

Salesforce Project Documentation

Legal Contract Analyzer

Name : N K LAKSHMI NARASIMHA MURTHY

Email : nlm201nara@gmail.com

Roll No : 22B81A6684

Legal Contract Analyzer

1. Project Overview

The **Legal Contract Analyzer** is an AI-powered Salesforce-native application designed to automate legal contract review and negotiation. It streamlines contract analysis, reduces legal risks, ensures compliance, and accelerates negotiations by providing AI-assisted suggestions.

Key Features / Business Value

- Automated clause extraction and risk scoring.
- AI-driven negotiation suggestions.
- Real-time dashboards and status notifications.
- Enterprise-grade security, scalability, and audit readiness.
- Tested and validated with **81% Apex test coverage**.

2. Objectives

- Automate contract reviews by extracting clauses and assessing risks.
- Standardize accuracy through clause detection and risk scoring.
- Accelerate negotiations with AI-generated alternative wordings.
- Ensure compliance with GDPR/CCPA and legal policies.
- Provide visibility via dashboards, reports, and audit trails.

Phase 1 – Problem Understanding & Industry Analysis

- **Requirement Gathering:** Contracts take time, high risk of human error.
- **Stakeholders:** Legal teams, law firms, compliance officers, enterprises.
- **Business Process Mapping:** From contract upload → AI analysis → negotiation → approval.
- **Industry Use Case:** LegalTech is trending, focus on risk/compliance automation.

Phase 2 – Org Setup & Configuration

- Salesforce **Enterprise Edition Developer Org.**
- Setup included company profile, users, roles, and permission sets.
- Configured fiscal year and business hours.
- Sandbox used for development, changes deployed via **Change Sets**.

The screenshot displays the Salesforce Setup interface. The top navigation bar includes the Salesforce logo, a search bar, and various utility icons. The left sidebar shows the 'Setup' menu with options like Home, Object Manager, and a 'Quick Find' search bar. The main content area is titled 'Personal Information' and contains a 'Details' section with the following fields:

Field	Value
First Name	N K LAKSHMI NARASI
Last Name	MURTHY
Alias	NMURTH
Email	nlnara201m@gmail.com
Username	murthy2026@salesforce.com
Nickname	murthy2026
Phone	
Extension	
Fax	
Mobile	+91 9652057128

Below the 'Details' section is the 'Address' section with the following fields:

Field	Value
Street	
City	
State/Province	
Zip/Postal Code	
Country	IN

The bottom section is labeled 'My Work Information'.

2.1 Developer Org Information

Phase 3 – Data Modeling & Relationships

Custom Objects

- **Contract__c** → Metadata, risk, status.
- **Clause__c** → Clause text, type, risk level.
- **Status_Change_Event__e** → Platform event for async processing.

Relationships

- Master-Detail: Clause__c → Contract__c.
- Lookup: Uploaded_By__c, Requested_By__c → User.

The screenshot shows the Salesforce Setup interface for a custom object named 'Legal Contract'. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The left sidebar contains a list of configuration options: Details (selected), Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, Object Access, and Triggers. The main content area is titled 'Legal Contract' and has 'Edit' and 'Delete' buttons. It is divided into two columns. The left column contains: Description, API Name (Contract__c), Custom (checked), Singular Label (Legal Contract), Plural Label (Legal Contracts), and a checkbox. The right column contains: Enable Reports (checked), Track Activities (checked), Track Field History (checked), Deployment Status (Deployed), Help Settings, and a link to 'Standard salesforce.com Help Window'.

3.1 Custom Contract Object

◆ Usage of Contract and Clause Objects

Contract__c (Parent Object)

- This is the **central object** in the application.
- It represents the **entire legal contract** uploaded or created by the legal team.
- Key details stored:

- Contract Title, Parties, Effective Date, Status (Draft/Approved/Rejected).
 - Overall **Risk Score** (calculated from all its clauses).
 - Metadata such as Uploaded By, Department, and Type (NDA, Vendor Agreement, Employment Contract, etc.).
- Usage: Contracts are the **entry point** for analysis — once a contract is created/uploaded, AI services parse it into smaller parts (clauses).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Analysis Error	Analysis_Error__c	Long Text Area(32768)		
Analyzed Date	Analyzed_Date__c	Date/Time		
Contract Number	Name	Auto Number	✓	
Contract Title	Title__c	Text(255)		
Contract Type	Contract_Type__c	Picklist		
Created By	CreatedById	Lookup(User)		
Description	Description__c	Long Text Area(32768)		
Extracted Text	Extracted_Text__c	Long Text Area(32768)		
High Risk Clauses	High_Risk_Clauses__c	Number(18, 0)		
Last Modified By	LastModifiedById	Lookup(User)		
Low Risk Clauses	Low_Risk_Clauses__c	Number(18, 0)		
Medium Risk Clauses	Medium_Risk_Clauses__c	Number(18, 0)		
Overall Risk Score	Overall_Risk_Score__c	Number(3, 2)		
Owner	OwnerId	Lookup(User/Group)	✓	
Status	Status__c	Picklist		
Total Clauses	Total_Clauses__c	Number(18, 0)		
Uploaded By	Uploaded_By__c	Lookup(User)	✓	

3.2 Fields and Relationships of Contract Object

Clause__c (Child Object)

- Each **clause** within a contract is stored as a separate record under **Clause__c**.
- Key details stored:
 - Clause Text, Category (Termination, Liability, Confidentiality, etc.).
 - Risk Level (Low, Medium, High).
 - AI-assigned confidence score.
- Usage:
 - Breaks down contracts into **granular pieces** for analysis.
 - Makes it easier for the AI and legal teams to assess **specific risks** without reviewing the full contract manually.
 - Provides a base for **AI Negotiation Suggestions** (e.g., “Replace termination period from 90 days → 30 days”).

Legal contract analyzer doc x Documentation screenshot g x Contract Clause | Salesforce x AI-Driven-Legal-Contract-Ai x +

ddl00000cex5puae-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01dL00000A744N/Details/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Contract Clause

Details

Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules
Scoping Rules
Object Access
Triggers

Details

Description

API Name
Clause__c

Custom
✓

Singular Label
Contract Clause

Plural Label
Contract Clauses

Enable Reports
✓

Track Activities
✓

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit Delete

3.3 Clause Custom Object

SETUP > OBJECT MANAGER
Contract Clause

Details

Fields & Relationships
22 Items, Sorted by Field Label

Field Label FIELD NAME DATA TYPE CONTROLLING FIELD INDEXED

Clause Number	Clause_Number__c	Text(50)		
Clause Number	Name	Auto Number		✓
Clause Type	Clause_Type__c	Picklist		
Contract	Contract__c	Master-Detail(Legal Contract)		✓
Created By	CreatedBy	Lookup(Owner)		
End Position	End_Position__c	Number(18, 0)		
Entities	Entities__c	Long Text Area(32768)		
Extracted Text	Extracted_Text__c	Long Text Area(32768)		
Key Terms	Key_Terms__c	Long Text Area(32768)		
Last Modified By	LastModifiedBy	Lookup(Owner)		
Original Text	Original_Text__c	Long Text Area(32768)		
Recommendations	Recommendations__c	Long Text Area(32768)		
Review Notes	Review_Notes__c	Long Text Area(32768)		
Reviewed By	Reviewed_By__c	Lookup(Owner)		✓
Reviewed Date	Reviewed_Date__c	Date/Time		
Risk Factors	Risk_Factors__c	Long Text Area(32768)		
Risk Level	Risk_Level__c	Picklist		
Risk Score	Risk_Score__c	Number(13, 0)		
Start Position	Start_Position__c	Number(18, 0)		
Status	Status__c	Picklist		
Suggested Text	Suggested_Text__c	Long Text Area(32768)		
Title	Title__c	Text(255)		

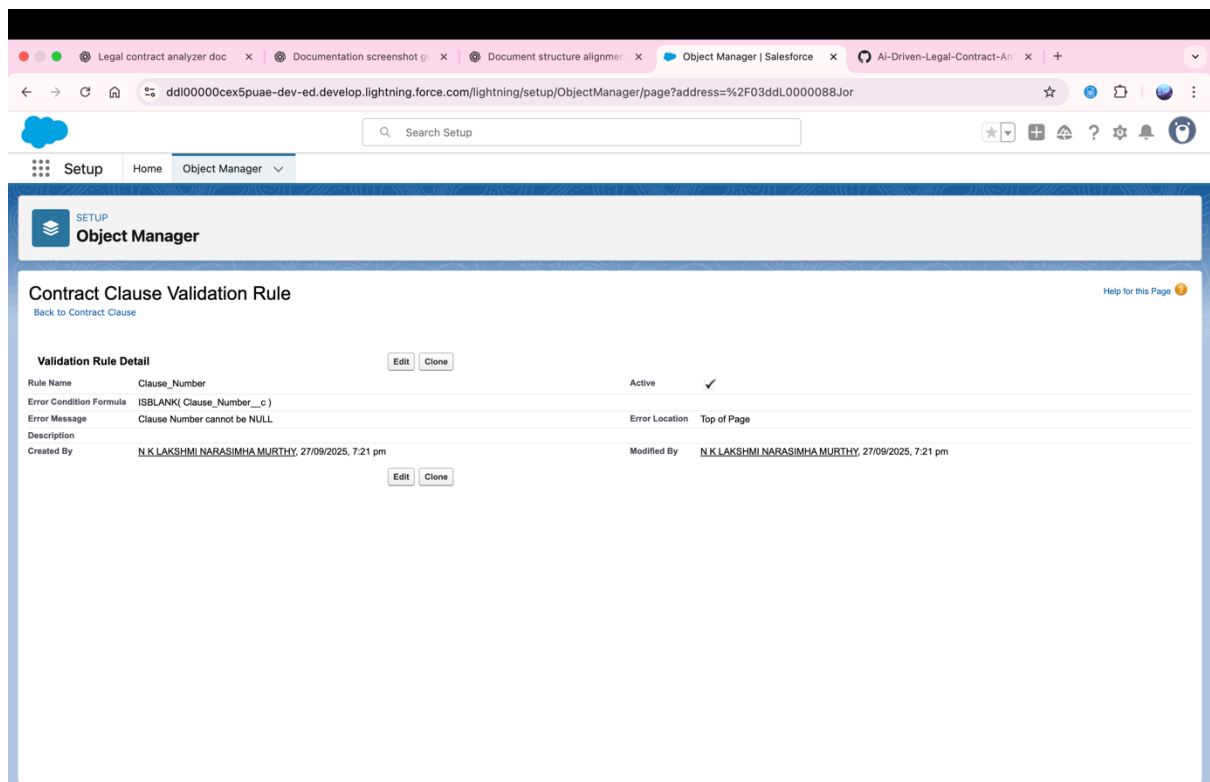
3.4 Clause Object Fields and Relationships

◆ Relationships Between Contract and Clause

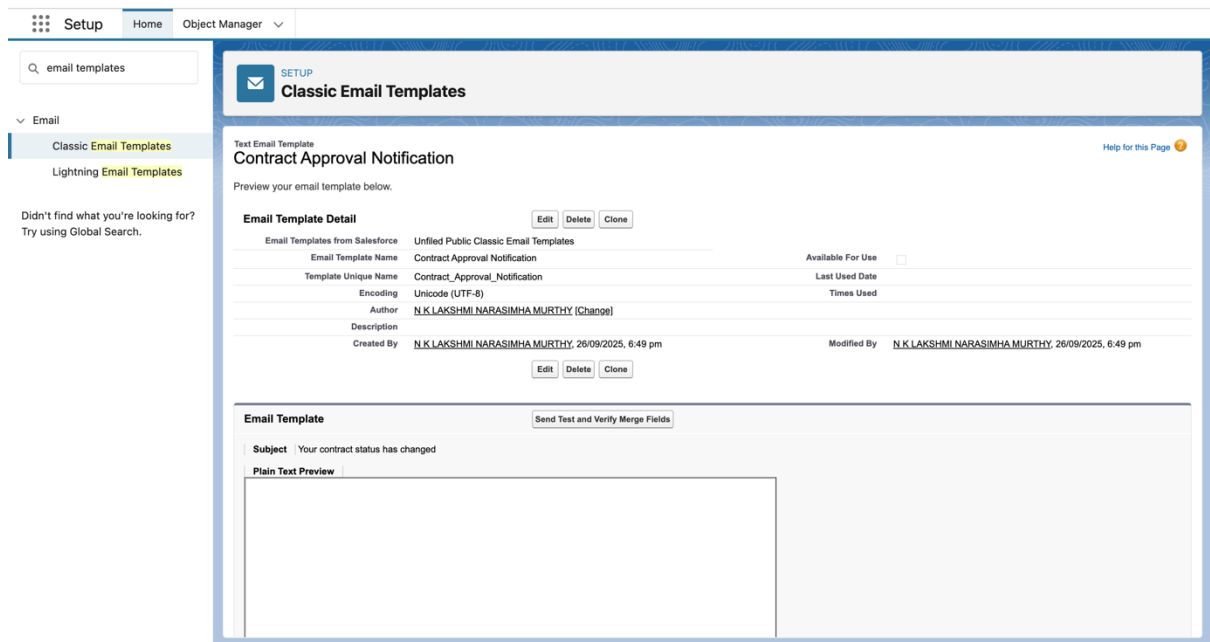
- **Master-Detail Relationship: Clause__c → Contract__c**
 - Every clause belongs to **exactly one contract**.
 - If a contract is deleted, its associated clauses are automatically deleted (data integrity).
 - Aggregated roll-up summaries are enabled: e.g., “Count of High-Risk Clauses per Contract.”
- **User Lookups (Uploaded_By__c, Requested_By__c)**
 - Provides accountability: who uploaded the contract and who requested the review.
 - Useful for audit trails and compliance tracking.

Phase 4 – Process Automation (Admin)

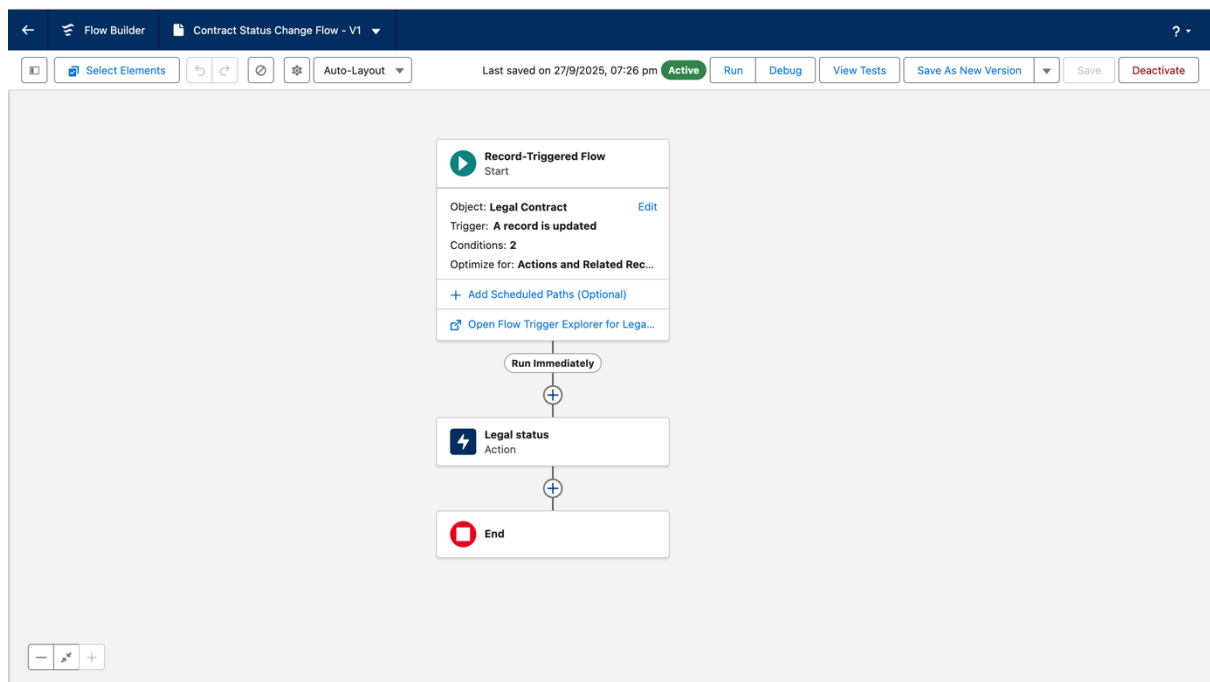
- **Validation Rules:** Required fields (Title, Risk Level, Status).
- **Auto-Numbering:** CT-{00000}, CL-{00000}, NS-{00000}.
- **Flows:** (Planned) Record-triggered flows for stakeholder notifications.
- **Approval Process:** Contracts can move through review → approve/reject with email alerts.



4.1 Validation Rule for Clause Object



4.2 Email Template for Contract Approval Notification



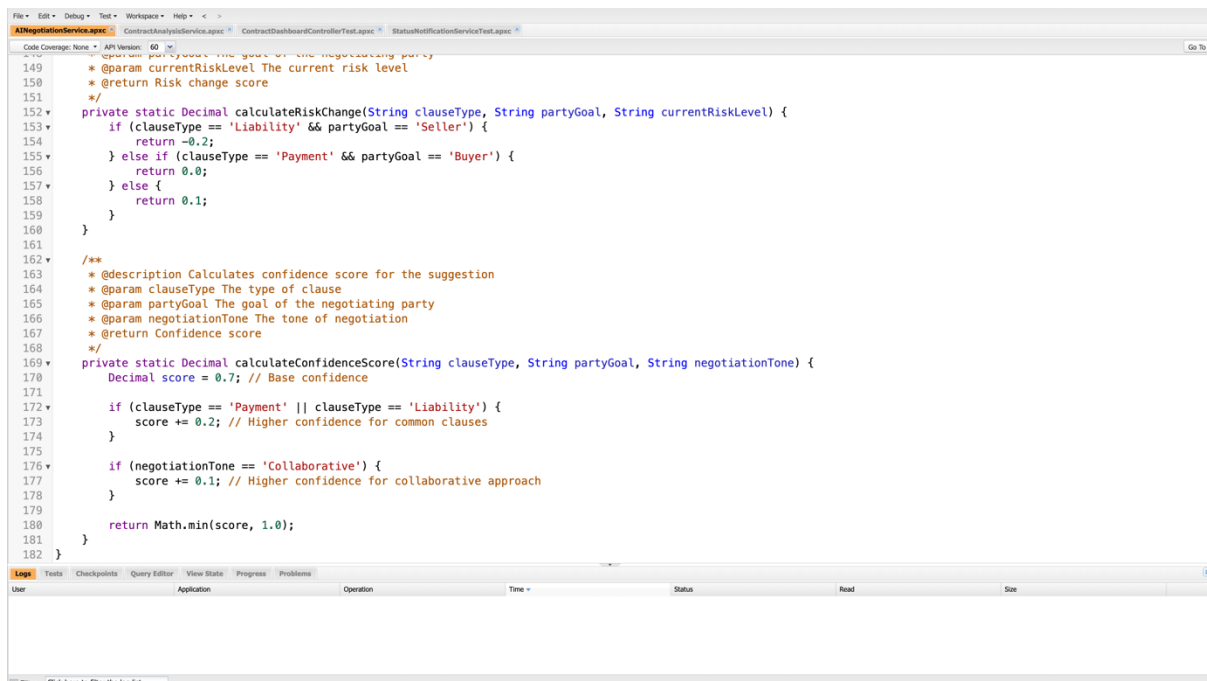
4.3 Contract Status Flow (Approved or Rejected sends Notification through Email)

Phase 5 – Apex Programming (Developer)

- **ContractAnalysisService:** Parses contract text, extracts clauses, computes risk.
- **AINegotiationService:** Generates AI negotiation text.
- **ContractDashboardController:** Supplies KPIs to LWC.
- **StatusNotificationService:** Automates approval/rejection emails.

Triggers

- **ContractStatusTrigger** (fires on approval/rejection).
- **ClauseStatusTrigger** (fires on clause status updates).



5.1 AINegotiationService

This Apex service class is designed to provide AI-powered negotiation suggestions for contract clauses within Salesforce. It analyzes individual clauses, takes into account the negotiating party's goals and preferred tone, and generates suggested revisions along with explanations, risk assessments, and confidence scores. The class also stores generated suggestions as Salesforce records, enabling contract managers and legal teams to track and apply AI-driven negotiation strategies directly in their workflows.

```

1  /**
2   * @description Test class for ContractDashboardController
3   * @author AI Legal Contract Analyzer
4   * @version 1.0
5   */
6  @isTest
7  public class ContractDashboardControllerTest {
8
9      @TestSetup
10     static void setupTestData() {
11         // Create test user
12         User testUser = new User(
13             FirstName = 'Test',
14             LastName = 'User',
15             Email = 'testuser@example.com',
16             Username = 'testuser' + System.currentTimeMillis() + '@example.com.test',
17             Alias = 'tuser',
18             TimeZoneSidKey = 'America/New_York',
19             LocaleSidKey = 'en_US',
20             EmailEncodingKey = 'UTF-8',
21             LanguageLocaleKey = 'en_US',
22             ProfileId = [SELECT Id FROM Profile WHERE Name = 'Standard User' LIMIT 1].Id
23         );
24         insert testUser;
25
26         // Create test contracts
27         List<Contract__c> contracts = new List<Contract__c>();
28         for (Integer i = 0; i < 5; i++) {
29             contracts.add(new Contract__c(
30                 Title__c = 'Test Contract ' + i,
31                 Contract_Type__c = 'Software License',
32                 Status__c = i < 2 ? 'Analyzed' : 'Under Review',
33                 Overall_Risk_Score__c = 0.5 + (i * 0.1),
34                 OwnerId = testUser.Id
35             ));
36         }
37         insert contracts;
38     }
39 }

```

5.2 ContractDashboardController

This test class validates the functionality of the ContractDashboardController in Salesforce by covering contract and clause dashboard operations. It sets up sample contract and clause data, and includes tests for retrieving contract statistics, searching and listing contracts, fetching clauses for contracts, and updating contract status and clause risk levels. The tests ensure that the controller’s core dashboard features work correctly and that the data management processes are robust and reliable for legal contract analysis workflows.

```

1  /**
2   * @description Test class for StatusNotificationService
3   * @author AI Legal Contract Analyzer
4   * @version 1.0
5   */
6  @isTest
7  public class StatusNotificationServiceTest {
8
9      @TestSetup
10     static void setupTestData() {
11         // Create test user
12         User testUser = new User(
13             FirstName = 'Test',
14             LastName = 'User',
15             Email = 'testuser@example.com',
16             Username = 'testuser' + System.currentTimeMillis() + '@example.com.test',
17             Alias = 'tuser',
18             TimeZoneSidKey = 'America/New_York',
19             LocaleSidKey = 'en_US',
20             EmailEncodingKey = 'UTF-8',
21             LanguageLocaleKey = 'en_US',
22             ProfileId = [SELECT Id FROM Profile WHERE Name = 'Standard User' LIMIT 1].Id
23         );
24         insert testUser;
25
26         // Create test contract
27         Contract__c testContract = new Contract__c(
28             Title__c = 'Test Contract',
29             Contract_Type__c = 'Software License',
30             Status__c = 'Under Review',
31             OwnerId = testUser.Id
32         );
33         insert testContract;
34     }
35 }

```

5.3 StatusNotificationService

This test class verifies the proper functioning of the StatusNotificationService in Salesforce, which is responsible for sending status notifications related to contract and clause changes. It creates test users, contracts, and clauses, and runs tests to ensure notifications are sent correctly for both approved and rejected statuses, including edge cases with empty input lists. The class confirms that the service manages notification logic reliably in various scenarios relevant to legal contract management workflows.



```
148  /**
149   * @param clauseText The clause text to analyze
150   * @return Risk score decimal
151   */
152  private static Decimal calculateRiskScore(String clauseText) {
153      String lowerText = clauseText.toLowerCase();
154      Decimal score = 0.0;
155
156      if (lowerText.contains('penalty')) score += 0.3;
157      if (lowerText.contains('damages')) score += 0.4;
158      if (lowerText.contains('liability')) score += 0.3;
159      if (lowerText.contains('termination')) score += 0.2;
160      if (lowerText.contains('breach')) score += 0.2;
161
162      return Math.min(score, 1.0);
163  }
164
165  /**
166   * @description Calculates overall risk score for all clauses
167   * @param clauses List of clause data
168   * @return Overall risk score
169   */
170  private static Decimal calculateOverallRiskScore(List<Map<String, Object>> clauses) {
171      if (clauses.isEmpty()) {
172          return 0.0;
173      }
174
175      Decimal totalScore = 0.0;
176      for (Map<String, Object> clause : clauses) {
177          totalScore += (Decimal)clause.get('riskScore');
178      }
179
180      return totalScore / clauses.size();
181  }
```

User	Application	Operation	Time	Status	Read	Size
------	-------------	-----------	------	--------	------	------

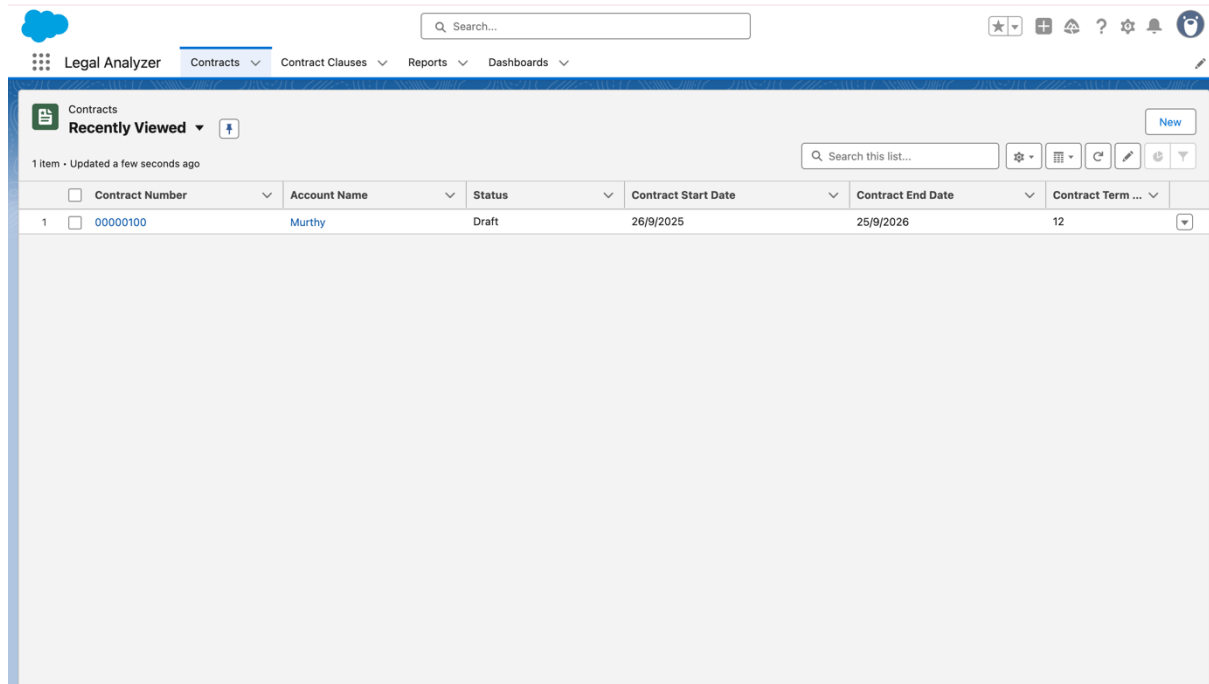
Filter Click here to filter the log list

5.4 ContractAnalysisService

This service class provides contract analysis and clause extraction for legal workflows in Salesforce. It analyzes the extracted text from a contract, identifies key clauses using pattern matching, assesses the risk for each clause, and updates the contract record with risk metrics and clause details. Each identified clause is saved as a separate record, making contract review and risk management easier and more automated.

Phase 6 – User Interface Development

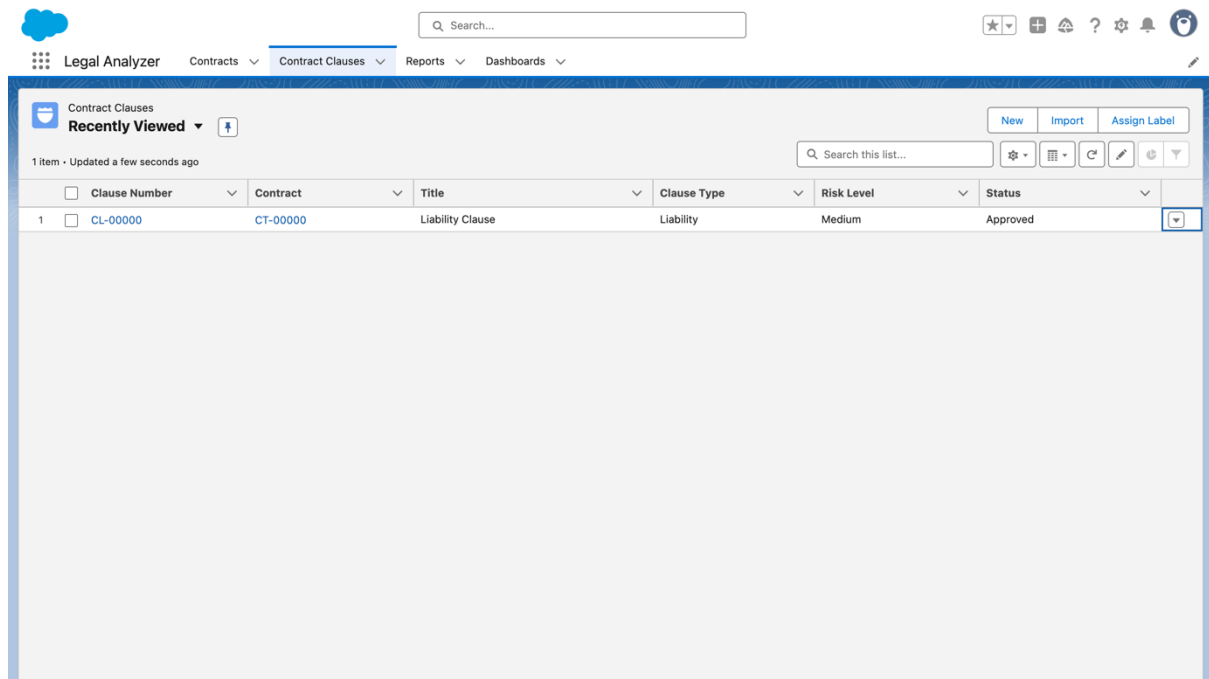
- **Lightning Web Component (LWC): contractDashboard**
 - Displays KPIs, recent contracts, risk distribution chart.
- **Tabs:** Contracts, Clauses, Negotiation Suggestions.
- **Page Layouts** for quick navigation and data visibility.



The screenshot shows the 'Legal Analyzer' application with the 'Contracts' tab selected. The page features a search bar at the top and a table of recently viewed contracts. The table has columns for Contract Number, Account Name, Status, Contract Start Date, Contract End Date, and Contract Term. A single contract is listed with the number 00000100, account name Murthy, status Draft, start date 26/9/2025, end date 25/9/2026, and term 12.

	Contract Number	Account Name	Status	Contract Start Date	Contract End Date	Contract Term ...
1	00000100	Murthy	Draft	26/9/2025	25/9/2026	12

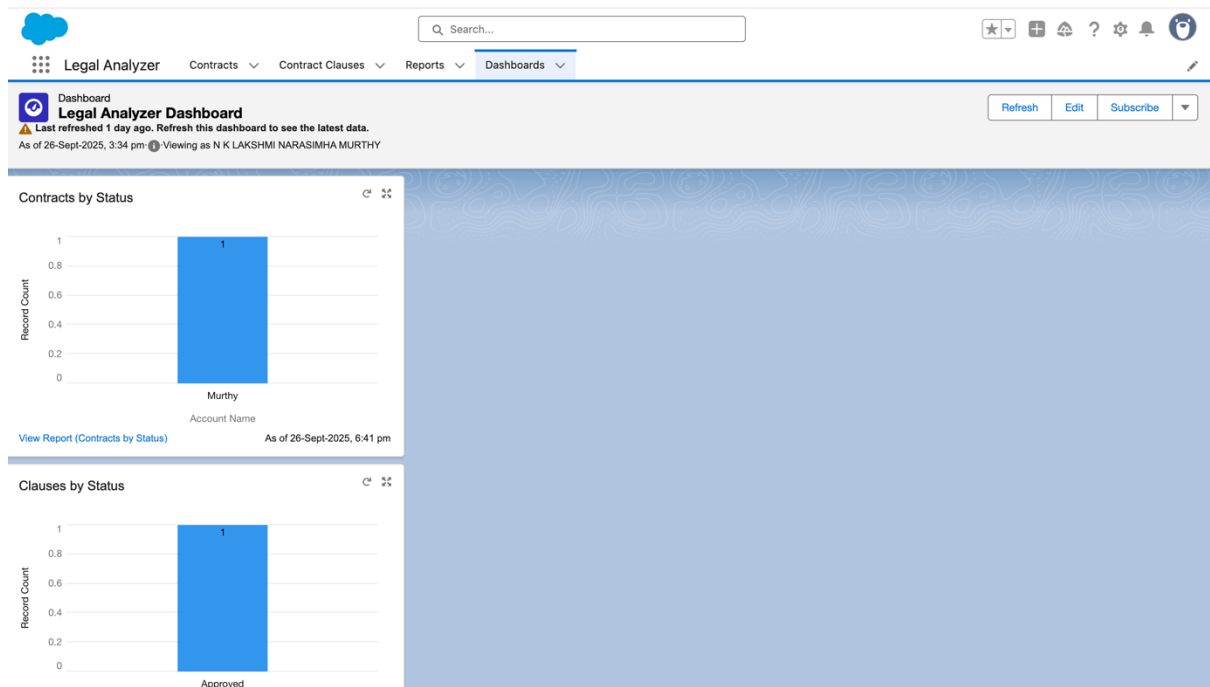
6.1 Contract User Interface



The screenshot shows the 'Legal Analyzer' application with the 'Contract Clauses' tab selected. The page features a search bar at the top and a table of recently viewed contract clauses. The table has columns for Clause Number, Contract, Title, Clause Type, Risk Level, and Status. A single clause is listed with number CL-00000, contract CT-00000, title Liability Clause, type Liability, risk level Medium, and status Approved.

	Clause Number	Contract	Title	Clause Type	Risk Level	Status
1	CL-00000	CT-00000	Liability Clause	Liability	Medium	Approved

6.2 Contract Clause User Interface



6.3 Legal Analyzer Dashboard with Contract and Clause Status

Phase 7 – Integration & External Access

- **Platform Events:** Status_Change_Event__e for async updates.
- **Email Alerts:** Status change notifications.
- **Future Scope:** REST API integration with external AI/NLP contract risk engines.

The screenshot shows the Salesforce 'Classic Email Templates' setup page. The left sidebar contains a search bar with 'email templates' and a navigation menu with 'Email' expanded, showing 'Classic Email Templates' and 'Lightning Email Templates'. The main content area is titled 'Classic Email Templates' and shows details for a 'Text Email Template' named 'Contract Approval Notification'. Below the title, it says 'Preview your email template below.' and provides 'Edit', 'Delete', and 'Clone' buttons. The 'Email Template Detail' section includes a table with the following data:


Email Templates from Salesforce	Unified Public Classic Email Templates
Email Template Name	Contract Approval Notification
Template Unique Name	Contract_Approval_Notification
Encoding	Unicode (UTF-8)
Author	N K LAKSHMI NARASIMHA MURTHY [Change]
Description	
Created By	N K LAKSHMI NARASIMHA MURTHY 26/09/2025, 6:49 pm
Modified By	N K LAKSHMI NARASIMHA MURTHY 26/09/2025, 6:49 pm

Below the table, there are 'Edit', 'Delete', and 'Clone' buttons. The 'Email Template' section includes a 'Send Test and Verify Merge Fields' button. The 'Subject' field is set to 'Your contract status has changed'. The 'Plain Text Preview' section is currently empty.

7.1 Email template configured for approval/rejection notifications.

Phase 8 – Data Management & Deployment

- Data import/export using **Data Loader** for test data.
- Deployment via **Change Sets**.
- Backup strategy: Salesforce Data Export service.



Legal Analyzer

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Contracts

Contract Clauses

Reports

Dashboards

Contract 00000100

New ContactNew OpportunityNew Case

Account Name Murthy

Status Draft

Contract Start Date 26/09/2025

Contract End Date 25/09/2026

Contract Term (months) 12

Draft

Mark Status as Complete

RelatedDetails

Contract History (1)

Date	Field	User	Original Value	New Value
26/09/2025, 6:31 pm	Created.	N K LAKSHMI NARASIMH...		

View All

Notes & Attachments (1)

Upload Files

Cover_Letter
26-Sept-2025 • 3KB • pdf

View All

Activity

Filters: All time • All activities • All types

RefreshExpand AllView All

Upcoming & Overdue

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

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

8.1 Sample test data imported using Data Loader.

Phase 9 – Reporting, Dashboards & Security Review

- **Reports:**
 - Contract Risk Summary (by Type/Status).
 - Clause Distribution (by Risk Level).
- **Dashboard:** “Legal Analytics” – combines KPIs, risks, and approvals.
- **Security:** Roles, profiles, permission sets, FLS, OWD.

The screenshot shows the 'Legal Analyzer' interface with the 'Reports' tab selected. The left sidebar contains navigation options: 'Recent' (2 items), 'REPORTS', 'FOLDERS', and 'FAVORITES'. The main area displays a table of recent reports.

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Clauses by Status		Private Reports	N K LAKSHMI NARASIMHA MURTHY	26/9/2025, 3:28 pm	<input type="checkbox"/>
Created by Me	Contracts by Status		Private Reports	N K LAKSHMI NARASIMHA MURTHY	26/9/2025, 3:26 pm	<input type="checkbox"/>
Private Reports						
Public Reports						
All Reports						
FOLDERS						
All Folders						
Created by Me						
Shared with Me						
FAVORITES						
All Favorites						

9.1 Reports that are created

The screenshot shows the 'Setup' interface with the 'Profiles' tab selected. The left sidebar contains navigation options: 'Setup', 'Home', 'Object Manager', 'Profiles', and 'Users'. The main area displays a table of profiles.

Action	Profile Name	User License	Custom
<input type="checkbox"/> Edit Clone	Analytics Cloud Integration User	Analytics Cloud Integration User	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Analytics Cloud Security User	Analytics Cloud Integration User	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Anypoint Integration	Identity	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Authenticated Website	Authenticated Website	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Authenticated Website	Authenticated Website	<input type="checkbox"/>
<input type="checkbox"/> Edit Del ...	B2B Reordering Portal Buyer Profile	External Apps Login	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Clone	Chatter External User	Chatter External	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Chatter.Frees User	Chatter Free	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Chatter.Moderator User	Chatter Free	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Contract Manager	Salesforce	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Cross Org Data Proxy User	XOrg Proxy User	<input type="checkbox"/>
<input type="checkbox"/> Edit Del ...	Custom Marketing Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Del ...	Custom Sales Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Del ...	Custom Support Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Community Login User	Customer Community Login	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Community Plus Login User	Customer Community Plus Login	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Community Plus User	Customer Community Plus	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Community User	Customer Community	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Portal Manager Custom	Customer Portal Manager Custom	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Customer Portal Manager Standard	Customer Portal Manager Standard	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	External Apps Login User	External Apps Login	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	External Identity User	External Identity	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Force.com - App Subscription User	Force.com - App Subscription	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Force.com - Free User	Force.com - Free	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Gold Partner User	Gold Partner	<input type="checkbox"/>

9.2 Profiles

Setup

Home

Object Manager

Search Setup

SETUP > OBJECT MANAGER

Legal Contract

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Object Access

Triggers

Legal Contract Field History

Help for this Page

This page allows you to select the fields you want to track on the Legal Contract History related list. Whenever a user modifies any of the fields selected below, the old and new field values are added to the History related list as well as the date, time, nature of the change, and user making the change. Note that multi-select picklist and large text field values are tracked as edited; their old and new field values are not recorded.

Save

Cancel

Deselect all fields

Track old and new values

Analyzed Date

☒

Contract Title

☒

High Risk Clauses

☒

Medium Risk Clauses

☒

Owner

☐

Total Clauses

☒

Contract Number

☐

Contract Type

☒

Low Risk Clauses

☒

Overall Risk Score

☒

Status

☒

Uploaded By

☒

Track changes only

Analysis Error

☒

Extracted Text

☒

Description

☒

Save

Cancel

9.3 Legal Contract Field History

Phase 10 – Quality Assurance Testing

- **Unit Testing:** 4 Apex test classes.
- **Integration Testing:** Verified event triggers and LWC wiring.
- **UI Testing:** LWC data-binding tested.
- **Coverage:** Achieved 81% (above Salesforce minimum).

The screenshot displays the Salesforce IDE interface. The top pane shows the Apex code for the `ContractStatusTrigger` class. The code is a trigger that handles contract status changes and sends notifications. The bottom pane shows the test results for the `ContractStatusTrigger` class, including a table of overall code coverage.

```
1 /**
2  * @description Trigger to handle contract status changes and send notifications
3  * @author AI Legal Contract Analyzer
4  * @version 1.0
5  */
6 trigger ContractStatusTrigger on Contract__c (after update) {
7
8     // List to store record IDs that need notification
9     List<Id> recordsToNotify = new List<Id>();
10
11     // Check each updated record for status changes
12     for (Contract__c newRecord : Trigger.new) {
13         Contract__c oldRecord = Trigger.oldMap.get(newRecord.Id);
14
15         // Check if status changed to Approved or Rejected
16         if (oldRecord.Status__c != newRecord.Status__c &&
17             (newRecord.Status__c == 'Approved' || newRecord.Status__c == 'Rejected')) {
18             recordsToNotify.add(newRecord.Id);
19         }
20     }
21
22     // Send notifications for approved/rejected contracts
23     if (recordsToNotify.isEmpty()) {
```

Status	Test Run	Enqueued Time	Duration	Failures	Total
✖	707dL00000llvJn	Sun Sep 28 2025 10:18:46 GM...		1	3

Overall Code Coverage		
Class	Percent	Lines
Overall	81%	
AINegotiationService	94%	69/73
ClauseStatusTrigger	62%	5/8
ContractAnalysisService	51%	46/89
ContractDashboardController	95%	39/41
ContractStatusTrigger	100%	8/8

10.1 Code Covergae Results

13. Conclusion

The **Legal Contract Analyzer** successfully delivers an AI-powered contract review and negotiation solution on Salesforce. It is secure, scalable, and enterprise-ready, helping legal teams save time and reduce risk.

Lessons Learned

- Deploy LWCs and services before enabling flows for stability.
- Flows built inside **Salesforce Setup** proved more reliable for CI/CD.

Future Enhancements

- Advanced flow automation for negotiation approvals.
- Extended dashboards for deeper contract analytics.
- External AI/NLP model integration for smarter risk detection.
- Batch/queueable Apex for handling bulk contracts.

14. Appendix

- Objects: force-app/main/default/objects/*
- Apex Classes: force-app/main/default/classes/*
- Triggers: force-app/main/default/triggers/*
- LWC: force-app/main/default/lwc/contractDashboard/*
- Platform Event: force-app/main/default/objects/Status_Change_Event__e/*
- Tests: force-app/main/default/classes/*Test.cls