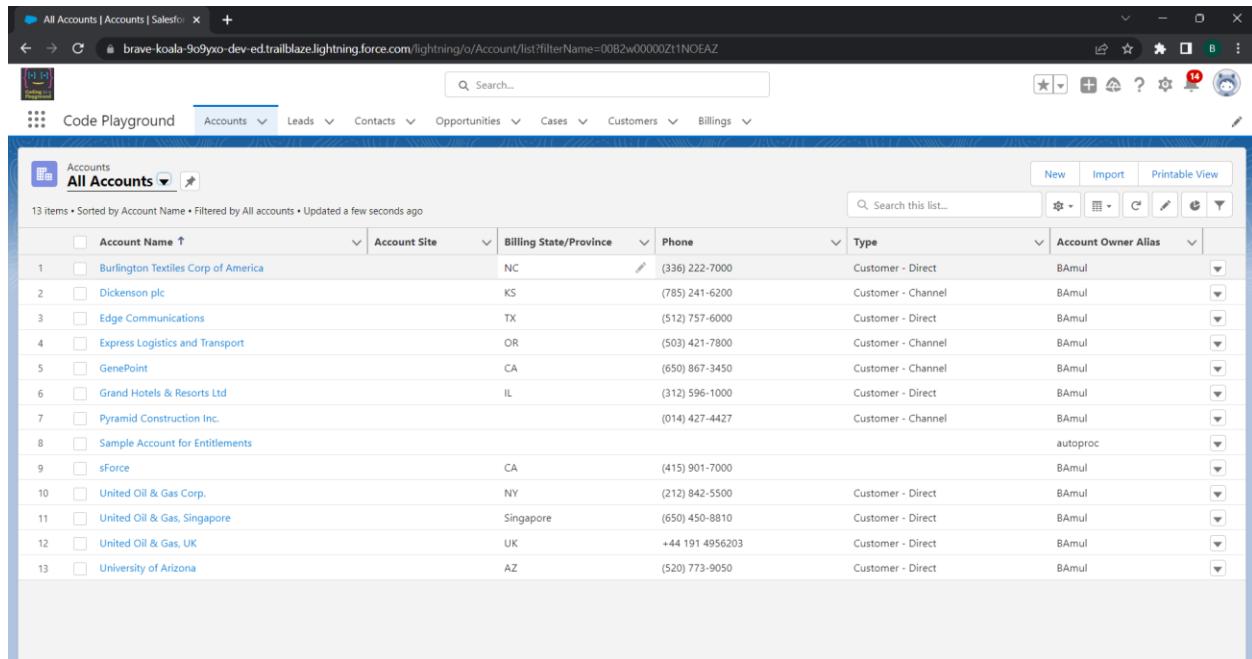




Capstone Module 3
On
“Salesforce application”

EXERCISE 1

Code Playground App



The screenshot shows the Salesforce Lightning interface for the 'All Accounts' page. The browser address bar indicates the URL is brave-koala-9o9yo-dev-ed.trailblaze.lightning.force.com/lightning/o/Account/list?filterName=00B2w00000Z1NOEAZ. The page title is 'All Accounts'. The top navigation bar includes links for Accounts, Leads, Contacts, Opportunities, Cases, Customers, and Billings. A search bar at the top right contains the placeholder 'Search...'. Below the navigation is a toolbar with icons for New, Import, and Printable View. The main content area displays a table of 13 account records. The columns are: Account Name (sorted by name), Account Site, Billing State/Province, Phone, Type, and Account Owner Alias. The data is as follows:

	Account Name	Account Site	Billing State/Province	Phone	Type	Account Owner Alias
1	Burlington Textiles Corp of America		NC	(336) 222-7000	Customer - Direct	BAmul
2	Dickenson plc		KS	(785) 241-6200	Customer - Channel	BAmul
3	Edge Communications		TX	(512) 757-6000	Customer - Direct	BAmul
4	Express Logistics and Transport		OR	(503) 421-7800	Customer - Channel	BAmul
5	GenePoint		CA	(650) 867-3450	Customer - Channel	BAmul
6	Grand Hotels & Resorts Ltd		IL	(312) 596-1000	Customer - Direct	BAmul
7	Pyramid Construction Inc.			(014) 427-4427	Customer - Channel	BAmul
8	Sample Account for Entitlements					autproc
9	sForce		CA	(415) 901-7000		BAmul
10	United Oil & Gas Corp.		NY	(212) 842-5500	Customer - Direct	BAmul
11	United Oil & Gas, Singapore		Singapore	(650) 450-8810	Customer - Direct	BAmul
12	United Oil & Gas, UK		UK	+44 191 4956203	Customer - Direct	BAmul
13	University of Arizona		AZ	(520) 773-9050	Customer - Direct	BAmul

EXERCISE 2

Defined a String Variable & use string method ‘endsWith’

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. Below the navigation is a toolbar with icons for 'Log', 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The main area has tabs for 'Logs' (selected), 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The 'Logs' tab displays a table with columns: User, Application, Operation, Time, Status, Read, and Size. A single log entry is shown: 'User: Bahatam Amulya, Application: Unknown, Operation: /services/data/v57.0/tooling/execut..., Time: 22/02/2023, 11:26:31, Status: Success, Read: 2.14 KB, Size: 5.6 KB'. The central workspace contains two panes: 'Execution Log' on the left and 'Enter Apex Code' on the right. The 'Execution Log' pane shows detailed memory allocations and operations. The 'Enter Apex Code' pane contains the following code:

```

1 String x = 'Bahatam Amulya';
2 System.debug(x.endsWith('a'));

```

Below the code editor are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. At the bottom of the workspace are checkboxes for 'This Frame', 'Executable', 'Debug Only', and 'Filter', followed by a link 'Click here to filter the log list'.

Code to display the value of x = 0 to 9

The screenshot shows the Salesforce Developer Console interface, similar to the previous one. The top navigation bar and toolbar are identical. The 'Logs' tab is selected in the 'Logs' section. The 'Logs' table shows a single log entry: 'User: Bahatam Amulya, Application: Unknown, Operation: /services/data/v57.0/tooling/execut..., Time: 22/02/2023, 12:43:13, Status: Success, Read: 5.6 KB, Size: 5.6 KB'. The central workspace contains two panes: 'Execution Log' on the left and 'Enter Apex Code' on the right. The 'Execution Log' pane shows detailed memory allocations and operations. The 'Enter Apex Code' pane contains the following code:

```

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

```

Below the code editor are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. At the bottom of the workspace are checkboxes for 'This Frame', 'Executable', 'Debug Only', and 'Filter', followed by a link 'Click here to filter the log list'.

EXERCISE 3

True Or False

The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links for File, Edit, Debug, Test, Workspace, Help, and a search bar. Below the navigation bar, a message says "Log executeAnonymous @2/27/2023, 8:22:27 AM". The main area is divided into several sections:

- Execution Log:** A table showing a single log entry: Timestamp (08:22:27:003), Event (USER_DEBUG), and Details ([5]DEBUG|True).
- Enter Apex Code:** A code editor window containing the following Apex code:

```
1 Integer myunluckyNumber = 7;
2 Integer myluckyNumber = 15;
3 if (myluckyNumber != myunluckyNumber + 8) {
4     System.debug('False');
5 } else {
6     System.debug('True');
7 }
```
- Logs:** A table showing a log entry from Bahatam Amulya. The table has columns for User, Application, Operation, Time, Status, Read, and Size. The entry details are: User (Bahatam Amulya), Application (Unknown), Operation (/services/data/v57.0/tooling/executeAn...), Time (2/27/2023, 8:22:27 AM), Status (Success), Read (checked), and Size (2.62 KB).

EXERCISE 4

Boolean True or False

The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links for File, Edit, Debug, Test, Workspace, and Help. Below the navigation bar, a message says "Log executeAnonymous @22/02/2023, 12:52:09". The main area is titled "Execution Log" and contains a table with three columns: Timestamp, Event, and Details. A single entry is shown: "12:52:09:002 USER_DEBUG [3][DEBUG]true". Below the log table is a modal window titled "Enter Apex Code" containing the following Apex code:

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

At the bottom of the modal are three buttons: "Open Log" (unchecked), "Execute" (disabled), and "Execute Highlighted" (disabled). The background of the developer console shows a "Logs" tab selected, displaying a table of logs. One log entry is visible:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 12:52:09	Success		2.35 KB

Below the logs table is a "Filter" button and a link "Click here to filter the log list".

EXERCISE 5

Date Method

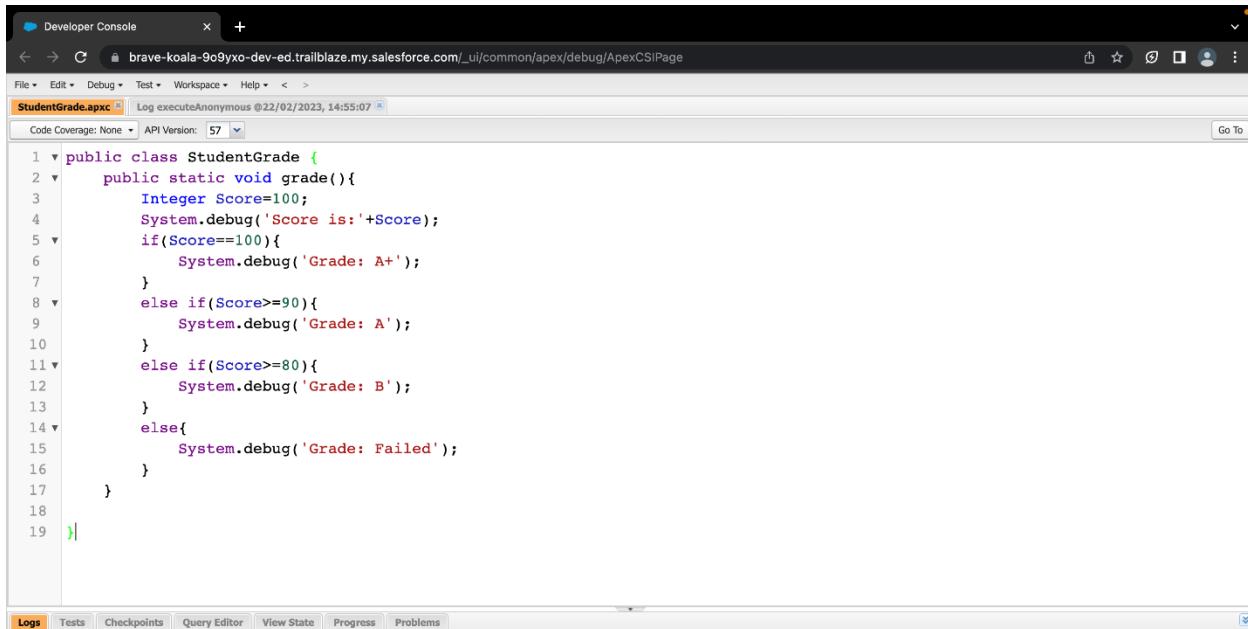
The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links for File, Edit, Debug, Test, Workspace, Help, and a back/forward button. Below the navigation is a header bar with the URL "brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage". A timestamp "Log executeAnonymous @22/02/2023, 11:33:10" is displayed. The main area is divided into several sections:

- Execution Log:** A table showing log entries with columns for Timestamp, Event, and Details. The log includes entries for USER_INFO, EXECUTION_ST..., and various HEAP_ALLOCATE operations.
- Enter Apex Code:** A modal window containing the following Apex code:

```
1 Date a1= Date.today();
2 System.debug(a1);
3 Date a2= a1.addDays(30);
4 System.debug(a2);
```
- Log Tab:** A table showing the execution details with columns for User, Application, Operation, Time, Status, Read, and Size. One entry is shown for "Bahatan Amulya" with an application of "Unknown" and a status of "Success".

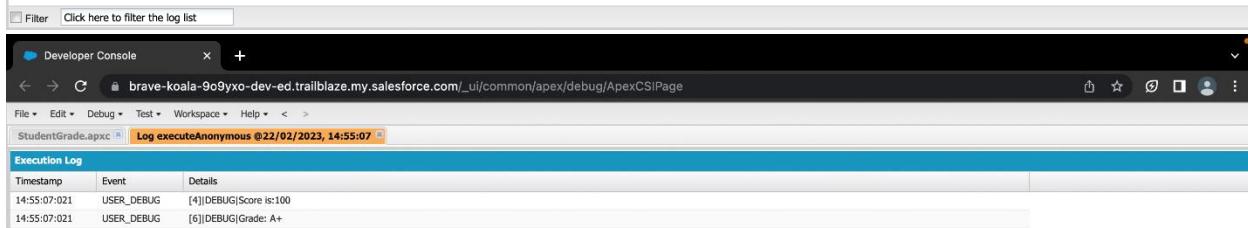
EXERCISE 6

The use of “If..else if...else”



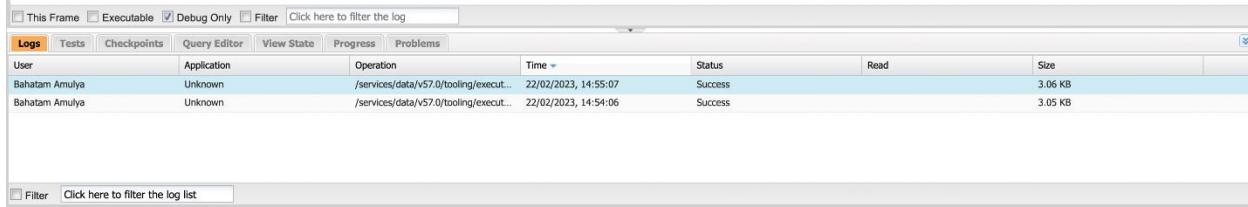
The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links like File, Edit, Debug, Test, Workspace, Help, and a user icon. Below the navigation bar, the title bar displays "Developer Console" and the URL "brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage". The main area contains the Apex code for "StudentGrade.apxc". The code defines a class "StudentGrade" with a static method "grade". This method initializes an integer variable "Score" to 100, then uses a series of nested if statements to determine a grade based on the score. If the score is 100, it outputs "Grade: A+". If the score is 90 or higher, it outputs "Grade: A". If the score is 80 or higher, it outputs "Grade: B". Otherwise, it outputs "Grade: Failed". Below the code editor, there's a "Logs" tab which is currently selected. It shows a table with two rows of log entries. Both entries were made by "Bahatan Amulya" at different times on 22/02/2023, 14:55:07 and 14:54:06. The logs indicate successful operations with sizes of 3.06 KB and 3.05 KB respectively.

User	Application	Operation	Time	Status	Read	Size
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:55:07	Success		3.06 KB
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:54:06	Success		3.05 KB



This screenshot shows the execution log for the "StudentGrade.apxc" class. The interface is similar to the previous one, with a navigation bar and a title bar. The "Logs" tab is selected, showing an "Execution Log" table. The log contains two entries: a USER_DEBUG log at 14:55:07:021 with the message "[4]||DEBUG|Score is:100" and another USER_DEBUG log at 14:55:07:021 with the message "[6]||DEBUG|Grade: A+".

Timestamp	Event	Details
14:55:07:021	USER_DEBUG	[4] DEBUG Score is:100
14:55:07:021	USER_DEBUG	[6] DEBUG Grade: A+



This screenshot shows the logs table for the "StudentGrade.apxc" class. The interface is consistent with the previous ones. The "Logs" tab is selected, displaying a table of log entries. There are two entries from "Bahatan Amulya" at different times: one at 22/02/2023, 14:55:07 and another at 22/02/2023, 14:54:06. Both entries are successful and have sizes of 3.06 KB and 3.05 KB respectively.

User	Application	Operation	Time	Status	Read	Size
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:55:07	Success		3.06 KB
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 14:54:06	Success		3.05 KB

EXERCISE 7

The use of “Apex – for Loop”

Developer Console

brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

BillingObject.apxc Log executeAnonymous @23/02/2023, 12:46:27

```

1 // This is a class named BillingObject that contains a static method called createrecords.
2 public class BillingObject {
3     // This method creates three records of the custom object "Billing__c" with the "Amount_Paid__c" field set to 5000 and "S
4     public static void createRecords() {
5         Billing__c b = new Billing__c();
6         b.Amount_Paid__c = 5000;
7         b.Status__c = 'Paid';
8         Billing__c b1 = new Billing__c();
9         b1.Amount_Paid__c = 5000;
10        b1.Status__c = 'Paid';
11        Billing__c b2 = new Billing__c();
12        b2.Amount_Paid__c = 5000;
13        b2.Status__c = 'Paid';
14        // Create a list of Billing__c records and add the previously created records to it.
15        List<Billing__c> billingList = new List<Billing__c>();
16        billingList.add(b);
17        billingList.add(b1);
18        billingList.add(b2);
19        // Try to insert the billingList records into the database.
20        try {
21            insert billingList;
22        }

```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 12:46:27	Success		9.2 KB

Filter Click here to filter the log list

Developer Console

brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

BillingObject.apxc Log executeAnonymous @23/02/2023, 12:46:27

```

1 // This is a class named BillingObject that contains a static method called createrecords.
2 public class BillingObject {
3     // This method creates three records of the custom object "Billing__c" with the "Amount_Paid__c" field set to 5000 and "S
4     public static void createRecords() {
5         Billing__c b = new Billing__c();
6         b.Amount_Paid__c = 5000;
7         b.Status__c = 'Paid';
8         Billing__c b1 = new Billing__c();
9         b1.Amount_Paid__c = 5000;
10        b1.Status__c = 'Paid';
11        Billing__c b2 = new Billing__c();
12        b2.Amount_Paid__c = 5000;
13        b2.Status__c = 'Paid';
14        // Create a list of Billing__c records and add the previously created records to it.
15        List<Billing__c> billingList = new List<Billing__c>();
16        billingList.add(b);
17        billingList.add(b1);
18        billingList.add(b2);
19        // Try to insert the billingList records into the database.
20        try {
21            insert billingList;
22        }
23        // catch (Exception e) {
24            //system.debug('Invalid Data');
25        }
26        // Query the database for all "Billing__c" records created today and store them in the billingList variable.
27        billingList = [SELECT Id, Name, Status__c FROM Billing__c WHERE CreatedDate = today];
28        system.debug('Value of BillingList: ' + billingList);
29
30        // Create a new list to hold the Billing record names.
31        List<String> billingNames = new List<String>();
32
33        // Loop through the records in billingList and add the names of the records with a status of "Paid" to the billingName
34        for (Billing__c bb : billingList) {
35            if (bb.Status__c == 'Paid') {
36                System.debug('Value of Current record over in the Loop: ' + bb);
37                billingNames.add(bb.Name);
38            }
39        }
40        // Output the billingNames list to the debug log.
41        system.debug('Billing Record Names are: ' + billingNames);
42    }

```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Bahatan Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 12:46:27	Success		9.2 KB

Filter Click here to filter the log list

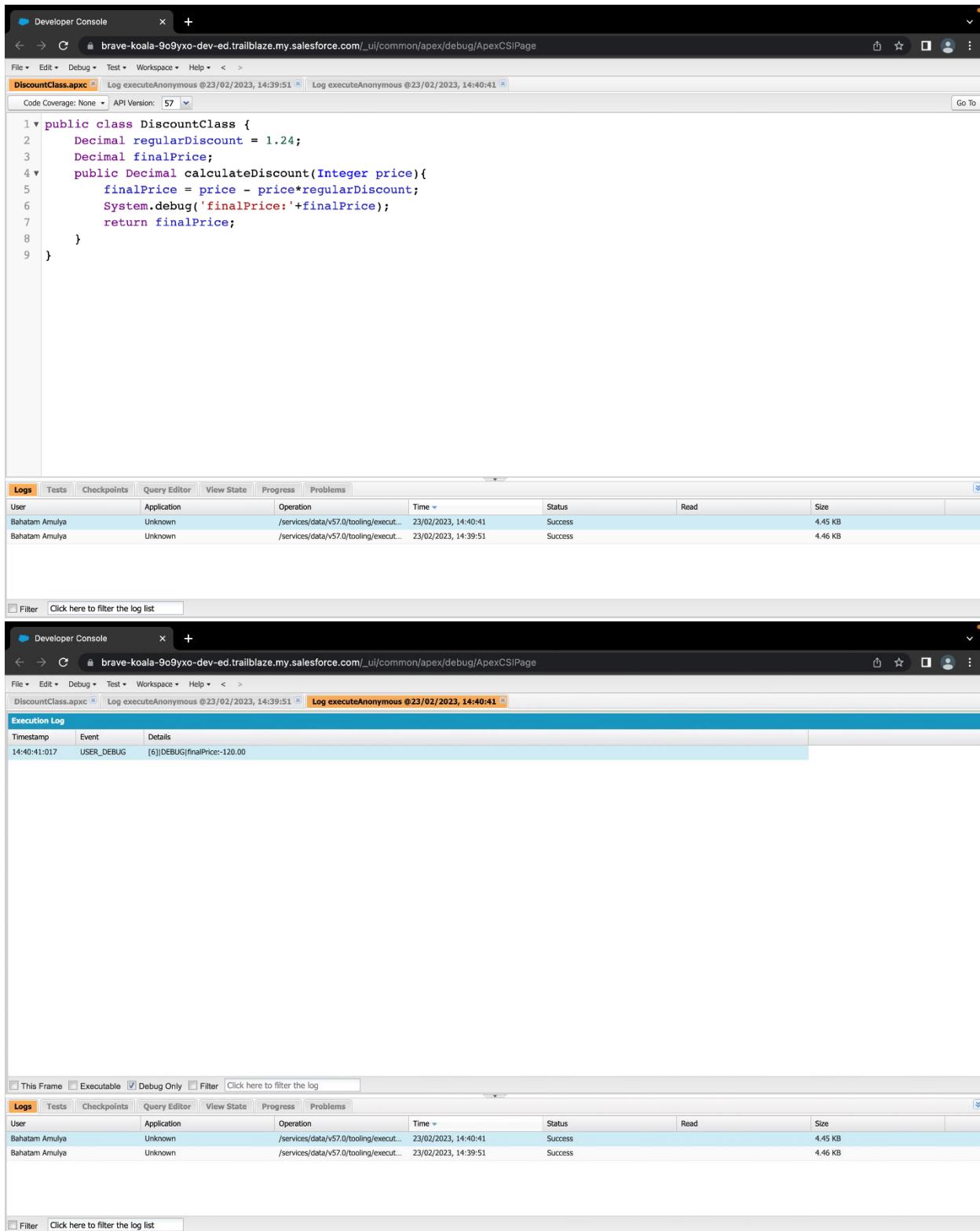
CAPSTONE MODULE 3

The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links for File, Edit, Debug, Test, Workspace, Help, and a search bar. Below the navigation is a tab bar with 'BillingObject.apxc' and 'Log executeAnonymous @23/02/2023, 12:46:27'. The main area is divided into several sections:

- Execution Log:** A table showing debug logs with columns for Timestamp, Event, and Details. The log entries show the creation of three Billing objects with IDs a042w000000xchAAA, a042w000000xchnAAA, and a042w000000xchnAAA, and their status being set to 'Paid'.
- Enter Apex Code:** A modal window containing the Apex code `BillingObject.createRecords();` with buttons for Open Log, Execute, and Execute Highlighted.
- Logs:** A table showing a single log entry from user Bahatan Amulya at 23/02/2023, 12:46:27, with operation '/services/data/v57.0/tooling/execut...', status Success, and size 9.2 KB.

EXERCISE 8

The use of Constants in Apex



The screenshot shows three panels of the Salesforce Developer Console:

- Top Panel:** Shows the code for a class named `DiscountClass`. The code defines a constant `regularDiscount` with a value of `1.24`, and a method `calculateDiscount` that takes an `Integer price` and returns the final price after applying the discount.
- Middle Panel:** Shows the logs for the execution of the anonymous apex script. It lists two entries from the user "Bahatam Amulya" at different times, both showing a success status and a size of 4.46 KB.
- Bottom Panel:** Shows the execution log for the anonymous apex script. It contains one entry: `14:40:41:017 USER_DEBUG [6] DEBUG|finalPrice:-120.00`.

```

public class DiscountClass {
    Decimal regularDiscount = 1.24;
    Decimal finalPrice;
    public Decimal calculateDiscount(Integer price){
        finalPrice = price - price*regularDiscount;
        System.debug('finalPrice:' + finalPrice);
        return finalPrice;
    }
}

```

EXERCISE 9

The use of Interface in Apex

```
Developer Console +  
brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage  
File Edit Debug Test Workspace Help < >  
InterfaceExample.apxc  
Code Coverage: None API Version: 57 Go To  
1 v public interface InterfaceExample {  
2     Double percentageDiscountToBeApplied();  
3 }
```

```
Developer Console +  
brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage  
File Edit Debug Test Workspace Help < >  
InterfaceExample.apxc PremiumCustomer.apxc  
Code Coverage: None API Version: 57 Go To  
1 v public class PremiumCustomer implements InterfaceExample{  
2     public Double percentageDiscountToBeApplied(){  
3         return 0.30;  
4     }  
5 }
```

CAPSTONE MODULE 3

The screenshot shows the Salesforce Developer Console interface. At the top, the URL is `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the header, there are tabs for `InterfaceExample.apxc`, `PremiumCustomer.apxc`, and `Log executeAnonymous @23/02/2023, 15:19:48`. The main area displays the `Execution Log` with the following data:

Timestamp	Event	Details
15:19:48:006	USER_DEBUG	[3][DEBUG]0.3

Below the log, there is a section titled "Logs" which lists several log entries from the user "Bahatam Amulya". The logs are as follows:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:19:48	Success		3.81 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:02:59	Success		1.73 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:58:20	Success		3.55 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:51	Success		3.61 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:20	Success		3.61 KB
Bahatam Amulya	Unknown	ApexTestHandler	23/02/2023, 14:55:38	Success	Unread	986 bytes

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

The second screenshot shows the same developer console interface. The URL is now `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The tabs are `InterfaceExample.apxc`, `PremiumCustomer.apxc`, and `Log executeAnonymous @23/02/2023, 15:19:48`. The main area displays the `Execution Log` with the following data:

Timestamp	Event	Details
15:19:48:006	USER_DEBUG	[3][DEBUG]0.3

Below the log, there is a section titled "Logs" which lists several log entries from the user "Bahatam Amulya". The logs are as follows:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:19:48	Success		3.81 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:02:59	Success		1.73 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:58:20	Success		3.55 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:51	Success		3.61 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:20	Success		3.61 KB
Bahatam Amulya	Unknown	ApexTestHandler	23/02/2023, 14:55:38	Success	Unread	986 bytes

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

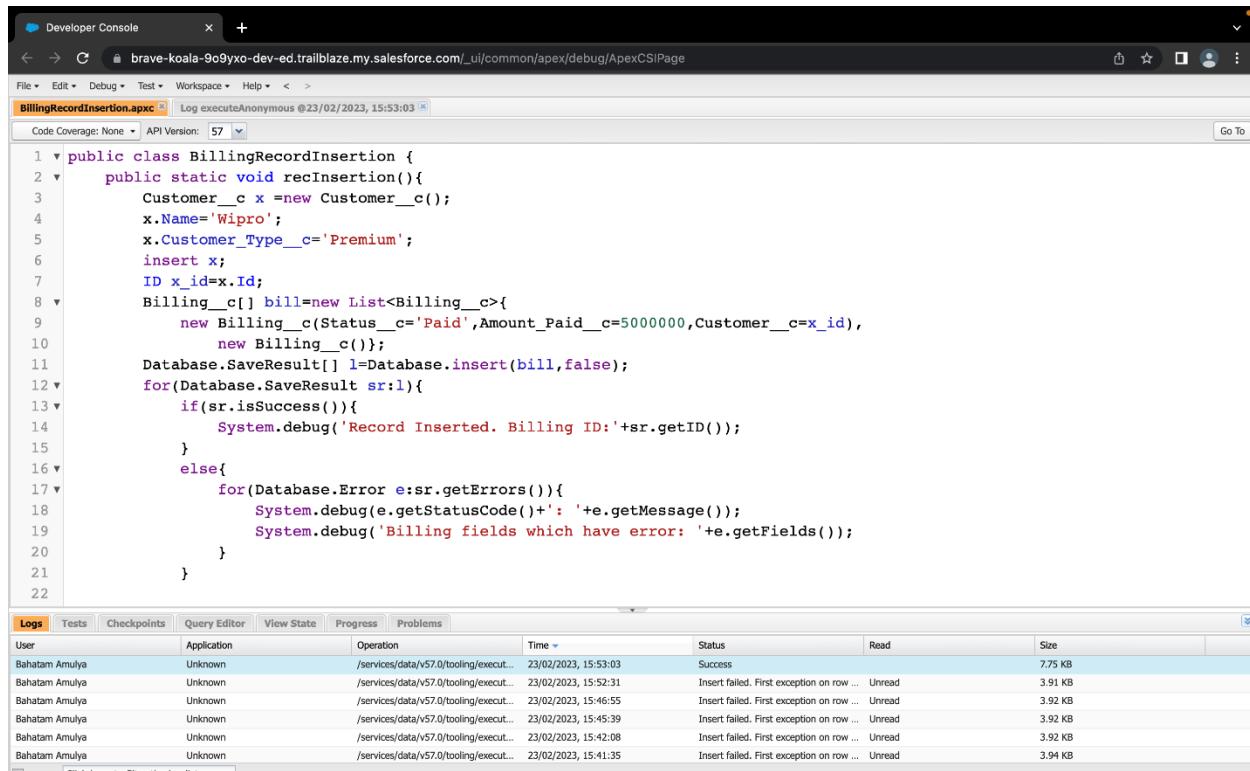
CAPSTONE MODULE 3

The screenshot shows the Salesforce Developer 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, there are tabs for InterfaceExample.apxc, PremiumCustomer.apxc, Log executeAnonymous @23/02/2023, 15:19:48, normalCustomer.apxc, and Log executeAnonymous @23/02/2023, 15:21:44. The main area is titled "Execution Log" and contains a table with columns: Timestamp, Event, and Details. One entry is visible: 15:21:44:013 USER_DEBUG [3]DEBUG|0.1. Below this, there's a larger section titled "Logs" which includes filters for This Frame, Executable, and Debug Only, along with a "Filter" button and a link to "Click here to filter the log". This section displays a table of log entries with columns: User, Application, Operation, Time, Status, Read, and Size. Six log entries are listed, all from the user "Bahatam Amulya" and application "Unknown", with various operation URLs and timestamps between 23/02/2023, 14:57:20 and 23/02/2023, 15:21:44, all marked as Success and 3.61 KB in size.

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:21:44	Success		3.85 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:19:48	Success		3.81 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:02:59	Success		1.71 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:58:20	Success		3.56 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:51	Success		3.61 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:57:20	Success		3.61 KB

EXERCISE 10

Demo on DML Insert Operation Using Database methods



```

1  public class BillingRecordInsertion {
2    public static void recInsertion(){
3      Customer__c x =new Customer__c();
4      x.Name='Wipro';
5      x.Customer_Type__c='Premium';
6      insert x;
7      ID x_id=x.Id;
8      Billing__c[] bill=new List<Billing__c>{
9        new Billing__c(Status__c='Paid',Amount_Paid__c=5000000,Customer__c=x_id),
10       new Billing__c());
11     Database.Saveresult[] l=Database.insert(bill,false);
12   for(Database.Saveresult sr:l){
13     if(sr.isSuccess()){
14       System.debug('Record Inserted. Billing ID:'+sr.getID());
15     }
16   else{
17     for(Database.Error e:sr.getErrors()){
18       System.debug(e.getStatusCode()+' : '+e.getMessage());
19       System.debug('Billing fields which have error: '+e.getFields());
20     }
21   }
22 }

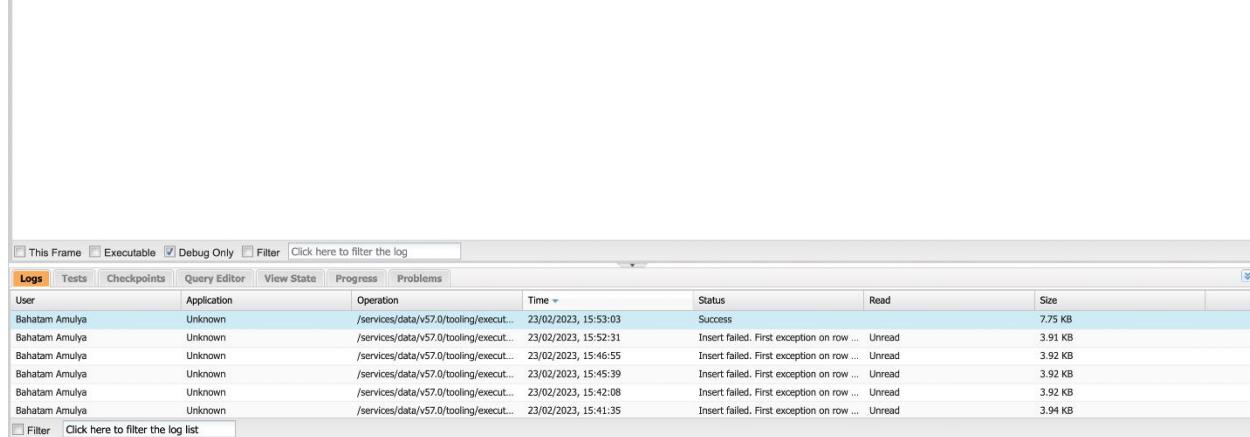
```

Logs

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:53:03	Success		7.75 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:52:31	Insert failed. First exception on row ...	Unread	3.91 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:46:55	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:45:39	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:42:08	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:41:35	Insert failed. First exception on row ...	Unread	3.94 KB

Execution Log

Timestamp	Event	Details
15:53:03:100	USER_DEBUG	[14]DEBUG Record Inserted. Billing ID:a042w00000xodfFAAQ
15:53:03:111	USER_DEBUG	[18]DEBUG REQUIRED_FIELD_MISSING: Required fields are missing: [Customer__c]
15:53:03:112	USER_DEBUG	[19]DEBUG Billing fields which have error: [Customer__c]

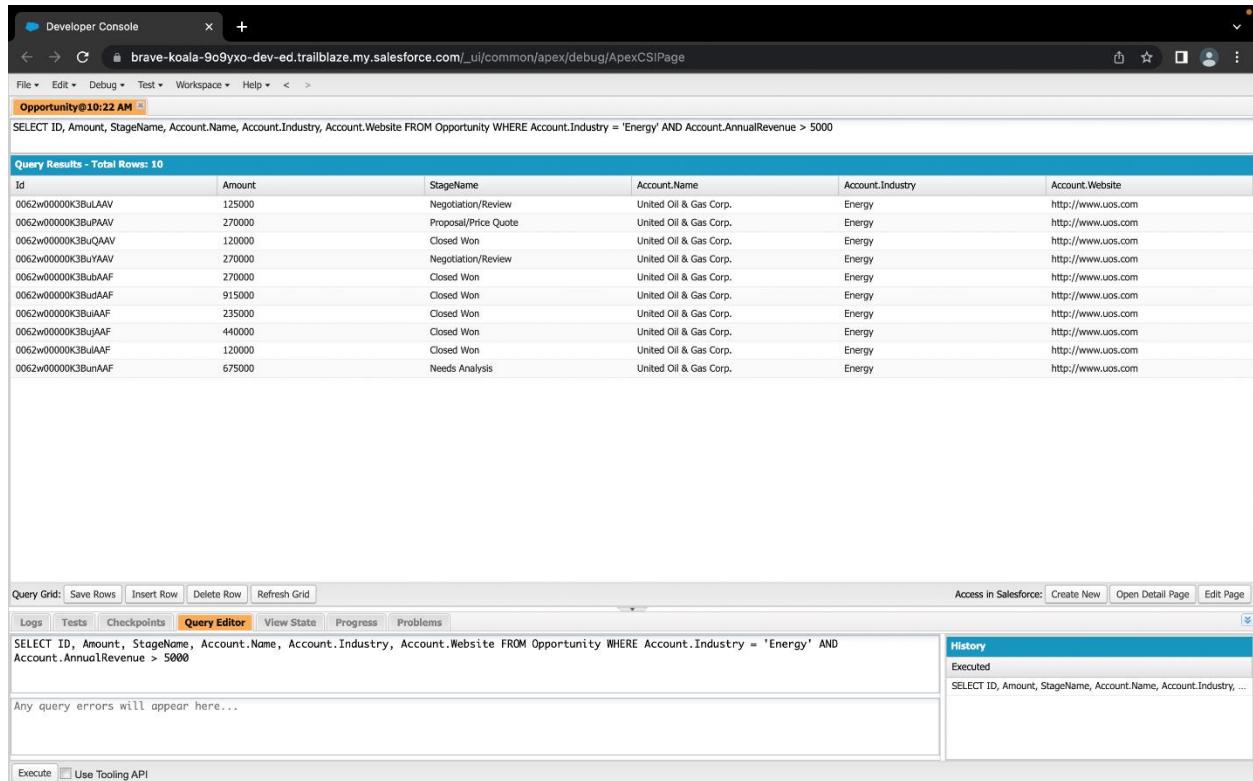


Logs

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:53:03	Success		7.75 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:52:31	Insert failed. First exception on row ...	Unread	3.91 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:46:55	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:45:39	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:42:08	Insert failed. First exception on row ...	Unread	3.92 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 15:41:35	Insert failed. First exception on row ...	Unread	3.94 KB

EXERCISE 11

Write and execute SOQL queries from Developer Console



The screenshot shows the Salesforce Developer Console interface. At the top, there's a navigation bar with links like File, Edit, Debug, Test, Workspace, and Help. Below the navigation bar, a message says "Opportunity@10:22 AM". The main area displays a query result grid and the Query Editor.

Query Results - Total Rows: 10

Id	Amount	StageName	Account.Name	Account.Industry	Account.Website
0062w00000K3BuAAV	125000	Negotiation/Review	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuPAAV	270000	Proposal/Price Quote	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuQAAV	120000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuYAAV	270000	Negotiation/Review	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuAAF	270000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuIAAF	915000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuJAAF	235000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuJAAF	440000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuIAAF	120000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuIAAF	675000	Needs Analysis	United Oil & Gas Corp.	Energy	http://www.uos.com

Query Grid: Save Rows | Insert Row | Delete Row | Refresh Grid | **Access in Salesforce:** Create New | Open Detail Page | Edit Page

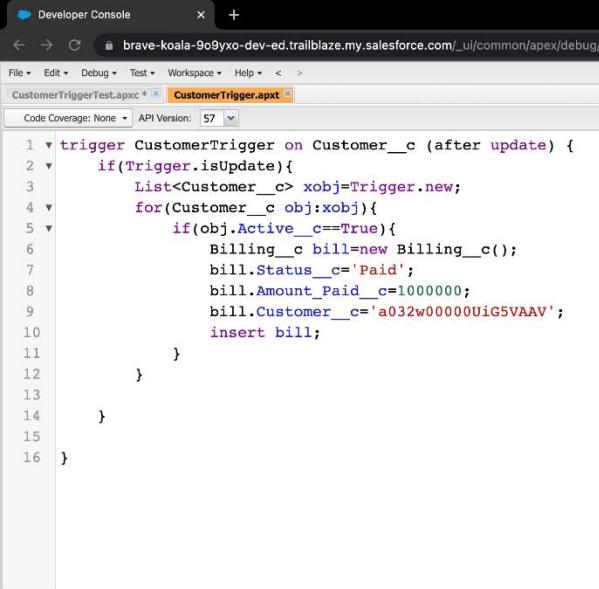
Logs | **Tests** | **Checkpoints** | **Query Editor** | View State | Progress | Problems | **History**
Executed
SELECT ID, Amount, StageName, Account.Name, Account.Industry, Account.Website FROM Opportunity WHERE Account.Industry = 'Energy' AND Account.AnnualRevenue > 5000

Any query errors will appear here...

Execute | Use Tooling API

EXERCISE 12

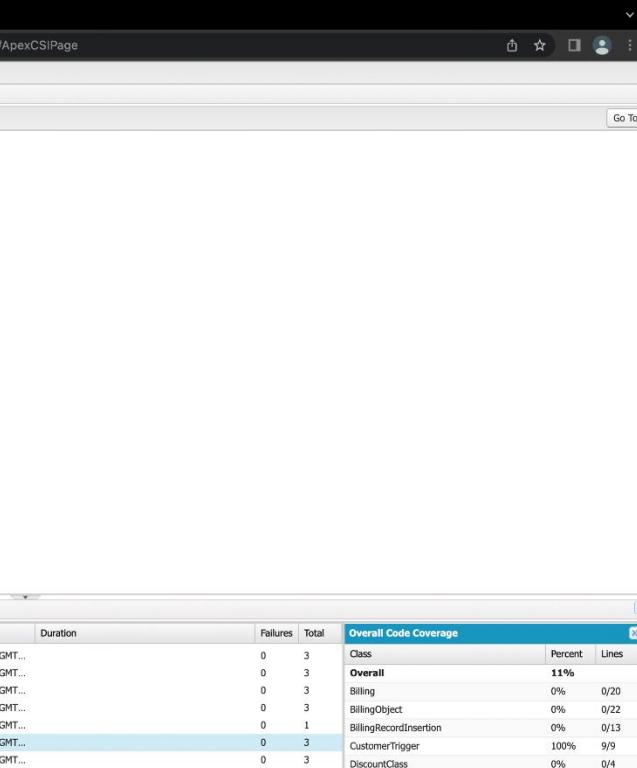
Writing an apex trigger named as CustomerTrigger



```

trigger CustomerTrigger on Customer__c (after update) {
    if(Trigger.isUpdate){
        List<Customer__c> xobj=Trigger.new;
        for(Customer__c obj:xobj){
            if(obj.Active__c==true){
                Billing__c bill=new Billing__c();
                bill.Status__c='Paid';
                bill.Amount_Paid__c=1000000;
                bill.Customer__c='a032w00000UiG5VAAV';
                insert bill;
            }
        }
    }
}

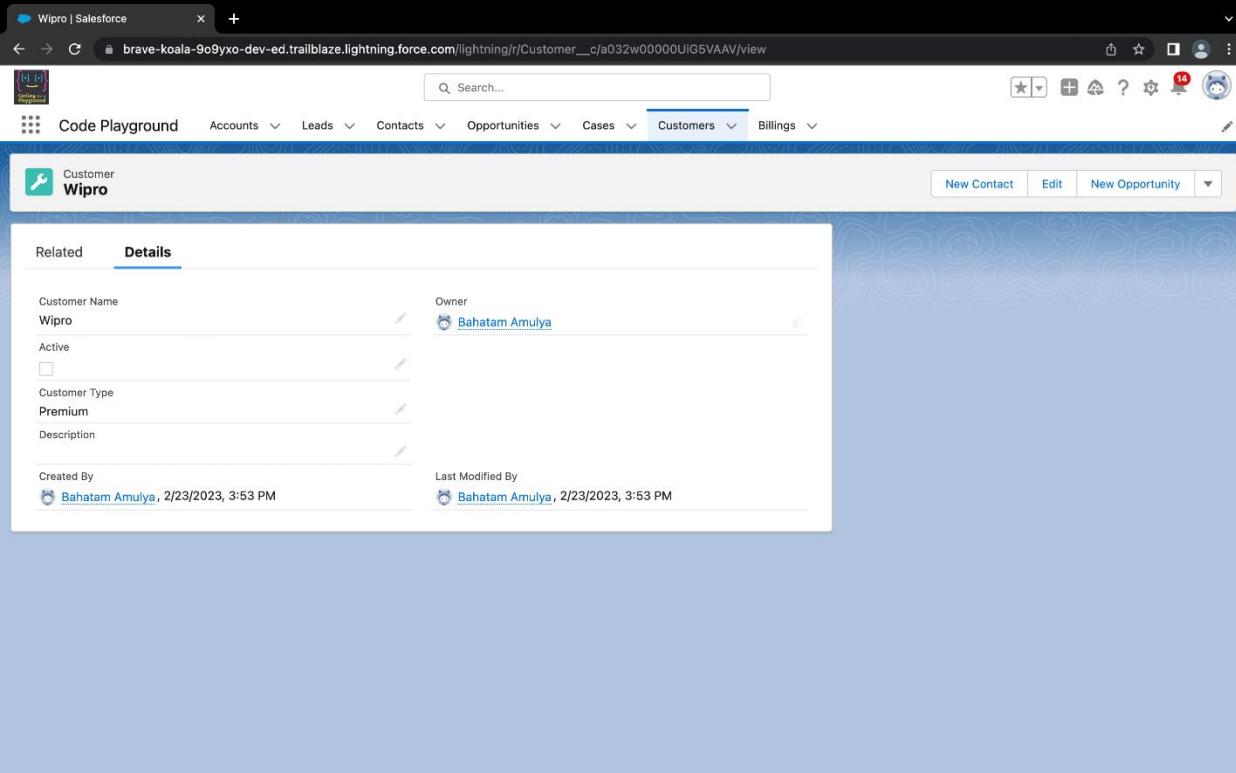
```



Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	7072w00008LTTNf	Fri Feb 24 2023 10:52:40 GMT...		0	3
✓	7072w00008LYY8	Fri Feb 24 2023 11:44:59 GMT...		0	3
✓	7072w00008LJz2o	Fri Feb 24 2023 12:00:28 GMT...		0	3
✓	7072w00008LJa6U	Fri Feb 24 2023 12:02:07 GMT...		0	3
✓	7072w00008Lja7I	Fri Feb 24 2023 12:02:16 GMT...		0	1
✓	7072w00008Lja81	Fri Feb 24 2023 12:02:28 GMT...		0	3
✓	7072w00008LbND	Fri Feb 24 2023 12:17:44 GMT...		0	3

Overall Code Coverage

Class	Percent	Lines
Overall	11%	
Billing	0%	0/20
BillingObject	0%	0/22
BillingRecordInsertion	0%	0/13
CustomerTrigger	100%	9/9
DiscountClass	0%	0/4



CAPSTONE MODULE 3

Wipro | Salesforce

brave-koala-9c9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Customer__c/a032w00000UIG5VAA/view

Code Playground Accounts Leads Contacts Opportunities Cases Customers Billings

Customer Wipro

New Contact Edit New Opportunity

Related Details

Customer Name: Wipro

Active:

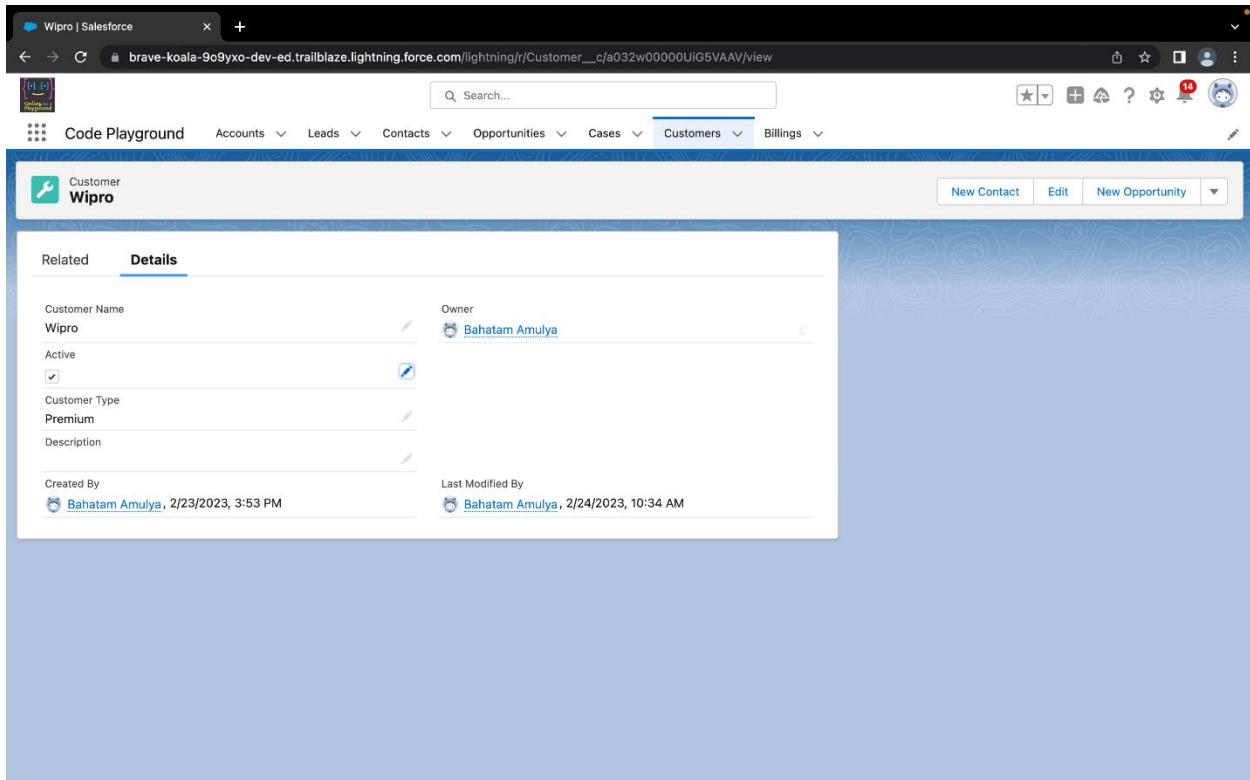
Customer Type: Premium

Description:

Created By: Bahatam Amulya, 2/23/2023, 3:53 PM

Owner: Bahatam Amulya

Last Modified By: Bahatam Amulya, 2/24/2023, 10:34 AM



B - 0048 | Salesforce

brave-koala-9c9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Billing__c/a042w00000xojCtAA/view

Code Playground Accounts Leads Contacts Opportunities Cases Customers Billings

Billing B - 0048

New Contact Edit New Opportunity

Related Details

Bill Number: B - 0048

Amount Paid: ₹10,00,000

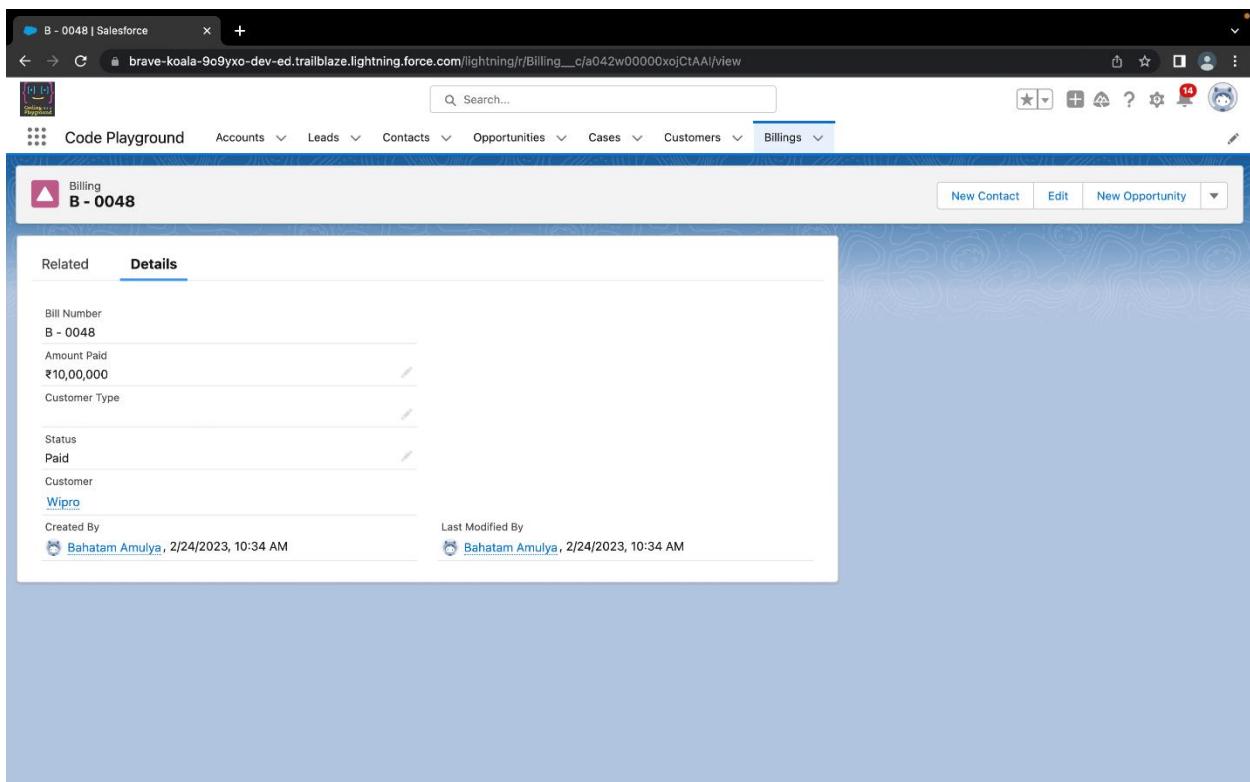
Customer Type:

Status: Paid

Customer: Wipro

Created By: Bahatam Amulya, 2/24/2023, 10:34 AM

Last Modified By: Bahatam Amulya, 2/24/2023, 10:34 AM



EXERCISE 13

Test Class for CustomerTrigger

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes File, Edit, Debug, Test, Workspace, Help, and tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The main area displays the code for `CustomerTriggerTest.apxc`. The code itself is as follows:

```

4 static void testCustomerTrigger() {
5     // Create test data
6     Customer__c xx = new Customer__c();
7     xx.Name = 'Test Customer';
8     xx.Active__c = false;
9     insert xx;
10    // Test trigger behavior when updating customer to active
11    Test.startTest();
12    xx.Active__c = true;
13    update xx;
14    if(xx.Active__c == true){
15        Billing__c x = new Billing__c();
16        x.Status__c = 'paid';
17        x.Amount_Paid__c= 100000000;
18        System.assertEquals(x.Status__c, 'paid' );
19        System.assertEquals(x.Amount_Paid__c,100000000 );
20    }
21    System.assertEquals(xx.Name,'Test Customer');
22    Test.stopTest();
23 }
24
25

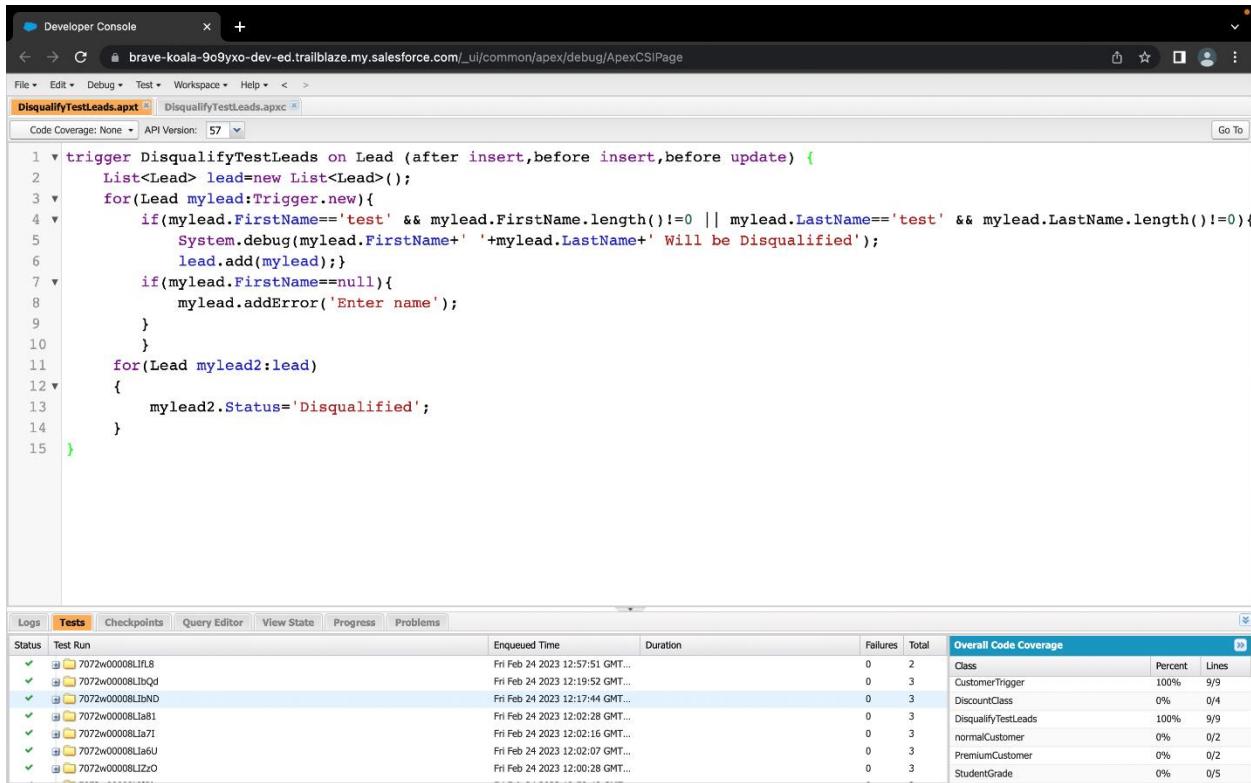
```

Below the code, the "Tests" tab is selected, showing a list of test runs. The table has columns for Status, Test Run, Enqueued Time, Duration, Failures, Total, and Overall Code Coverage.

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	7072w000008LjYY8	Fri Feb 24 2023 11:44:59 GMT...		0	3	Class: Overall 11%
✓	7072w000008LjZzO	Fri Feb 24 2023 12:00:28 GMT...		0	3	Percent: 0% Lines: 0/20
✓	7072w000008La6U	Fri Feb 24 2023 12:02:07 GMT...		0	3	BillingObject 0% 0/22
✓	7072w000008La7I	Fri Feb 24 2023 12:02:16 GMT...		0	1	BillingRecordInsertion 0% 0/13
✓	7072w000008La81	Fri Feb 24 2023 12:02:28 GMT...		0	3	CustomerTrigger 100% 9/9
✓	7072w000008LbND	Fri Feb 24 2023 12:17:44 GMT...		0	3	DiscountClass 0% 0/4
✓	7072w000008LbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3	

EXERCISE 14

DisqualifyTestLeads Trigger



The screenshot shows the Salesforce Developer Console interface. At the top, the URL is `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the URL, the tab bar shows "DisqualifyTestLeads.apxt" is selected. The main area displays the Apex trigger code:

```

1 trigger DisqualifyTestLeads on Lead (after insert,before insert,before update) {
2     List<Lead> lead=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             lead.add(mylead);
7         }
8         if(mylead.FirstName==null){
9             mylead.addError('Enter name');
10        }
11    }
12    for(Lead mylead2:lead)
13    {
14        mylead2.Status='Disqualified';
15    }
}

```

Below the code, there is a table titled "Tests" showing the results of the test runs:

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	7072w00008LifL8	Fri Feb 24 2023 12:57:51 GMT...		0	2	Class
✓	7072w00008LbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3	CustomerTrigger
✓	7072w00008LbtND	Fri Feb 24 2023 12:17:44 GMT...		0	3	DiscountClass
✓	7072w00008La81	Fri Feb 24 2023 12:02:28 GMT...		0	3	DisqualifyTestLeads
✓	7072w00008Lia7I	Fri Feb 24 2023 12:02:16 GMT...		0	3	normalCustomer
✓	7072w00008La6U	Fri Feb 24 2023 12:02:07 GMT...		0	3	PremiumCustomer
✓	7072w00008LJz2O	Fri Feb 24 2023 12:00:28 GMT...		0	3	StudentGrade

EXERCISE 15

Test Class for DisqualifyTestLeads Trigger

Developer Console +

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

DisqualifyTestLeads.aptx ▾ DisqualifyTestLeads.apxc ▾

Code Coverage: None ▾ API Version: 57 ▾

Run Test Go To

```

1  @isTest
2  public class DisqualifyTestLeads {
3      @isTest
4      private static void insertData1(){
5          Lead A = new Lead();
6          A.FirstName = 'Test';
7          A.LastName = 'Anil';
8          A.Company = 'CTS';
9          Test.startTest();
10         insert A;
11         Test.stopTest();
12         System.assertEquals('Test', A.FirstName);
13         System.assertEquals('Anil', A.LastName);
14         System.assertEquals('CTS', A.Company);
15     }
16     @isTest
17     private static void insertData2(){
18         Lead B = new Lead();
19         B.LastName = 'Test';
20         B.Company = 'Wipro';
21         Test.startTest();
22         insert B;

```

Logs Tests Checkpoints Query Editor View State Progress Problems

Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	7072w00008LjfR8	Fri Feb 24 2023 12:57:51 GMT...		0	2
✓	7072w00008LjbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3
✓	7072w00008LjbND	Fri Feb 24 2023 12:17:44 GMT...		0	3
✓	7072w00008La81	Fri Feb 24 2023 12:02:28 GMT...		0	3
✓	7072w00008LaJzI	Fri Feb 24 2023 12:02:16 GMT...		0	3
✓	7072w00008La6U	Fri Feb 24 2023 12:02:07 GMT...		0	3
✓	7072w00008LjZz0	Fri Feb 24 2023 12:00:28 GMT...		0	3

Overall Code Coverage

Class	Percent	Lines
CustomerTrigger	100%	9/9
DiscountClass	0%	0/4
DisqualifyTestLeads	100%	9/9
normalCustomer	0%	0/2
PremiumCustomer	0%	0/2
StudentGrade	0%	0/5

Developer Console +

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

DisqualifyTestLeads.aptx ▾ DisqualifyTestLeads.apxc ▾

Code Coverage: None ▾ API Version: 57 ▾

Run Test Go To

```

7  A.LastName = 'Anil';
8  A.Company = 'CTS';
9  Test.startTest();
10    insert A;
11    Test.stopTest();
12    System.assertEquals('Test', A.FirstName);
13    System.assertEquals('Anil', A.LastName);
14    System.assertEquals('CTS', A.Company);
15 }
16 @isTest
17 private static void insertData2(){
18     Lead B = new Lead();
19     B.LastName = 'Test';
20     B.Company = 'Wipro';
21     Test.startTest();
22     insert B;
23     Test.stopTest();
24     System.assertEquals(null, B.FirstName);
25     System.assertEquals('Test', B.LastName);
26     System.assertEquals('Test', B.Company);
27 }
28 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

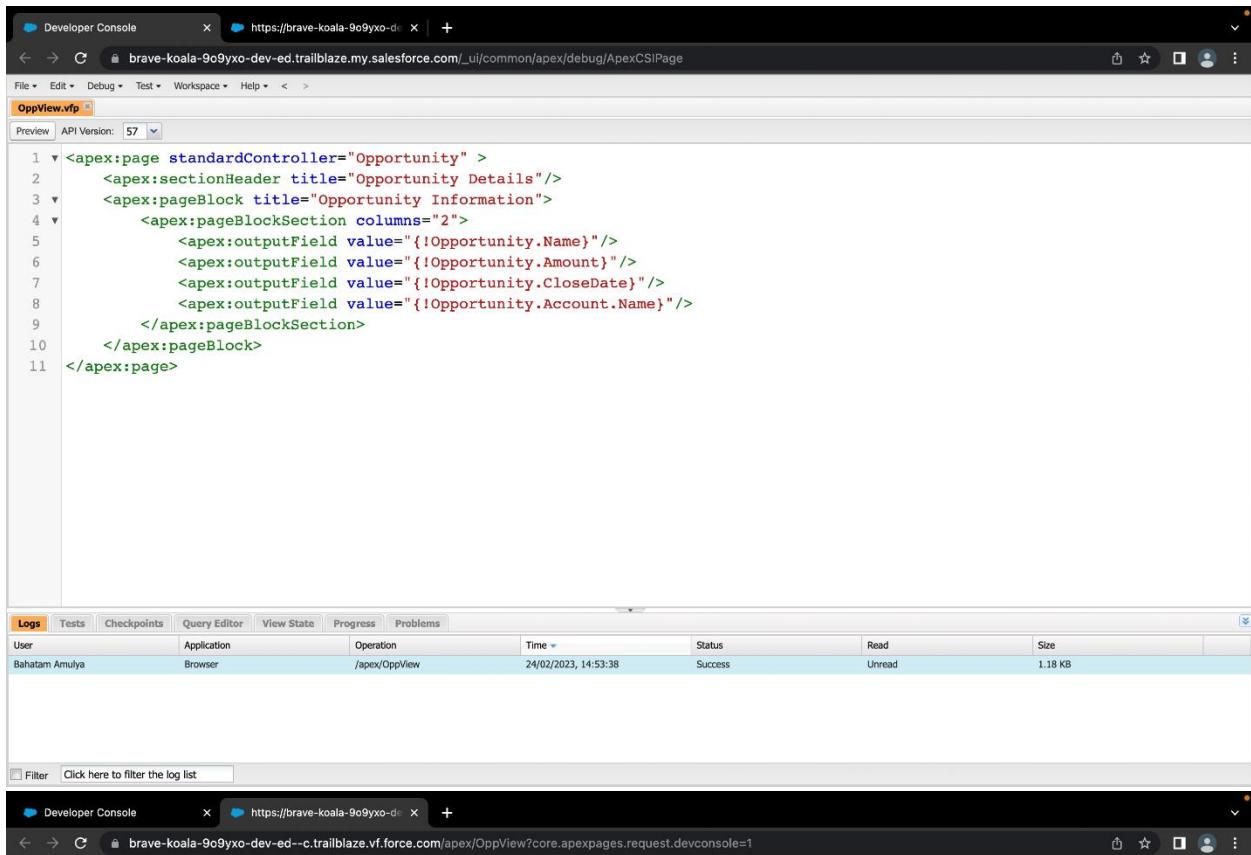
Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	7072w00008LjfR8	Fri Feb 24 2023 12:57:51 GMT...		0	2
✓	7072w00008LjbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3
✓	7072w00008LjbND	Fri Feb 24 2023 12:17:44 GMT...		0	3
✓	7072w00008La81	Fri Feb 24 2023 12:02:28 GMT...		0	3
✓	7072w00008LaJzI	Fri Feb 24 2023 12:02:16 GMT...		0	3
✓	7072w00008La6U	Fri Feb 24 2023 12:02:07 GMT...		0	3
✓	7072w00008LjZz0	Fri Feb 24 2023 12:00:28 GMT...		0	3

Overall Code Coverage

Class	Percent	Lines
CustomerTrigger	100%	9/9
DiscountClass	0%	0/4
DisqualifyTestLeads	100%	9/9
normalCustomer	0%	0/2
PremiumCustomer	0%	0/2
StudentGrade	0%	0/5

EXERCISE 16

Created a Visualforce page which displays Opportunity fields as output fields



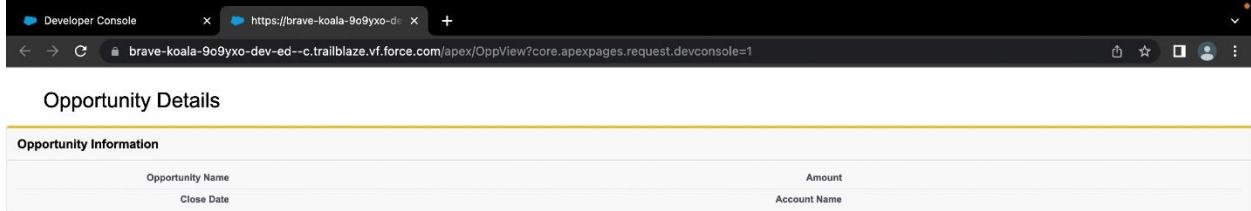
The screenshot shows the Salesforce Developer Console interface. At the top, the URL is https://brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. Below the URL, the page title is "OppView.vfp". The code editor contains the following Visualforce page code:

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

Below the code editor is a log table with one entry:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Browser	/apex/OppView	24/02/2023, 14:53:38	Success	Unread	1.18 KB

At the bottom of the developer console, there is a message bar: "Filter Click here to filter the log list".

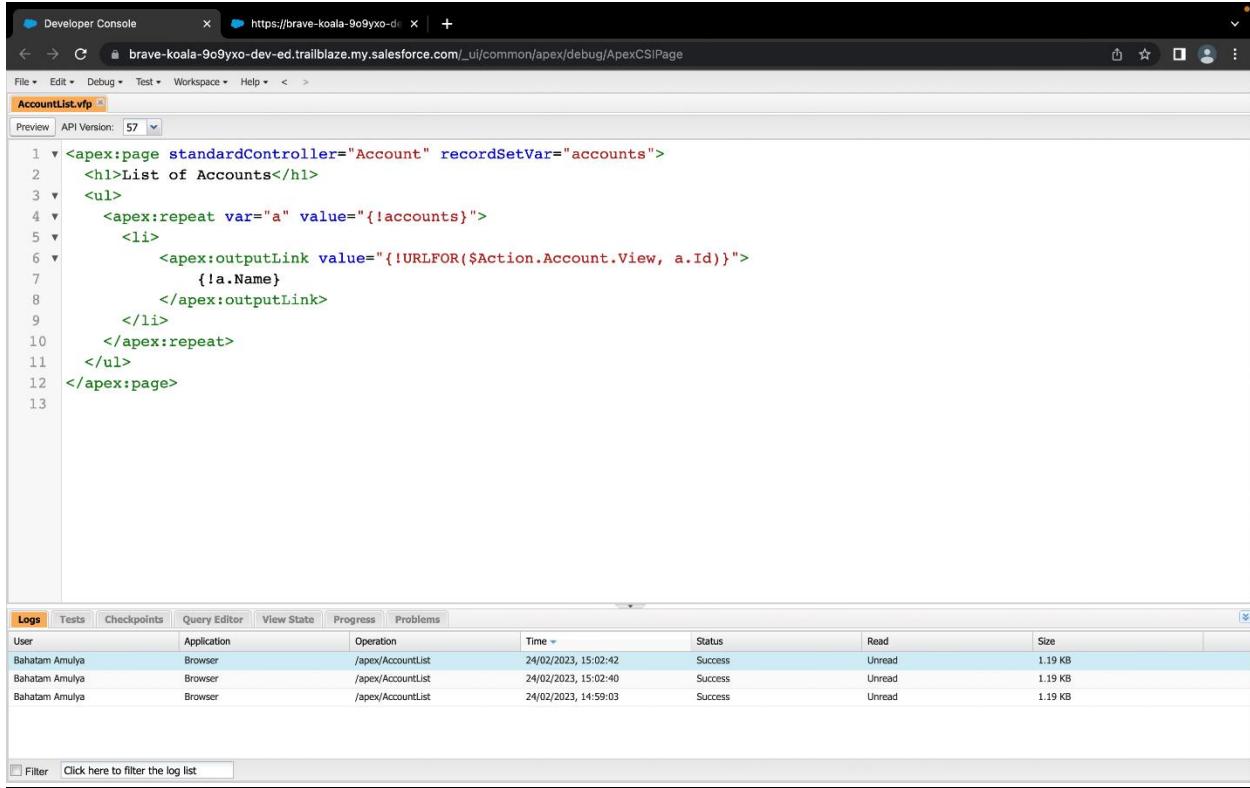


The screenshot shows a browser window displaying the "Opportunity Details" page. The URL is https://brave-koala-9o9yxo-dev-ed--c.trailblaze.vf.force.com/apex/OppView?core.apexpages.request.devconsole=1. The page has a header "Opportunity Details" and a section titled "Opportunity Information" with the following fields:

Opportunity Name	Amount
Close Date	Account Name

EXERCISE 17

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

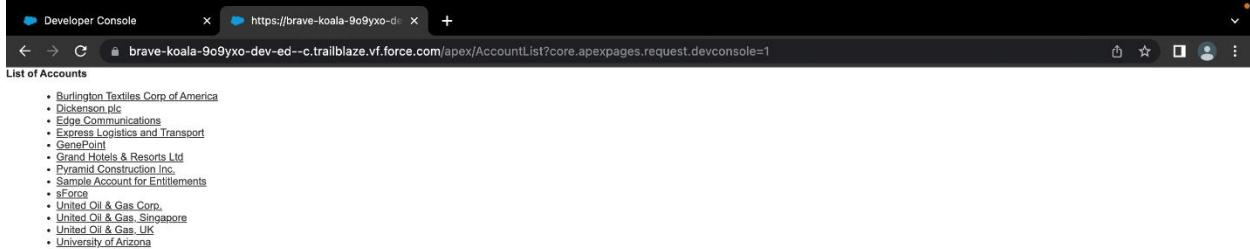


```

1 <apex:page standardController="Account" recordSetVar="accounts">
2   <h1>List of Accounts</h1>
3   <ul>
4     <apex:repeat var="a" value="{!accounts}">
5       <li>
6         <apex:outputLink value="{!!URLFOR($Action.Account.View, a.Id)}">
7           {!a.Name}
8         </apex:outputLink>
9       </li>
10      </apex:repeat>
11    </ul>
12  </apex:page>
13

```

Logs						
User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Browser	/apex/AccountList	24/02/2023, 15:02:42	Success	Unread	1.19 KB
Bahatam Amulya	Browser	/apex/AccountList	24/02/2023, 15:02:40	Success	Unread	1.19 KB
Bahatam Amulya	Browser	/apex/AccountList	24/02/2023, 14:59:03	Success	Unread	1.19 KB

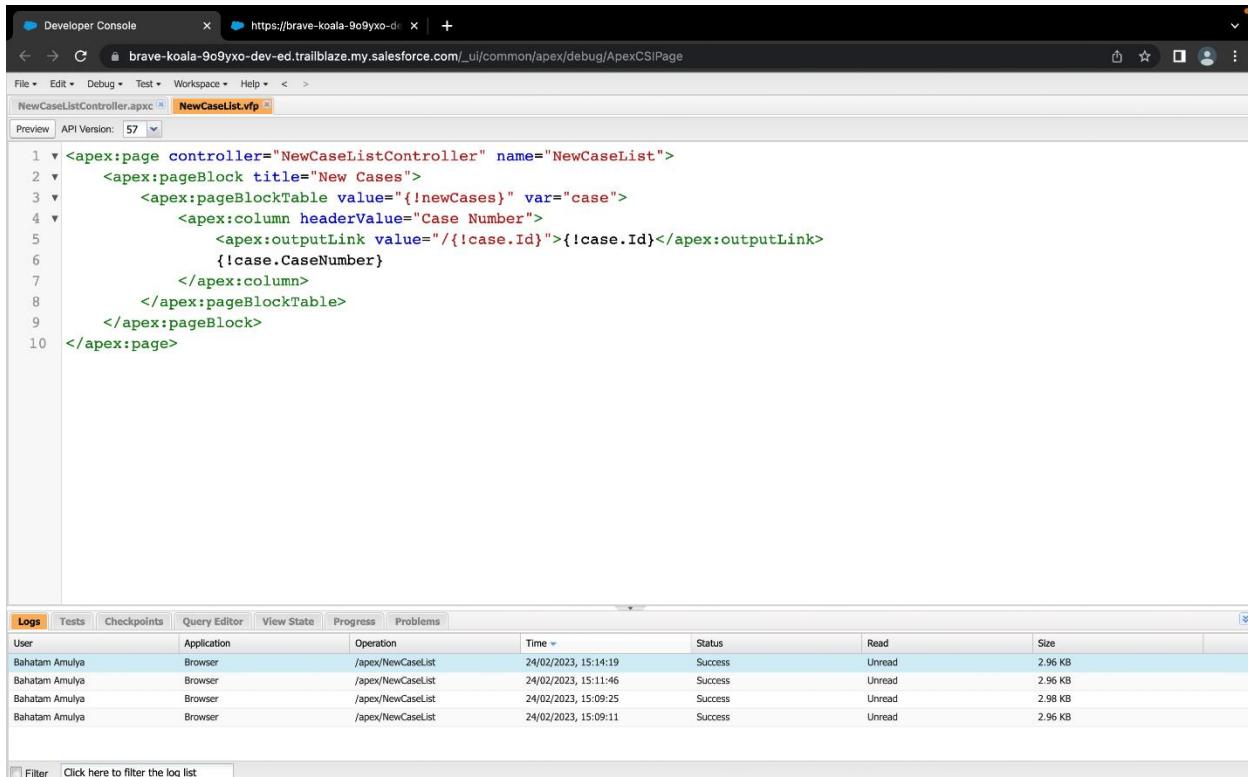


List of Accounts

- Burlington Textiles Corp of America
- Dickenson plc
- Edge Communications
- Express Logistics and Transport
- Grand Hotels & Resorts Ltd
- Pyramid Construction Inc.
- Sample Account for Entitlements
- sForce
- United Oil & Gas Corp.
- United Oil & Gas, Singapore
- United Oil & Gas, UK
- University of Arzona

EXERCISE 18

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



The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'Developer Console', the URL 'https://brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage', and various menu options like File, Edit, Debug, Test, Workspace, Help, and a workspace switcher. Below the navigation is a toolbar with 'Preview' and 'API Version: 57'. The main area displays the Visualforce page code:

```

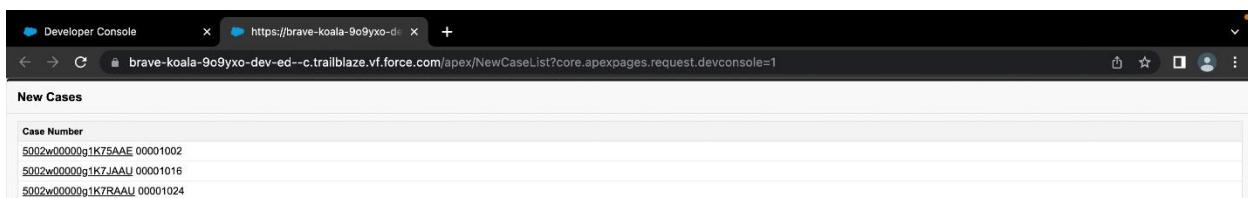
1 <apex:page controller="NewCaseListController" name="NewCaseList">
2   <apex:pageBlock title="New Cases">
3     <apex:pageBlockTable value="{!newCases}" var="case">
4       <apex:column headerValue="Case Number">
5         <apex:outputLink value="/{!case.Id}">{!case.Id}</apex:outputLink>
6         {!case.CaseNumber}
7       </apex:column>
8     </apex:pageBlockTable>
9   </apex:pageBlock>
10 </apex:page>

```

Below the code is a log table showing activity for the user Bahatam Amulya:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Browser	/apex/NewCaseList	24/02/2023, 15:14:19	Success	Unread	2.96 KB
Bahatam Amulya	Browser	/apex/NewCaseList	24/02/2023, 15:11:46	Success	Unread	2.96 KB
Bahatam Amulya	Browser	/apex/NewCaseList	24/02/2023, 15:09:25	Success	Unread	2.98 KB
Bahatam Amulya	Browser	/apex/NewCaseList	24/02/2023, 15:09:11	Success	Unread	2.96 KB

At the bottom of the developer console is a 'Logs' tab and a 'Click here to filter the log list' link.



The screenshot shows a browser window with the URL 'https://brave-koala-9c9yxo-dev-ed--c.trailblaze.vf.force.com/apex/NewCaseList?core.apexpages.request.devconsole=1'. The page title is 'New Cases'. The content area displays a table with three rows, each containing a case number:

Case Number
5002w00000g1K75AAE 00001002
5002w00000g1K7JAAU 00001016
5002w00000g1K7RAAU 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](#)