



Capstone Project Report On “Travel Approval App”

Submitted by:

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Date: 24/02/2023

GitHub: <https://github.com/vaibhavkaushik07/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.

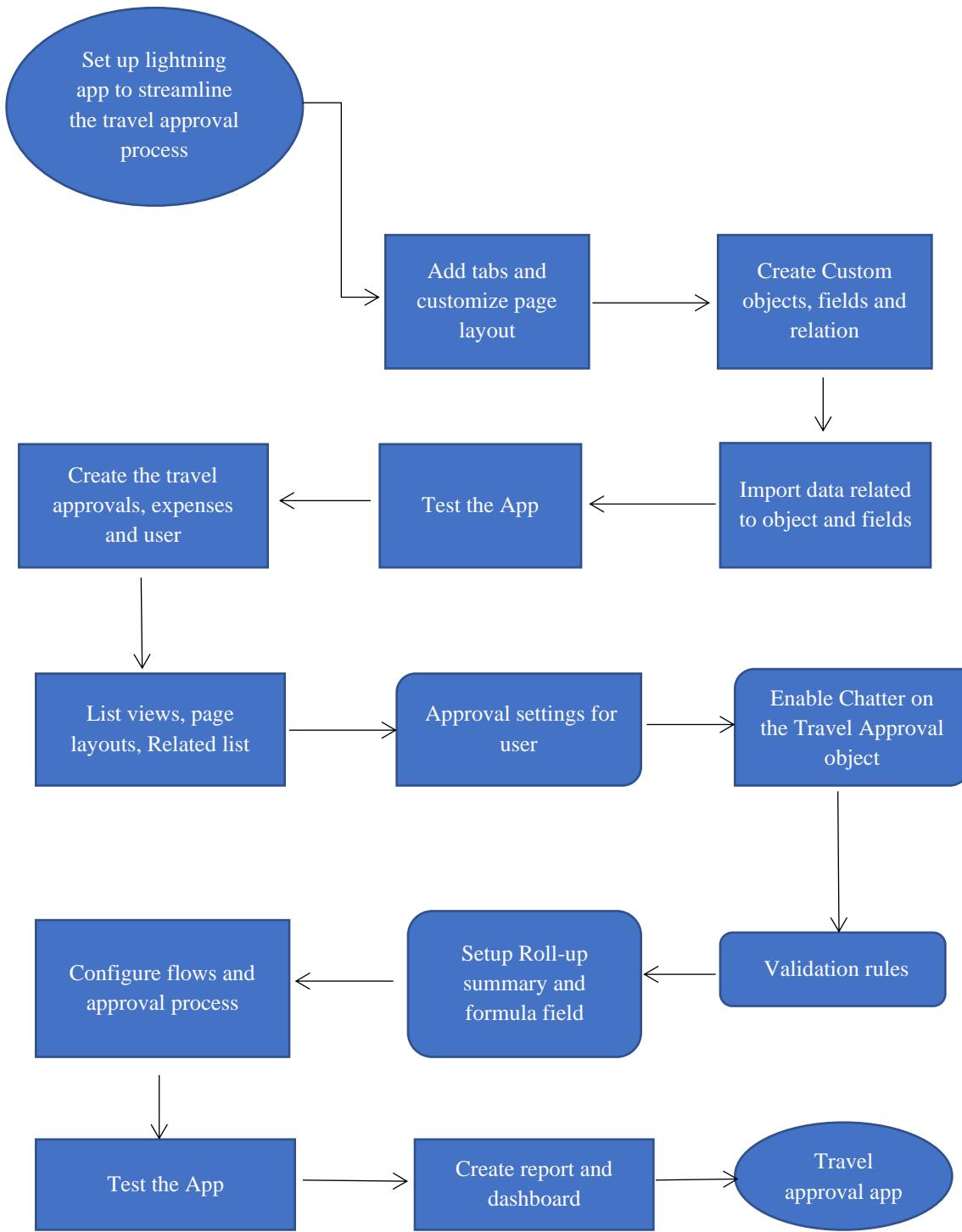
Salesforce is currently providing various software solutions and platforms for developers to create and distribute custom software/applications. Tech giants like Google, Twitter, Amazon, and Facebook are using Salesforce either in the form of SaaS or PaaS.



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

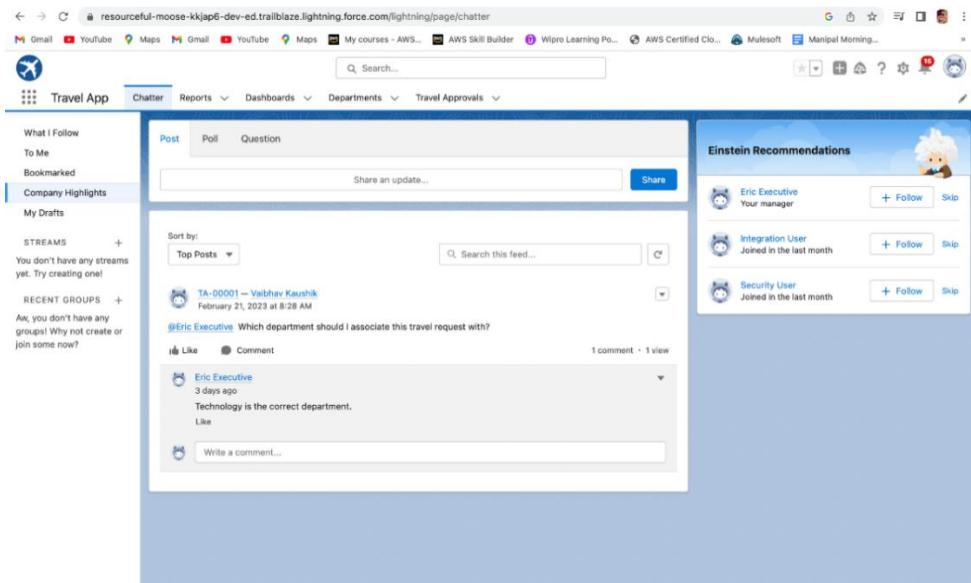
Requirements	
Windows	
Operating system	Windows 8.1 64-bit, Windows 8 64-bit, Windows 7 Service Pack 1 64-bit, Windows Vista Service Pack 2 64-bit
CPU	Core 2 Quad Q6600 at 2.4 GHz or AMD Phenom 9850 at 2.5 GHz
Memory	4 GB RAM
Free space	65 GB of free space
Graphics hardware	DirectX 10-compatible GPU: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

Module-1

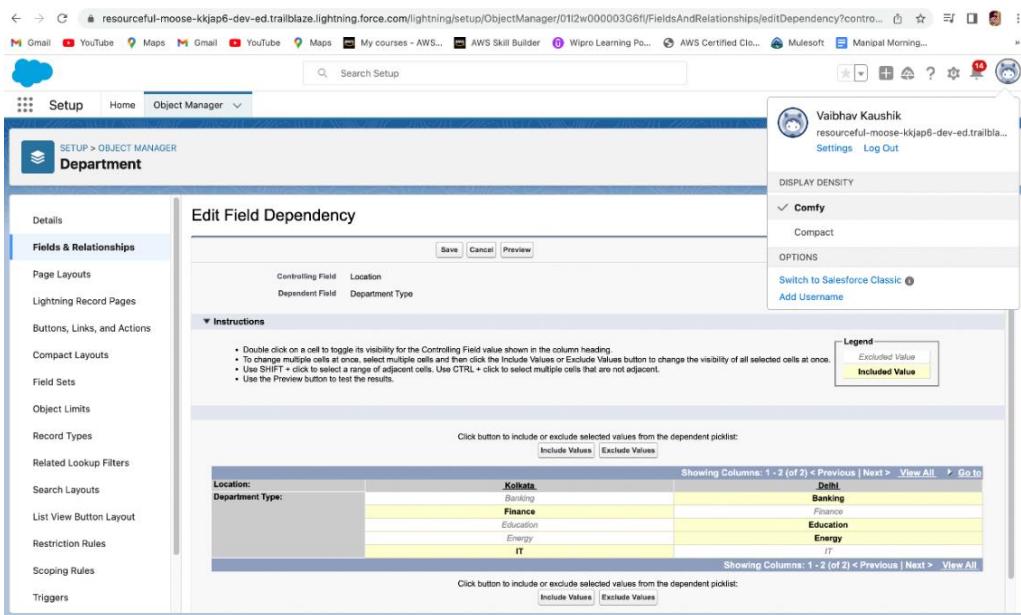
TRAVEL APPROVAL APP

Exercise-1:

Travel App Lightning App



Field dependency



The screenshot shows a Salesforce Lightning interface for a travel approval record. The record ID is TA-00001. The main sections include:

- Notes & Attachments (0)**: Includes a file upload area.
- Expense Items (2)**:

Expense Item Number	Expense Type	Amount
E-00006	Airfare	₹450.00
E-00007	Hotel	₹870.00
- Approval History (2)**:

Step Name	Date	Status	Assigned To
Step 1	2/21/2023, 8:31 AM	Pending	Eric Executive
Approval Request Submitted	2/21/2023, 8:31 AM	Submitted	Vaibhav Kaushik

A sidebar on the right shows user settings for Vaibhav Kaushik, including density options (Comfy, Compact) and a comment from Eric Executive:

@Eric Executive Which department should I associate this travel request with?

Import the Department.CSV File

The screenshot shows a list of departments in Salesforce. The list includes:

- Audit Services
- Contract Management
- Disability Determination Bureau
- Division of Aging
- Division of Disability and Rehabilitative Services
- Division of Family Resources
- Division of Finance
- Division of Mental Health and Addiction
- Human Resources
- Legislative Services
- Office of Communications and Media
- Office of Early Childhood and Out-of-School Learning
- Office of General Counsel
- Office of Medicaid Policy and Planning
- Quality and Compliance Office
- Technology

Exercise-2:

The screenshot shows the Salesforce Setup interface for managing users. The left sidebar navigation includes 'Setup', 'Home', 'Object Manager', and a search bar. Under 'Users', there are sections for 'Permission Set Groups', 'Permission Sets', 'Profiles', 'Public Groups', 'Queues', 'Roles', 'User Management Settings' (which is selected), 'Users', 'Feature Settings', 'Data.com', 'Prospector Users', 'User Interface' (selected), 'Action Link Templates', 'Actions & Recommendations', 'App Menu', 'Custom Labels', 'Density Settings', 'Global Actions', and 'Global Actions'. The main content area displays the 'Users' configuration page with sections for 'Mailing Address', 'Single Sign On Information', 'Locale Settings', and 'Approver Settings'. A context menu is open on the right, showing 'DISPLAY DENSITY' with 'Comfy' checked, and other options like 'Compact' and 'OPTIONS'. There are also links to 'Switch to Salesforce Classic' and 'Add Username'. At the bottom are 'Save', 'Save & New', and 'Cancel' buttons.

The screenshot shows the Lightning App Builder interface for creating a 'Travel Approval Record Page'. The left sidebar has 'Components' and 'Fields' tabs, a search bar, and a 'Get more on the AppExchange' button. The main workspace shows a record detail page for 'TA-000001' with sections for 'Details' and 'Activity'. The 'Details' section includes fields for 'Last Approved Date', 'Status', 'Owner', 'Last Modified Date', 'Status Indicator', and 'Trip Info'. The 'Activity' section shows a Chatter feed with a message from Vaibhav Kaushik. A 'Record Detail' sidebar on the right provides tips for configuring record detail sections and fields, upgrading to Dynamic Forms, and setting component visibility. It also includes sections for 'Set fields in Page Layouts', 'Assign Page Layouts', and 'Travel Approval Layout (previewed)'. A 'Tips' sidebar at the bottom right contains a 'Filters' section with a '+ Add Filter' button.

Travel Approval TA-00001

Notes & Attachments (0)

Expense Items (2)

Expense Item Number	Expense Type	Amount
E-00006	Airfare	₹450.00
E-00007	Hotel	₹870.00

Approval History (2)

Step Name	Date	Status	Assigned To
Step 1	2/21/2023, 8:31 AM	Pending	Eric Executive
Approval Request Submitted	2/21/2023, 8:31 AM	Submitted	Vaibhav Kaushik

Create Travel Approval record

Travel Approval TA-00001

Related **Details**

Trip Info

Purpose of Trip	Out-of-State
Attend Dreamforce	<input checked="" type="checkbox"/>
Trip Start Date	2/1/2023
Trip End Date	2/16/2023
Created By	Vaibhav Kaushik, 2/21/2023, 8:05 AM
Last Modified By	Vaibhav Kaushik, 2/21/2023, 8:22 AM

Module-2

Create Validation Rule

The screenshot shows the Salesforce Object Manager interface for the 'Travel Approval' object. On the left, a sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, and Lightning Record Pages. The main content area displays the 'Travel Approval Validation Rule' detail page. The validation rule is named 'Trip_end_date_after_start_date' and has the formula `Trip_End_Date__c < Trip_Start_Date__c`. It is active and set to trigger on 'Trip End Date'. The error message is 'Trip end date must be greater than or equal to start date'. The rule was created by Vaibhav Kaushik on 2/16/2023 at 8:46 AM and modified by the same user on the same date.

Create a Record – Triggered Flow

The screenshot shows the Salesforce Flow Builder interface for a 'Record-Triggered Flow' titled 'Out of State Travel Flag - V1'. The flow starts with a 'Start' action, followed by a decision point 'Is Travel Out of State?'. If the answer is 'Yes Out of State', it triggers an 'Update Records' action to 'Update Travel Approval Record'. If the answer is 'In State', it also triggers an 'Update Records' action to 'Update Travel Approval Record'. The flow is triggered by 'A record is created or updated' for the 'Travel Approval' object. The flow is currently active and last modified 5 days ago.

resourceful-moose-kkjap6-dev-ed.trailblaze.lightning.force.com/builder_platform_interaction/flowBuilder.app?flowId=3012w000001BmXGAA0

Flow Builder Out of State Travel Flag - V1

Edit Update Records

Update Salesforce records using values from the flow.

Update Travel Approval Record (Update_Travel_Approval_Record)

How to Find Records to Update and Set Their Values

- Use the travel approval record that triggered the flow
- Update records related to the travel approval record that triggered the flow
- Use the IDs and all field values from a record or record collection
- Specify conditions to identify records, and set fields individually

Because this flow runs before a record is saved, you can only update the record that triggered the flow to run. To update other records, configure the trigger to run the flow after the record is saved.

Set Filter Conditions

Condition Requirements to Update Record

None—Always Update Record

Set Field Values for the Travel Approval Record

Field	Value
Out_of_State__c	True

Add Field

Cancel Done

Get more on the AppExchange

resourceful-moose-kkjap6-dev-ed.trailblaze.lightning.force.com/builder_platform_interaction/flowBuilder.app?flowId=3012w000001BmXGAA0

Flow Builder Out of State Travel Flag - V1

Edit Decision

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 +

OUTCOME DETAILS	
* Label Yes Out of State	Outcome API Name Yes_Out_of_State

Condition Requirements to Execute Outcome

All Conditions Are Met (AND)

Resource	Operator	Value
\$Record > Destination State	Does Not Equal	TX

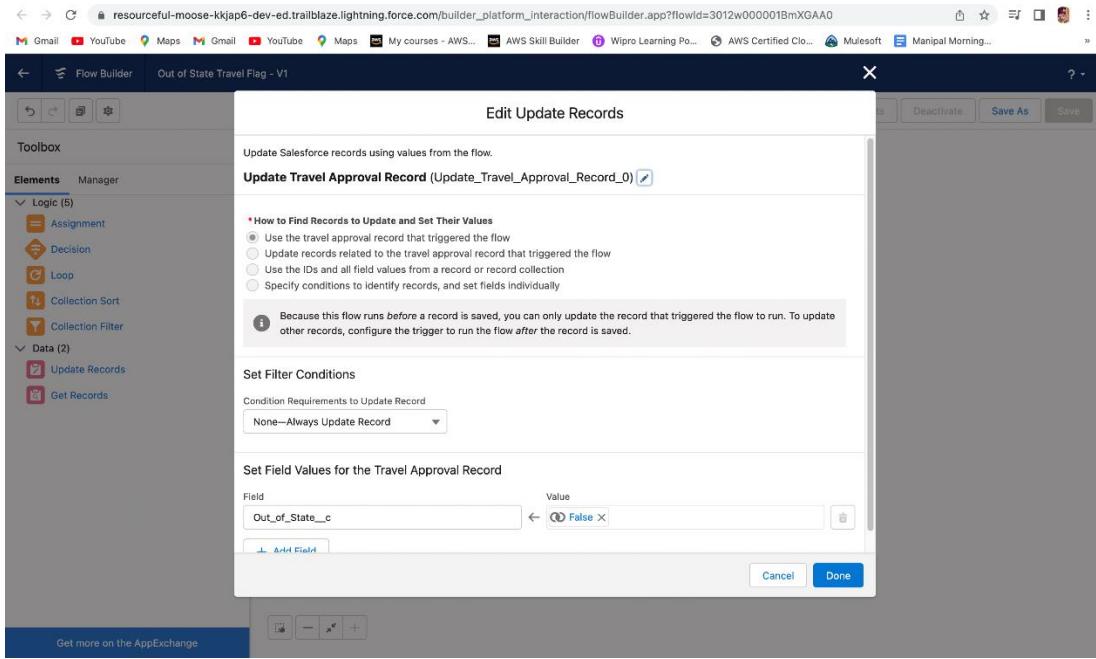
+ Add Condition

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

Cancel Done

Get more on the AppExchange



Create an Approval Process to send Travel approvals to Manager or Travel coordinator

Expense Item Number	Expense Type	Amount
E-00006	Airfare	\$450.00
E-00007	Hotel	\$870.00

Step Name	Date	Status	Assigned To
Travel Coordinator Approval	2/24/2023, 6:50 AM	Pending	Valbhav Kaushik
Step 1	2/24/2023, 6:50 AM	Approved	Eric Executive
Approval Request Submitted	2/21/2023, 8:31 AM	Submitted	Valbhav Kaushik

Exercise-2:

Use Data Import Wizard to import Travel Approval records

Bulk Data Load Job
7502w00000ONGvH

View the details of a bulk data load job.

Back to List: Bulk Data Load Jobs

Bulk Data Load Job Detail

Job ID	7502w00000ONGvH	Job Type	Bulk V1	Status	Closed
Submitted By	Vaibhav Kaushik	Operation	Insert	Total Processing Time (ms)	842
Start Time	2/21/2023, 8:01 AM AKST	Queued Batches	0	API Active Processing Time (ms)	554
End Time	2/21/2023, 8:01 AM AKST	In Progress Batches	0	Apex Processing Time (ms)	91
Time to Complete (hh:mm:ss)	00:02	Completed Batches	1		
Object	Travel Approval	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	300		
Concurrency Mode	Parallel	Records Failed	0		
API Version	57.0	Retries	0		

Travel Approvals

All ▾

301 items · Sorted by Department · Filtered by My travel approvals · Updated a few seconds ago

Department ↑	Created By	Status	Trip Start Date
1 Audit Services	Vaibhav Kaushik	Rejected	8/9/2019
2 Audit Services	Vaibhav Kaushik	Approved	2/28/2019
3 Audit Services	Vaibhav Kaushik	Approved	4/30/2019
4 Audit Services	Vaibhav Kaushik	Approved	12/27/2019
5 Audit Services	Vaibhav Kaushik	Approved	9/21/2019
6 Audit Services	Vaibhav Kaushik	Approved	9/3/2019
7 Audit Services	Vaibhav Kaushik	Approved	3/20/2019
8 Audit Services	Vaibhav Kaushik	Approved	7/8/2019
9 Audit Services	Vaibhav Kaushik	Approved	8/7/2019
10 Audit Services	Vaibhav Kaushik	Approved	2/18/2019
11 Audit Services	Vaibhav Kaushik	Approved	11/4/2019
12 Audit Services	Vaibhav Kaushik	Rejected	5/31/2019
13 Audit Services	Vaibhav Kaushik	Approved	7/8/2019
14 Audit Services	Vaibhav Kaushik	Rejected	11/22/2019
15 Audit Services	Vaibhav Kaushik	Approved	4/15/2019
16 Audit Services	Vaibhav Kaushik	Rejected	4/7/2019
17 Contract Management	Vaibhav Kaushik	Approved	12/22/2019
18 Contract Management	Vaibhav Kaushik	Approved	5/8/2019

Reports

resourceful-moose-kkjap6-dev-ed.trailblaze.lightning.force.com/lightning/r/Report/00O2w00000BnPoEEAV/view?queryScope=userFolders

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Travel App Chatter Reports Dashboards Departments Travel Approvals

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

Total Records Total Out-of-State
301 232

Department	Sum of Out-of-State
Audit Services	14
Contract Management	14
Disability Determination Bureau	13
Division of Aging	18
Division of Disability and Rehabilitative Services	16
Division of Family Resources	14
Division of Finance	13
Division of Mental Health and Addiction	11
Human Resources	16
Legislative Services	16
Office of Communications and Media	16
Office of Early Childhood and Out-of-School Learning	14
Office of General Counsel	8
Office of Medicaid Program Management	7
Quality and Compliance Office	8
Technology	13

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

Department Travel Approval: Travel Approval # Status Out-of-State Destination State Trip Start Date Trip End Date

Department	Travel Approval: Travel Approval #	Status	Out-of-State	Destination State	Trip Start Date	Trip End Date
Audit Services (16)	TA-02563	Rejected	<input checked="" type="checkbox"/>	FL	8/9/2019	8/15/2019
	TA-02573	Approved	<input type="checkbox"/>	TX	2/28/2019	3/6/2019

Row Counts Detail Rows Subtotals Grand Total

resourceful-moose-kkjap6-dev-ed.trailblaze.lightning.force.com/lightning/r/Report/00O2w00000BnPoJEAV/view?queryScope=userFolders

Gmail YouTube Maps Gmail YouTube Maps My courses - AWS... AWS Skill Builder Wipro Learning Po... AWS Certified Clo... Mulesoft Manipal Morning...

Travel App Chatter Reports Dashboards Departments Travel Approvals

Report: Travel Approvals **Travel Requests by Month**

Total Records
301

Trip End Date ↑	Out-of-State ↑	Travel Approval: Travel Approval #	Department	Status	Destination State
January 2019 (17)	(6)	TA-02621	Legislative Services	Approved	TX
		TA-02644	Office of General Counsel	Rejected	TX
		TA-02657	Disability Determination Bureau	Approved	TX
		TA-02791	Division of Aging	Approved	TX
		TA-02803	Quality and Compliance Office	Approved	TX
		TA-02812	Contract Management	Approved	TX
			Subtotal		
		TA-02677	Office of Communications and Media	Rejected	FL
		TA-02584	Division of Disability and Rehabilitative Services	Approved	OK
		TA-02599	Division of Aging	Approved	OK
		TA-02659	Division of Aging	Approved	FL
		TA-02669	Division of Mental Health and Addiction	Approved	OK
		TA-02670	Contract Management	Approved	GA
		TA-02714	Division of Disability and Rehabilitative Services	Approved	FL
		TA-02750	Contract Management	Approved	FL
		TA-02763	Office of Early Childhood and Out-of-School Learning	Approved	GA

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

Trip End Date Out-of-State Travel Approval: Travel Approval # Department Status Destination State

Row Counts Detail Rows Subtotals Grand Total

Dashboard

Screenshot of a Salesforce Lightning dashboard titled "Travel Requests Dashboard". The dashboard displays two main charts: "Travel Requests by Department" and "Travel Requests by Month". A sidebar on the right provides user information and display density options.

Travel Requests by Department

Department	Record Count
Audit Services	16
Contract Management	20
Disability Determination B...	19
Division of Aging	20
Division of Disability and ...	21
Division of Family Resour...	18
Division of Finance	19
Division of Mental Health ...	17
Human Resources	18
Legislative Services	19
Office of Communication...	24
Office of Early Childhood ...	19

[View Report \(Travel Requests by Department\)](#)

Travel Requests by Month

Trip End Date > Out-of-State	Record Count
Jan... false	8
Jan... true	11
Feb... false	3
Feb... true	18
Mar... false	7
Mar... true	21
Apr... false	5
Apr... true	28
May... false	5
May... true	17
Jun... false	3
Jun... true	15
July... false	6
July... true	23
Aug... false	5

[View Report \(Travel Requests by Month\)](#)

User Information

Vaibhav Kaushik
resourceful-moose-kkjap6-dev-ed.trailblaze.lightning.force.com/lightning/r/Dashboard/01Z2w000000CFTgEAG/view?queryScope=userFolders

Display Density

✓ Comfy (selected)
Compact

OPTIONS

Switch to Salesforce Classic ⓘ
Add Username

Module-3

CODE PLAYGROUND

Create a new custom lightning App, name: Code Playground.

The screenshot shows a Salesforce Lightning App interface titled "Code Playground". The main area displays a list of accounts with the following data:

Account Name	Account Site	Billing State/Province	Phone	Type
Burlington Textiles Corp of America		NC	(336) 222-7000	Customer - Dir
Dickenson plc		KS	(785) 241-6200	Customer - Ch
Edge Communications		TX	(512) 757-6000	Customer - Dir
Express Logistics and Transport		OR	(503) 421-7800	Customer - Ch
GenePoint		CA	(650) 867-3450	Customer - Channel
Grand Hotels & Resorts Ltd		IL	(312) 598-1000	Customer - Direct
Pyramid Construction Inc.			(014) 427-4427	Customer - Channel
Sample Account for Entitlements				autopro
sForce		CA	(415) 901-7000	VKaus
United Oil & Gas Corp.		NY	(212) 842-5500	Customer - Direct
United Oil & Gas, Singapore		Singapore	(65) 450-8810	Customer - Direct
United Oil & Gas, UK		UK	+44 191 4966203	Customer - Direct
University of Arizona		AZ	(520) 773-9050	VKaus

Exercise-1: Use Execute Anonymous to define and execute the following code.

The screenshot shows the Salesforce Execute Anonymous tool interface. The code entered in the "Enter Apex Code" window is:

```
String a='Vaibhav';
System.debug('String endsWith:' + a.endsWith('v'));
```

The execution log shows the following entry:

Timestamp	Event	Details
17:13:15:002	USER_DEBUG	[2][DEBUG]String endsWith:true

The logs table at the bottom shows two entries:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:13:15	Success		2.32 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:12:10	Success		7.28 KB

brave-panda-if0xv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

Log executeAnonymous @23/02/2023, 17:15:27 Log executeAnonymous @23/02/2023, 17:16:37 Log executeAnonymous @23/02/2023, 17:18:08 Log executeAnonymous @23/02/2023, 17:19:55 Log executeAnonymous @23/02/2023, 17:20:27

Execution Log

Timestamp	Event	Details
17:20:27:003	USER_DEBUG	[2]DEBUG String endswith:true
17:20:27:003	USER_DEBUG	[6]DEBUG Todays date 2023-02-23 00:00:00
17:20:27:003	USER_DEBUG	[7]DEBUG Added 30 days 2023-03-25 00:00:00
17:20:27:003	USER_DEBUG	[11]DEBUG 30
17:20:27:003	USER_DEBUG	[15]DEBUG 7
17:20:27:004	USER_DEBUG	[24]DEBUG (2, 4, 6, 8, 10)
17:20:27:004	USER_DEBUG	[27]DEBUG
17:20:27:004	USER_DEBUG	[30]DEBUG (2, 20, 6, 8, 10)
17:20:27:004	USER_DEBUG	[33]DEBUG

Enter Apex Code

```

17 List<Integer> x =new List<Integer>();
18 //add()
19 x.add(2);
20 x.add(4);
21 x.add(6);
22 x.add(8);
23 x.add(10);
24 System.debug(x);
25 //get()
26 Integer z = x.get(2);
27 System.debug(z);
28 //set()
29 x.set(1,20);
30 System.debug(x);
31 //clear()
32 x.clear();
33 System.debug(x);

```

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

[Open Log](#) [Execute](#) [Execute Highlighted](#)

Logs

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:20:27	Success		7.14 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:19:55	Success		7.15 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:19:48	List index out of bounds: 6	Unread	6.79 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:18:08	Success		7.15 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:15:37	Success		4.84 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:15:27	Success		4.23 KB

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

brave-panda-if0xv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help < >

Log executeAnonymous @23/02/2023, 17:13:15 Log executeAnonymous @23/02/2023, 17:14:21 Log executeAnonymous @23/02/2023, 17:15:27 Log executeAnonymous @23/02/2023, 17:16:37

Execution Log

Timestamp	Event	Details
17:16:37:003	USER_DEBUG	[2]DEBUG String endswith:true
17:16:37:003	USER_DEBUG	[6]DEBUG Todays date 2023-02-23 00:00:00
17:16:37:003	USER_DEBUG	[7]DEBUG Added 30 days 2023-03-25 00:00:00
17:16:37:003	USER_DEBUG	[11]DEBUG 30
17:16:37:003	USER_DEBUG	[15]DEBUG 7

Enter Apex Code

```

3
4 Date todaysDate=date.today();
5 Date add30Days=date.today().addDays (30);
6 System.debug('Todays date '+todaysDate);
7 System.debug('Added 30 days '+add30Days);

8
9 String s = '10';
10 integer num = integer.valueOf(s);
11 System.debug(num +20);

12
13 String name = 'Vaibhav';
14 Integer ln = name.length();
15 System.debug(ln);
16

```

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

[Open Log](#) [Execute](#) [Execute Highlighted](#)

Logs

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:16:37	Success		4.84 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:15:27	Success		4.23 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:14:21	Success		3.58 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:13:15	Success		2.32 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:12:10	Success		7.28 KB

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

Exercise-2

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

The screenshot shows the Salesforce Apex Dev Console interface. At the top, the URL is `brave-panda-if0xv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the header is a toolbar with File, Edit, Debug, Test, Workspace, Help, and a Log dropdown set to "Log executeAnonymous @25/02/2023, 12:20:15". The main area is titled "Execution Log" with a table:

Timestamp	Event	Details
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:0
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:1
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:2
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:3
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:4
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:5
12:22:21:004	USER_DEBUG	[11]DEBUG:value of x is:6
12:22:21:005	USER_DEBUG	[11]DEBUG:value of x is:7
12:22:21:005	USER_DEBUG	[11]DEBUG:value of x is:8
12:22:21:005	USER_DEBUG	[11]DEBUG:value of x is:9

Below the log is a modal window titled "Enter Apex Code" containing the following code:

```
1 Integer x=20;
2 v while(x>12){
3     integer n=12;
4     x--;
5     if(x==12){
6         x=x-12;
7     }
8 }
9 integer i=x;
10 v For(integer x=i;x<10;x=x+1){
11     system.debug('value of x is:' + x);
12 }
```

At the bottom of the modal are "Open Log", "Execute", and "Execute Highlighted" buttons. The status bar at the bottom of the page includes "Logs Tests Checkpoints Query Editor View State Progress Problems" tabs, a "Filter" button, and a "Click here to filter the log list" link.

Exercise-3

The screenshot shows the Salesforce Apex Dev Console interface. At the top, the URL is `brave-panda-if0xv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the header is a toolbar with File, Edit, Debug, Test, Workspace, Help, and a Log dropdown set to "Log executeAnonymous @23/02/2023, 17:27:44". The main area is titled "Execution Log" with a table:

Timestamp	Event	Details
17:29:45:003	USER_DEBUG	[2]DEBUG:Ans:false

Below the log is a modal window titled "Enter Apex Code" containing the following code:

```
1 Integer myluckyNumber = 15;
2 Integer myunluckyNumber = 7;
3 System.debug('Ans:' + (myluckyNumber != myunluckyNumber+8));
```

At the bottom of the modal are "Open Log", "Execute", and "Execute Highlighted" buttons. The status bar at the bottom of the page includes "Logs Tests Checkpoints Query Editor View State Progress Problems" tabs, a "Filter" button, and a "Click here to filter the log list" link.

Exercise-4

The screenshot shows the Salesforce ApexCSIPage. At the top, there's a navigation bar with links like Gmail, YouTube, Maps, My courses - AWS..., AWS Skill Builder, Wipro Learning Po..., AWS Certified Clo..., Mulesoft, and Manipal Morning... Below the navigation bar is a toolbar with File, Edit, Debug, Test, Workspace, and Help buttons.

The main area has tabs for Execution Log, Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The Execution Log tab is active, showing a table with columns: Timestamp, Event, and Details. A single entry is present: 17:31:04:002 USER_DEBUG [3]@DEBUG|Ans:true.

A modal window titled "Enter Apex Code" is open, displaying the following code:

```
1 Boolean.isTrue = True;
2 Boolean.isFalse = false;
3 System.debug('Ans:' +(isTrue || isFalse));
4
```

At the bottom of the modal are three buttons: Open Log, Execute, and Execute Highlighted.

The Logs tab shows a table of log entries:

User	Application	Operation	Time	Status	Read	Size
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:31:04	Success		2.5 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:29:45	Success		2.55 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:27:44	Success		5.61 KB

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

Exercise-5

The screenshot shows the Salesforce ApexCSIPage, similar to the previous one but with different log entries. The navigation bar and toolbar are identical.

The Execution Log tab is active, showing a table with columns: Timestamp, Event, and Details. A single entry is present: 17:32:44:002 USER_DEBUG [3]@DEBUG|Ans:true.

A modal window titled "Enter Apex Code" is open, displaying the following code:

```
1 Date today = Date.today();
2 Date tomorrow = Date.today().addDays(1);
3 System.debug('Ans:' +(today!=tomorrow));
4
5
```

At the bottom of the modal are three buttons: Open Log, Execute, and Execute Highlighted.

The Logs tab shows a table of log entries:

User	Application	Operation	Time	Status	Read	Size
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:32:44	Success		2.62 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:31:04	Success		2.5 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:29:45	Success		2.55 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 17:27:44	Success		5.61 KB

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

Exercise-6

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

The screenshot shows the Salesforce Dev Console interface. At the top, there's a navigation bar with links like Gmail, YouTube, Maps, and AWS Skill Builder. Below it is a toolbar with File, Edit, Debug, Test, Workspace, and Help buttons. A title bar says "Log executeAnonymous @23/02/2023, 17:41:08". The main area has two tabs: "Execution Log" and "Logs". The "Execution Log" tab shows a timestamp of 17:41:08:002 and an event of USER_DEBUG. The "Logs" tab shows a single log entry from a user named Vaibhav Kaushik at 23/02/2023, 17:41:08 with a status of Success and a size of 2.48 KB. In the center, there's an "Enter Apex Code" window containing the following Apex code:

```
1 Integer score = 75;
2 if(score==100) {
3     System.debug ('Grade:A+');
4 }else if(score>=80){
5     System.debug ('Grade:A');
6 }else if(score>=70){
7     System.debug ('Grade:B');
8 }else{
9     System.debug('Grade:Failed');
10 }
```

At the bottom of the code editor are buttons for "Open Log", "Execute", and "Execute Highlighted".

Exercise-7

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

The screenshot shows the Salesforce Dev Console interface. At the top, there's a navigation bar with links like Gmail, YouTube, Maps, and AWS Skill Builder. Below it is a toolbar with File, Edit, Debug, Test, Workspace, and Help buttons. A title bar says "Billing.apxc @23/02/2023, 21:04:46". The main area has two tabs: "Logs" and "Tests". The "Logs" tab shows a log entry from a user named Vaibhav Kaushik at 23/02/2023, 21:05:04 with a status of Success and a size of 6.54 KB. The "Tests" tab shows a test result from Vaibhav Kaushik at 23/02/2023, 21:04:46 with a status of Success and a size of 6.56 KB. In the center, there's an "Enter Apex Code" window containing the following Apex code:

```
1 public class Billing {
2     public static void viewBills(){
3         List<Billing__c> BillsList= [SELECT ID, Name, Status__c FROM Billing__c];
4         List<string> billRecords= new list<string>();
5         for (Billing__c bill : BillsList){
6             System.debug('Current Record value on which loop is iterating: '+ BillsList);
7             if(bill.Status__c == 'Paid'){
8                 billRecords.add(bill.Name);
9             }
10        }
11        system.debug('Billing Records are:' + billRecords);
12    }
13 }
```

At the bottom of the code editor are buttons for "Filter" and "Click here to filter the log list".

The screenshot shows the Salesforce Apex Debug Console. At the top, there's a navigation bar with links like Gmail, YouTube, Maps, My courses - AWS..., AWS Skill Builder, Wipro Learning Po..., AWS Certified Clo..., Mulesoft, and Manipal Morning... Below the navigation bar is a toolbar with File, Edit, Debug, Test, Workspace, and Help buttons.

The main area has tabs for Billing.apxc and Billing_c@8:59 PM. The active tab is Log executeAnonymous @23/02/2023, 21:04:46. The execution log table shows the following entries:

Timestamp	Event	Details
21:04:46:029	USER_DEBUG	[5]DEBUG Current Record value on which loop is iterating: (Billing__c:{Id=a012w000017ILX0AAO, Name=B - 0003, Status__c=Paid}, Billing__c:{Id=a012w000017ILWvAAO, Name=B - 0002, Status__c=Unpaid}, Billing__c:{Id=a012w000017ILWqAAO
21:04:46:030	USER_DEBUG	[5]DEBUG Current Record value on which loop is iterating: (Billing__c:{Id=a012w000017ILX0AAO, Name=B - 0003, Status__c=Paid}, Billing__c:{Id=a012w000017ILWvAAO, Name=B - 0002, Status__c=Unpaid}, Billing__c:{Id=a012w000017ILWqAAO
21:04:46:030	USER_DEBUG	[5]DEBUG Current Record value on which loop is iterating: (Billing__c:{Id=a012w000017ILX0AAO, Name=B - 0003, Status__c=Paid}, Billing__c:{Id=a012w000017ILWvAAO, Name=B - 0002, Status__c=Unpaid}, Billing__c:{Id=a012w000017ILWqAAO
21:04:46:030	USER_DEBUG	[11]DEBUG Billing Records are:(B - 0003, B - 0001)

A modal window titled "Enter Apex Code" is open, containing the following code:

```
1 Billing.viewBills();
```

Below the log table are several filter options: This Frame, Executable, Debug Only, Filter, Click here to filter the log, Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. A table below the logs shows API activity:

User	Application	Operation	Time	Status	Read	Size
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:05:04	Success	Unread	6.54 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:04:46	Success		6.56 KB

Exercise-8

Write a Class to demo the use of Constants in Apex.

The screenshot shows the Salesforce Apex Debug Console. The interface is similar to the previous one, with a navigation bar, toolbar, and a main area with tabs for Billing.apxc and Billing_c@8:59 PM. The active tab is Log executeAnonymous @23/02/2023, 21:04:46. The code editor contains the following Apex class:

```
1 public class DiscountClass {
2     Final Decimal regularDiscount=0.1;
3     Decimal finalPrice=0.0;
4
5     public Decimal calculateDiscount (Integer price){
6         finalPrice=price-price*regularDiscount;
7         return finalPrice;
8     }
9 }
```

The execution log table shows the following entries:

User	Application	Operation	Time	Status	Read	Size
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:11:32	Success		4.82 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:05:04	Success	Unread	6.54 KB
Valbhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:04:46	Success		6.56 KB

← → ⌂ brave-panda-ifoxv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/px/debug/ApexCSIPage

Gmail YouTube Maps Gmail YouTube Maps My courses - AWS... AWS Skill Builder Wipro Learning Po... AWS Certified Clo... Mulesoft Manipal Morning...

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

Billing.apxc Billing_c@8:59 PM Log executeAnonymous @23/02/2023, 21:04:46 DiscountClass.apxc Log executeAnonymous @23/02/2023, 21:11:32 Log executeAnonymous @23/02/2023, 21:13:06

Execution Log

Timestamp	Event	Details
21:13:06:007	USER_DEBUG	[3]DEBUG finalPrice:90.0

Enter Apex Code

```
1 DiscountClass obj=new DiscountClass();
2 Decimal finalPrice=obj.calculateDiscount (100);
3 System.debug('finalPrice:'+finalPrice);
```

Open Log Execute Execute Highlighted

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

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:13:06	Success		4.76 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:11:32	Success		4.82 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:05:04	Success	Unread	6.54 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:04:46	Success		6.56 KB

Filter Click here to filter the log list

Exercise-9

Write a Class to demo the use of Interface in Apex.

The screenshot shows the Salesforce IDE interface. At the top, there are tabs for 'InterfaceExample.apxc' (highlighted in orange), 'PremiumCustomer.apxc', and 'normalCustomer.apxc'. Below the tabs, there is a code editor with the following code:

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

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

```
1 PremiumCustomer obj1=new PremiumCustomer();
2 Double discount=obj1.percentageDiscountTobeApplied();
3 System.debug('Calling the interface method in PremiumCusto
4 System.debug('Discount in percentage: '+discount*100)+'%
5 NormalCustomer obj2=new normalCustomer();
6 discount=obj2.percentageDiscountTobeApplied();
7 System.debug('Calling the interface method in PremiumCusto
8 System.debug('Discount in percentage: '+discount*100)+'%
```

At the bottom of the modal are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. Below the modal is a log viewer with the following entries:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:50:03	Success		6.96 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:43:03	Insert failed. First exception on row...	Unread	3.11 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:19:13	Insert failed. First exception on row...	Unread	3.21 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:13:06	Success		4.76 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:11:32	Success		4.82 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:05:04	Success	Unread	6.54 KB

At the bottom of the log viewer is a filter bar with the placeholder 'Click here to filter the log list'.

The screenshot shows the Salesforce IDE interface. At the top, there are tabs for 'InterfaceExample.apxc' (highlighted in orange), 'PremiumCustomer.apxc', and 'normalCustomer.apxc'. Below the tabs, there is a code editor with the following code:

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

Below the code editor is a modal window titled 'Enter Apex Code' containing the same code as the previous screenshot:

```
1 PremiumCustomer obj1=new PremiumCustomer();
2 Double discount=obj1.percentageDiscountTobeApplied();
3 System.debug('Calling the interface method in PremiumCusto
4 System.debug('Discount in percentage: '+discount*100)+'%
5 NormalCustomer obj2=new normalCustomer();
6 discount=obj2.percentageDiscountTobeApplied();
7 System.debug('Calling the interface method in PremiumCusto
8 System.debug('Discount in percentage: '+discount*100)+'%
```

At the bottom of the modal are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. Below the modal is a log viewer with the following entries:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:50:03	Success		6.96 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:43:03	Insert failed. First exception on row...	Unread	3.11 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:19:13	Insert failed. First exception on row...	Unread	3.21 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:13:06	Success		4.76 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:11:32	Success		4.82 KB
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/execut...	23/02/2023, 21:05:04	Success	Unread	6.54 KB

At the bottom of the log viewer is a filter bar with the placeholder 'Click here to filter the log list'.

The screenshot shows the Salesforce IDE interface with two main windows:

- Execution Log:** Displays the following log entries:

```

Timestamp          Event           Details
2023-02-27T09:47:54 USER_DEBUG    [22]|DEBUG|Calling the interface method in PremiumCustomer
2023-02-27T09:47:54 USER_DEBUG    [22]|DEBUG|Disccount is 100000000.000000
2023-02-27T09:47:54 USER_DEBUG    [22]|DEBUG|NormalCustomer obj2=new NormalCustomer();
2023-02-27T09:47:54 USER_DEBUG    [22]|DEBUG|Disccount=obj2.percentageOfDiscountToBeApplied();
2023-02-27T09:47:54 USER_DEBUG    [22]|DEBUG|Discount in percentage: +(discount*100)+"%

```

- Enter Apex Code:** Shows the apex code for the PremiumCustomer class:

```

1 public class PremiumCustomer implements InterfaceExample{
2     public Double percentageOfDiscountToBeApplied(){
3         return 0.38;
4     }
5 }

```

Exercise-10

Demo on DML Insert Operation Using Database methods.

The screenshot shows the Salesforce IDE interface with two main windows:

- Execution Log:** Displays the following log entry:

```

Timestamp          Event           Details
2023-02-27T12:38:24 USER_DEBUG    [22]|DEBUG|Successfully inserted Billing Record Billing Id : a012w000018BVTKAAO

```

- Enter Apex Code:** Shows the apex code for inserting a Customer record and a Billing record:

```

1 Customer__c cr =new Customer__c();
2     cr.Name='Wipro';
3     cr.Customer_Type__c='Premium';
4
5     insert cr;
6     List<Billing__c> BillingList =new List<Billing__c>();
7     Billing__c Br =new Billing__c();
8         Br.Status__c = 'Paid';
9         Br.Amount_Paid__c = 5000000;
10        Br.Id = cr.CreatedById;
11        BillingList.add(Br);
12        Database.SaveResult[] srList = Database.insert(BillingList,false);
13        Integer i=0;
14        for (Database.SaveResult sr : srList) {
15            if (!sr.isSuccess()) {
16                for(Database.Error err : sr.getErrors()) {
17                    System.debug('Following Error Found ');
18                }
19            }
20        }

```

Customer
Wipro

Related Details

Customer Name: Wipro

Active:

Customer Type: Premium

Description:

Created By: Vaibhav Kaushik, 23/02/2023, 10:27 pm

Last Modified By: Vaibhav Kaushik, 23/02/2023, 10:27 pm

Exercise-11

Write and execute SOQL queries from Developer Console.

Account@10:35 PM

select Industry, Website, (Select id, Amount, StageName from Opportunities)from Account where (Industry ='Energy' AND AnnualRevenue > 5000)

Query Results - Total Rows: 1

Industry	Website	Opportunities
Energy	http://www.ues.com	[{"id":"0062v00000KAjlaAAP","Amount":"125000","StageName":"Negotiation/Review"}, {"id":"0062v00000KAjleAAP","Amount":"270000","StageName":"Proposal/Price Quo...

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 Industry,Website(Select id,Amount,StageName from Opportunities)from Account where (Industry ='Energy' AND AnnualRevenue > 5000)

Unknown error parsing query

History

Executed

SELECT Id, Name, Status__c FROM Billing__c

select: Industry,Website,(Select id,Amount,StageName from Opportu...

Exercise-12

Write an Apex Trigger, Name = CustomerTrigger.

The screenshot shows the Salesforce IDE interface. The top navigation bar includes links for Gmail, YouTube, Maps, AWS Skill Builder, Wipro Learning Po..., AWS Certified Clo..., Mulesoft, and Manipal Morning... The main area displays the code for the CustomerTrigger trigger:

```
trigger CustomerTrigger on Customer__c (after insert, after update) {
    List<Billing__c> BillingList = new List<Billing__c>();
    for (Customer__c objCustomer: Trigger.new)
    {
        if (objCustomer.Active__c == True)
        {
            Billing__c objbilling = new Billing__c();
            objbilling.Status__c = 'Paid';
            objbilling.Amount_Paid__c=1000000;
            BillingList.add(objbilling);
        }
    }
    insert Billinglist;
}
```

Below the code editor is a logs table:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/runTest...	28/02/2023, 15:32:27	Success	Unread	11.3 KB

Exercise-13

Write a Test Class for CustomerTrigger.

The screenshot shows the Salesforce IDE interface. The top navigation bar includes links for Gmail, YouTube, Maps, AWS Skill Builder, Wipro Learning Po..., AWS Certified Clo..., Mulesoft, and Manipal Morning... The main area displays the code for the CustomerTriggerTestClass:

```
@isTest
public class CustomerTriggerTestClass {
    @isTest static void testName() {
        Customer__c cust=new Customer__c();
        cust.Active__c=True;
        insert cust;

        Test.startTest();
        cust.Active__c=True;
        update cust;
        Test.stopTest();
    }
}
```

Below the code editor is a logs table:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Unknown	/services/data/v57.0/tooling/runTest...	28/02/2023, 15:32:27	Success	Unread	11.3 KB

Exercise-14

Write an Apex Trigger, Name = DisqualifyTestLeads.

The screenshot shows the Salesforce Apex editor with the trigger code for 'DisqualifyTestLeads'. The code uses a trigger on Lead before insert to check if FirstName or LastName contains 'test' or is blank, adding such leads to a list. It then iterates through the list and sets the status of each lead to 'Disqualified'. Below the code, the 'Tests' tab of the Test Results panel is selected, showing a list of test runs. One run, 'TestRun @ 10:58:52 pm', is highlighted and shows a failure count of 1.

```
trigger DisqualifyTestLeads on Lead (before insert) {
    List<Lead> llist = new List<Lead>();
    for(Lead le:Trigger.new)
    {
        if(le.FirstName.equalsIgnoreCase('test')|| string.isBlank(le.FirstName)
           || le.LastName.equalsIgnoreCase('test')||string.isBlank(le.LastName))
        {
            system.debug(le.FirstName + ' ' + le.LastName + ' Will be disqualified!');
            llist.add(le);
        }
    }
    for(Lead l :llist){
        l.status='Disqualified';
    }
}
```

Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	TestRun @ 10:44:25 pm			0	1
✓	CustomerTriggerTestClass			0	1
✓	TestRun @ 10:52:27 pm			0	1
✓	TestRun @ 10:57:02 pm			0	1
⌚	TestRun @ 10:58:52 pm			0	1
✓	TestRun @ 11:00:16 pm			0	1
✓	DisqualifyTestLeads			0	1

Exercise-15

Write a Test Class for DisqualifyTestLeads.

The screenshot shows the Salesforce Apex editor with the test class 'DisqualifyTestLeadsTestClass'. The class contains a static void method 'a' that creates a test lead with specific values, inserts it, and then stops the test. Below the code, the 'Tests' tab of the Test Results panel is selected, showing a list of test runs. One run, 'TestRun @ 10:58:52 pm', is highlighted and shows a failure count of 1.

```
@isTest
public class DisqualifyTestLeads {
    @isTest static void a()
    {
        Lead le=new Lead();
        le.FirstName = 'Role';
        le.LastName = 'Test';
        le.Company = 'Wipro';
        le.Status = 'Open- Not Contacted';

        Test.startTest();
        insert le;
        Test.stopTest();
    }
}
```

Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	TestRun @ 10:44:25 pm			0	1
✓	CustomerTriggerTestClass			0	1
✓	TestRun @ 10:52:27 pm			0	1
✓	TestRun @ 10:57:02 pm			0	1
⌚	TestRun @ 10:58:52 pm			0	1
✓	TestRun @ 11:00:16 pm			0	1
✓	DisqualifyTestLeads			0	1

Execution Log

Timestamp	Event	Details
22:57:02:029	USER_DEBUG	[8] DEBUG Role TestWill be disqualified

Status	Test Run	Enqueued Time	Duration	Failures	Total
✓	TestRun @ 10:44:25 pm			0	1
✓	CustomerTriggerTestClass			0	1
✓	TestRun @ 10:52:27 pm			0	1
✓	TestRun @ 10:57:02 pm			0	1
⌚	TestRun @ 10:58:52 pm			0	1
✓	TestRun @ 11:00:16 pm			0	1
✓	DisqualifyTestLeads			0	1

Exercise-16

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

```

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

```

Logs

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Browser	/apex/OppView	23/02/2023, 23:04:00	Success		1.18 KB

A screenshot of a Salesforce Opportunity Details page. The URL is brave-panda-if0xv9-dev-ed--c.trailblaze.vf.force.com/apex/OppView?core.apexpages.request.devconsole=1. The page displays fields such as Opportunity Name, Close Date, Amount, and Account Name.

Exercise-17

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

A screenshot of the Salesforce developer console. The URL is brave-panda-if0xv9-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The page shows the code for AccountList.vfp:

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

The logs section shows the following entry:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Browser	/apex/AccountList	23/02/2023, 23:05:37	Success	Unread	1.19 KB

A screenshot of a web browser window. The address bar shows the URL: `brave-panda-if0xv9-dev-ed--c.trailblaze.vf.force.com/apex/AccountList?core.apexpages.request.devconsole=1`. The page content is a list of account names:

- Burlington Textiles Corp of America
- Dickenson plc
- Edge Communications
- Express Logistics and Transport
- GenePoint
- 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 Arizona

Exercise-18

Visualforce page that uses a custom controller to display a list of cases with the status of 'New'.

A screenshot of the Salesforce Dev Console. The top navigation bar includes links for Gmail, YouTube, Maps, My courses - AWS..., AWS Skill Builder, Wipro Learning Po..., AWS Certified Clo..., Mulesoft, and Manipal Morning... The main area shows the code for `NewCaseList.vfp` and `NewCaseListController.apxc`:

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

The bottom section shows the Logs tab with the following data:

User	Application	Operation	Time	Status	Read	Size
Vaibhav Kaushik	Browser	/apex/NewCaseList	23/02/2023, 23:09:29	Success	Unread	3.25 KB

The screenshot shows the Force.com IDE interface. At the top, there's a navigation bar with links like Gmail, YouTube, Maps, and AWS Skill Builder. Below the bar, the code editor window is open with the file 'NewCaseList.vfp' and the class 'NewCaseListController'. The code is as follows:

```
1 public class NewCaseListController {  
2     public List<case> getNewCases(){  
3         List<case>results =database.query('SELECT ID, CaseNumber from Case where Status = \'New\'');  
4         return results;  
5     }  
6 }  
7 }
```

Below the code editor is a log viewer tab titled 'Logs' which shows a single entry:

User	Application	Operation	Time	Status	Read	Size
Vaishav Kaushik	Browser	/apex/NewCaseList	23/02/2023, 23:09:29	Success	Unread	3.25 KB

The screenshot shows a browser window with the URL 'brave-panda-if0xv9-dev-ed--c.trailblaze.vf.force.com/apex/NewCaseList?core.apexpages.request.devconsole=1'. The page displays a list of three case numbers:

- 00001002
- 00001016
- 00001024

Future Enhancements

There are several potential future enhancements that could be made to the Travel Approval App to further improve its functionality and user experience. Some of these enhancements include:

Integration with travel booking platforms: To streamline the travel booking process, the app could be integrated with popular travel booking platforms such as Expedia or Booking.com. This would allow employees to book their travel arrangements directly through the app, rather than having to navigate to a separate site.

Automatic itinerary tracking: To simplify the expense reporting process, the app could automatically track travel itineraries and expenses, pulling in data from email confirmations or other sources. This would eliminate the need for employees to manually enter their travel expenses, saving time and reducing errors.

Real-time reporting: To provide better visibility into travel and expense data, the app could offer real-time reporting and analytics. This would allow managers to track spending trends and identify areas where cost savings could be achieved.

Integration with corporate credit card programs: To further streamline the expense reporting process, the app could be integrated with corporate credit card programs. This would allow employees to easily reconcile their expenses with their credit card statements, reducing the risk of errors and simplifying the approval process.

Overall, these enhancements would help to make the Travel Approval App even more powerful and user-friendly, providing a more streamlined and efficient solution for managing travel requests and expenses.

Conclusion

In conclusion, the Travel Approval App in Salesforce Trailhead provides a comprehensive guide for building a custom travel approval application using Salesforce. This application is designed to streamline the process of approving travel requests by automating many of the manual steps that are typically involved. With this app, companies can easily manage travel requests, track expenses, and ensure that all requests are approved in a timely manner.

The Capstone module provides instructions on how to build this app, including how to create custom objects, fields, and workflows. It also covers how to set up approval processes as well as how to customize the user interface to meet specific business requirements.

The Apex Trigger and Visualforce Page used in Capstone module provides an in-depth understanding of how to create and utilize triggers and pages in Salesforce. Apex triggers allow users to automate certain actions within their Salesforce org, while Visualforce pages provide a way to create custom user interfaces for these actions.

Through this module, users learn how to write Apex triggers that fire when certain conditions are met, and how to use them to automate tasks such as updating records or sending notifications. Additionally, they learn how to create Visualforce pages to provide a custom interface for these actions, which can greatly enhance the user experience and improve the efficiency of their workflows.

Overall, the Travel Approval App is an excellent example of how Salesforce can be used to create custom applications that solve real-world business problems. By following this Capstone module, users can gain a solid understanding of the tools and techniques required to build their own custom apps in Salesforce, making them better equipped to meet the needs of their organizations.

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