



Capstone Project Report
On
**“TRAVEL
APPROVAL APP”**

Submitted by:

Name: Jatin Balani
Batch: WIP-SF-13
LMS Id: MGSA_531
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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.

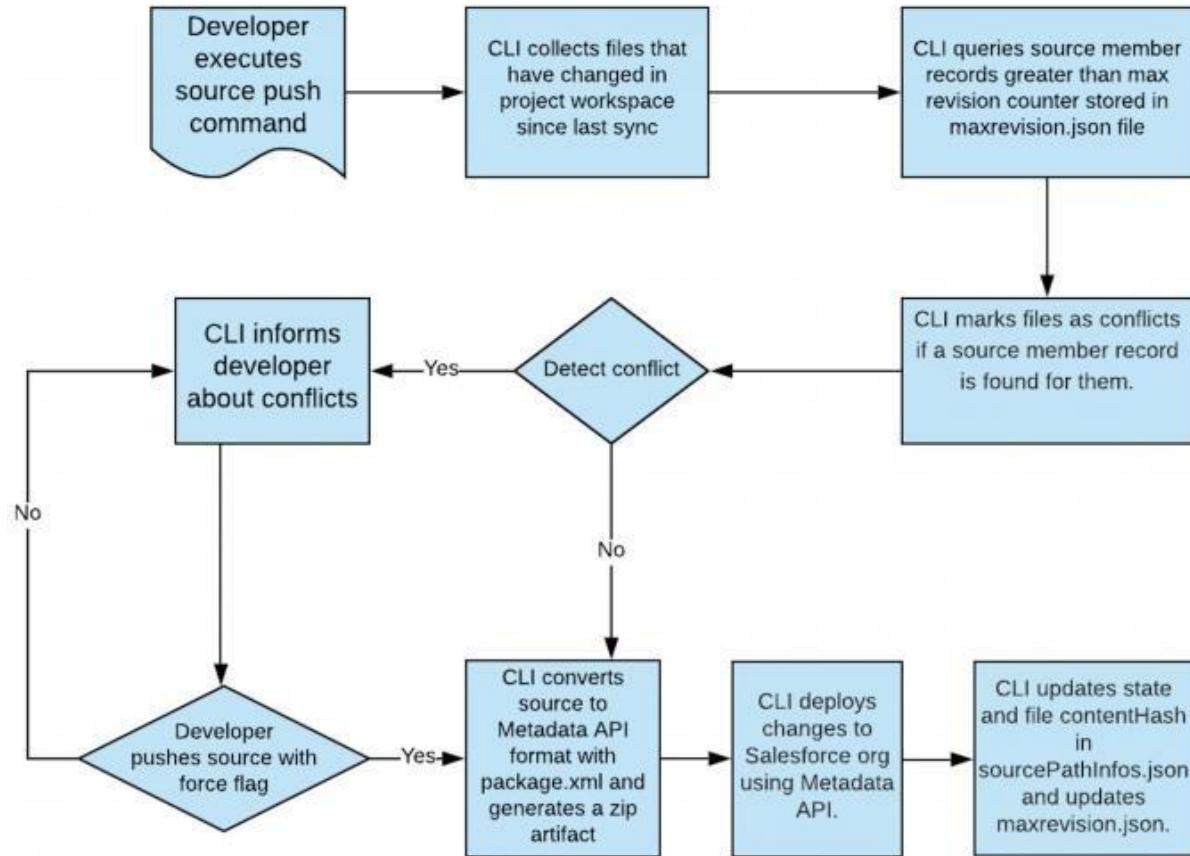
Salesforce is currently providing various software solutions and platforms for developers to create and distribute custom software/applications. Tech giants like Google, Twitter, Amazon, and Facebook are using Salesforce either in the form of SaaS or PaaS.



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

Exercise- 1:

Step-1:

The screenshot shows the Chatter feed for a user named "Travel App". The feed has three tabs: Post, Poll, and Question. The "Post" tab is selected. A search bar at the top right contains the placeholder "Search...". Below the search bar is a text input field with the placeholder "Share an update..." and a "Share" button. To the left of the main feed area is a sidebar with sections for "What I Follow", "To Me", "Bookmarked", and "Company Highlights". Under "Company Highlights", there is a section titled "My Drafts" and another titled "STREAMS" which says "You don't have any streams yet. Try creating one!". Below that is a section titled "RECENT GROUPS" which says "Aw, you don't have any groups! Why not create or join some now?". The main feed area features a decorative background image of clouds and mountains. At the bottom of the screen, the Windows taskbar is visible with various pinned icons and the system tray showing the date and time.

Step -2:

The screenshot shows the Salesforce Object Manager interface for the "Department" object. The top navigation bar includes tabs for "Hands-On Orgs", "Chatter Home | Salesforce", and "Department | Salesforce". The main content area displays the "Department" object details. On the left, a sidebar lists various configuration options under "SETUP > OBJECT MANAGER": Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, and Restriction Rules. The main panel shows the "Details" section for the "Department" object. It includes fields for "Description", "API Name" (set to "Department__c"), "Custom" (with a checked checkbox), "Singular Label" (set to "Department"), "Plural Label" (set to "Departments"), and "Enable Reports" (with a checked checkbox). Other settings shown include "Track Activities", "Track Field History", "Deployment Status" (set to "Deployed"), and "Help Settings" (set to "Standard salesforce.com Help Window"). At the bottom right of the main panel, there are "Edit" and "Delete" buttons. The Windows taskbar is visible at the bottom of the screen.

Step-3 :

The screenshot shows the Salesforce Object Manager interface for the 'Department' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, etc. The main area displays the 'Fields & Relationships' section with a table:

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|------------------|--------------------|----------------------------------|-------------------|---------|
| Created By | CreatedById | Lookup(User) | | |
| Department Code | Department_Code__c | Text(10) (Unique Case Sensitive) | | ✓ |
| Department Name | Name | Text(80) | | ✓ |
| Department Type | Department_Type__c | Picklist | Location | ✓ |
| Last Modified By | LastModifiedById | Lookup(User) | | |
| Location | Location__c | Picklist | | ✓ |
| Owner | OwnerId | Lookup(User/Group) | | ✓ |

At the bottom right of the page, there is a message: "Activate Windows Go to Settings to activate Windows."

Step-4 :

The screenshot shows the Salesforce Object Manager interface for the 'Travel Approval' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, etc. The main area displays the 'Details' section with a table:

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

At the bottom right of the page, there is a message: "Activate Windows Go to Settings to activate Windows."

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

- Setup** tab selected.
- Object Manager** section.
- Travel Approval** object selected.
- Fields & Relationships** tab selected.
- Fields & Relationships** table:

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|-------------------|----------------------|--------------------|-------------------|---------|
| Created By | CreatedById | Lookup(User) | | |
| Department | Department__c | Lookup(Department) | | ✓ |
| Destination State | Destination_State__c | Text(2) | | |
| Last Modified By | LastModifiedById | Lookup(User) | | |
| Out of State | Out_of_State__c | Checkbox | | |
| Owner | OwnerId | Lookup(User/Group) | | ✓ |
| Purpose of Trip | Purpose_of_Trip__c | Text Area(255) | | |
| Status | Status__c | Picklist | | |
| Status Indicator | Status_Indicator__c | Formula (Text) | | |
- Activate Windows** message: Go to Settings to activate Windows.

Test the app:

The screenshot shows the Travel App interface with the following details:

- Travel App** tab selected.
- Travel Approvals** section.
- Travel Approval # TA-00001** record selected.
- Details** tab selected.
- Related** tab available.
- Activity** section:
 - 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.
- Activate Windows** message: Go to Settings to activate Windows.

Step-5 :

The screenshot shows the Salesforce Lightning interface. The top navigation bar includes tabs for Project report, Apex Trailmix, Apex Special, Apex & .NET, Hands-On, Import Data, All Departments, Home | Sales, Create department, and a plus sign. Below the navigation is a search bar and a toolbar with icons for New, Import, Change Owner, and Printable View. The main content area displays a list of departments under the heading "Departments All". The list contains 16 items, each with a checkbox and a link to the department's detail page. The items are: 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, and Office of Medicaid Policy and Planning. A status message "Activate Windows" with a link to settings is visible on the right. The bottom of the screen shows the Windows taskbar with various pinned icons and system status.

Exercise-2:

Step-1 :

The screenshot shows the Salesforce Lightning interface. The top navigation bar includes tabs for Project report, Apex Trailmix, Apex Special, Apex & .NET, Hands-On, Customize this!, YouTube, and a plus sign. Below the navigation is a search bar and a toolbar with icons for New Contact, Edit, and New Opportunity. The main content area displays a "Travel Approval" detail page for record TA-00001. The left sidebar shows related lists for "Related" and "Details". The "Details" section includes fields for Travel Approval # (TA-00001), Status (Draft), Out of State (checked), Destination State (CA), and Trip Info (Purpose of Trip: Attend Dreamforce, Trip Start Date: 08/03/2023, Trip End Date: 24/03/2023). The right sidebar shows the "Activity" section with a list of activity types (Email, Task, Call, etc.) and a message: "No activities to show. Get started by sending an email, scheduling a task, and more." A status message "Activate Windows" with a link to settings is visible on the right. The bottom of the screen shows the Windows taskbar with various pinned icons and system status.

Step-2 :

The screenshot shows the Salesforce Setup interface for the 'Expense Item' object. The left sidebar lists various configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, and Triggers. The main pane displays the 'Details' section for the 'Expense Item' object. It includes fields for Description, API Name (Expense__Item__c), Singular Label (Expense Item), Plural Label (Expense Items), Enable Reports (checked), Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and a note about Standard salesforce.com Help Window. At the bottom right, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'

Step-3:

The screenshot shows the Salesforce Setup interface for the 'Expense Item' object, specifically the 'Fields & Relationships' section. The left sidebar shows the same list of configuration options as in Step 2. The main pane displays a table titled 'Fields & Relationships' with 6 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data is as follows:

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

At the bottom right, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'

Step-4:

The screenshot shows a Salesforce Lightning interface for a travel approval record. The top navigation bar includes links for Project report, Apex Trailmix, Apex Special, Apex & .NET, Hands-On Orgs, Customize this!, TA-00001, YouTube, and other tabs. The main page title is "Travel Approval TA-00001". The left sidebar has sections for Travel App, Chatter, Reports, Dashboards, Departments, and Travel Approvals. The main content area displays "Notes & Attachments (0)" and "Expense Items (2)". The expense items table shows:

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

The right sidebar shows the "Activity" section with a button to "New Contact", "Edit", and "New Opportunity". Below it is the "Upcoming & Overdue" section, which indicates "No activities to show. Get started by sending an email, scheduling a task, and more." A message at the bottom right says "Activate Windows Go to Settings to activate Windows." The bottom of the screen shows a Windows taskbar with icons for File Explorer, Task View, Start, Taskbar settings, and various pinned apps like Edge, Mail, and Google Chrome.

Step-5:

The screenshot shows the Salesforce Setup interface for managing users. The top navigation bar includes links for Chatter Home, New Tab, and a search bar. The main content area shows the "Users" setup page for "Eric Executive". The left sidebar has sections for Setup, Home, Object Manager, and various user management settings like Permission Set Groups, Profiles, Public Groups, Queues, Roles, User Management Settings, and Feature Settings. The "Users" section is currently selected. The main page displays "User Detail" for Eric Executive, showing fields such as Name, Alias, Email, Username, Nickname, Title, Company, Department, Division, Address, Time Zone, Locale, Language, Delegated Approver, Manager, and Receive Approval Request Emails. It also shows roles like CEO, Salesforce, System Administrator, and Marketing User. A message at the bottom right says "Activate Windows Go to Settings to activate Windows." The bottom of the screen shows a Windows taskbar with icons for File Explorer, Task View, Start, Taskbar settings, and various pinned apps like Edge, Mail, and Google Chrome.

Test Chatter:

The screenshot shows the Salesforce Chatter interface. On the left, there's a sidebar with navigation links like 'What I Follow', 'To Me', 'Bookmarked', 'Company Highlights' (which is selected), 'My Drafts', 'STREAMS' (with a note 'You don't have any streams yet. Try creating one!'), and 'RECENT GROUPS' (with a note 'Aw, you don't have any groups! Why not create or join some now?'). The main area displays a post from 'TA-00001 — Jatin Balani' dated 26 February 2023 at 2:23 pm. The post asks, '@Eric Executive Which department should I associate this travel request with?'. Below the post, 'Eric Executive' replies, 'Technology is the correct department.' There are 'Like' and 'Comment' buttons, and a comment input field. To the right, there's a section titled 'Einstein Recommendations' listing three users: 'Eric Executive' (Your manager), 'Integration User' (Joined in the last week), and 'Security User' (Joined in the last week), each with a '+ Follow' and 'Skip' button. At the bottom of the screen, there's a Windows taskbar with various icons and a system status bar showing '28°C', 'ENG IN', '1:48 PM', and the date '2/28/2023'.

Test the app:

The screenshot shows the 'Travel Approval' application detail view for record 'TA-00001'. The left side has a 'Details' tab with fields for 'Travel Approval #', 'Status' (Approved), 'Out of State' (checked), 'Destination State' (CA), 'Total Expenses' (₹1,320.00), 'Status Indicator' (green icon), and a 'Trip Info' section with 'Purpose of Trip' (Attend Dreamforce), 'Trip Start Date' (08/03/2023), and 'Trip End Date'. The right side shows an 'Activity' feed with a header for 'Upcoming & Overdue' and a note 'No activities to show. Get started by sending an email, scheduling a task, and more.' There's also a 'Chatter' section with a similar note. At the bottom, there's a Windows taskbar and a system status bar.

Hands-On Orgs TA-00001 | Salesforce Home | Salesforce

wise-fox-o1h8uc-dev-ed.trailblaze.lightning.force.com/lightning/r/Travel_Approval__c/a012w0000184tZZAAY/view

Travel App Chatter Reports Dashboards Departments Travel Approvals

Travel Approval TA-00001

Related Details

Notes & Attachments (0) Upload Files

Expense Items (2) New

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

View All

Approval History (3)

javascript:void(0)

Activity Chatter

Filters: All time • All activities • All types Refresh • Expand All • View All

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.

Activate Windows Go to Settings to activate Windows.

Type here to search

Windows Start button Taskbar icons Date: 28°C 1:47 PM IN 2/28/2023

Module -2:

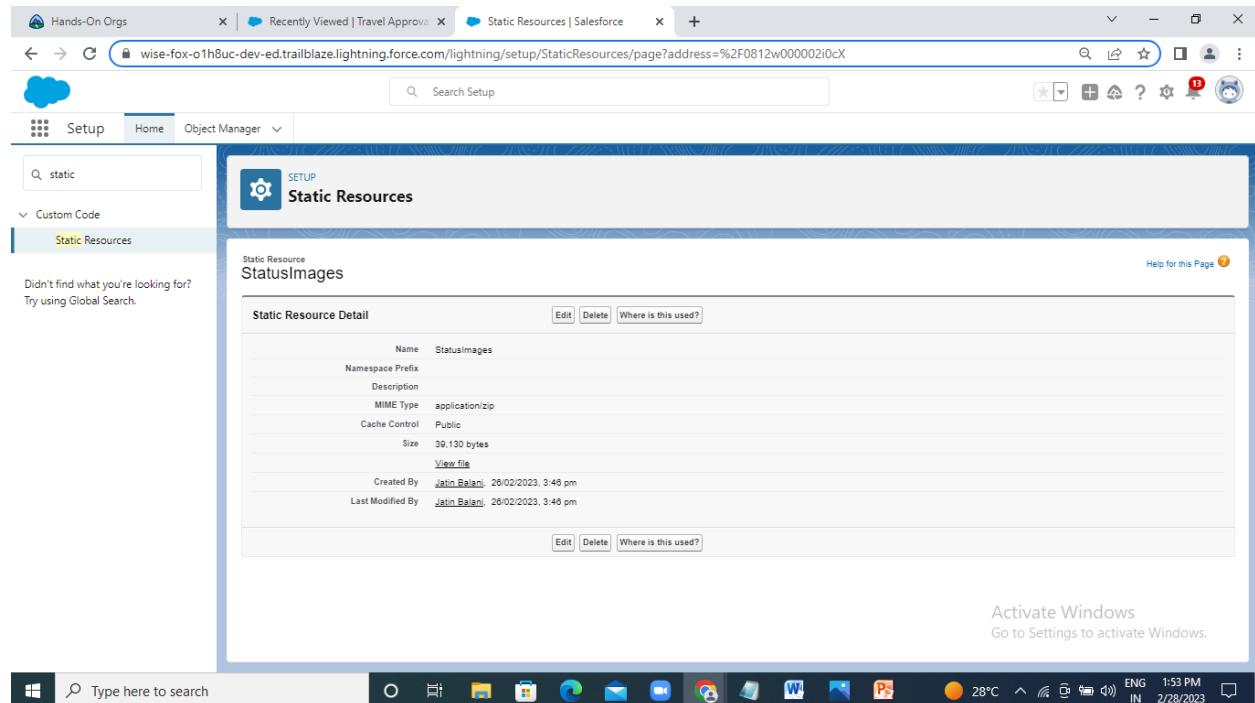
Step -1:

The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, etc. The main content area displays the 'Travel Approval Validation Rule' configuration. The rule is named 'Trip_end_date_after_start_date'. It has an error condition formula: `Trip_End_Date__c < Trip_Start_Date__c`. The error message is 'Trip end date must be greater than or equal to start date'. The rule is active and was created by Jatin Balani on 28/02/2023 at 2:43 pm. The modified by field also shows Jatin Balani with the same timestamp. A note at the bottom right says 'Activate Windows'.

Step-2 :

The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The left sidebar is expanded to show 'Fields & Relationships'. The main content area displays the 'Total Expenses' custom field configuration. The field is defined with a label 'Total Expenses', API name 'Total_Expenses__c', and a help text 'Help Text'. The data owner is set to 'Field Usage'. The field is part of the 'Travel Approval' object. A note at the bottom right says 'Activate Windows'.

Step -3:

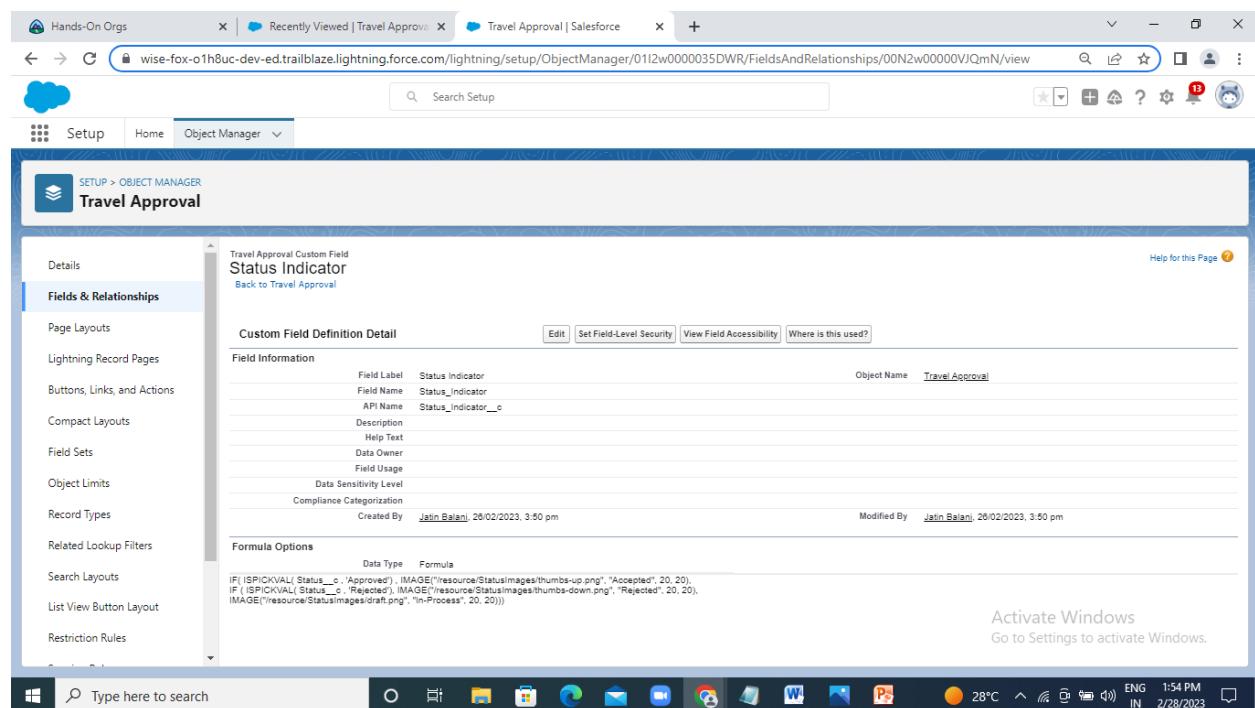


The screenshot shows the Salesforce Setup interface. In the left sidebar, under 'Static Resources', there is a single entry named 'StatusImages'. The main content area displays the 'Static Resource Detail' for 'StatusImages'. The details include:

| Name | StatusImages |
|---------------------------|-----------------------------------|
| Namespace Prefix | |
| Description | |
| MIME Type | application/zip |
| Cache Control | Public |
| Size | 30,130 bytes |
| View file | |
| Created By | Jatin Balani, 26/02/2023, 3:46 pm |
| Last Modified By | Jatin Balani, 26/02/2023, 3:46 pm |

Below the detail table, there are 'Edit', 'Delete', and 'Where is this used?' buttons. A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.'

Step-4:

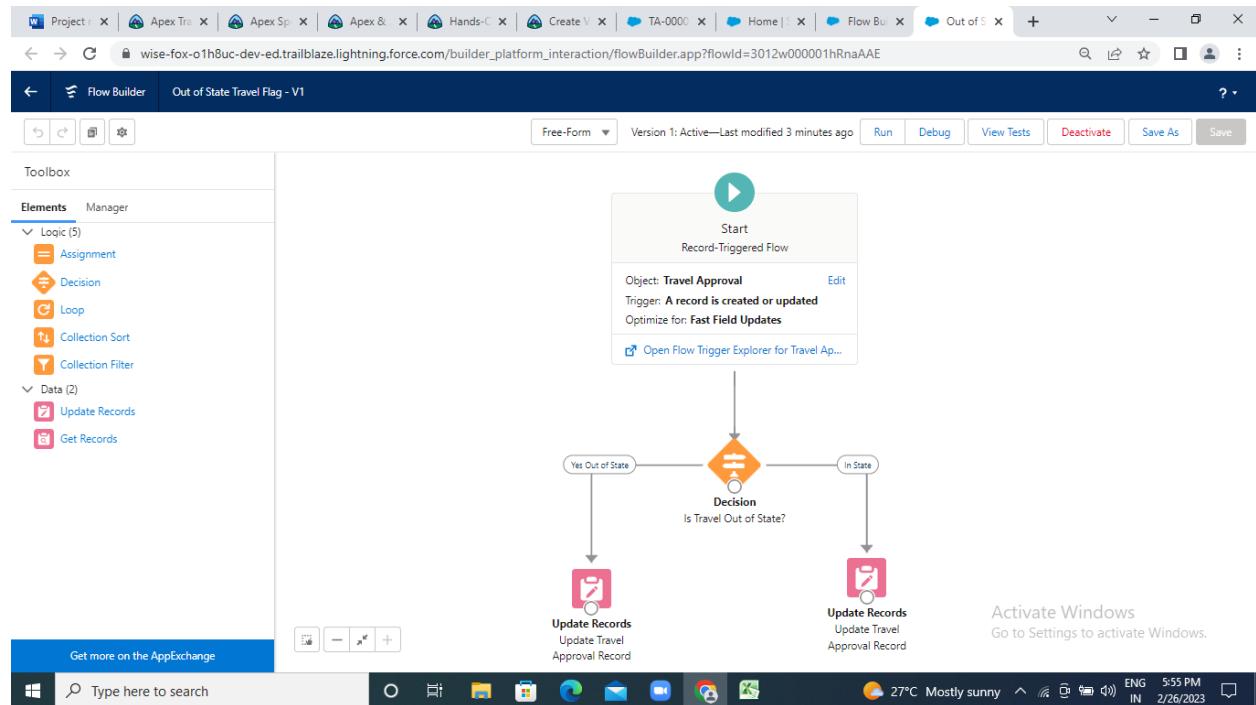


The screenshot shows the Salesforce Setup interface. In the left sidebar, under 'Object Manager', there is a single entry named 'Travel Approval'. The main content area displays the 'Custom Field Definition Detail' for the 'Status Indicator' field. The details include:

| Field Label | Status Indicator |
|---------------------------|-----------------------------------|
| Field Name | Status_Indicator |
| API Name | Status_Indicator__c |
| Description | |
| Help Text | |
| Data Owner | |
| Field Usage | |
| Data Sensitivity Level | |
| Compliance Categorization | |
| Created By | Jatin Balani, 26/02/2023, 3:50 pm |
| Modified By | Jatin Balani, 26/02/2023, 3:50 pm |

Below the detail table, there are 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?' buttons. A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.'

Step-5 :



Step-6:

The screenshot shows the "Approval Processes" setup page for a "Travel Approval Request" process. The process definition details include:

- Process Name: Travel Approval Request
- Unique Name: Travel_Approval_Request
- Description: Next Automated Approver Determined By Manager of Record Submitter
- Entry Criteria: True
- Record Editability: Administrator ONLY
- Approval Assignment Email Template: Not specified
- Initial Submitters: Travel Approval Owner
- Created By: Jatin Balaji, 26/02/2023, 5:59 pm
- Modified By: Jatin Balaji, 26/02/2023, 6:09 pm

The "Initial Submission Actions" section contains a single entry: "Record Lock" with the description "Lock the record from being edited". The "Approval Steps" section shows two steps:

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

Step-7 & 8 :

The screenshot shows the Salesforce Setup interface for 'Approval Processes'. The left sidebar has a search bar and navigation links for Data, Process Automation, and Approval Processes. The main area is titled 'Approval Processes' and contains sections for 'Record Lock', 'Approval Steps', 'Final Approval Actions', 'Final Rejection Actions', and 'Recall Actions'. A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.' The status bar at the bottom shows system information like temperature and date.

Exercise-2 :

Step-1 & 2:

The screenshot shows a Salesforce report titled 'Report: Travel Requests by Department'. It displays a bar chart with the 'Record Count' on the Y-axis (0 to 40) and 'Department' on the X-axis. The data is as follows:

| Department | Record Count |
|--------------------------|--------------|
| Audit Services | 25 |
| Contract Management | 25 |
| Disability Determination | 25 |
| Division of Aging | 25 |
| Division of Disability | 20 |
| Division of Family R... | 20 |
| Division of Finance | 30 |
| Division of Mental H... | 20 |
| Human Resources | 10 |
| Legislative Services | 15 |
| Office of Communic... | 15 |
| Office of Early Child... | 30 |
| Office of General Co... | 15 |
| Office of Medicaid P... | 30 |
| Quality and Complia... | 15 |
| Technology | 36 |

The report also includes a filter bar at the bottom with fields for Department, Status, Travel Approval, Out of State, Destination State, Trip Start Date, and Trip End Date. A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.'

Step-3 :

The screenshot shows a Salesforce report titled "Report: Travel Approvals" with the specific report name "Travel Requests by Month". The report displays a table of travel approvals for April 2019. The columns include Trip End Date, Out of State, Travel Approval: Travel Approval #, Department, Status, Destination State, and Trip Start Date. There are 15 entries listed. The status for all entries is "Approved". The destination state is "TX" for all entries. The trip start date is "04/01/2019" for all entries. The department names listed are Division of Family Resources, Division of Finance, Office of General Counsel, and Division of Aging.

| Trip End Date | Out of State | Travel Approval: Travel Approval # | Department | Status | Destination State | Trip Start Date |
|-------------------|--------------|------------------------------------|------------------------------|----------|-------------------|-----------------|
| January 2019 (20) | (15) | TA-00013 | Division of Family Resources | Approved | TX | 04/01/2019 |
| | | TA-00039 | Division of Finance | Approved | TX | 10/01/2019 |
| | | TA-00072 | Office of General Counsel | Approved | TX | 04/01/2019 |
| | | TA-00297 | Division of Family Resources | Approved | TX | 04/01/2019 |
| | | TA-00323 | Division of Finance | Approved | TX | 10/01/2019 |
| | | TA-00356 | Office of General Counsel | Approved | TX | 04/01/2019 |
| | | TA-00214 | Office of General Counsel | Approved | TX | 04/01/2019 |
| | | TA-00226 | Division of Family Resources | Approved | TX | 04/01/2019 |
| | | TA-00252 | Division of Finance | Approved | TX | 10/01/2019 |
| | | TA-00285 | Office of General Counsel | Approved | TX | 04/01/2019 |
| | | TA-00155 | Division of Family Resources | Approved | TX | 04/01/2019 |
| | | TA-00181 | Division of Finance | Approved | TX | 10/01/2019 |
| | | TA-00084 | Division of Family Resources | Approved | TX | 04/01/2019 |
| | | TA-00110 | Division of Finance | Approved | TX | 10/01/2019 |

Step-4:

The screenshot shows a Salesforce dashboard titled "Dashboard" with the specific dashboard name "Travel Requests Dashboard". The dashboard displays two charts: "Travel Requests by Department" and "Travel Requests by Month". The "Travel Requests by Department" chart is a bar chart showing the record count for various departments. The "Travel Requests by Month" chart is a bar chart showing the record count for each month from January 2019 to March 2020. A legend indicates that blue bars represent "true" and grey bars represent "false" for the "Out of State" field.

Travel Requests by Department

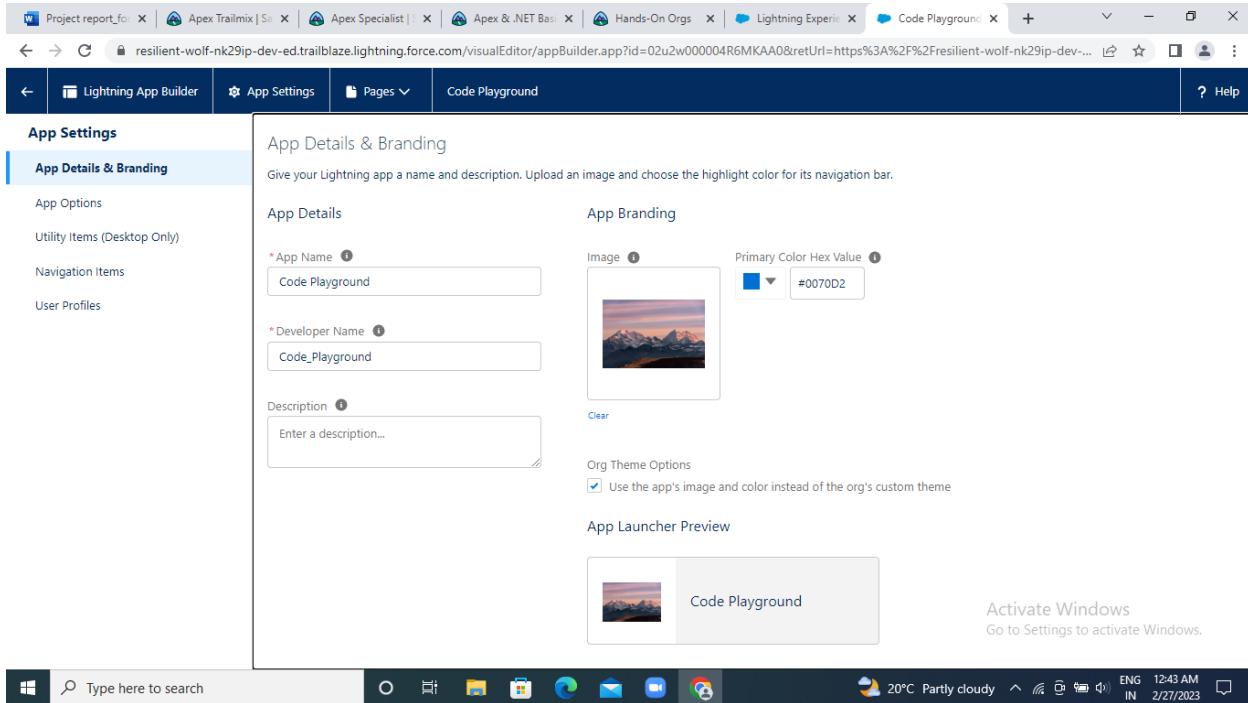
| Department | Record Count |
|----------------------------------|--------------|
| Audit Services | 25 |
| Contract Management | 25 |
| Disability Determination Bur... | 25 |
| Division of Aging | 20 |
| Division of Disability and Re... | 20 |
| Division of Family Resources | 20 |
| Division of Finance | 30 |
| Division of Mental Health an... | 20 |
| Human Resources | 10 |
| Legislative Services | 15 |
| Office of Communications a... | 15 |
| Office of Early Childhood an... | 30 |

Travel Requests by Month

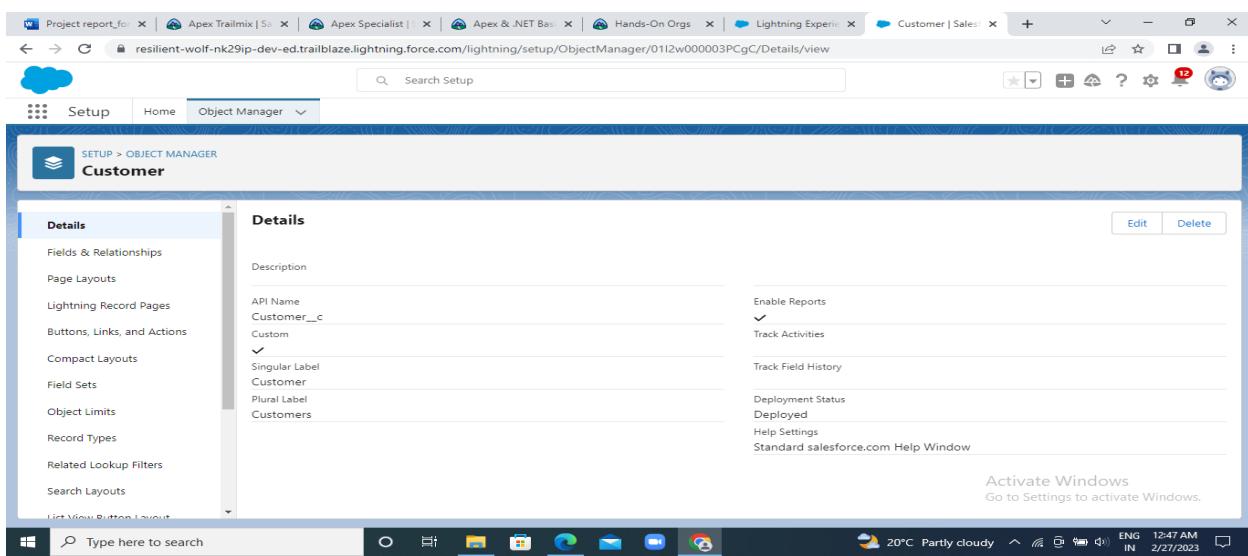
| Trip End Date | Record Count |
|----------------|--------------|
| January 2019 | 5 |
| February 2019 | 10 |
| March 2019 | 15 |
| April 2019 | 55 |
| May 2019 | 25 |
| June 2019 | 15 |
| July 2019 | 35 |
| August 2019 | 15 |
| September 2019 | 35 |
| October 2019 | 25 |
| November 2019 | 30 |
| December 2019 | 25 |
| January 2020 | 30 |
| February 2020 | 30 |
| March 2020 | 30 |

Module-3

Exercise-1:



Create Custom Object: Customer



Create Fields and Relationships:

The screenshot shows the Salesforce Object Manager interface for the 'Customer' object. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area is titled 'Fields & Relationships' and displays a table of seven fields. The table columns are 'FIELD LABEL', 'FIELD NAME', 'DATA TYPE', 'CONTROLLING FIELD', and 'INDEXED'. The fields listed are:

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|------------------|------------------|-------------------------|-------------------|---------|
| Active | Active__c | Checkbox | | |
| Created By | CreatedById | Lookup(User) | | |
| Customer | Customer__c | Master-Detail(Customer) | | ✓ |
| Customer Name | Name | Text(80) | | ✓ |
| Customer Type | Customer_Type__c | Picklist | | |
| Description | Description__c | Text Area(255) | | |
| Last Modified By | LastModifiedById | Lookup(User) | | |

At the bottom right of the table, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'

Create Custom Object: Billing

The screenshot shows the Salesforce Object Manager interface for the 'Billing' custom object. The left sidebar contains setup options such as Fields & Relationships, Page Layouts, and API Name. The main area is titled 'Details' and shows the configuration for the 'Billing' object. The 'API Name' is set to 'Billing__c'. Other settings include:

- Custom (checkbox checked)
- Singular Label: Billing
- Plural Label: Billings
- Enable Reports (checkbox checked)
- Track Activities
- Track Field History
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

At the bottom right, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'

The screenshot shows the Salesforce Setup interface for the Billing object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main content area is titled "Fields & Relationships" and displays a table of fields. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|------------------|------------------|--------------------|-------------------|---------|
| Amount Paid | Amount_Paid_c | Currency(18, 0) | | |
| Bill Number | Name | Auto Number | | ✓ |
| Created By | CreatedById | Lookup(User) | | |
| Customer Type | Customer_Type_c | Picklist | | |
| Last Modified By | LastModifiedById | Lookup(User) | | |
| Owner | OwnerId | Lookup(User,Group) | | ✓ |
| Status | Status_c | Picklist | | |

At the bottom right of the main area, there is a message: "Activate Windows" and "Go to Settings to activate Windows."

Test The App:

The screenshot shows the Salesforce Accounts list page. The top navigation bar includes links for Leads, Accounts, Contacts, Opportunities, Cases, Customers, and Billings. The main content area is titled "All Accounts" and displays a table of 13 accounts. The table columns are Account Name, Account Site, Billing State/Provin..., Phone, Type, and Account Owner AI... . The accounts listed are:

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

At the bottom right of the main area, there is a message: "Activate Windows" and "Go to Settings to activate Windows."

Exercise-2 :

Use Execute Anonymous Window to define and Execute the following Code:

1. Define a string variable and use method ‘endsWith’ to display the output.

The screenshot shows the Salesforce Developer Console interface. In the center, there is an "Enter Apex Code" window containing the following code:

```
1 String a= 'Hello Salesforce';
2 System.debug(a.endsWith('e'));
```

Below the code editor, the "Logs" tab is selected in the navigation bar. The log table shows one entry:

| User | Application | Operation | Time | Status | Read | Size |
|--------------|-------------|--------------------------------------|-----------------------|---------|------|---------|
| Jatin Balani | Unknown | /services/data/v57.0/tooling/exec... | 2/27/2023, 9:32:38 AM | Success | | 2.14 KB |

The status bar at the bottom right indicates: 19°C Sunny, ENG IN, 9:33 AM, 2/27/2023.

2. Define 2 Date type variables, use Date method today() and addDays(30) to display the output.

The screenshot shows the Salesforce Developer Console interface. In the center, there is an "Enter Apex Code" window containing the following code:

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

Below the code editor, the "Logs" tab is selected in the navigation bar. The log table shows two entries:

| User | Application | Operation | Time | Status | Read | Size |
|--------------|-------------|--------------------------------------|-----------------------|---------|------|---------|
| Jatin Balani | Unknown | /services/data/v57.0/tooling/exec... | 2/27/2023, 9:37:59 AM | Success | | 2.5 KB |
| Jatin Balani | Unknown | /services/data/v57.0/tooling/exec... | 2/27/2023, 9:32:38 AM | Success | | 2.14 KB |

The status bar at the bottom right indicates: 19°C Sunny, ENG IN, 9:33 AM, 2/27/2023.

3. Display the output of an integer variable from string '10' and then add 20 to it.

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', and 'Developer Console'. Below the navigation bar is a toolbar with icons for File, Edit, Debug, Test, Workspace, Help, and a search bar. The main area is divided into two panes: 'Execution Log' on the left and 'Enter Apex Code' on the right. The 'Execution Log' pane displays a table of events with columns for Timestamp, Event, and Details. The 'Enter Apex Code' pane contains the following Apex code:

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

Below the code editor are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. At the bottom of the developer console window, there is a status bar showing the user's name, session ID, and system information like temperature and battery level.

4. Define a String Variable & use String method length() to display the output.

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', and 'Developer Console'. Below the navigation bar is a toolbar with icons for File, Edit, Debug, Test, Workspace, Help, and a search bar. The main area is divided into two panes: 'Execution Log' on the left and 'Enter Apex Code' on the right. The 'Execution Log' pane displays a table of events with columns for User, Application, Operation, Time, Status, Read, and Size. The 'Enter Apex Code' pane contains the following Apex code:

```
1 String s= 'Hello Salesforce';
2 System.debug('size:'+s.length());
```

Below the code editor are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. At the bottom of the developer console window, there is a status bar showing the user's name, session ID, and system information like temperature and battery level.

5. Define a list of integers and display the output using add(), get(), set() and clear() methods.

The screenshot shows the Salesforce Developer Console interface. In the center, there is an "Enter Apex Code" pane containing the following Apex code:

```
1 List<Integer> I=new List<Integer>();
2 I.add(0);
3 I.add(1);
4 I.add(2);
5 I.add(3);
6 I.add(4);
7 System.debug('After using add()'+I);
8 System.debug('After using get()'+I.get(0));
9 I.set(1,100);
10 System.debug('After using set()'+I);
11 I.clear();
12 System.debug('After clearing'+I);
```

Below the code pane is an "Execution Log" table showing the following log entries:

| Timestamp | Event | Details |
|--------------|------------|-----------------------------------------------|
| 10:23:49:003 | USER_DEBUG | [7]DEBUG After using add() (0, 1, 2, 3, 4) |
| 10:23:49:003 | USER_DEBUG | [8]DEBUG After using get() (0) |
| 10:23:49:004 | USER_DEBUG | [10]DEBUG After using set() (0, 100, 2, 3, 4) |
| 10:23:49:004 | USER_DEBUG | [12]DEBUG After clearing() |

At the bottom of the interface, there is a taskbar with various icons and system status information.

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 Developer Console interface. In the center, there is an "Enter Apex Code" pane containing the following Apex code:

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

Below the code pane is an "Execution Log" table showing the following log entries:

| Timestamp | Event | Details |
|--------------|------------|-------------------------|
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is0 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is1 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is2 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is3 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is4 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is5 |
| 10:28:22:003 | USER_DEBUG | [4]DEBUG Value of x is6 |
| 10:28:22:004 | USER_DEBUG | [4]DEBUG Value of x is7 |
| 10:28:22:004 | USER_DEBUG | [4]DEBUG Value of x is8 |
| 10:28:22:004 | USER_DEBUG | [4]DEBUG Value of x is9 |

At the bottom of the interface, there is a taskbar with various icons and system status information.

Exercise-3:

Answer the following in True Or False

The screenshot shows the Salesforce Developer Console interface. In the center, there is a modal window titled "Enter Apex Code" containing the following Apex code:

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

Below the modal, the "Execution Log" section displays the following log entries:

| Timestamp | Event | Details |
|--------------|------------|-----------------|
| 10:32:00:003 | USER_DEBUG | [7] DEBUG True |

At the bottom of the log, there are several tabs: Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The "Logs" tab is selected. The status bar at the bottom right shows "Active Windows" and "Go to Settings to activate Windows.".

Exercise-4 :

The screenshot shows the Salesforce Developer Console interface. In the center, there is a modal window titled "Enter Apex Code" containing the following Apex code:

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

Below the modal, the "Execution Log" section displays the following log entries:

| Timestamp | Event | Details |
|--------------|------------|-----------------|
| 10:34:17:002 | USER_DEBUG | [3] DEBUG true |

At the bottom of the log, there are several tabs: Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The "Logs" tab is selected. The status bar at the bottom right shows "Active Windows" and "Go to Settings to activate Windows.".

Exercise-5 :

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs' and 'Developer Console'. Below the tabs, the URL is `resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area has four tabs: '23:49 AM', 'Log executeAnonymous @2/27/2023, 10:28:22 AM', 'Log executeAnonymous @2/27/2023, 10:32:00 AM', and 'Log executeAnonymous @2/27/2023, 10:34:17 AM'. The fourth tab, 'Log executeAnonymous @2/27/2023, 10:36:27 AM', is active. The 'Execution Log' section shows a single entry: '10:36:27:003 USER_DEBUG [3]DEBUG|true'. Below this is the 'Enter Apex Code' editor with the following code:

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

The 'Logs' tab in the navigation bar is selected. The log table shows several entries from 'Jatin Balani' with various operations and file paths. The status column indicates success for all entries. The bottom right corner shows system information: 25°C, ENG IN 2/27/2023.

Exercise-6:

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs' and 'Developer Console'. Below the tabs, the URL is `resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area has four tabs: 'Log executeAnonymous @2/27/2023, 11:41:57 AM', 'Log executeAnonymous @2/27/2023, 11:42:21 AM', and 'Log executeAnonymous @2/27/2023, 11:45:12 AM'. The third tab, 'Log executeAnonymous @2/27/2023, 11:45:12 AM', is active. The 'Execution Log' section shows two entries: '11:45:12:003 USER_DEBUG [4]DEBUG|Score :100' and '11:45:12:003 USER_DEBUG [6]DEBUG|Grade :A+'. Below this is the 'Enter Apex Code' editor with the following code:

```
1 //Exercise 6
2
3 Integer Score=100;
4 System.debug('Score :'+Score);
5 if(Score==100){
6     System.debug('Grade :A+');
7 }
8 else if(Score >90){
9     System.debug('Grade :A');
10 }
11 else if(Score >80){
12     System.debug('Grade :B');
13 }
14 else{
15     System.debug('Grade:Failed');
16 }
```

The 'Logs' tab in the navigation bar is selected. The log table shows several entries from 'Jatin Balani' with various operations and file paths. The status column indicates success for all entries. The bottom right corner shows system information: 26°C, ENG IN 2/27/2023.

Exercise-7 :

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', 'Developer Console', and '(2) WhatsApp'. Below the tabs, the URL is `resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area has four tabs: 'Execution Log', 'Logs' (which is selected), 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The 'Logs' tab displays a table of logs with columns: User, Application, Operation, Time, Status, Read, and Size. The table shows multiple entries from 'Jatin Balani' at different times. An 'Enter Apex Code' panel is open on the right, containing the following code:

```
//Exercise 7
List<Billing__c> li=new List<Billing__c>();
List<String> Billinglist=new List<String>();
for (Billing__c obj:li){
    if (obj.Status__c=='Paid'){
        System.debug('Value of Current Record in the Loop '+obj);
        Billinglist.add(obj.Name);
}
}
System.debug('Value of BillingList' +BillingList);
```

At the bottom of the 'Logs' tab, there are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. A status bar at the bottom right shows 'Activate Windows' and 'Go to Settings to activate Windows.'

Exercise-8:

Write a Class to demo the use of Constants in Apex

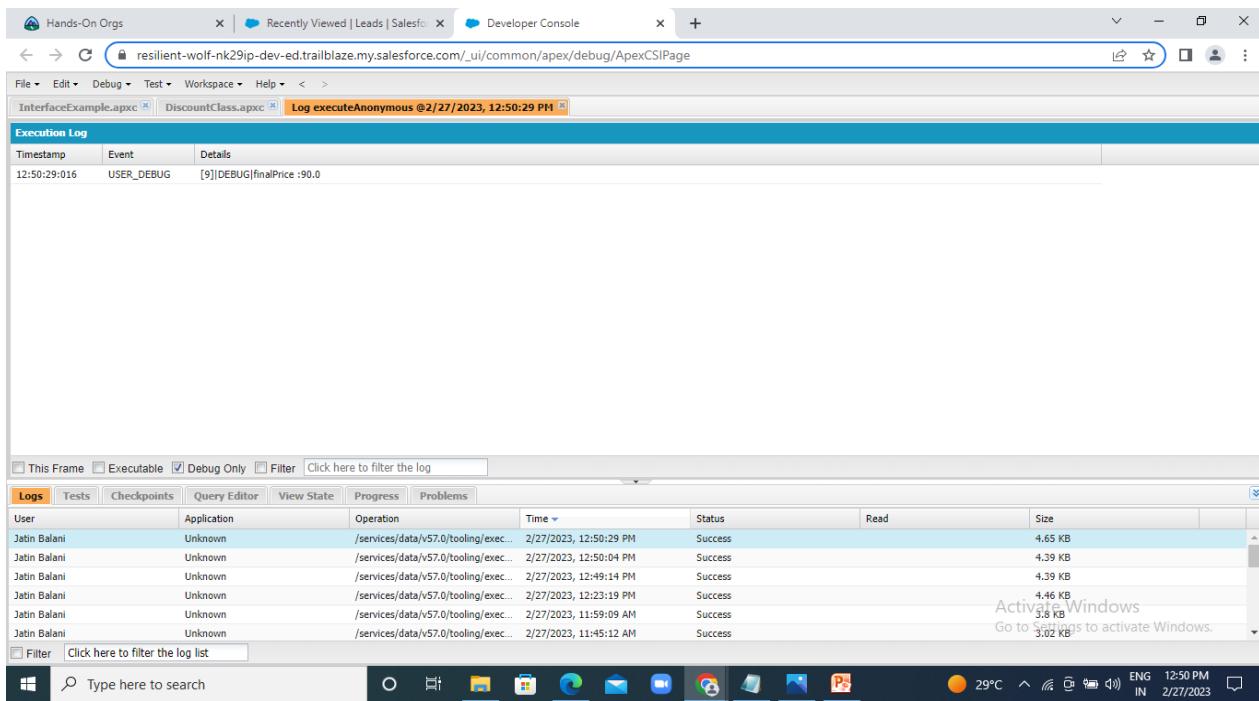
The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', 'Developer Console', and '(2) WhatsApp'. Below the tabs, the URL is `resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The main area has tabs for 'InterfaceExample.apxc' (selected) and 'DiscountClass.apxc'. It also shows 'Code Coverage: None' and 'API Version: 57'. An 'Enter Apex Code' panel is open on the right, containing the following code:

```
DiscountClass x = new DiscountClass();
x.calculateDiscount (100);
```

The left pane shows the code for the 'DiscountClass' class:

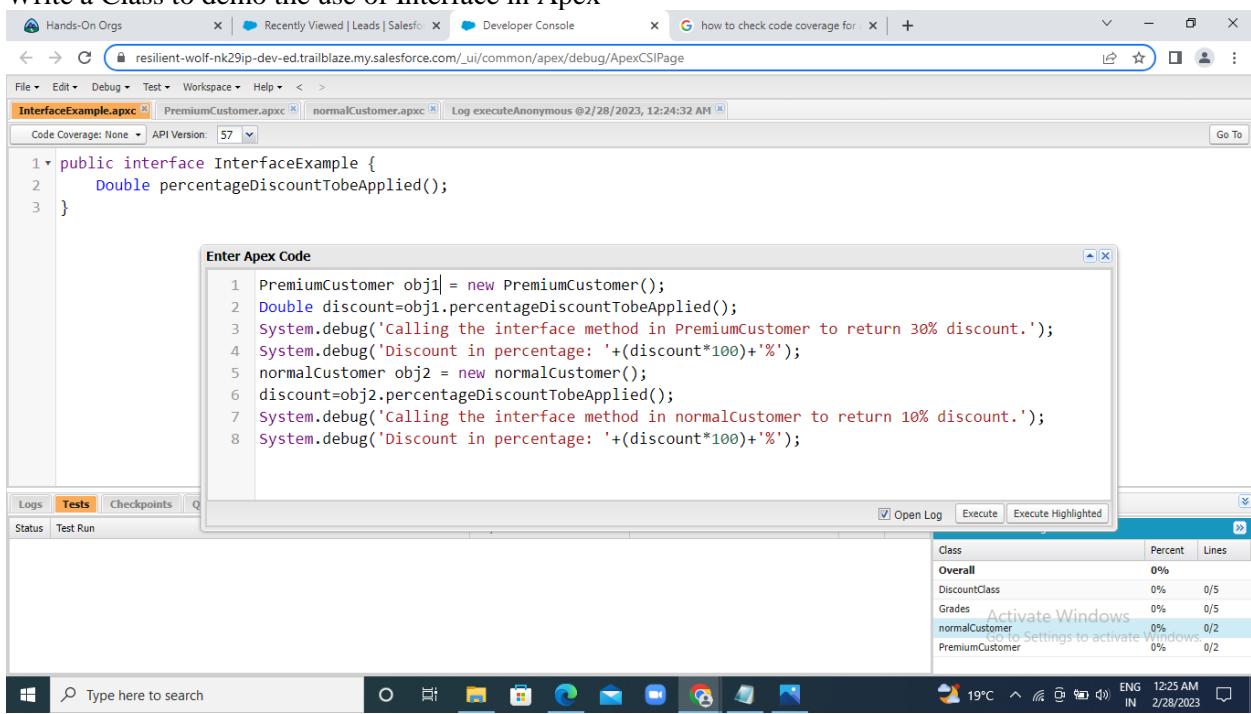
```
public class DiscountClass {
    Decimal regularDiscount = .1;
    Decimal finalPrice=0;
    public Decimal calculateDiscount(Integer price){
        finalPrice = price-price*regularDiscount;
        System.debug('finalPrice :'+finalPrice);
        return finalPrice;
    }
}
```

At the bottom of the 'Logs' tab, there are buttons for 'Open Log', 'Execute', and 'Execute Highlighted'. A status bar at the bottom right shows 'Activate Windows' and 'Go to Settings to activate Windows.'



Exercise-9 :

Write a Class to demo the use of Interface in Apex



Screenshot of the Salesforce Developer Console showing the PremiumCustomer.apxc file. The code implements the InterfaceExample interface with a discount of 0.30.

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

The Tests tab shows a single test run with 0 failures and 0 total tests. The Overall Code Coverage table indicates 0% coverage across all classes.

| Class | Percent | Lines |
|-----------------|---------|-------|
| Overall | 0% | |
| DiscountClass | 0% | 0/5 |
| Grades | 0% | 0/5 |
| normalCustomer | 0% | 0/2 |
| PremiumCustomer | 0% | 0/2 |

Screenshot of the Salesforce Developer Console showing the normalCustomer.apxc file. The code implements the InterfaceExample interface with a discount of 0.10.

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

The Tests tab shows a single test run with 0 failures and 0 total tests. The Overall Code Coverage table indicates 0% coverage across all classes.

| Class | Percent | Lines |
|-----------------|---------|-------|
| Overall | 0% | |
| DiscountClass | 0% | 0/5 |
| Grades | 0% | 0/5 |
| normalCustomer | 0% | 0/2 |
| PremiumCustomer | 0% | 0/2 |

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', 'Developer Console', and a search bar for 'how to check code coverage for...'. Below the tabs, the URL is resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The main area contains two tabs: 'InterfaceExample.apxc' and 'PremiumCustomer.apxc'. The 'Log executeAnonymous @2/28/2023, 12:24:32 AM' tab is selected, displaying the execution log:

| Timestamp | Event | Details |
|--------------|------------|----------------------------------------------------------------------------------|
| 00:24:32:028 | USER_DEBUG | [3]DEBUG Calling the interface method in PremiumCustomer to return 30% discount. |
| 00:24:32:028 | USER_DEBUG | [4]DEBUG Discount in percentage: 30.0% |
| 00:24:32:029 | USER_DEBUG | [7]DEBUG Calling the interface method in normalCustomer to return 10% discount. |
| 00:24:32:029 | USER_DEBUG | [8]DEBUG Discount in percentage: 10.0% |

Below the log, there is a 'Test Results' section with tabs for 'Logs', 'Tests' (which is selected), 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The 'Tests' tab shows a single test run:

| Status | Test Run | Enqueued Time | Duration | Failures | Total |
|---------|----------|----------------------|--------------|----------|-------|
| Success | Test Run | 2023-02-28T12:24:32Z | 00:00:00.000 | 0 | 1 |

The 'Overall Code Coverage' table shows the following results:

| Class | Percent | Lines |
|-----------------|---------|-------|
| Overall | 0% | 0/5 |
| DiscountClass | 0% | 0/5 |
| Grades | 0% | 0/5 |
| normalCustomer | 0% | 0/2 |
| PremiumCustomer | 0% | 0/2 |

The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating 19°C, ENG IN, and the date 2/28/2023.

Exercise-10:

The screenshot shows the Salesforce Developer Console interface. At the top, there are tabs for 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', 'Developer Console', and a search bar for 'BillingRecord.apxc'. Below the tabs, the URL is resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The main area contains three tabs: 'InterfaceExample.apxc', 'PremiumCustomer.apxc', and 'BillingRecord.apxc'. The 'BillingRecord.apxc' tab is selected, displaying the Apex code:

```
1 public class BillingRecord {
2     public static void test(){
3         customer__c obj=new customer__c();
4         obj.Name='Wipro';
5         obj.Customer_Type__c = 'Premium';
6         insert obj;
7
8         List<Billing__c> listinsert = new List<Billing__c>();
9         Billing__c obj2 = new Billing__c();
10        obj2.Status__c = 'Paid';
11        obj2.Amount_Paid__c = 5000000;
12        obj2.Id =obj.Customer__c;
13        listinsert.add(obj2);
14        Database.SaveResult[] srList = Database.insert(listinsert, false);
15
16        for (Database.SaveResult sr:srList){
17            if(sr.isSuccess()){
18                System.debug('Successfully inserted Billing ID:' +sr.getId());
19            }
20        else{
21            for (Database.Error objErr : sr.getErrors()){
22                System.debug('The following error has occurred.');
23                System.debug(objErr.getStatusCode() +':'+objErr.getMessage());
24                System.debug('Billing object field which are affected by the error' +objErr.getFields());
25            }
26        }
27    }
}
```

Below the code editor, there is a 'Problems' tab selected in the navigation bar. The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating 18°C, ENG IN, and the date 2/28/2023.

| Execution Log | | |
|---------------|------------|---------------------------------------------------------------|
| Timestamp | Event | Details |
| 10:56:21:104 | USER_DEBUG | [18] DEBUG Successfully inserted Billing ID: a012w000017yobAA |

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

Exercise-11:

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

| Query Results - Total Rows: 10 | | | | | |
|--------------------------------|--------|----------------------|--------------------|--------------------|------------------|
| ID | Amount | StageName | AccountId | Account.Website | Account.Industry |
| 0062w00000KB018AAD | 125000 | Negotiation/Review | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01CAAT | 270000 | Proposal/Price Quote | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01DAAT | 120000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01LAAT | 270000 | Negotiation/Review | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01OAAT | 270000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01QAAT | 915000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01VAAT | 235000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01WAAT | 440000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01YAAT | 120000 | Closed Won | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |
| 0062w00000KB01zAAD | 675000 | Needs Analysis | 0012w00001LkHNYAAZ | http://www.uos.com | Energy |

| Logs | Tests | Checkpoints | Query Editor | View State | Progress | Problems | Access in Salesforce: | Create New | Open Detail Page |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|--------------|------------|----------|----------|-----------------------|------------|------------------|
| SELECT ID, Amount, StageName, AccountId, Account.Website, Account.Industry FROM Opportunity WHERE Account.Industry='Energy' AND Account.AnnualRevenue>5000 | | | | | | | History | | |
| | | | | | | | Executed | | |
| Any query errors will appear here... | | | | | | | | | |

Exercise-12:

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

- Trigger Code:**

```
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 == False){
            Billing__c objbill = new Billing__c();
            objbill.Status__c = 'Paid';
            objbill.Amount_Paid__c = 100000;
            BillingList.add(objbill);
        }
    }
    insert BillingList;
}
```
- Test Results:** A table showing 12 test runs, all successful (0 failures, 2 total).

| Status | Test Run | Enqueued Time | Duration | Failures | Total |
|--------|-----------------|---------------------------------|----------|----------|-------|
| ✓ | 7072w00008MlaHv | Tue Feb 28 2023 00:55:06 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlfvt | Tue Feb 28 2023 01:54:42 GMT... | | 0 | 2 |
| ✓ | 7072w00008MldZK | Tue Feb 28 2023 01:55:51 GMT... | | 0 | 2 |
| ✓ | 7072w00008MlgEi | Tue Feb 28 2023 01:57:51 GMT... | | 0 | 2 |
| ✓ | 7072w00008MlgOE | Tue Feb 28 2023 01:59:52 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlgip | Tue Feb 28 2023 02:00:28 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlj9C | Tue Feb 28 2023 02:29:27 GMT... | | 0 | 2 |
- Overall Coverage:** Shows 0% coverage across various classes.

Exercise13:

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

- Test Class Code:**

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

        system.Test.startTest();
        cust.Active__c = True;
        update cust;
        system.Test.stopTest();
    }
}
```
- Test Results:** A table showing 14 test runs, all successful (0 failures, 2 total).

| Status | Test Run | Enqueued Time | Duration | Failures | Total |
|--------|-----------------|---------------------------------|----------|----------|-------|
| ✓ | 7072w00008MlaHv | Tue Feb 28 2023 00:55:06 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlfvt | Tue Feb 28 2023 01:54:42 GMT... | | 0 | 2 |
| ✓ | 7072w00008MldZK | Tue Feb 28 2023 01:55:51 GMT... | | 0 | 2 |
| ✓ | 7072w00008MlgEi | Tue Feb 28 2023 01:57:51 GMT... | | 0 | 2 |
| ✓ | 7072w00008MlgOE | Tue Feb 28 2023 01:59:52 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlgip | Tue Feb 28 2023 02:00:28 GMT... | | 0 | 2 |
| ✓ | 7072w00008Mlj9C | Tue Feb 28 2023 02:29:27 GMT... | | 0 | 2 |
- Overall Coverage:** Shows 0% coverage across various classes.

Exercise-14:

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

- Code Coverage:** All Tests 100% | API Version: 57
- Trigger:** DisqualifyTestLeads on Lead (before insert)
- Code:**

```
1 trigger DisqualifyTestLeads on Lead (before insert) {
2     List<Lead> Disqualify=new List<Lead>();
3     for(Lead leads:Trigger.new){
4         if(leads.FirstName==null){
5         }
6         else{
7             if((leads.FirstName=='test' && leads.FirstName.length()!=0) || (leads.LastName=='test' && leads.LastName.length()!=0)){
8                 System.debug(leads.FirstName+' '+leads.LastName+' '+'Will be Disqualified');
9                 Disqualify.add(leads);
10            }
11            for(Lead led:Disqualify){
12                led.Status='Disqualified';
13            }
14        }
15    }
16 }
```

- Logs Tab:** Shows a list of test runs with status (X), enqueue time, duration, failures, and total.
- Overall Code Coverage:** Class: 1.5%
- Test Results:** TestRunId: 7072v00008MnsWL, Status: Failed, Duration: 11:23:28 GMT..., Failures: 4, Total: 4.
- Test Results:** TestRunId: 7072v00008MnrzP, Status: Failed, Duration: 11:25:25 GMT..., Failures: 2, Total: 2.
- Test Results:** TestRunId: 7072v00008MnsqG, Status: Failed, Duration: 11:25:51 GMT..., Failures: 4, Total: 4.
- Test Results:** TestRunId: 7072v00008MnraH, Status: Failed, Duration: 11:30:36 GMT..., Failures: 2, Total: 2.
- Test Results:** TestRunId: 7072v00008Mnuh6, Status: Failed, Duration: 11:38:40 GMT..., Failures: 1, Total: 1.

Exercise-15:

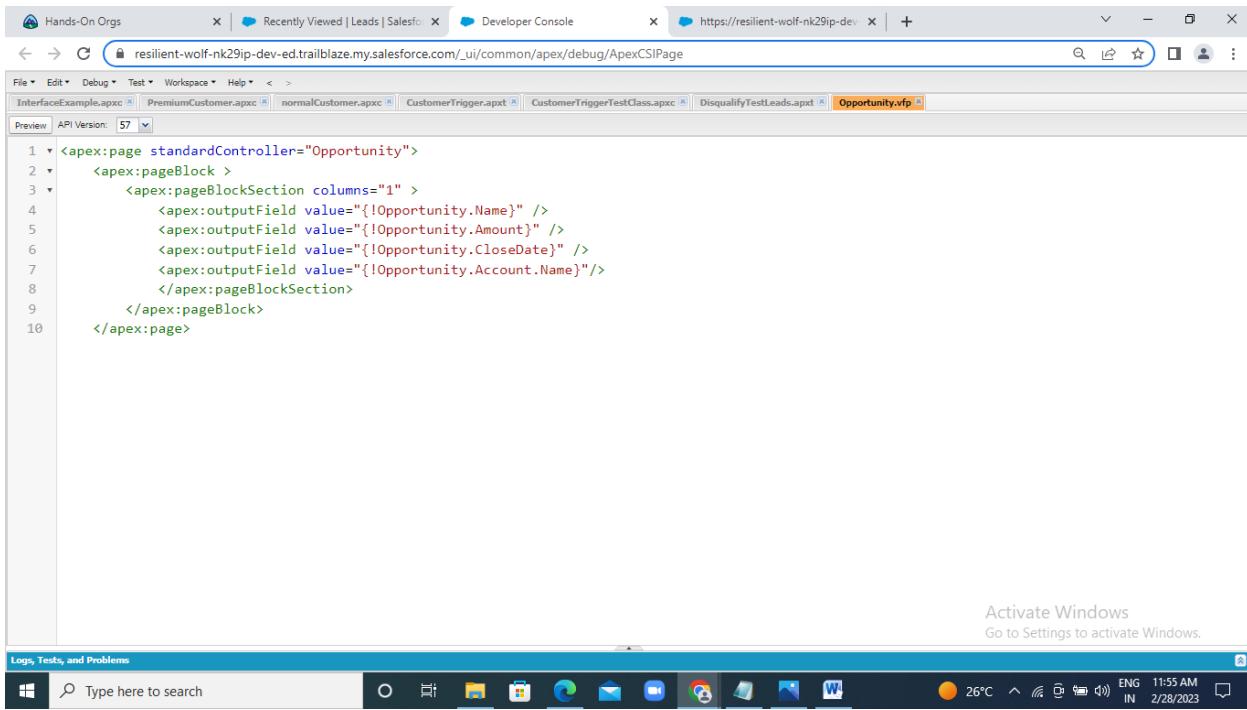
The screenshot shows the Salesforce Developer Console with the following details:

- Code Coverage:** None | API Version: 57
- Test Class:** TestDisqualifyLeadClass
- Code:**

```
1 @isTest
2 public class TestDisqualifyLeadClass {
3     @isTest static void test(){
4         Lead led = new Lead();
5         led.FirstName = 'Hello';
6         led.LastName = 'Test';
7         led.Company = 'Wipro';
8
9         System.Test.startTest();
10        insert led;
11        System.Test.stopTest();
12    }
13 }
```

- Logs Tab:** Shows a list of test runs with status (X), enqueue time, duration, failures, and total.
- Overall Code Coverage:** Class: 1.5%
- Test Results:** TestRunId: 7072v00008MnsWL, Status: Failed, Duration: 11:23:28 GMT..., Failures: 4, Total: 4.
- Test Results:** TestRunId: 7072v00008MnrzP, Status: Failed, Duration: 11:25:25 GMT..., Failures: 2, Total: 2.
- Test Results:** TestRunId: 7072v00008MnsqG, Status: Failed, Duration: 11:25:51 GMT..., Failures: 4, Total: 4.
- Test Results:** TestRunId: 7072v00008MnraH, Status: Failed, Duration: 11:30:36 GMT..., Failures: 2, Total: 2.
- Test Results:** TestRunId: 7072v00008Mnuh6, Status: Failed, Duration: 11:38:40 GMT..., Failures: 1, Total: 1.

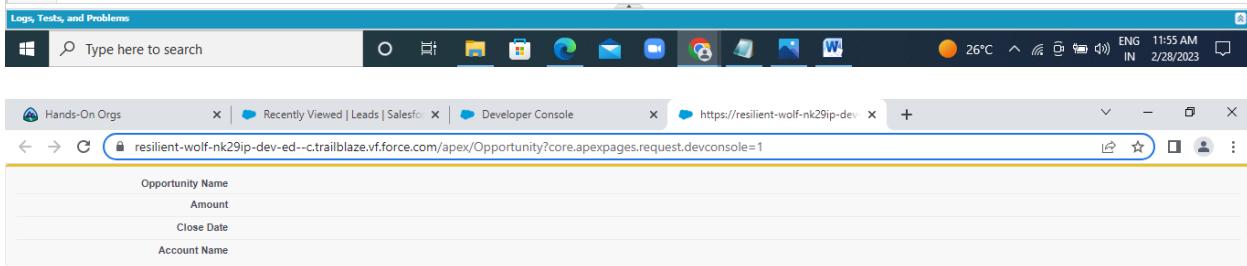
Exercise-16:



The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo...', 'Developer Console', and the URL 'https://resilient-wolf-nk29ip-dev-ed-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage'. Below the navigation is a tabs bar with 'InterfaceExample.apxc', 'PremiumCustomer.apxc', 'normalCustomer.apxc', 'CustomerTrigger.apxt', 'CustomerTriggerTestClass.apxc', 'DisqualifyTestLeads.apxt', and 'Opportunity.vfp' (which is highlighted). A dropdown menu shows 'Preview' and 'API Version: 57'. The main content area displays the following Apex code:

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

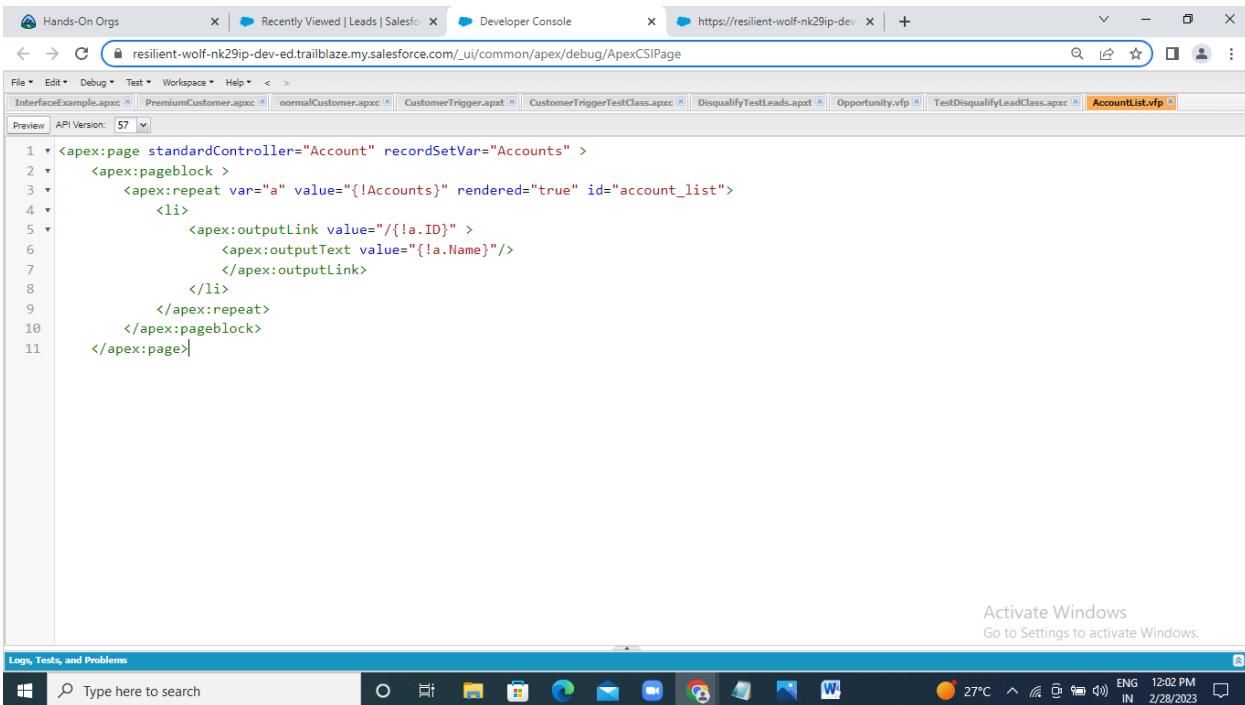
In the bottom right corner of the developer console window, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'



The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar icons include File Explorer, Task View, Edge, File, Mail, Google Chrome, Microsoft Edge, and Word. The system tray shows the date and time as '2/28/2023 11:55 AM' and the temperature as '26°C'. The main browser window is titled 'Hands-On Orgs' and shows the URL 'https://resilient-wolf-nk29ip-dev-ed-ed.trailblaze.vf.force.com/apex/Opportunity?core.apexpages.request.devconsole=1'. The page content displays four input fields: 'Opportunity Name', 'Amount', 'Close Date', and 'Account Name'. In the bottom right corner of the browser window, there is a message: 'Activate Windows' and 'Go to Settings to activate Windows.'



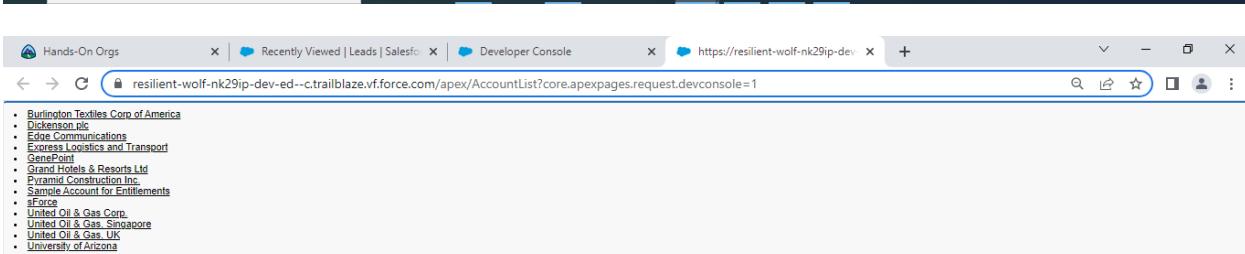
Exercise-17:



The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes 'Hands-On Orgs', 'Recently Viewed | Leads | Salesfo', 'Developer Console', and the URL 'https://resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage'. Below the navigation is a tab bar with several tabs: 'InterfaceExample.apxc', 'PremiumCustomer.apxc', 'normalCustomer.apxc', 'CustomerTrigger.apxt', 'CustomerTriggerTestClass.apxc', 'DisqualifyTestLeads.apxt', 'Opportunity.vfp', 'TestDisqualifyLeadClass.apxc', and 'AccountList.vfp' (which is currently selected). A dropdown menu shows 'Preview' and 'API Version: 57'. The main area displays the Apex 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       </li>
9     </apex:repeat>
10   </apex:pageblock>
11 </apex:page>
```

In the bottom right corner of the developer console window, there is a message: 'Activate Windows Go to Settings to activate Windows.'



The screenshot shows a browser window with the URL 'https://resilient-wolf-nk29ip-dev-ed--c.trailblaze.vf.force.com/apex/AccountList?core.apexpages.request.devconsole=1'. The page content lists various account names:

- Burlington Textiles Corp of America
- Dickenson Oil
- Edge Communications
- Express Logistics and Transport
- GenePord
- Gulfport Mills & 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

Activate Windows
Go to Settings to activate Windows.



Exercise-18:

The screenshot shows a Windows desktop environment. At the top, there is a browser window titled "Hands-On Orgs" with the URL "resilient-wolf-nk29ip-dev-ed.trailblaze.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage". The browser tabs include "InterfaceExample.apxc", "PremiumCustomer.apxc", "normalCustomer.apxc", "CustomerTrigger.apxc", "CustomerTriggerTestClass.apxc", "DisqualifyTestLeads.apxc", "BillingRecord.apxc", "NewCaseList.vfp*", and "Opportunity.vfp". Below the tabs, the API Version is set to 57. The main content area displays the following Apex code:

```
1 <apex:page controller="NewCaseListController">
2   <apex:repeat var="case" value="{!newCases}">
3     <li>
4       <apex:outputLink value="/{!case.Id}">{!case.CaseNumber}</apex:outputLink>
5       -{! case.caseNumber}
6       -{! case.Account.Name}
7     </li>
8   </apex:repeat>
9 </apex:page>
```

At the bottom right of the browser window, there is a message: "Activate Windows Go to Settings to activate Windows." Below the browser window, the Windows taskbar is visible, showing icons for File Explorer, Edge, Mail, and other system status indicators like battery level and temperature.

| • | 5002w00000g58E0AAJ | - 00001000 - Edge Communications |
|---|------------------------------------|--------------------------------------------------|
| • | 5002w00000g58E1AAJ | - 00001001 - United Oil & Gas Corp. |
| • | 5002w00000g58E2AAJ | - 00001002 - United Oil & Gas Corp. |
| • | 5002w00000g58E3AAJ | - 00001003 - Express Logistics and Transport |
| • | 5002w00000g58E4AAJ | - 00001004 - Express Logistics and Transport |
| • | 5002w00000g58E5AAJ | - 00001005 - Express Logistics and Transport |
| • | 5002w00000g58E6AAJ | - 00001006 - GenePoint |
| • | 5002w00000g58E7AAJ | - 00001007 - Grand Hotels & Resorts Ltd |
| • | 5002w00000g58E8AAJ | - 00001008 - Grand Hotels & Resorts Ltd |
| • | 5002w00000g58F9AAJ | - 00001009 - United Oil & Gas, UK |
| • | 5002w00000g58FAAAY | - 00001010 - United Oil & Gas, Singapore |
| • | 5002w00000g58FBAAY | - 00001011 - United Oil & Gas, Singapore |
| • | 5002w00000g58FCAAY | - 00001012 - University of Arizona |
| • | 5002w00000g58FDAAY | - 00001013 - Grand Hotels & Resorts Ltd |
| • | 5002w00000g58FEAAY | - 00001014 - Grand Hotels & Resorts Ltd |
| • | 5002w00000g58FFAAY | - 00001015 - United Oil & Gas, Singapore |
| • | 5002w00000g58FGAAY | - 00001016 - GenePoint |
| • | 5002w00000g58FHAAY | - 00001017 - Edge Communications |
| • | 5002w00000g58FIAAY | - 00001018 - Edge Communications |
| • | 5002w00000g58FJAAY | - 00001019 - Burlington Textiles Corp of America |
| • | 5002w00000g58FKAAY | - 00001020 - Burlington Textiles Corp of America |
| • | 5002w00000g58FLAAY | - 00001021 - United Oil & Gas Corp. |
| • | 5002w00000g58FMAAY | - 00001022 - United Oil & Gas Corp. |
| • | 5002w00000g58FNAAY | - 00001023 - United Oil & Gas Corp. |
| • | 5002w00000g58FOAAY | - 00001024 - United Oil & Gas Corp. |
| • | 5002w00000g58FPAAY | - 00001025 - United Oil & Gas Corp. |

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