

Capstone Project

Travel App

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Batch : WIP – SF - 13

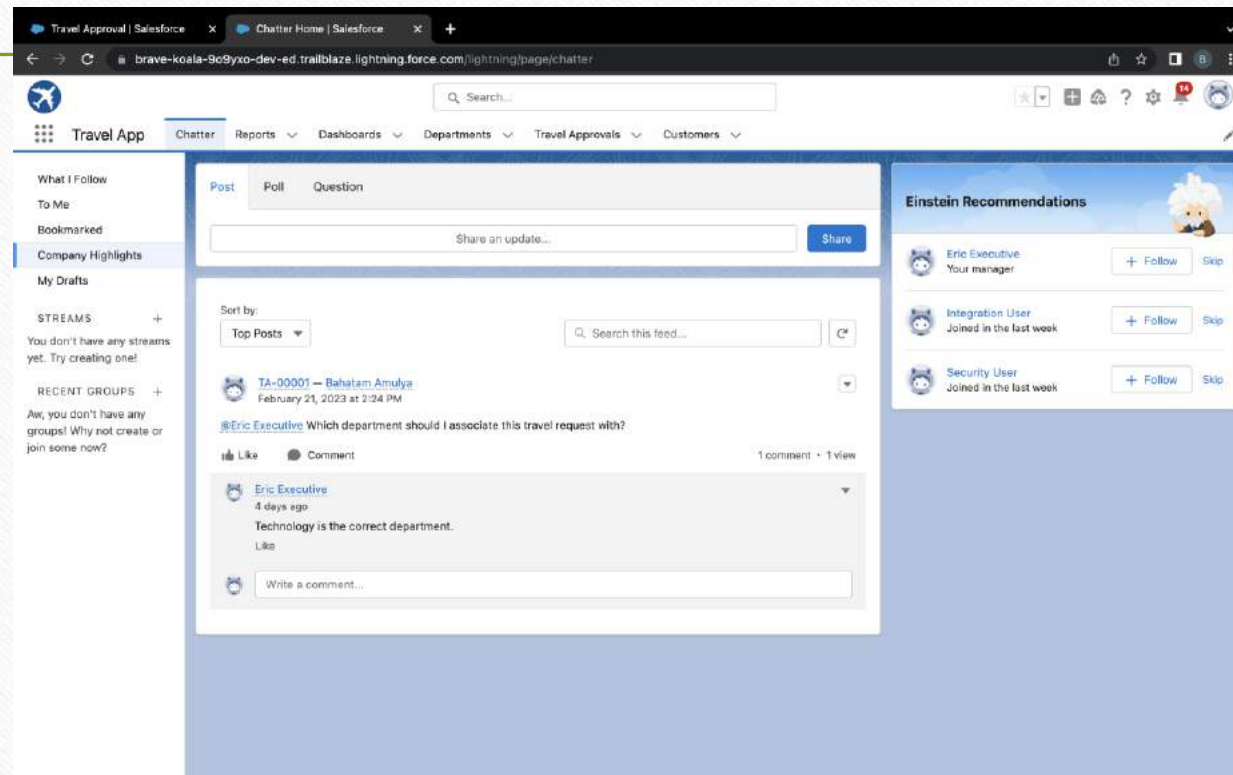
LMS ID: MGSA_512

Contents

- Module 1
- Module 2
- Module 3

Module 1

- Exercise 1
- Step 1



• Step 2

The screenshot shows the Salesforce Object Manager interface for a custom object named 'Department'. The browser address bar indicates the URL: `brave-koala-9o9yx0-dev-ed.trailblaze.lightning.force.com/lightning/setup/ObjectManager/0112w0000034trK/Details/view`. The page header includes the Salesforce logo, a search bar, and navigation tabs for Setup, Home, and Object Manager. The main content area is titled 'SETUP > OBJECT MANAGER Department' and features a left-hand navigation menu with options like Fields & Relationships, Page Layouts, and Record Types. The 'Details' section on the right displays the object's configuration, including its API Name (`Department__c`), Singular Label (`Department`), and Plural Label (`Departments`). It also shows settings for Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window).

Department | Salesforce x Chatter Home | Salesforce x +

brave-koala-9o9yx0-dev-ed.trailblaze.lightning.force.com/lightning/setup/ObjectManager/0112w0000034trK/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER
Department

Details Edit Delete

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

Flow Triggers

Details

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

• Step 3

The screenshot shows the Salesforce Setup interface for the 'Department' object. The 'Fields & Relationships' tab is selected, displaying a table of fields. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By, Department Code, Department Name, Department Type, Last Modified By, Location, and Owner.

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(UserGroup)		✓

The screenshot shows the 'Edit Field Dependency' page in Salesforce Setup. The 'Location' field is the controlling field, and the 'Department Type' field is the dependent field. The page includes instructions on how to use the 'Include Values' and 'Exclude Values' buttons to manage the dependency. A table shows the current dependency configuration, with 'Department Type' values mapped to 'Location' values.

Instructions:

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

Legend:

- Excluded Value
- Included Value

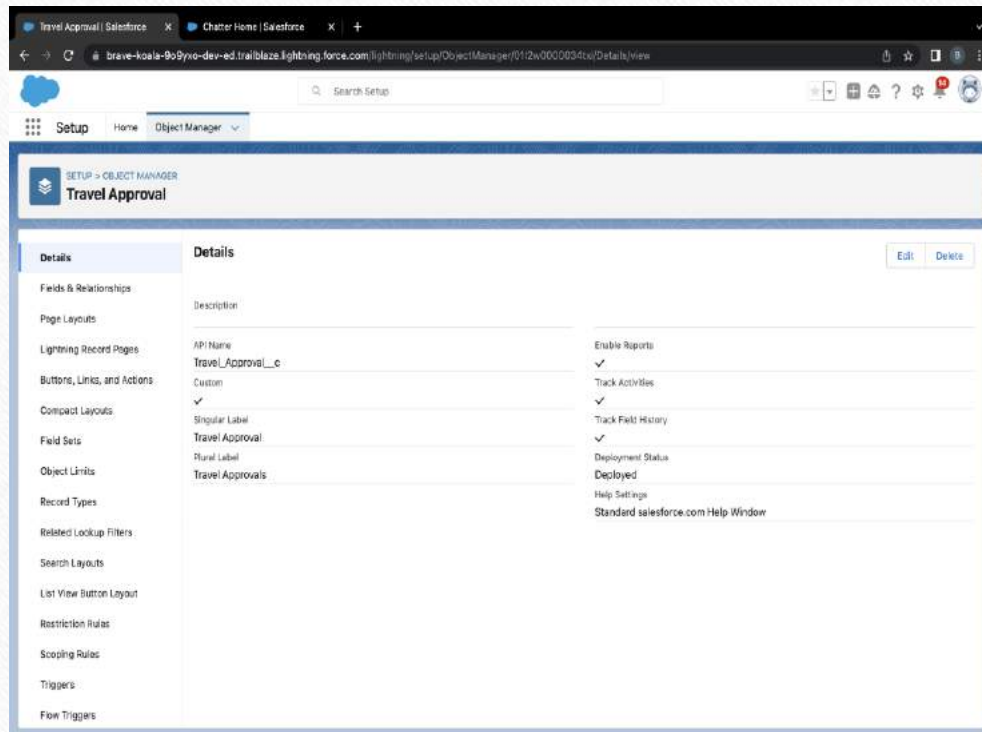
Table:

Controlling Field	Dependent Field
Location	Department Type

Table:

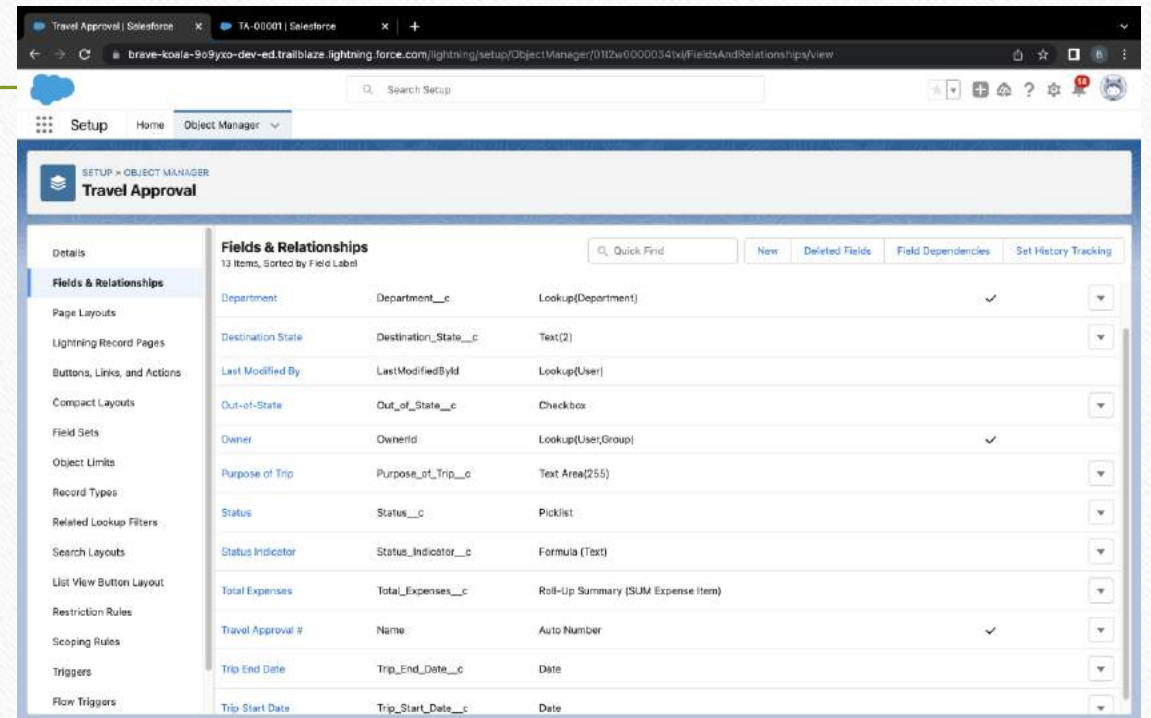
Location	Department Type
Kolkata	IT
Banking	IT
Finance	IT
Education	IT
Energy	IT

• Step 4



This screenshot shows the 'Details' tab of the 'Travel Approval' object in Salesforce Setup. The left sidebar contains a navigation menu with the following items: Details (selected), 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 main content area is titled 'Details' and includes an 'Edit' button and a 'Delete' button. The 'Description' field is visible. Below it, the 'API Name' is 'Travel_Approval__c'. To the right, there are several checkboxes: 'Enable Reports' (checked), 'Track Activities' (checked), 'Track Field History' (checked), 'Deployment Status' (set to 'Deployed'), and 'Help Settings' (with a link to 'Standard salesforce.com Help Window').



This screenshot shows the 'Fields & Relationships' tab of the 'Travel Approval' object in Salesforce Setup. The left sidebar is identical to the previous screenshot, with 'Fields & Relationships' selected.

The main content area is titled 'Fields & Relationships' and includes a 'Quick Find' search bar and buttons for 'New', 'Deleted Fields', 'Field Dependencies', and 'Set History Tracking'. It lists 13 items, sorted by Field Label. The table below shows the first 10 items:

Field Name	Field Label	Field Type	Required	Visible
Department	Department__c	Lookup(Department)	✓	✓
Destination State	Destination_State__c	Text(2)		✓
Last Modified By	LastModifiedById	Lookup(User)		✓
Out-of-State	Out_of_State__c	Checkbox		✓
Owner	OwnerId	Lookup(User;Group)	✓	✓
Purpose of Trip	Purpose_of_Trip__c	Text Area(255)		✓
Status	Status__c	Picklist		✓
Status Indicator	Status_Indicator__c	Formula (Text)		✓
Total Expenses	Total_Expenses__c	Roll-Up Summary (SUM Expense Item)		✓
Travel Approval #	Name	Auto Number	✓	✓

The remaining 3 items in the list are:

- Trip End Date (Field Label: Trip_End_Date__c, Type: Date, Required: ✓, Visible: ✓)
- Trip Start Date (Field Label: Trip_Start_Date__c, Type: Date, Required: ✓, Visible: ✓)

- Step 5

Travel Approval | Salesforce x All | Departments | Salesforce x +

brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/o/Department__c/list?filterName=00B2w00000YN86NEAT

Search...

Travel App Chatter Reports Dashboards Departments Travel Approvals Customers

Departments All

New Import Change Owner Printable View

16 Items • Sorted by Department Name • Filtered by All departments • Updated a few seconds ago

Search this list...

<input type="checkbox"/>	Department Name ↑	
1 <input type="checkbox"/>	Audit Services	▼
2 <input type="checkbox"/>	Contract Management	▼
3 <input type="checkbox"/>	Disability Determination Bureau	▼
4 <input type="checkbox"/>	Division of Aging	▼
5 <input type="checkbox"/>	Division of Disability and Rehabilitative Services	▼
6 <input type="checkbox"/>	Division of Family Resources	▼
7 <input type="checkbox"/>	Division of Finance	▼
8 <input type="checkbox"/>	Division of Mental Health and Addiction	▼
9 <input type="checkbox"/>	Human Resources	▼
10 <input type="checkbox"/>	Legislative Services	▼
11 <input type="checkbox"/>	Office of Communications and Media	▼
12 <input type="checkbox"/>	Office of Early Childhood and Out-of-School Learning	▼
13 <input type="checkbox"/>	Office of General Counsel	▼
14 <input type="checkbox"/>	Office of Medical Policy and Planning	▼
15 <input type="checkbox"/>	Quality and Compliance Office	▼
16 <input type="checkbox"/>	Technology	▼

- Exercise 2
- Create records

The screenshot displays a Salesforce interface for a Travel Approval record. The browser address bar shows the URL: `brave-koala-9c9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval__c/a012w000017AP1bAAG/view`. The Salesforce navigation bar includes the 'Travel App' and 'Travel Approvals' tabs. The record details are as follows:

Travel Approval # TA-00001	
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
Owner	Bahatam Amulya
Department	Technology
Out-of-State	<input checked="" type="checkbox"/>
Destination State	CA
Last Modified By	Bahatam Amulya, 2/21/2023, 4:00 PM

The right sidebar shows the 'Activity' tab with filters: 'All time', 'All activities', and 'All types'. It indicates 'No activities to show' and provides instructions: 'Get started by sending an email, scheduling a task, and more.' Below this, it states: 'No past activity. Past meetings and tasks marked as done show up here.'

- Customising the Records

Travel Approval | Salesforce x Travel Approval Record Page x Travel Approval | Salesforce x Open Out of State Travel Requ x +

brave-koola-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/setup/ObjectManager/0112w0000034txi/PageLayouts/page?address=%2Fplayouteditor%2FplayoutEdit...

Search Setup

Setup Home Object Manager

SETUP > 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
Scoping Rules
Triggers
Flow Triggers

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Fields
Buttons
Quick Actions
Mobile & Lightning Actions
Expanded Lookups
Related Lists
Report Charts

Quick Find Field Name

Section	Destination State	Purpose of Trip	Travel Approval #
Blank Space	Last Modified By	Status	Trip End Date
Created By	Out-of-State	Status Indicator	Trip Start Date
Department	Owner	Total Expenses	

Information (Header visible on edit only)

Travel Approval #	GEN-2004-001234	Owner	Sample Text
Status	Sample Text	Department	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 (Header visible on edit only)

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.

- Setting Up Approval

The screenshot displays the Salesforce Setup interface for managing users. The left sidebar shows the navigation menu with 'Users' selected under 'User Management Settings'. The main content area is titled 'Users' and shows the 'Individual' user configuration page. The form includes the following sections:

- Mailing Address:** Fields for Street, City, State/Province, Zip/Postal Code, and Country (set to IN).
- Single Sign On Information:** Field for Federation ID.
- Locale Settings:** Fields for Time Zone (set to (GMT+05:30) India Standard Time (Asia/Kolkata)), Locale (set to English (United States)), and Language (set to English).
- Approver Settings:** Fields for Delegated Approver, Manager (set to Eric Executive), and Receive Approval Request Emails (set to Only if I am an approver).

At the bottom of the form are buttons for 'Save', 'Save & New', and 'Cancel'. The browser address bar shows the URL: <https://brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/setup/ManageUsers/page?address=%2F0052w00000EfjoN%2Fe%3FisUserEntityOverride%3D1%26...>

- Enabling Chatter

The screenshot shows the Salesforce Setup interface for configuring Feed Tracking. The browser tabs include 'Travel Approval | Salesforce', 'Travel Approval Record Page', 'Feed Tracking | Salesforce', and 'TA-00001 | Salesforce'. The URL is 'brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/setup/FeedTracking/home'. The left sidebar shows the navigation menu with 'Setup', 'Home', and 'Object Manager'. The 'Feed Tracking' section is selected under 'Feature Settings' > 'Chatter'. The main content area is titled 'Feed Tracking' and includes a help link. It contains a table of objects with their tracked fields and a configuration panel for 'Fields in travel approvals'.

Feed Tracking

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.

Object	Tracked
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	
Communication Subscription Consent	

Fields in travel approvals

Save Cancel ☒ Enable Feed Tracking Restore Defaults

Your changes have been saved.

Department	<input type="checkbox"/>	Destination State	<input checked="" type="checkbox"/>
Out-of-State	<input type="checkbox"/>	Owner	<input type="checkbox"/>
Purpose of Trip	<input type="checkbox"/>	Status	<input checked="" type="checkbox"/>
Travel Approval #	<input type="checkbox"/>	Trip End Date	<input type="checkbox"/>
Trip Start Date	<input type="checkbox"/>		

You can also display feed activity for related objects.

All Related Objects ☐

Save Cancel ☒ Enable Feed Tracking Restore Defaults

Module 2

- Exercise 1
- Step 1

The screenshot displays the Salesforce Setup interface for a 'Travel Approval' object. The left sidebar contains a navigation menu with the following items: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, Triggers, and Flow Triggers. The main content area is titled 'Travel Approval Validation Rule' and includes a 'Back to Travel Approval' link. Below the title is a 'Validation Rule Detail' section with the following information:

Validation Rule Detail		Active
Rule Name	Trip_end_date_after_start_date	<input checked="" type="checkbox"/>
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	Error Location: Trip End Date
Description		
Created By	Bahatom Amulya, 2/21/2023, 2:36 PM	Modified By: Bahatom Amulya, 2/21/2023, 2:36 PM

Buttons for 'Edit' and 'Clone' are available for the rule name, error condition formula, error message, and the created/modified by fields.

- Setting Up Roll Up Summary and Formula Fields

The screenshot shows the Salesforce Setup interface for a custom field named 'Total Expenses' on the 'Travel Approval' object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, Triggers, and Flow Triggers. The main content area is titled 'Travel Approval Custom Field' and 'Total Expenses'. It includes a 'Custom Field Definition Detail' section with tabs for Edit, Set Field-Level Security, View Field Accessibility, and Where is this used?. Below this is a 'Field Information' table with fields like Field Label, Field Name, API Name, Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The 'Created By' and 'Modified By' fields are both set to 'Bahatam Amulya' on 2/21/2023 at 2:40 PM. At the bottom, there is a 'Roll-Up Summary Options' section with fields for Data Type, Roll-Up Summary, Summarized Object, Field to Aggregate, and Filter Criteria. The 'Summary Type' is set to 'SUM'.

Field Label	Total Expenses	Object Name	Travel Approval
Field Name	Total_Expenses		
API Name	Total_Expenses__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Bahatam Amulya, 2/21/2023, 2:40 PM	Modified By	Bahatam Amulya, 2/21/2023, 2:40 PM

Roll-Up Summary Options		
Data Type	Roll-Up Summary	Summary Type
Summarized Object	Expense Item	SUM
Field to Aggregate	Expense Item: Amount	
Filter Criteria		

Configuring

The screenshot shows the Salesforce Setup interface for configuring Approval Processes. The browser tabs include 'Travel Approval | Salesforce', 'TA-00001 | Salesforce', 'Approval Processes | Salesforce', 'Out of State Travel Flag - V1', and 'TA-00001 | Salesforce'. The URL is 'brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/setup/ApprovalProcesses/page?address=%2F04a2w000000gwhJ%3FappLayout%3Dsetup%26tour...'. The left sidebar contains a 'Quick Find' search bar and a list of setup categories: Setup Home, Service Setup Assistant, Multi-Factor Authentication Assistant, Release Updates, Lightning Experience Transition Assistant, Salesforce Mobile App, Lightning Usage, Optimizer, ADMINISTRATION (Users, Data, Email), PLATFORM TOOLS (Apps, Feature Settings, Slack, Workflow Services, MuleSoft, Einstein).

The main content area is titled 'Approval Processes' and contains several sections:

- Initial Submission Actions**: A table with columns 'Action' and 'Type'. It contains one row: 'Record Lock' with description 'Lock the record from being edited'.
- Approval Steps**: A table with columns 'Action', 'Step Number', 'Name', 'Description', 'Criteria', 'Assigned Approver', and 'Reject Behavior'. It contains two rows:
 - Step 1: 'Step 1' with description 'Step 1', criteria 'Travel Approval: Out-of-State EQUALS True', assigned approver 'Manager', and reject behavior 'Final Rejection'.
 - Step 2: 'Travel Coordinator Approval' with description 'Travel Coordinator Approval', criteria 'Travel Approval: Out-of-State EQUALS True', assigned approver 'User:Eric Executive', and reject behavior 'Final Rejection'.
- Final Approval Actions**: A table with columns 'Action', 'Type', and 'Description'. It contains two rows: 'Record Lock' (description: 'Lock the record from being edited') and 'Field Update' (description: 'Set Status to Approved').
- Final Rejection Actions**: A table with columns 'Action', 'Type', and 'Description'. It contains two rows: 'Record Lock' (description: 'Unlock the record for editing') and 'Field Update' (description: 'Set Status to Rejected').
- Recall Actions**: A table with columns 'Action', 'Type', and 'Description'. It contains one row: 'Record Lock' with description 'Unlock the record for editing'.

At the bottom, there is a 'Back To Top' link and a note: 'Always show me fewer / more records per related list'.

Travel Approval | Salesforce x TA-00001 Approval | Salesforce x Users | Salesforce x Out of State Travel Flag - V1 x Recently Viewed | Travel App x +

brave-kola-9o9yx0-dev-ed.trailblaze.lightning.force.com/lightning/ProcessInstanceStep/04h2w00000052EAZA2/view

Search...

Travel App Chatter Reports Dashboards Departments Travel Approvals Customers *TA-00001 Approval

Process Instance Step
Travel Approval Approval Approved

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

Details No Comments

Approval Details

Travel Approval #	Owner
TA-00001	Bahatam Amulya

Travel Approval | Salesforce x TA-00001 Approval | Salesforce x Users | Salesforce x Out of State Travel Flag - V1 x Recently Viewed | Travel App x +

brave-kola-9o9yx0-dev-ed.trailblaze.lightning.force.com/lightning/ProcessInstanceStep/04h2w00000052EAZA2/view

Search...

Travel App Chatter Reports Dashboards Departments Travel Approvals Customers *Eric Executive x *TA-00001 Approval

Process Instance Step
Travel Approval Approval Rejected

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

Details No Comments

Approval Details

Travel Approval #	Owner
TA-00001	Bahatam Amulya

Travel Approval | Salesforce

TA-00001 | Salesforce

Users | Salesforce

Out of State Travel Flag - V1

Recently Viewed | Travel Appro

brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval___c/a012w000017APibAAG/view

Travel App

Chatter

Reports

Dashboards

Departments

Travel Approvals

Customers

TA-00001 Approval

Search...

14

Travel Approval

TA-00001

Follow

Edit

New Contact

New Opportunity

Or drop files

Expense Items (2)

New

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

[View All](#)

Approval History (6+)

Approve

Reject

Step Name	Date	Status	Assigned To
Travel Coordinator Approval	2/25/2023, 3:19 PM	Approved	Eric Executive
Step 1	2/25/2023, 3:18 PM	Approved	Eric Executive
Approval Request Submitted	2/25/2023, 3:18 PM	Submitted	Bahatam Amulya
Step 1	2/25/2023, 3:17 PM	Rejected	Eric Executive
Approval Request Submitted	2/25/2023, 3:16 PM	Submitted	Bahatam Amulya
Travel Coordinator Approval	2/25/2023, 3:14 PM	Approved	Eric Executive

[View All](#)

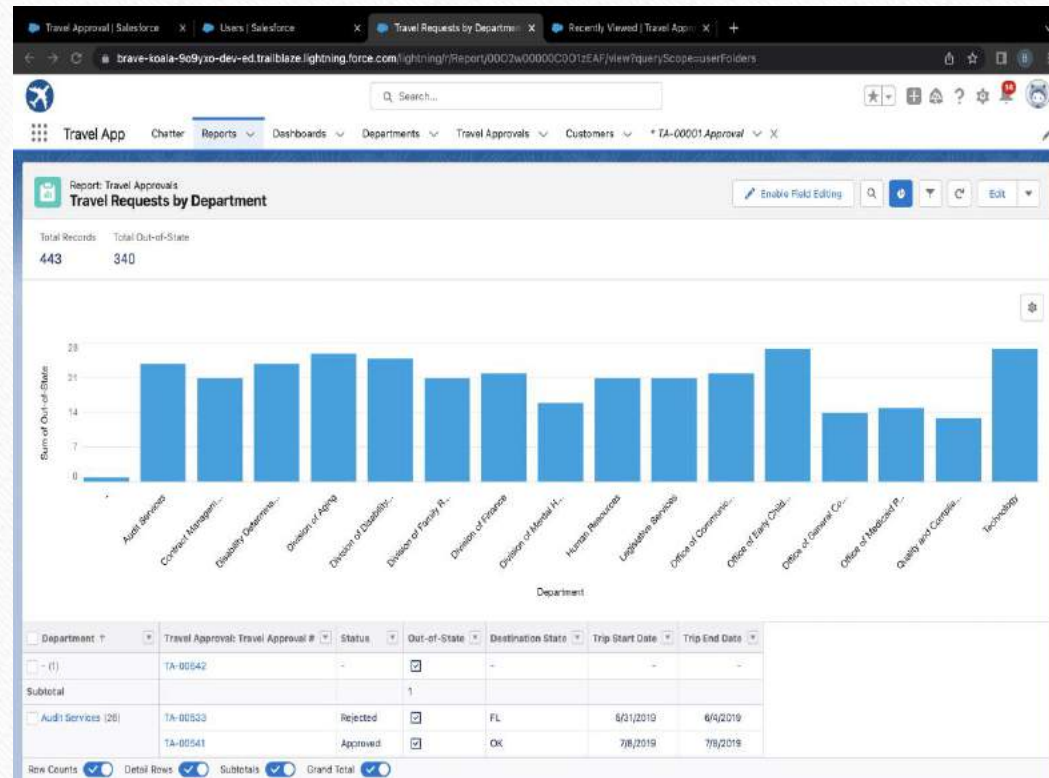
Upcoming & Overdue

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.

https://brave-koala-9o9yxo-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval___c/a012w000017APibAAG/related/Expense_Items__r/view

- Created Reports and Dashboard

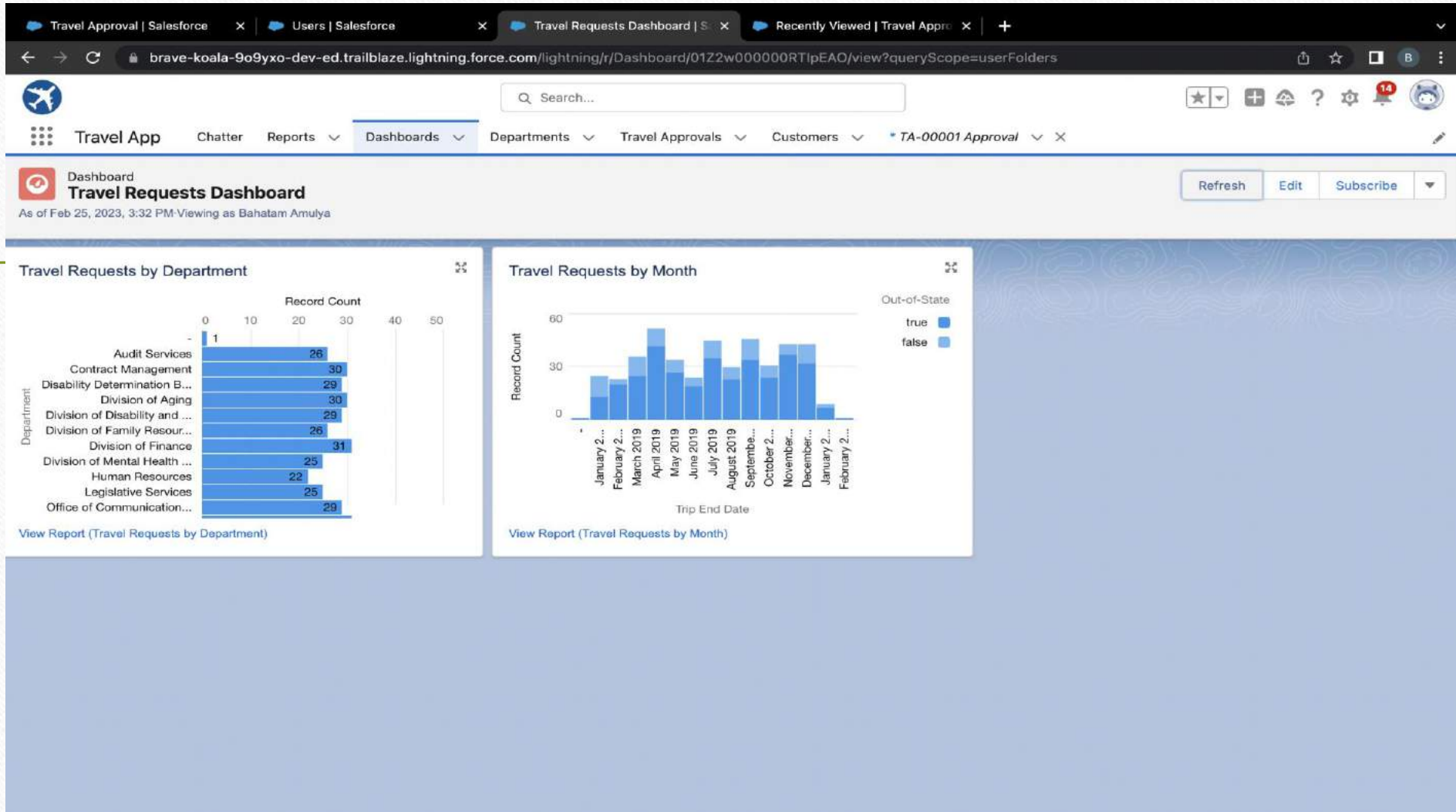


Report: Travel Approvals
Travel Requests by Month

Total Records: 443

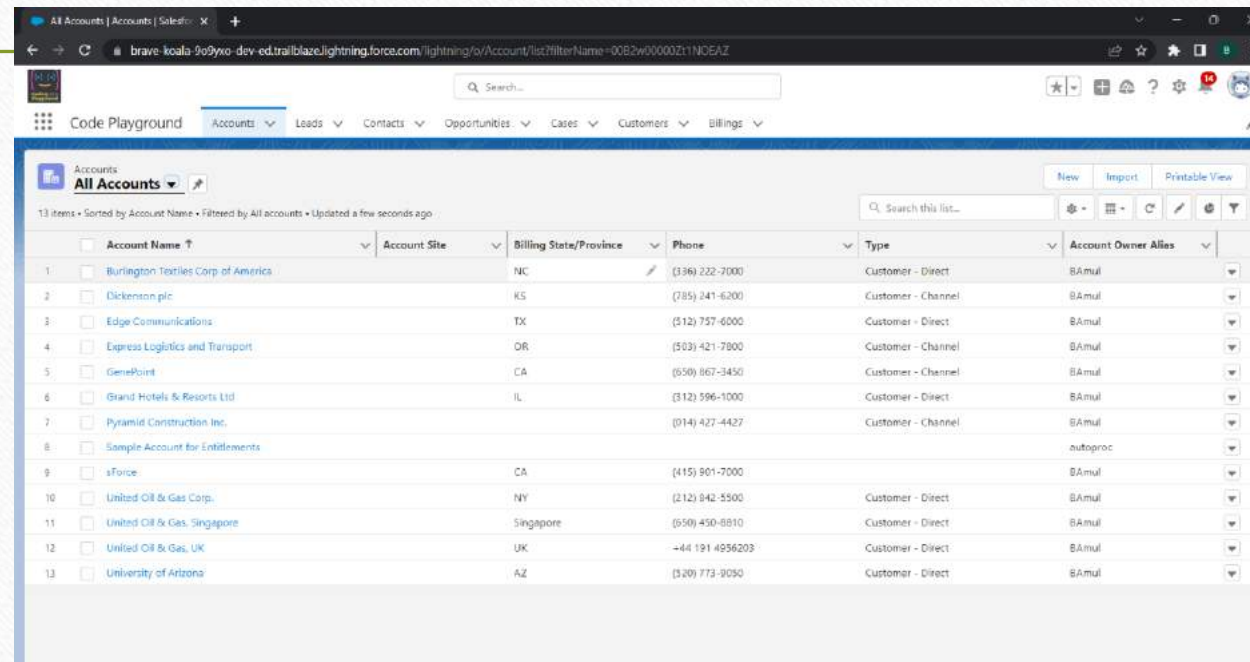
Trip End Date	Out-of-State	Travel Approval: Travel Approval #	Department	Status	Destination State	Trip Start Date
- (1)	<input checked="" type="checkbox"/> (1)	TA-00642	-	-	-	-
Subtotal						
January 2019 (25)	<input checked="" type="checkbox"/> (12)	TA-00578	Division of Aging	Approved	TX	1/22/2019
		TA-00590	Quality and Compliance Office	Approved	TX	1/14/2019
		TA-00599	Contract Management	Approved	TX	1/18/2019
		TA-00013	Division of Family Resources	Approved	TX	1/4/2019
		TA-00039	Division of Finance	Approved	TX	1/10/2019
		TA-00408	Legislative Services	Approved	TX	1/20/2019
		TA-00072	Office of General Counsel	Approved	TX	1/4/2019
		TA-00431	Office of General Counsel	Rejected	TX	1/27/2019
		TA-00444	Disability Determination Bureau	Approved	TX	1/12/2019
		TA-00084	Division of Family Resources	Approved	TX	1/4/2019
		TA-00110	Division of Finance	Approved	TX	1/10/2019
		TA-00143	Office of General Counsel	Approved	TX	1/4/2019
Subtotal						
	<input checked="" type="checkbox"/> (13)	TA-00537	Contract Management	Approved	FL	1/29/2019

Row Counts ☒ Detail Rows ☒ Subtotals ☒ Grand Total ☒



Module 3

- Exercise 1



The screenshot shows the Salesforce 'All Accounts' list view. The table contains 13 rows of account data, sorted by Account Name. The columns are: Account Name, Account Site, Billing State/Province, Phone, Type, and Account Owner Alias. The first row is 'Burlington Textiles Corp of America' with phone '(336) 222-7000' and type 'Customer - Direct'. The last row is 'University of Arizona' with phone '(520) 773-9090' and type 'Customer - Direct'.

	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	(550) 867-3450	Customer - Channel	BAmul
6	Grand Hotels & Resorts Ltd		IL	(312) 596-1000	Customer - Direct	BAmul
7	Pyramid Construction Inc.			(914) 427-4427	Customer - Channel	BAmul
8	Sample Account for Entitlements					autoprocc
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	(550) 450-8810	Customer - Direct	BAmul
12	United Oil & Gas, UK		UK	+44 191 4956203	Customer - Direct	BAmul
13	University of Arizona		AZ	(520) 773-9090	Customer - Direct	BAmul

Exercise 2

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'Developer Console'. The browser address bar shows the URL: `brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The 'Log executeAnonymous @22/02/2023, 11:26:31' tab is active. The 'Execution Log' table displays various events with columns: Timestamp, Event, and Details. The 'Enter Apex Code' window is open, showing the following code:

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

The bottom of the console shows a table with columns: User, Application, Operation, Time, Status, Read, and Size. The table contains one row for user 'Bahatan Amulya' with a 'Success' status and a size of '2.11 KB'.

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'Lightning', 'Create a Tr...', 'Recently Vi...', 'Developer', 'Home | Sal...', 'Int. Salesforce', 'Mail - Bahu', 'Salesforce', 'Salesforce', and 'What Is 'A...'. The browser address bar shows the URL: `brave-koala-9c9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The 'Log executeAnonymous @22/02/2023, 12:43:13' tab is active. The 'Execution Log' table displays various events with columns: Timestamp, Event, and Details. The 'Enter Apex Code' window is open, showing 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 }
```

The bottom of the console shows a table with columns: User, Application, Operation, Time, Status, Read, and Size. The table contains one row for user 'Bahatan Amulya' with a 'Success' status and a size of '5.6 KB'.

- Exercise 3

Developer Console

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

File Edit Debug Test Workspace Help

Log executeAnonymous @22/02/2023, 12:48:50

Execution Log

Timestamp	Event	Details
12:48:50:002	USER_DEBUG	[7][DEBUG]True

☐ This Frame ☐ Executable ☒ Debug Only ☐ Filter

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Behatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 12:48:50	Success		2.64 KB

☐ Filter

- Exercise 4

The screenshot displays the Salesforce Developer Console interface. The top section shows the browser address bar with the URL `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the address bar, the **Execution Log** tab is active, showing a table with columns: Timestamp, Event, and Details. The table contains one entry:

Timestamp	Event	Details
12:48:50:002	USER_DEBUG	[7]DEBUG:True

. Below the Execution Log, there are checkboxes for ☐ This Frame, ☐ Executable, ☒ Debug Only, and ☐ Filter, along with a link [Click here to filter the log](#). The bottom section shows the **Logs** tab, which displays a table with columns: User, Application, Operation, Time, Status, Read, and Size. The table contains one entry:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 12:48:50	Success		2.64 KB

. At the bottom of the Logs tab, there is a ☐ Filter checkbox and a link [Click here to filter the log list](#).

- Exercise 5

The screenshot displays the Salesforce Developer Console interface. At the top, the browser address bar shows the URL: `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the address bar, the 'Developer Console' tab is active. The main area is divided into two sections. The top section, titled 'Execution Log', shows a log entry for 'executeAnonymous' at 12:57:08. The log entry details are as follows:

Timestamp	Event	Details
12:57:08:003	USER_DEBUG	[3][DEBUG]true

The bottom section, titled 'Enter Apex Code', contains a code editor with the following Apex code:

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

Below the code editor, there are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. At the bottom of the console, there is a filter section with checkboxes for 'This Frame', 'Executable', 'Debug Only', and 'Filter'. Below this, there is a table with the following columns: User, Application, Operation, Time, Status, Read, and Size. The table contains one row of data:

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	22/02/2023, 12:57:08	Success		2.45 KB

At the bottom of the console, there is a filter section with a checkbox for 'Filter' and a text input field labeled 'Click here to filter the log list'.

- Exercise 6

Developer Console

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

StudentGrade.apxcLog executeAnonymous @22/02/2023, 14:55:07

Execution Log

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 Frame☐ Executable☒ Debug Only☐ FilterClick here to filter the log

LogsTestsCheckpointsQuery EditorView StateProgressProblems

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

☐ FilterClick here to filter the log list

Exercise 7

The screenshot displays the Salesforce Developer Console interface. At the top, the browser address bar shows the URL: `brave-koala-9o9yxo-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The console title is "Developer Console".

The main area shows the "Execution Log" for the file `BillingObject.apxc`, with a log entry titled "Log executeAnonymous @23/02/2023, 12:46:27". The log contains the following entries:

Timestamp	Event	Details
12:46:27:059	USER_DEBUG	[30][DEBUG]Value of BillingList: (Billing__c:{Id=a042w00000xochIAAA, Name=B - 0043, Status__c=Paid}, Billing__c:{Id=a042w00000xochmAAA, Name=B - 0044, Status__c=Paid}, Billing__c:{Id=a042w00000xochnAAA, Name=B - 0045, Status__c=Paid})
12:46:27:059	USER_DEBUG	[38][DEBUG]Value of Current record over in the Loop: Billing__c:{Id=a042w00000xochIAAA, Name=B - 0043, Status__c=Paid}
12:46:27:060	USER_DEBUG	[38][DEBUG]Value of Current record over in the Loop: Billing__c:{Id=a042w00000xochmAAA, Name=B - 0044, Status__c=Paid}
12:46:27:060	USER_DEBUG	[38][DEBUG]Value of Current record over in the Loop: Billing__c:{Id=a042w00000xochnAAA, Name=B - 0045, Status__c=Paid}
12:46:27:060	USER_DEBUG	[44][DEBUG]Billing Record Names are: (B - 0043, B - 0044, B - 0045)

Below the log, there is a "Enter Apex Code" dialog box with the following code:

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

At the bottom of the console, there is a table showing the execution results:

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

- Exercise 8

Developer Console

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

DiscountClass.apxc Log executeAnonymous @23/02/2023, 14:39:51 Log executeAnonymous @23/02/2023, 14:40:41

Execution Log

Timestamp	Event	Details
14:40:41:017	USER_DEBUG	[6]DEBUG finalPrice:-120.00

☐ This Frame ☐ Executable ☒ Debug Only ☐ Filter [Click here to filter the log](#)

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:40:41	Success		4.45 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 14:39:51	Success		4.46 KB

☐ Filter [Click here to filter the log list](#)

• Exercise 9

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. The main area displays the 'Execution Log' for a debug session. The log table has columns for 'Timestamp', 'Event', and 'Details'. A single entry is visible: '15:19:46:006', 'USER_DEBUG', and '[3] DEBUG(0.1)'. Below the log, there are tabs for 'This Frame', 'Executable', 'Debug Only', and 'Filter'. The 'Debug Only' tab is selected. At the bottom, there is a 'Logs' tab with a table of log entries.

Timestamp	Event	Details
15:19:46:006	USER_DEBUG	[3] DEBUG(0.1)

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 15:19:48	Success		1.81 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 15:02:59	Success		1.71 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:58:20	Success		1.56 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:57:14	Success		1.61 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:57:20	Success		1.61 KB
Bahatam Amulya	Unknown	ApexTestRunner	23/02/2023, 14:53:35	Success	Unread	586 bytes

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'File', 'Edit', 'Debug', 'Test', 'Workspace', and 'Help'. The main area displays the 'Execution Log' for a debug session. The log table has columns for 'Timestamp', 'Event', and 'Details'. A single entry is visible: '15:21:44:013', 'USER_DEBUG', and '[3] DEBUG(0.1)'. Below the log, there are tabs for 'This Frame', 'Executable', 'Debug Only', and 'Filter'. The 'Debug Only' tab is selected. At the bottom, there is a 'Logs' tab with a table of log entries.

Timestamp	Event	Details
15:21:44:013	USER_DEBUG	[3] DEBUG(0.1)

User	Application	Operation	Time	Status	Read	Size
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 15:21:44	Success		3.85 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 15:19:48	Success		3.81 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 15:02:59	Success		1.73 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:58:20	Success		3.56 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:57:14	Success		3.61 KB
Bahatam Amulya	Unknown	/services/data/v57.0/tooling/execute...	23/02/2023, 14:57:20	Success		3.61 KB

- Exercise 10

Developer Console

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

File Edit Debug Test Workspace Help < >

BillingRecordInsertion.apex Log executeAnonymous @23/02/2023, 15:53:03

Execution Log

Timestamp	Event	Details
15:53:03:100	USER_DEBUG	[14] DEBUG Record Inserted. Billing ID:a042w0000xodfAAQ
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)

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

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
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

☐ Filter Click here to filter the log list

• Exercise 11

Developer Console

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

File Edit Debug Test Workspace Help

Opportunity@10:22 AM

SELECT ID, Amount, StageName, Account.Name, Account.Industry, Account.Website FROM Opportunity WHERE Account.Industry = 'Energy' AND Account.AnnualRevenue > 5000

Query Results - Total Rows: 10

Id	Amount	StageName	Account.Name	Account.Industry	Account.Website
0062w00000K3BuLAAV	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
0062w00000K3BubAAF	270000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BudAAF	915000	Closed Won	United Oil & Gas Corp.	Energy	http://www.uos.com
0062w00000K3BuIAAF	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
0062w00000K3BunAAF	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

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

History

Executed

SELECT ID, Amount, StageName, Account.Name, Account.Industry, ...

- Exercise 12

The screenshot shows a web browser window with a Salesforce URL. The page displays a record for a Billing object with ID B-0048. The record details are as follows:

Field	Value
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

The interface includes a top navigation bar with tabs for Accounts, Leads, Contacts, Opportunities, Cases, Customers, and Billings. The Billings tab is currently selected. The record page has a header with the record ID and a sub-header with tabs for Related and Details. The Details tab is active, showing the record information. The page also features a search bar and a sidebar with navigation options.

- Exercise 13

The screenshot displays the Salesforce Developer Console interface. The top section shows the code editor with a test class named `CustomerTriggerTest.apxc`. The code defines a static method `testCustomerTrigger()` that creates a test customer, updates its status to active, and then triggers a billing process. The bottom section shows the 'Tests' tab with a table of test run results.

```
static void testCustomerTrigger() {
    // Create test data
    Customer__c xx = new Customer__c();
    xx.Name = 'Test Customer';
    xx.Active__c = false;
    insert xx;
    // Test trigger behavior when updating customer to active
    Test.startTest();
    xx.Active__c = true;
    update xx;
    if(xx.Active__c == true){
        Billing__c x = new Billing__c();
        x.Status__c = 'paid';
        x.Amount_Paid__c = 100000000;
        System.assertEquals(x.Status__c, 'paid' );
        System.assertEquals(x.Amount_Paid__c, 100000000);
    }
    System.assertEquals(xx.Name, 'Test Customer');
    Test.stopTest();
}
```

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	7672w0000BLIYY8	Fri Feb 24 2023 11:44:59 GMT...		0	3	Class
✓	7672w0000BLIZZO	Fri Feb 24 2023 12:00:28 GMT...		0	3	Overall
✓	7672w0000BLIa6U	Fri Feb 24 2023 12:02:07 GMT...		0	3	Billing
✓	7672w0000BLIa7I	Fri Feb 24 2023 12:02:16 GMT...		0	1	BillingObject
✓	7672w0000BLIa8I	Fri Feb 24 2023 12:02:28 GMT...		0	3	BillingRecordInsertion
✓	7672w0000BLIbND	Fri Feb 24 2023 12:17:44 GMT...		0	3	CustomerTrigger
✓	7672w0000BLIbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3	DiscountClass

The 'Overall Code Coverage' table provides a detailed breakdown of test results:

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

- Exercise 14

The screenshot displays the Salesforce Developer Console interface. The top section shows the code for the `DisqualifyTestLeads.apxc` trigger. The code is as follows:

```
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         if(mylead.FirstName==null){
8             mylead.addError('Enter name');
9         }
10    }
11    for(Lead mylead2:lead)
12    {
13        mylead2.Status='Disqualified';
14    }
15 }
```

The bottom section of the console shows the test results for the `DisqualifyTestLeads` trigger. The table below summarizes the data presented in the screenshot:

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	7072w00008L1fL8	Fri Feb 24 2023 12:57:51 GMT...		0	2	Class
✓	7072w00008L1bQd	Fri Feb 24 2023 12:19:52 GMT...		0	3	CustomerTrigger
✓	7072w00008L1bND	Fri Feb 24 2023 12:17:44 GMT...		0	3	DiscountClass
✓	7072w00008L1a81	Fri Feb 24 2023 12:02:28 GMT...		0	3	DisqualifyTestLeads
✓	7072w00008L1a7I	Fri Feb 24 2023 12:02:16 GMT...		0	3	normalCustomer
✓	7072w00008L1a6U	Fri Feb 24 2023 12:02:07 GMT...		0	3	PremiumCustomer
✓	7072w00008L1z2Q	Fri Feb 24 2023 12:00:28 GMT...		0	3	StudentGrade

The 'Overall Code Coverage' section provides a detailed breakdown of the coverage for each class, including the percentage and the number of lines covered out of the total lines.

- Exercise 15

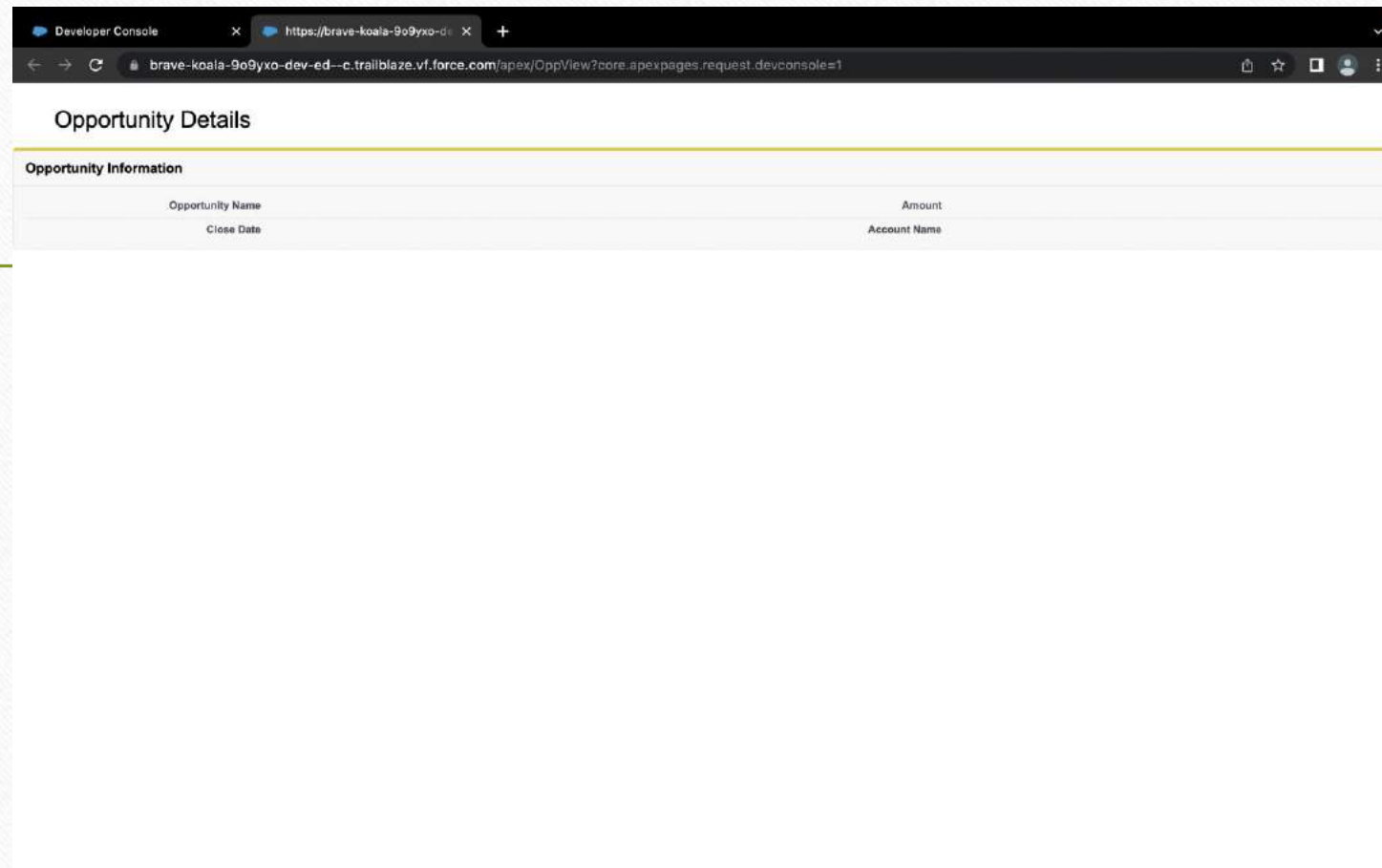
The screenshot displays the Salesforce Developer Console interface. The top section shows the Apex code for `DisqualifyTestLeads.apxc`. The code includes a test method `@isTest` with a private static method `insertData2()`. The test method performs assertions on a lead record `A` and a new lead record `B`.

```
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 }
```

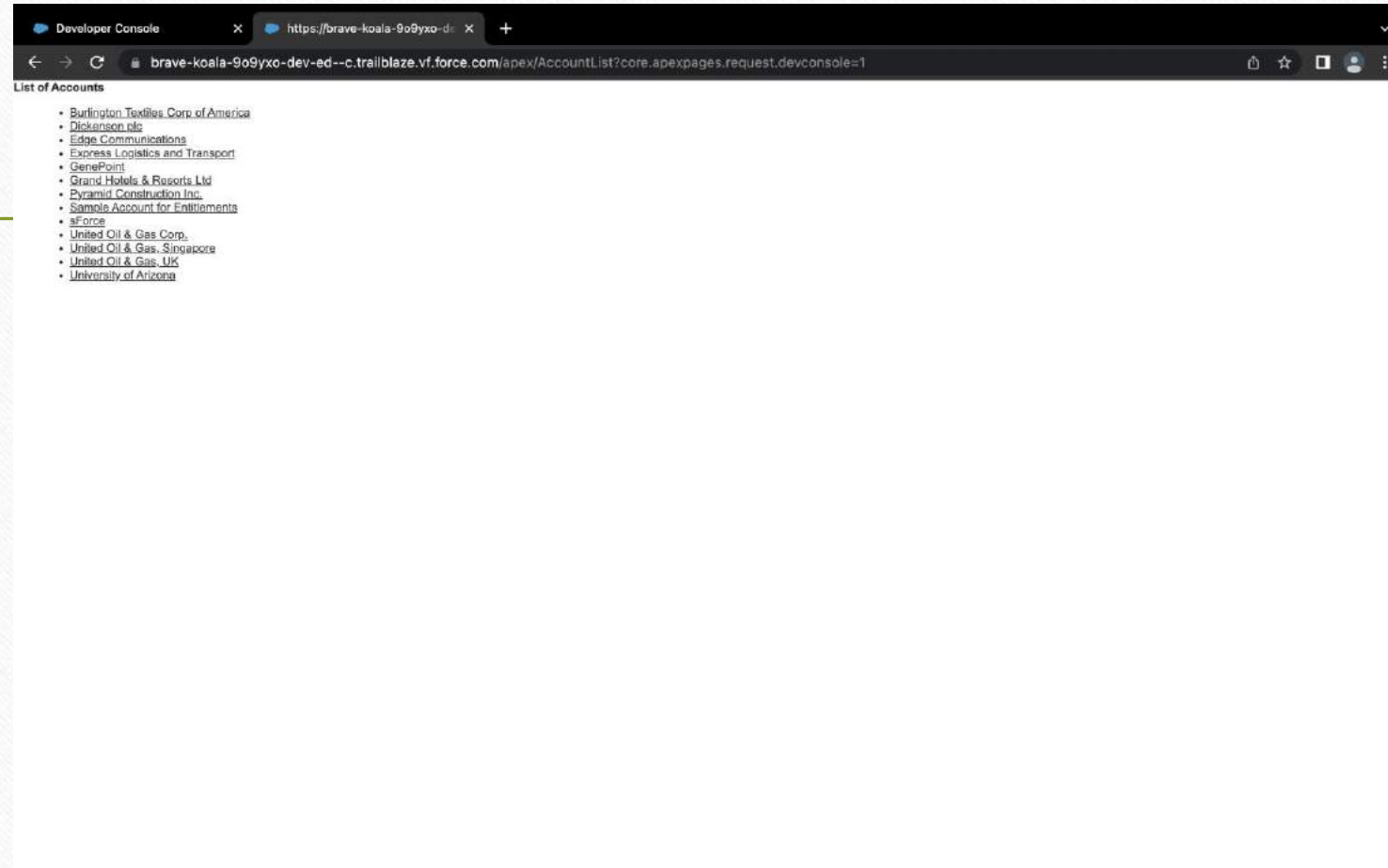
The bottom section shows the 'Tests' tab with a table of test results. The table includes columns for Status, Test Run, Enqueued Time, Duration, Failures, Total, and Overall Code Coverage. The overall code coverage is 100% for the `DisqualifyTestLeads` test class.

Status	Test Run	Enqueued Time	Duration	Failures	Total	Overall Code Coverage
✓	7072w00008LJfL8	Fri Feb 24 2023 12:57:51 GMT...		0	2	Class
✓	7072w00008LJbQd	Fri Feb 24 2023 12:19:52 GMT...		0	3	CustomerTrigger
✓	7072w00008LJbND	Fri Feb 24 2023 12:17:44 GMT...		0	3	DiscountClass
✓	7072w00008LJa81	Fri Feb 24 2023 12:02:28 GMT...		0	3	DisqualifyTestLeads
✓	7072w00008LJa71	Fri Feb 24 2023 12:02:16 GMT...		0	3	normalCustomer
✓	7072w00008LJa6U	Fri Feb 24 2023 12:02:07 GMT...		0	3	PremiumCustomer
✓	7072w00008LJZzO	Fri Feb 24 2023 12:00:28 GMT...		0	3	StudentGrade

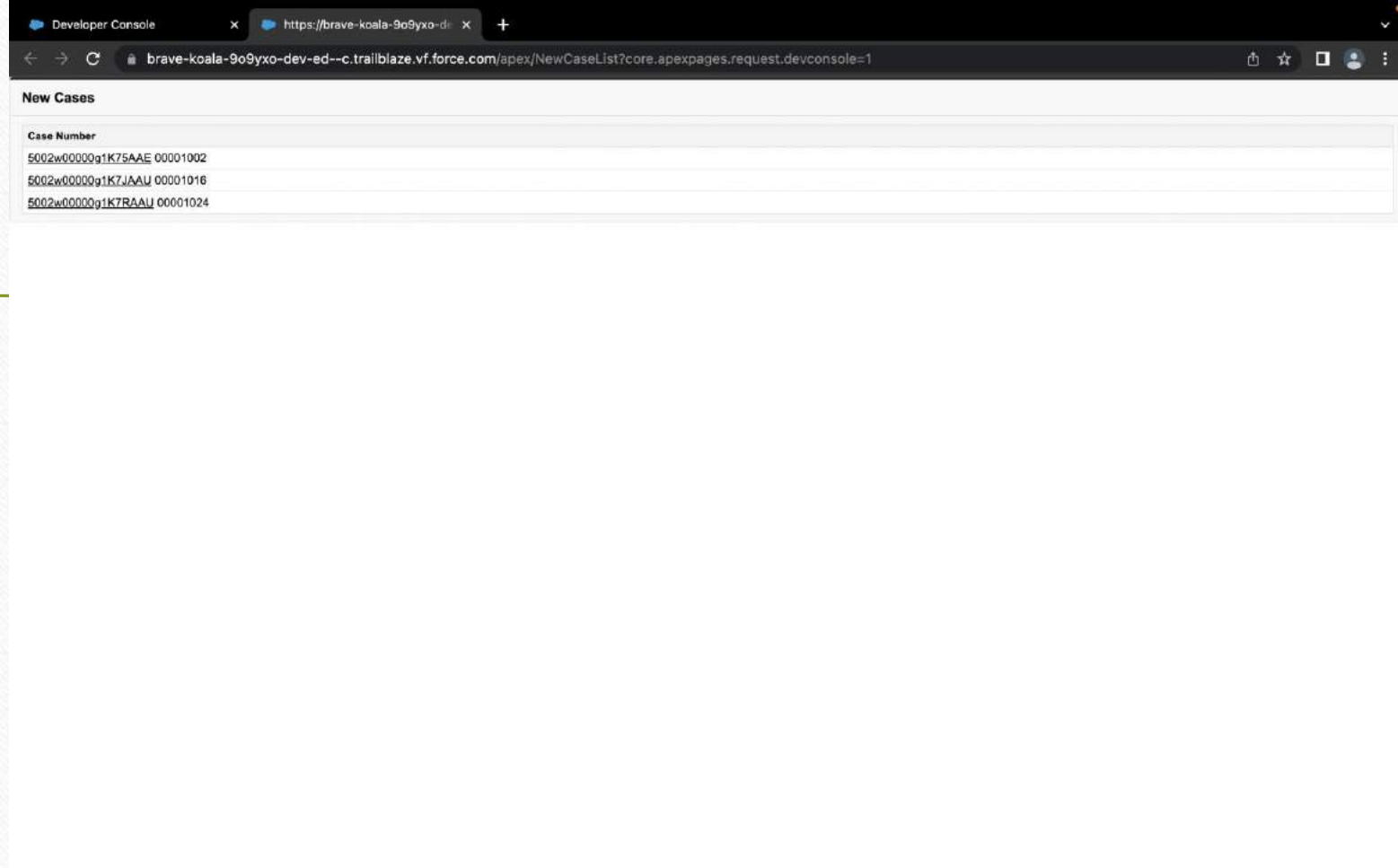
- Exercise 16



- Exercise 17



- Exercise 18



The screenshot shows a web browser window with the URL `https://brave-koala-9o9yxo-dev-ed--c.trailblaze.vf.force.com/apex/NewCaseList?core.apexpages.request.devconsole=1`. The page title is "New Cases". Below the title is a table with the following data:

Case Number
5002w00000g1K75AAE 00001002
5002w00000g1K7JAAU 00001016
5002w00000g1K7RAAU 00001024

**thank
you!**