

LAWYER ERP Development Specification Document

Project Name: [Lawyer ERP]

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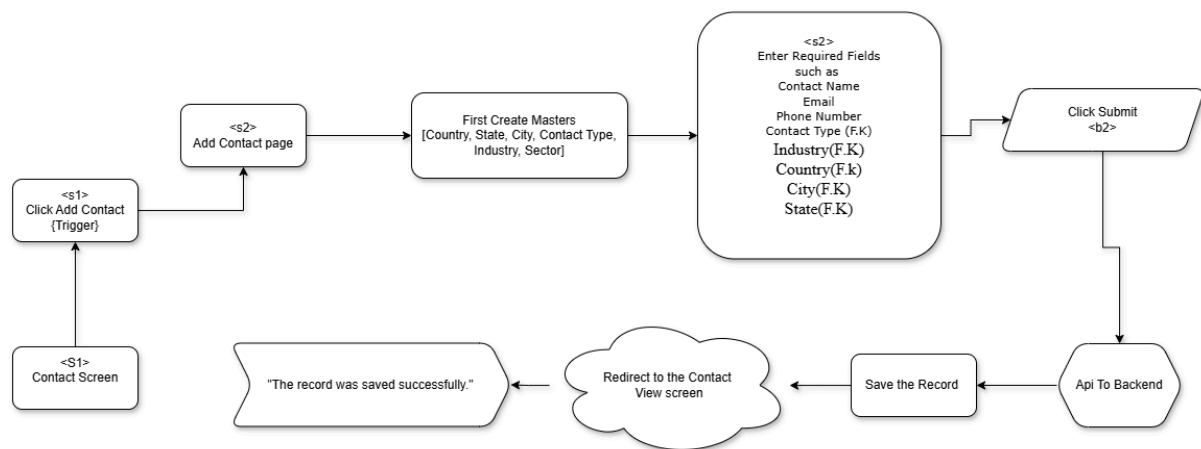
1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Contacts	UC-001	Create Contact	Yes
Country Management	UC-002	Manage Countries	Yes
State Management	UC-003	Manage States	Yes
City Management	UC-004	Manage Cities	Yes
Country Code Management	UC-005	Manage Country Codes	Yes
Currency Management	UC-006	Manage Currencies	Yes
Company Management	UC-007	Manage Company Information	Yes
Industry Management	UC-008	Manage Industries	Yes
Sector Management	UC-009	Manage Sectors	Yes
Known Relationships	UC-0010	Manage Known Relationships	Yes
Contact Type Management	UC-011	Manage Contacts Type	Yes
Organization Turnover	UC-012	Manage Organization Turnover	Yes
Organization employee Size	UC-013	Manage Organization employee Size	Yes

Sub Contacts	UC-014	Manage Sub Contacts	Yes
Address Management	UC-015	Manage Address Details	Yes
Contact Role Management	UC-016	Manage Contact Role Details	Yes

1.2 Flow Diagram for System Processes



Notes:

- We can add multiple contacts and addresses, treating each as a submodule. This allows us to add and manage multiple contacts and addresses as needed.

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

2.1 Use Case: Create Contact (UC-001)

2.1.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Contact Form	Contact Name	Text	Mandatory	N/A	No
	Contact Title	Text	Optional	N/A	No
	Email	Email	Mandatory, valid email format	N/A	No

	Organization Name	Text	Optional	N/A	No
	Sector	Dropdown	Optional, foreign key from SectorMaster table	SectorMaster	No
	Industry	Dropdown	Mandatory, foreign key from IndustryMaster table	IndustryMaster	No
	Organization Turnover	Dropdown	Optional	Foreign Key to SubOrganizationTurnOver	No
	Organization Employee Size	Dropdown	Optional	Foreign Key to SubOrganizationEmployeeSize	No
	Contact Type	Dropdown	Mandatory, foreign key from ContractType table	ContactType	No
	Contact Role	Dropdown	Optional, foreign key from Contact Role table	Contact Role	No
	Country	Dropdown	Mandatory, foreign key from Country table	Country	No
	City	Dropdown	Mandatory, foreign key from City table, depends on selected state	City	No
	State	Dropdown	Mandatory, foreign key from State table, depends on selected country	State	No
	Known Relationships	Multiselect	Optional, many-to-many relationship with KnownRelationships table	KnownRelationships	Yes
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No

	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated At	DateTime	Auto-generated, timestamp of record update	N/A	No

2.1.2 Field Validation Functions for Create Contact

Field Name	Validation Function	Error Message
Contact Name	validateName()	"Contact Name is mandatory."
Email	validateEmail()	"Please enter a valid email address."
Country Code	validateCountryCode()	"Country Code is mandatory and should follow the specified format."
Contact Number	validateNumber()	"Contact Number must contain only digits."
Industry	validateIndustry()	"Please select an Industry."
Contact Type	validateContactType()	"Please select a Contact Type."
Country	validateCountry()	"Please select a Country."
State	validateState()	"Please select a State based on the selected Country."
City	validateCity()	"Please select a City based on the selected State."
Known Relationships	validateRelationships()	"Please select at least one Known Relationship."
SubOrganizationTurnOver	validateSubOrganizationTurnOver()	"Please select a valid SubOrganization Turnover."
SubOrganizationEmployeeSize	validateSubOrganizationEmployeeSize()	Please select a valid SubOrganization Employee Size.

2.1.3 Table Mapping for UC-001

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Contacts	Contact_ID	INT	Primary Key	N/A	N/A
	Contact_Name	VARCHAR	Not Null	N/A	N/A
	Contact_Title	VARCHAR	Null	N/A	N/A
	Email	VARCHAR	Not Null, Unique	N/A	N/A
	Organization_Name	VARCHAR	Null	N/A	N/A
	Sector_ID	INT	Null	SectorMaster.Sector_ID	Direct(Mode 1)
	Industry_ID	INT	Not Null	IndustryMaster.Industry_ID	Direct(Mode 1)
	organization_turnover_id	INTEGER	Optional	SubOrganizationTurnOver.id	Direct
	organization_employee_size_id	INT	Null	SubOrganizationEmployeeSize.size_id	N/A
	Contact_Type_ID	INT	Not Null	ContactsType.Contact_Type_ID	Direct(Mode 1)
	Contact_Role_ID	INT	Null	ContactRole.Contact_Role_ID	Direct (Mode 1)
	Country_ID	INT	Not Null	Country.Country_ID	Direct (Mode 1)
	State_ID	INT	Not Null	State.State_ID	INDirect (Mode 2)When a country is selected, the related states should be

					displayed in the dropdown menu.
	City_ID	INT	Not Null	City.City_ID	INDirect (Mode 2)When a State is selected, the related City should be displayed in the dropdown menu.
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.1.4 Masters Section

Master Name	Screen Name	Table Name	Description
Sector Master	Sector Management	SectorMaster	Stores different sectors related to organizations.
Industry Master	Industry Management	IndustryMaster	Stores different industries related to organizations.
Contract Type Master	Contract Type Management	ContractType	Stores different types of contacts, e.g., Client,Staff, etc.
Contact Role Master	Contact Role Management	ContactRole	Stores different Contact roles that contacts can have within their organization.
Country Master	Country Management	Country	Stores list of all countries.
State Master	State Management	State	Stores list of all states within a country.
City Master	City Management	City	Stores list of all cities within a state.

Known Relationships Master	Known Relationships Management	KnownRelationships	Stores list of known relationships associated with the organization, facilitating networking opportunities.
Organization Turnover	Organization Turnover Management	OrganizationTurnover	Manages and tracks turnover details for organizations, supporting analysis of financial and operational metrics.
Sub Contacts	Sub Contacts Management	SubContacts	Manages and stores sub-contact details within the organization, helping maintain records of secondary contacts linked to primary entities.
Sub Address	Address Management	SubAddress	Manages and stores additional addresses associated with sub-contacts or entities, supporting multi-address functionalities within the system

2.2.5. Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Users table	Create Contact
On Field Change	Validate Input	Check Email Format	Email Field

2.2.6. Aggregation of Components

Component Type	Component Name
Tables	Contacts,Contact Type ,Country Master , State Master,City Master,Industry Master and Sector Master
Screens	Contacts Create,Contact Type Create,Country Master Create , State Master Create ,City Master Create ,Industry Master Create and Sector Master Create

Fields	Contact_ID, Contact_Name, Contact_Title, Email, Contact_Number, Organization_Name, Sector_ID, Industry_ID, Organization_Turnover, Organization_Employee_Size, Contact_Type_ID, Contact_Role_ID, Country_ID, State_ID, City_ID, Address, Created_By, Created_At, Updated_By, Updated_AtExt(Country,State,City,Contact Type, Industry,Sector..)
Buttons	Submit, Cancel,Convert to clients,Convert to Staff
Pop-Up Messages	Success, Error: "Action failed. Please try again." Validation Error: "Invalid input. Check and resubmit." Network Error: "Connection issue. Retry shortly."
Microservices	Create_contact,Create_country,Create_contact_type,Create_state.Create_city,Create_industry,Create_sector,Known Relationships

2.2.7. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Create_contact,Create_country,Create_contact_type,Create_state.Create_city,Create_industry,Create_sector,Known Relationships	Create	/api/lawyer_erp/	JSON Request/Response

Known Relationships NOTES:

When adding a "Known Relationship" as a Many-to-Many field while creating a contact, you should first save the data for all other fields. After submission, save the Many-to-Many field, and then, using the Known Relationship list ID, save the contact.

Country* State* City*

---Select Country--- ---Select State--- ---Select City---

Address

Name Email Phone Number

Name Email Phone Number

submit Cancel

2.2 Use Case: Manage Countries (UC-002)

2.2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Country Form	Country Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, from User table	User	No
	Created Date	DateTime	Auto-generated	N/A	No
	Updated By	Foreign Key	Optional, from User table	User	No
	Updated Date	DateTime	Auto-generated	N/A	No

2.2.2 Field Validation Functions for Manage Countries

Field Name	Validation Function	Error Message
Country Name	validateName()	"Country Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.2.3 Table Mapping for UC-002

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Country	Country_ID	INT	Primary Key	N/A	N/A
	Country_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.3 Use Case: Manage States (UC-003)

2.3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
State Form	Country	Dropdown	Mandatory, foreign key from Country table	Country	No
	State Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Created Date	DateTime	Auto-generated, timestamp of record creation	N/A	No

	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated Date	DateTime	Auto-generated, timestamp of record update	N/A	No

2.3.2 Field Validation Functions for Manage States

Field Name	Validation Function	Error Message
Country	validateCountry()	"Please select a Country."
State Name	validateName()	"State Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.3.3 Table Mapping for UC-003

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
State	Country_ID	INT	Not Null	Country.Country_ID	Direct (Mode 1)
	State_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.4 Use Case: Manage Cities (UC-004)

2.4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
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City Form	State	Dropdown	Mandatory, foreign key from State table	State	No
	City Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Created Date	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated Date	DateTime	Auto-generated, timestamp of record update	N/A	No

2.4.2 Field Validation Functions for Manage Cities

Field Name	Validation Function	Error Message
State	validateState()	"Please select a State."
City Name	validateName()	"City Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.4.3 Table Mapping for UC-004

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
City	City_ID	INT	Primary Key	N/A	N/A
	State_ID	INT	Not Null	State.State_ID	Direct (Mode 1)
	City_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)

	Updated_At	DATETIME	Null	N/A	N/A
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2.5 Use Case: Manage Country Codes (UC-005)

2.5.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Country Code Form	Country	Dropdown	Mandatory, foreign key from Country table	Country	No
	Country Code	Text	Mandatory, unique, specific format (e.g., alpha-2, alpha-3)	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Created Date	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated Date	DateTime	Auto-generated, timestamp of record update	N/A	No

2.5.2 Field Validation Functions for Manage Country Codes

Field Name	Validation Function	Error Message
Country	validateCountry()	"Please select a Country."
Country Code	validateCountryCode()	"Country Code is mandatory and should follow the specified format."
Created By	validateUser()	"Created By field should be valid user."

2.5.3 Table Mapping for UC-005

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Country Code	Country_ID	INT	Not Null	Country.Country_ID	Direct (Mode 1)
	Country_Code	VARCHAR	Not Null, Unique	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.6. Use Case: Currency Management (UC-006)

2.6.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Currency Details	Country ID	Dropdow n	Mandatory	Foreign Key - Country	No
	Currency Code	Textbox	Unique, Mandatory	None	No
	Created By	Dropdow n	Mandatory	Foreign Key - User	No

	Updated By	Dropdown	Optional	Foreign Key - User	No
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2.6.2 Field Validation Functions

Field Name	Validation Function	Error Message
Currency Code	validateCurrencyCode()	"Currency code must be unique."
Currency Name	validateCurrencyName()	"Currency name is required."

2.6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Currency	currency_id	VARCHAR(10)	Primary Key	None	None
	country_id	Foreign Key	Not Null	Country.country_id	Direct
	created_by	Foreign Key	Not Null	User.user_id	Direct
	update_by	Foreign Key	Optional	User.user_id	Direct
	created_at	DATETIME	Auto-generated	None	None
	update_at	DATETIME	Auto-updated	None	None

2.6.4 Masters Section

Master Name	Screen Name	Table Name	Description
Country	Country Assignment	Country	Holds available countries
User	Currency Assignment	User	Holds details of users assigning currencies

2.6.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Currency Table	Add Currency
On Update Currency	Update Currency	Update existing currency	Edit Currency

2.7 Use Case: Company Management (UC-007)

2.7.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Company Details	Company ID	Textbox	Auto-generat ed	None	No
	Company Name	Textbox	Unique, Mandatory	None	No

	Local Currency	Dropdown	Mandatory	Foreign Key - Currency	No
	Address	Text Area	Mandatory	None	No
	Country Code	Dropdown	Mandatory	Foreign Key - CountryCodeMaster	No
	Phone	Textbox	Unique, Mandatory	None	No
	Email	Email Field	Unique, Mandatory	None	No
	Bid Rate	Decimal	Optional	None	No
	Buy Rate	Decimal	Optional	None	No
	Sell Rate	Decimal	Optional	None	No
	Created By	Dropdown	Mandatory	Foreign Key - User	No
	Updated By	Dropdown	Optional	Foreign Key - User	No

2.7.2 Field Validation Functions

Field Name	Validation Function	Error Message
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Company Name	validateCompanyName()	"Company name must be unique."
Phone	validatePhoneNumber()	"Phone number must be unique and valid."
Email	validateEmail()	"Please enter a valid email address."

2.7.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Company	company_id	VARCHAR(50)	Primary Key	None	None
	company_name	VARCHAR(50)	Unique, Not Null	None	None
	local_currency	Foreign Key	Not Null	Currency.currency_id	Direct
	address	VARCHAR(100)	Not Null	None	None
	country_code	Foreign Key	Not Null	CountryCodeMaster.country_code	Direct
	phone	VARCHAR(15)	Unique, Not Null	None	None

	email	Email	Unique, Not Null	None	None
	bid_rate	Decimal	Optional	None	None
	buy_rate	Decimal	Optional	None	None
	sell_rate	Decimal	Optional	None	None
	created_by	Foreign Key	Not Null	User.user_id	Direct
	update_by	Foreign Key	Optional	User.user_id	Direct
	created_at	DATETIME	Auto-generated	None	None
	update_at	DATETIME	Auto-updated	None	None

2.7.4 Masters Section

Master Name	Screen Name	Table Name	Description
CountryCodeMaster	Country Code Assignment	CountryCodeMaster	Holds country codes for companies
Currency	Currency Selection	Currency	Manages available currencies

2.7.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Company Table	Add Company
On Update Company	Update Company	Update existing company	Edit Company

2.8 Use Case: Manage Industries (UC-007)

2.8.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Industry Form	Industry Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, from User table	User	No
	Created Date	DateTime	Auto-generated	N/A	No
	Updated By	Foreign Key	Optional, from User table	User	No
	Updated Date	DateTime	Auto-generated	N/A	No

2.8.2 Field Validation Functions for Manage Industries

Field Name	Validation Function	Error Message
Industry Name	validateName()	"Industry Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.8.3 Table Mapping for UC-007

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Industry	Industry_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.9 Use Case: Manage Sectors (UC-009)

2.9.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Sector Form	Industry	Dropdown	Mandatory, foreign key from Industry table	Industry	No
	Sector Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Created Date	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated Date	DateTime	Auto-generated, timestamp of record update	N/A	No

2.9.2 Field Validation Functions for Manage Sectors

Field Name	Validation Function	Error Message
Industry	validateIndustry()	"Please select an Industry."
Sector Name	validateName()	"Sector Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.9.3 Table Mapping for UC-009

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Sector	Industry_ID	INT	Not Null	Industry.Industry_ID	Direct (Mode 1)
	Sector_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.10 Use Case: Manage Known Relationships (UC-0010)

2.10.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Known Relationship Form	Name	Text	Mandatory	N/A	No
	Email	Text	Optional, valid email	N/A	No

	Phone Number	Number	Optional, only digits	N/A	No
	Created By	Foreign Key	Mandatory, from User table	User	No
	Created Date	DateTime	Auto-generated	N/A	No
	Updated By	Foreign Key	Optional, from User table	User	No
	Updated Date	DateTime	Auto-generated	N/A	No

2.10.2 Field Validation Functions for Manage Known Relationships

Field Name	Validation Function	Error Message
Name	validateName()	"Name is mandatory."
Email	validateEmail()	"Please enter a valid email address."
Phone Number	validateNumber()	"Phone Number must contain only digits."
Created By	validateUser()	"Created By field should be valid user."

2.10.3 Table Mapping for UC-0010

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
KnownRelationships	Name	VARCHAR	Not Null	N/A	N/A
	Email	VARCHAR	Null	N/A	N/A
	Phone_Number	INT	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A

	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.11 Use Case: Manage Contact Type(UC-011)

2.11.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Contact Type Form	Contact Type Name	Text	Mandatory	N/A	No
	Description	Text Area	Optional	N/A	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Created Date	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Updated Date	DateTime	Auto-generated, timestamp of record update	N/A	No

2.11.2 Field Validation Functions for Manage Contact type

Field Name	Validation Function	Error Message
Contact Type Name	validateName()	"Contact Type Name is mandatory."
Created By	validateUser()	"Created By field should be valid user."

2.11.3 Table Mapping for UC-011

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
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Contact Type	contact_type_ID	INT	Not Null	Contact_Type.contact_type_ID	Direct (Mode 1)
	Contact_Type_Name	VARCHAR	Not Null	N/A	N/A
	Description	VARCHAR	Null	N/A	N/A
	Created_By	INT	Not Null	User.User_ID	Direct (Mode 1)
	Created_At	DATETIME	Not Null	N/A	N/A
	Updated_By	INT	Null	User.User_ID	Direct (Mode 1)
	Updated_At	DATETIME	Null	N/A	N/A

2.12 Use Case: Manage Organization Turnover (UC-012)

2.12.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Organization Turnover	Min Organization Turnover	Number	Optional	None	No
	Max Organization Turnover	Number	Optional	None	No
	Created By	Dropdown	Mandatory	Foreign Key to User table	No
	Updated By	Dropdown	Optional	Foreign Key to User table	No

2.12.2 Field Validation Functions

Field Name	Validation Function	Error Message
Min Organization Turnover	validateMinTurnover()	"Minimum turnover must be a valid number."
Max Organization Turnover	validateMaxTurnover())	"Maximum turnover must be a valid number."

2.12.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubOrganizationTurnOver	min_organization_turnover	INTEGER	Optional	None	None
	max_organization_turnover	INTEGER	Optional	None	None
	created_by_id	INTEGER	Mandatory	Users.user_id	Direct
	updated_by_id	INTEGER	Optional	Users.user_id	Direct

2.13 Use Case: Manage Organization Employee Size (UC-013)

2.13.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
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Organization Turnover	Min Organization employee Size	Number	Optional	None	No
	Max Organization employee Size	Number	Optional	None	No
	Created By	Dropdown	Mandatory	Foreign Key to User table	No
	Updated By	Dropdown	Optional	Foreign Key to User table	No

2.13.2 Field Validation Functions

Field Name	Validation Function	Error Message
Min Organization employee Size	validateMinTurnover()	"Minimum turnover must be a valid number."
Max Organization employee Size	validateMaxTurnover())	"Maximum turnover must be a valid number."

2.13.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubOrganizationTurn Over	min_organization_employee_size	INTEGER	Optional	None	None

	max_organization_employee_size	INTEGER	Optional	None	None
	created_by_id	INTEGER	Mandatory	Users.user_id	Direct
	updated_by_id	INTEGER	Optional	Users.user_id	Direct

2.14 Use Case: Manage Sub Contacts (UC-014)

2.14.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Sub Contacts	Contact	Dropdown	Foreign Key (Contact)	Related to Contact table	No
	Country Code	Dropdown	Mandatory	Foreign Key to CountryCodeMaster	No
	Contact Number	Textbox	Mandatory, Unique	None	No

2.14.2 Field Validation Functions

Field Name	Validation Function	Error Message
Contact Number	validateContactNumber()	"Contact number must be unique and valid."

2.14.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubContacts	contact_id	INTEGER	Mandatory	Contacts.contact_id	Direct
	country_code_id	INTEGER	Mandatory	CountryCodeMaster.code_id	Direct
	contact_number	VARCHAR(13)	Unique, Not Null	None	None

2.15 Use Case: Manage Address Details (UC-015)

2.15.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Address Details	Contact	Dropdown	Foreign Key (Contact)	Related to Contact table	No
	Address	Text Area	Optional	None	No

2.15.2 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
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SubAddresses	address	TEXT	Optional	None	None
	contact_id	INTEGER	Mandatory	Contacts.contact_id	Direct

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

2.16 Use Case: Contact Role (UC-016)

2.16.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Contact Role Screen	Contact Role ID	Textbox	Unique, Optional	None	No
Contact Role Screen	Matter Name	Textbox	Mandatory, Max Length: 255	None	No
Contact Role Screen	Description	Text Area	Optional	None	No
Contact Role Screen	Sector	Dropdown	Foreign Key (SectorMaster)	Related to SectorMaster table	No

2.16.2 Field Validation Functions

Field Name	Validation Function	Error Message
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Contact Role ID	validateContactRoleID()	"Contact Role ID must be unique."
Matter Name	validateMatterName()	"Matter name is required."

2.16.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ContactRole	contact_role_id	VARCHAR(300)	Unique, Optional	None	None
ContactRole	matter_name	VARCHAR(255)	Not Null	None	None
ContactRole	description	TEXT	Optional	None	None
ContactRole	sector_id	INT	Foreign Key	SectorMaster.sector_id	Direct

2.16.4 Masters Section

Master Name	Screen Name	Table Name	Description
SectorMaster	Sector Management Screen	SectorMaster	Stores sector information for categorizing contact roles.

2.16.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Contact Role Save	Save Data	Save Contact Role	Create or update Contact Role details in database
On Contact Role Delete	Delete Data	Remove Contact Role	Remove Contact Role details from database

2.16.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Contact Role Service	Manage Contact Roles	/api/lawyer_erp/	JSON Request/Response
Sector Service	Retrieve Sector Information	/api/lawyer_erp/	Sector ID / Sector Details

2.16.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Contact Role Report	Analyze contact role usage	ContactRole Table	Sector, Date Range

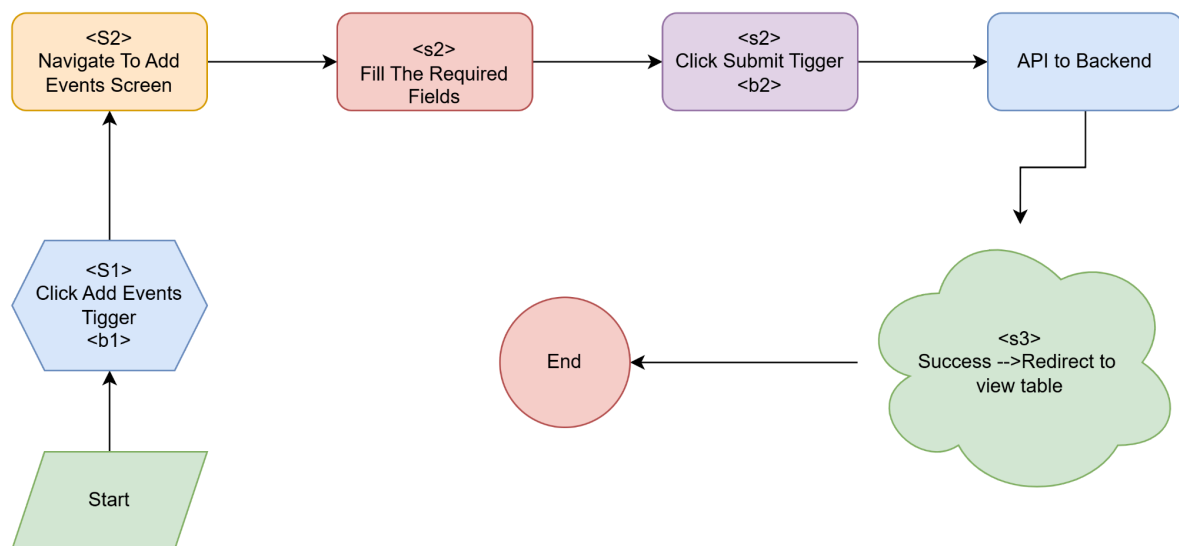
Events -(UE-001)

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Events	UE-001	Create Events	Yes
Known Relationships	UC-009	Manage Known Relationships	Yes
SubEvent Management	UE-002	Manage Sub-Event Details	Yes

1.2 Flow Diagram for System Processes



2.1. Process-wise Details: Tables, Screens, Fields, and Validation Functions

2.1.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Event Creation	Title	Textbox	Mandatory, Max Length: 255	None	No
Event Creation	Description	Text Area	Optional	None	No
Event Creation	Contact Type	Multi-sele ct	Mandatory	Foreign Key - ContactType	Yes

Event Creation	Location	Textbox	Mandatory, Max Length: 255	None	No
Event Creation	Capacity	Number	Optional, Numeric	None	No
Event Creation	Country Code	Dropdown	Mandatory	Foreign Key - CountryCodeMaster	No
Event Creation	Organizer	Textbox	Optional, Max Length: 255	None	No
Event Creation	Contacts	Number Field	Numeric, Max Length: 12	None	No
Event Creation	Approve	Checkbox	Optional	None	No
Event Creation	Assigned Date	Date Field	Mandatory, Date Format	None	No
Event Creation	Time	Time Field	Mandatory, Time Format	None	No
Event Creation	Duration	Duration Field	Optional	None	No
Event Creation	Fee	Decimal Field	Optional	None	No
Event Creation	Budget	Decimal Field	Optional	None	No
Event Creation	Status	Dropdown	Mandatory, Choice Field	Enum - STATUS_CHOICES	No

2.1.2 Field Validation Functions

Field Name	Validation Function	Error Message
Title	<code>validateTitle()</code>	"Event title is required."
Location	<code>validateLocation()</code>	"Event location is required."
Contacts	<code>validateContacts()</code>	"Contacts must be numeric."

2.1.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Events	event_id	VARCHAR(10)	Primary Key	None	None
Events	title	VARCHAR(255)	Not Null	None	None
Events	description	TEXT	Optional	None	None
Events	contact_type_id	INT	Foreign Key	ContactType.id	ManyToMany
Events	location	VARCHAR(255)	Not Null	None	None
Events	country_code_id	INT	Foreign Key	CountryCodeMaster.country_code	Direct
Events	organizer	VARCHAR(255)	Optional	None	None
Events	contacts	INTEGER	Numeric, Max Length: 12	None	None
Events	approve	BOOLEAN	Optional	None	None
Events	assigned_date	DATE	Not Null	None	None
Events	time	TIME	Not Null	None	None
Events	duration	INTERVAL	Optional	None	None
Events	fee	DECIMAL(10,2)	Optional	None	None
Events	budget	DECIMAL(15,2)	Optional	None	None

Events	status	VARCHAR(20)	Not Null, Choice Field	Enum - STATUS_CHOICES	None
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2.1.4 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Event Creation	Save Data	Save to Events Table	Create New Event
On Status Update	Update Status	Update Event Status	Mark Event as Cancelled
On Approval	Change Approval	Approve or Reject Event	Approve Event

2.1.5 Masters Section

Master Name	Screen Name	Table Name	Description
ContactTypeMaster	Event Management	ContactType	Manages types of event contacts
CountryCodeMaster	Event Management	CountryCodeMaster	Manages country codes for event locations

2.1.6. Aggregation of Components

Component Type	Component Name
Tables	Events and Industry Master
Screens	Events Create and Industry Master Create
Fields	title, description, target_group, location, notes, capacity, organizer, contacts, approve, date, time, fee, budget, status_1
Buttons	Submit, Cancel

Pop-Up Messages	Success, Error
Microservices	Create_Events ,Create_industry

2.1.7. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Create_Events and Create_industry	Create	/api/lawyer_erp/	JSON Request/Response

2.2 Use Case: SubEvent Management (UE-002)

2.2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Sub-Event Creation	Event	Dropdown	Mandatory	Foreign Key - Events	No
Sub-Event Creation	Industry	Dropdown	Mandatory	Foreign Key - IndustryMaster	No
Sub-Event Creation	Sector	Dropdown	Optional	Foreign Key - SectorMaster	No
Sub-Event Creation	Contact Role	Dropdown	Optional	Foreign Key - Role	No

2.2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Event	<code>validateEvent()</code>	"Event selection is required."
Industry	<code>validateIndustry()</code>	"Industry selection is required."

2.2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubEvent	sub_event_id	VARCHAR(10)	Primary Key	None	None
SubEvent	event_id	INT	Not Null	Events.event_id	Direct
SubEvent	industry_id	INT	Not Null	IndustryMaster.industry_id	Direct
SubEvent	sector_id	INT	Optional	SectorMaster.sector_id	Direct
SubEvent	contact_role_id	INT	Optional	Role.role_id	Direct

2.2.4 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Event Creation	Save Data	Save to Events Table	Create new event
On SubEvent Creation	Save Data	Save to SubEvents Table	Add a sub-event
On Event Update	Update Data	Update in Events Table	Modify event details

2.2.5 Microservices and Custom Functions

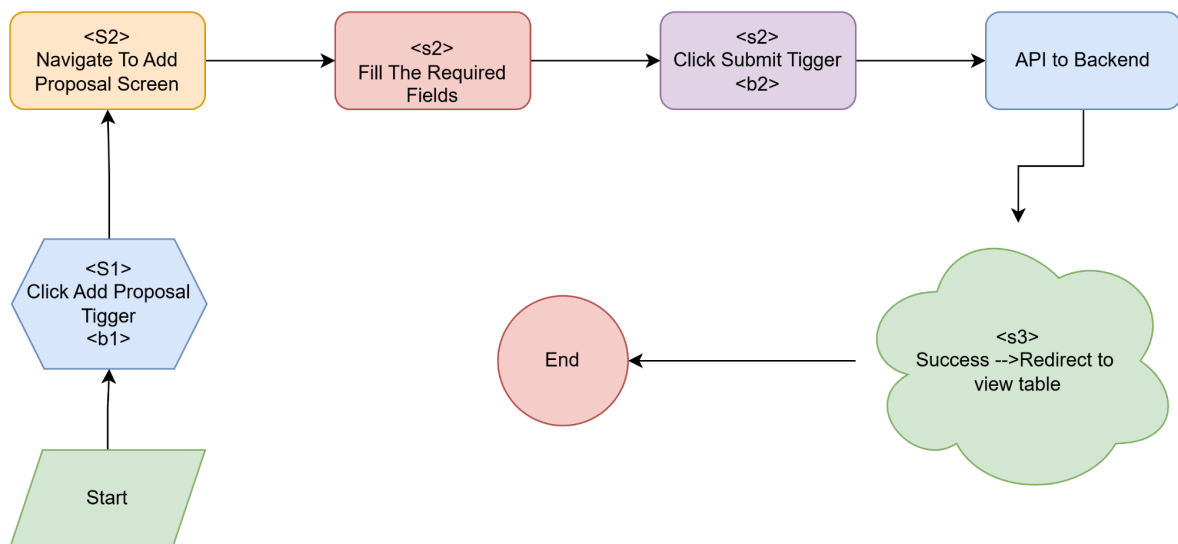
Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Event Notification Service	Notify event changes	/api/lawyer_erp/	Email/SMS Notification
Contact Assignment Service	Assign contacts	/api/lawyer_erp/	JSON Request/Response

2.2.6 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Event Status Report	Track event statuses	Events Table	Status, Date Range

Module	Proposal Case ID	Proposal Case Description	Flow Diagram Required
Proposal	UP-001	Manage Proposal	Yes
Proposal Type	UP-002	Manage proposal Type	Yes
Attachment Handling	UP-003	Upload and Manage Proposal Attachments	Yes
Template	UP-004	Manage Template Type	Yes
Document	UP-005	Manage proposal Type	Yes

1.2. Process-wise Details: Tables, Screens, Fields, and Validation Functions



2.1 Use Case: Manage Proposals (UP-001)

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Proposal Type Management (UP-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e

Proposal Type Management	Proposal Type	Textbox	Mandatory	None	No
Proposal Type Management	Description	Textbox	Optional, Max Length: 100	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Proposal Type	<code>validateProposalType()</code>	"Proposal Type is required."
Description	<code>validateDescription()</code>	"Description should be under 100 characters."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ProposalType	proposal_type_id	VARCHAR(10)	Primary Key	None	None
ProposalType	proposal_type_name	VARCHAR(100)	Not Null	None	None
ProposalType	description	VARCHAR(100)	Optional	None	None

ProposalType	created_by_id	INT	Foreign Key	User.user_id	Direct
ProposalType	updated_by_id	INT	Foreign Key	User.user_id	Direct
ProposalType	created_at	DATETIME	Auto-generated	None	None
ProposalType	updated_at	DATETIME	Auto-updated	None	None

Use Case: Proposal Handling (UP-002)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Proposal Management	Title	Textbox	Mandatory	None	No
Proposal Management	Organization	Textbox	Mandatory	None	No
Proposal Management	Country Code	Dropdown	Foreign Key	CountryCodeMaster table	No
Proposal Management	Organization Contact	Textbox	Optional	None	No

Proposal Management	Proposal Type	Dropdown	Foreign Key	<code>ProposalType</code> table	No
Proposal Management	Status	Dropdown	Mandatory	Choices: Created, Approved, Sent, Converted	No
Proposal Management	Created By	Dropdown	Foreign Key	<code>User</code> table	No
Proposal Management	Updated By	Dropdown	Foreign Key	<code>User</code> table	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Title	<code>validateTitle()</code>	"Title is required."
Organization	<code>validateOrganization()</code>	"Organization is required."
Status	<code>validateStatus()</code>	"Status must be selected."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
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Proposal	proposal_id	VARCHAR(10)	Primary Key	None	None
Proposal	title	VARCHAR(255)	Not Null	None	None
Proposal	organization	VARCHAR(255)	Not Null	None	None
Proposal	country_code_id	INT	Foreign Key	CountryCodeMaster	Direct
Proposal	proposal_type_id	INT	Foreign Key	ProposalType	Direct
Proposal	status	VARCHAR(20)	Not Null	None	None
Proposal	created_by_id	INT	Foreign Key	User.user_id	Direct
Proposal	updated_by_id	INT	Foreign Key	User.user_id	Direct
Proposal	created_at	DATETIME	Auto-generated	None	None
Proposal	updated_at	DATETIME	Auto-updated	None	None

Use Case: Attachment Handling (UP-003)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validation s	Relationship s	Multivalue
Proposal Attachments	Attachment	File Upload	Mandatory	None	No
Proposal Attachments	Created By	Dropdown	Foreign Key	User table	No
Proposal Attachments	Updated By	Dropdown	Foreign Key	User table	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Attachment	<code>validateAttachment()</code>	"Attachment file is required."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Attachment	attachment_id	VARCHAR(10)	Primary Key	None	None
Attachment	proposal_id	INT	Foreign Key	Proposal.proposal_id	Direct

Attachment	attachment	BLOB/File	Not Null	None	None
Attachment	created_by_id	INT	Foreign Key	User.user_id	Direct
Attachment	updated_by_id	INT	Foreign Key	User.user_id	Direct
Attachment	created_at	DATETIME	Auto-generated	None	None
Attachment	updated_at	DATETIME	Auto-updated	None	None

2.4 Masters Section

Master Name	Screen Name	Table Name	Description
ProposalTypeMaster	Proposal Type Screen	ProposalType	Manages types of proposals with details
CountryCodeMaster	Country Code Management	CountryCodeMaster	Stores country codes for organization contacts
User	User Management Screen	Users	Manages user information for proposal creation

2.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Proposal Submission	Save Data	Save to Proposal Table	Create Proposal
On Proposal Approval	Update Status	Change Proposal Status	Approve Proposal
On Attachment Upload	Save Data	Attach file to Proposal	Add Document Attachment

2.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Proposal Notification	Notify users on updates	<code>/api/proposals/notify</code>	Email/SMS Notification
Country Service	Fetch country codes	<code>/api/countrycodes</code>	JSON with country codes

2.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
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Proposal Status Report	Track proposal progress	Proposal Table	Status, Date Range
User Proposal Activity	Monitor proposal-related activity	User, Proposal Table	User ID, Role

Attachments Notes:

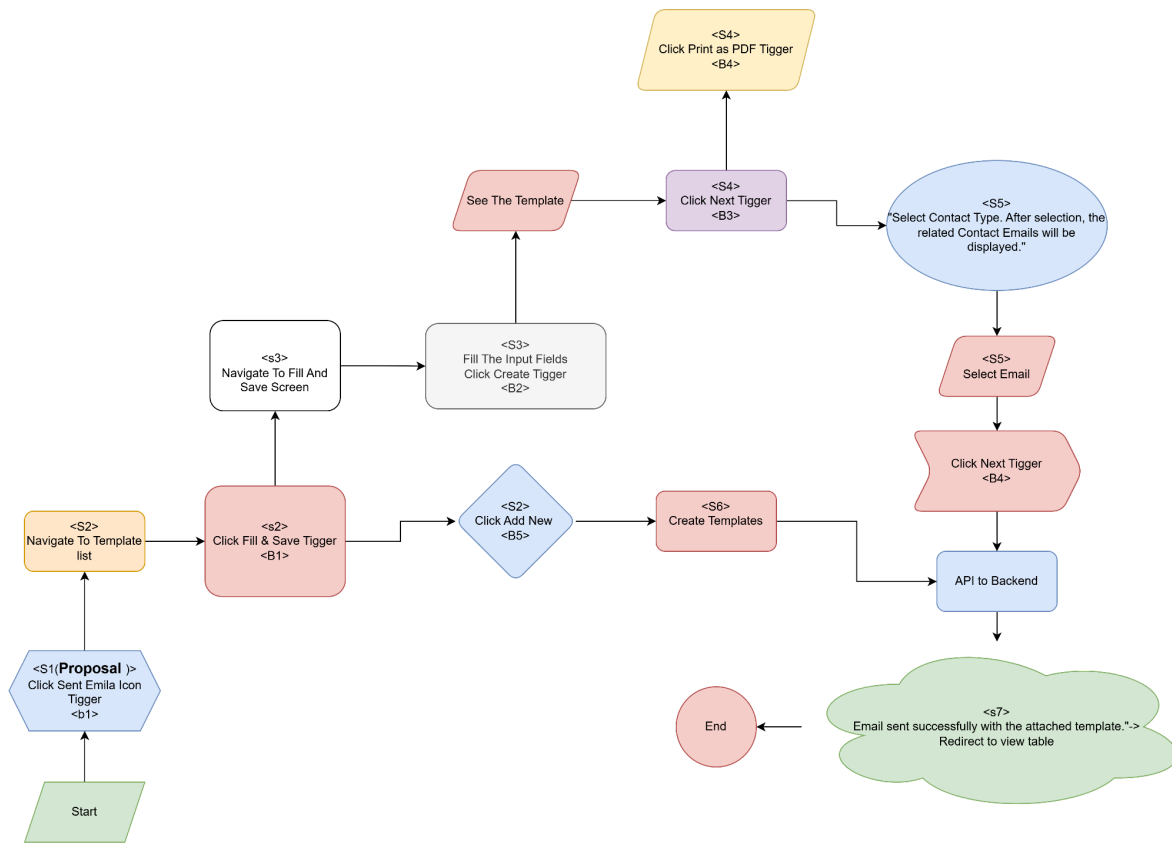
- The attachment feature allows us to link multiple records using a specific proposal ID, enabling multiple files to be attached to a single proposal.

Important Considerations

- **File Upload:** Ensure proper validation and security measures are in place for uploaded files.
- **Proposal Status Workflow:** Consider implementing a state machine to manage transitions between proposal statuses.
- **User Permissions:** Implement access control to restrict users from modifying or viewing proposals they shouldn't have access to.

Note: I've tried to be comprehensive, but please provide any specific information about your application's needs, and I'll be happy to tailor this documentation further.

3.2 Flow Diagram for System Processes



4. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Template Management (UC-001)

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Template Management	Name	Textbox	Mandatory	None	No
Template Management	Content	Rich Text	Mandatory	None	No

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
Name	validateTemplateName()	"Template name is required."
Content	validateContent()	"Content cannot be empty."

4.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Templates	template_id	VARCHAR(100)	Primary Key	None	None
Templates	name	VARCHAR(100)	Not Null	None	None
Templates	content	TEXT	Not Null	None	None
Templates	created_at	DATETIME	Auto-generated	None	None
Templates	updated_at	DATETIME	Auto-updated	None	None

Use Case: Document Management (UC-002)

5.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
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Document Management	Content	Text Area	Mandatory	None	No
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5.2 Field Validation Functions

Field Name	Validation Function	Error Message
Content	validateDocument()	"Document content is required."

5.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Documents	document_id	VARCHAR(100)	Primary Key	None	None
Documents	content	TEXT	Not Null	None	None
Documents	created_at	DATETIME	Auto-generated	None	None
Documents	updated_at	DATETIME	Auto-updated	None	None

5.4 Masters Section

Master Name	Screen Name	Table Name	Description
Template Types	Template Type Assignment	TemplateType	Defines types of templates available

5.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Template Creation	Save Data	Save to Template Table	Create New Template
On Document Upload	Save Data	Save to Document Table	Upload Document

5.6 Microservices and Custom Functions

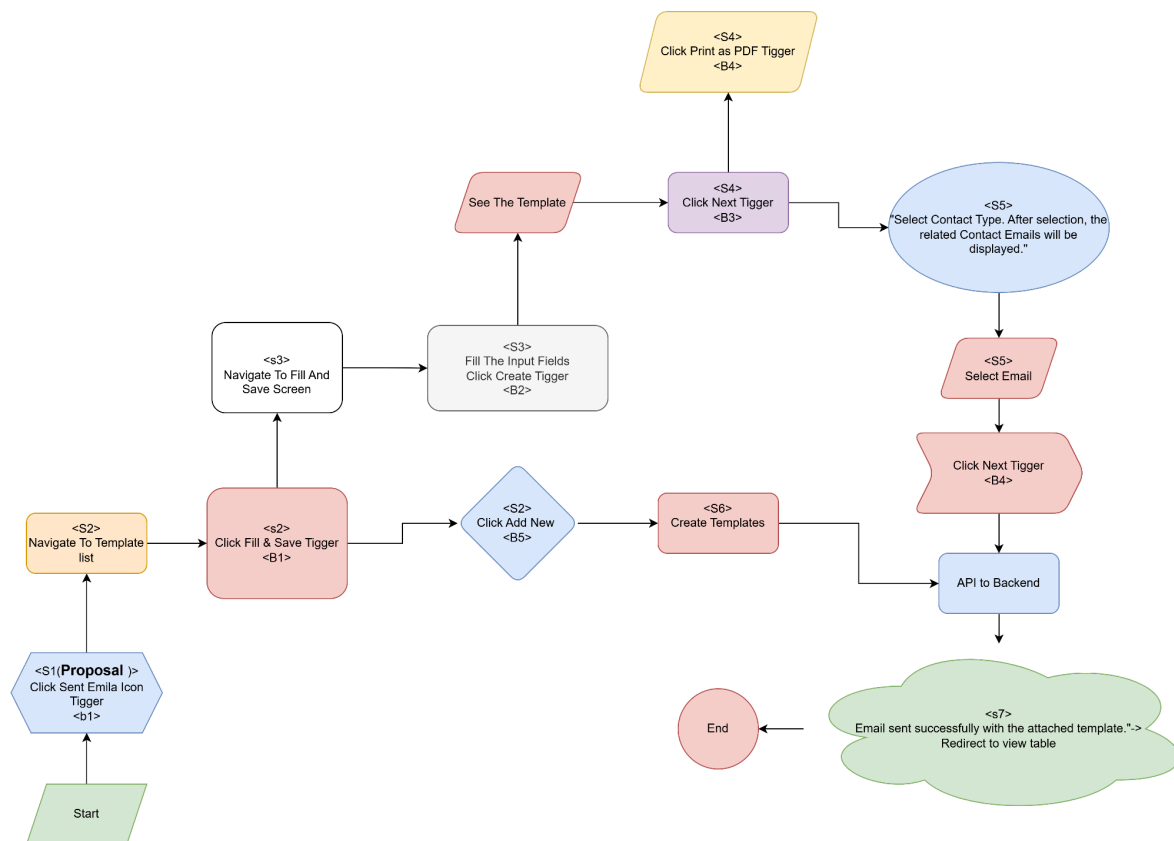
Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Template Service	Manage Templates	/api/lawyer_erp/	JSON Request/Response
Document Service	Manage Documents	/api/lawyer_erp/	JSON Request/Response

5.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Template Usage Report	Monitor template usage	Templates Table	Date Range
Document Report	Analyze document submissions	Documents Table	Date Range

1. Proposal Template

Template Creation View



- **Objective:** Create and manage email templates, which can be used as attachments in proposals.
- **Steps:**
 - **Click “Create New Template”:** Opens a form to create a new email template.
 - **Add Details:**
 - **Title:** Input for the template title.
 - **Contact Information Fields:** Use placeholders like `{{First_name}}`, `{{Last_name}}`, and `{{Email}}` for dynamic data entry that will auto-fill contact-specific information.
 - **Save Template:** Saves the template to the database.
- **Screen:** Display the saved templates in a table format, with columns for Title, Created Date, and Action options (Edit, Delete, and Preview).

Template Table View

- Display the saved templates in a **table format** for easier navigation and management:
 - **Columns:**
 - **Template Title**
 - **Date Created**
 - **Actions:** Edit, Delete, and Preview.

- **Screen Layout:** Table view with action icons/buttons beside each entry for quick actions.
-

2. Template Fill & Save

Fill and Save Template Screen

- **Objective:** Capture dynamic data for each template instance, allowing personalization.
 - **Steps:**
 - **Fill Fields:** Add content using the pre-defined placeholders (e.g., `{{First_name}}`).
 - **Save Button:** Save the filled-out template instance.
 - **Screen Layout:** A form view with dynamic input fields and a “Save” button.
-

3. Template Review and Document Export

Document Template Review

- **Objective:** Review the document created from the filled template and download it if needed.
 - **Steps:**
 - **Review Content:** Display the completed template content for review.
 - **Download PDF:** Option to download the document in PDF format.
 - **Next Button:** Continue to the contact selection screen if no download is needed.
 - **Screen Layout:** Document preview with “Download PDF” and “Next” buttons.
-

4. Contact Type Selection

Select Contact Type Screen

- **Objective:** Select specific contacts to receive the proposal email.
 - **Steps:**
 - **Contact Type Filter:** Filter contacts based on type.
 - **Checkboxes for Contact Selection:** Select contacts to send emails.
 - **Submit Button:** Send the template as an attachment to the selected contacts.
 - **Screen Layout:** List of contacts with checkboxes, a “Select Contact Type” dropdown, and “Submit” button.
-

5. Email Sending Process

Email Approval & Sending

- **Objective:** Send the proposal email and display a status update.
- **Steps:**
 - **Display Sending Status:** Inform the user that the email is being approved and sent.
 - **Success Confirmation:** A notification on completion.
- **Screen Layout:** Message showing “Email is in the process of being approved and sent.”

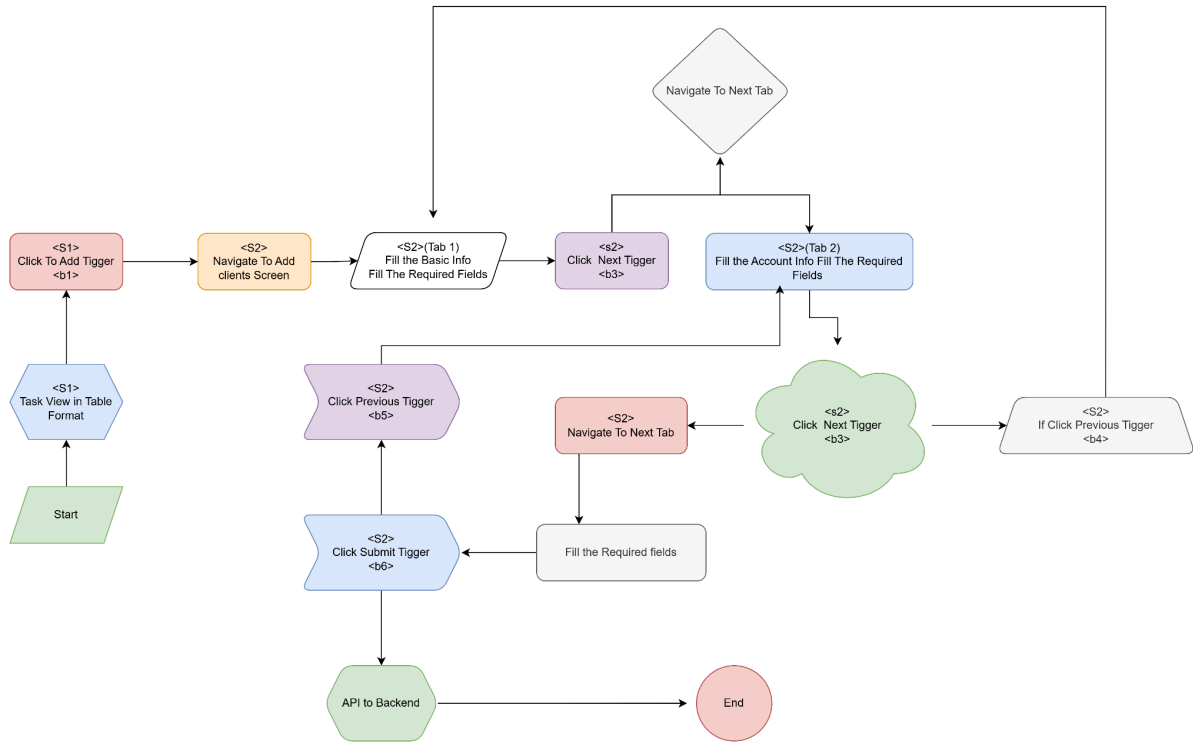
Client Modules

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Client Type	UCI-001	Manage Client Types	Yes
Client	UCI-002	Manage Clients	Yes
SubClientAddress	UCI-003	Manage SubClientAddress	Yes
EmailTypeMaster	UCI-004	Manage EmailTypeMaster	Yes

1.2 Flow Diagram for System Processes



2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Client Type (UCI-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Client Type Management	Name	Textbox	Mandatory	None	No
Client Type Management	Description	Text Area	Optional	None	No
Client Type Management	created_at	DATETIME	Auto-generated	None	None

Client Type Management	updated_at	DATETIME	Auto-updated	None	None
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2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Name	validateName()	"Name is required."
Description	validateDescription()	"Description is too long."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ClientTypeMaster	client_type_id	VARCHAR(100)	Primary Key	None	None
ClientTypeMaster	name	VARCHAR(100)	Not Null	None	None
ClientTypeMaster	description	TEXT	Optional	None	None
ClientTypeMaster	created_by	INT	Foreign Key	User.user_id	Direct
ClientTypeMaster	created_at	DATETIME	Auto-generated	None	None
ClientTypeMaster	updated_by	INT	Foreign Key	User.user_id	Direct

ClientTypeMaster	updated_at	DATETIME	Auto-updated	None	None
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Use Case: Client Management (UCI-002)

3.1 Screen Details

Notes:

- If the client ID is auto-generated but you would like to enter it manually also
- Payment Status(None,To Be Paid,Partially Paid,Paid,,Fully Paid)

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Client Management	Client ID(auto-generated) if you want enter Manually also	Textbox	Unique, Optional	None	No
	Client Name	Textbox	Mandatory	None	No
	Account Manager	Dropdown	Foreign Key	User (Account Manager)	No
	Default Currency	Dropdown	Foreign Key	Currency	No
	Phone Number	Number	Numeric, Optional	None	No

	Mobile Number	Number	Numeric, Optional	None	No
	Fax Number	Number	Numeric, Optional	None	No
	Creation Date	Date Field	Auto-generated	None	No
	Relationship Name	Textbox	Optional	None	No
	Relationship Contact	Number	Numeric, Optional	None	No
	Billing Name	Textbox	Optional	None	No
	Billing Contact	Number	Numeric, Optional	None	No
	Other Name	Textbox	Optional	None	No
	Other Contact	Number	Numeric, Optional	None	No
	Relationship Manager	Textbox	Optional	None	No
	Client Organization	Textbox	Optional	None	No

	Industry	Dropdown	Foreign Key	IndustryMaster	No
	Sector	Dropdown	Foreign Key	SectorMaster	No
	Known Relationships	MultiSelect	Optional	KnownRelationships	Yes
	Country	Dropdown	Foreign Key	Country	No
	City	Dropdown	Foreign Key	City	No
	State	Dropdown	Foreign Key	State	No
	Zip Code	Textbox	Optional	None	No
	Status	Dropdown	Default: "Active"	None	No
	VAT Number	VARCHAR(100)	Optional	None	No
	Accounting Isolation	Textbox	Optional	None	No
	Minimum Trust Balance	Float	Mandatory	None	No

	Payment Status	Dropdown	Default: "None"	None	No
	Invoice Status	Dropdown	Default: "Pending"	None	No
	Paid Amount	Float	Default: 0.0	None	No
	Total Amount	Float	Default: 0.0	None	No
	Client Type	Dropdown	Foreign Key	ClientTypeMaster	No
	Updated By	Dropdown	Foreign Key	User (User who updated the Client)	No
	Created By	Dropdown	Foreign Key	User (User who created the Client)	No
	Creation Date	Date Field	Auto-generated	None	No
	Update Date	Date Field	Auto-updated	None	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
Client ID	validateClientID()	"Client ID must be unique."

Email	validateEmail()	"Please enter a valid email address."
Phone Number	validatePhoneNumber() ()	"Phone number must be numeric."
Client Name	validateName()	"Client name is required."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Client	client_id	VARCHAR(300)	Primary Key, Unique	None	None
	client_name	VARCHAR(300)	Not Null	None	None
	account_manager_id	INT	Foreign Key	User.user_id	Direct
	currency_id	INT	Foreign Key	Currency.currency_id	Direct
	phone	INTEGER	Optional	None	None
	mobile	INTEGER	Optional	None	None
	fax	INTEGER	Optional	None	None

	creation_date	DATETIME	Auto-generated	None	None
	relationship_name	VARCHAR(300)	Optional	None	None
	relationship_contact	INTEGER	Optional	None	None
	billing_name	VARCHAR(300)	Optional	None	None
	billing_contact	INTEGER	Optional	None	None
	other_name	VARCHAR(300)	Optional	None	None
	other_contact	INTEGER	Optional	None	None
	relationship_manager	VARCHAR(300)	Optional	None	None
	organization_name	VARCHAR(300)	Optional	None	None
	industry_id	INT	Foreign Key	IndustryMaster. industry_id	Direct
	sector_id	INT	Foreign Key	SectorMaster.s ector_id	Direct
	known_relationships	VARCHAR(300)	Optional	None	Yes

	country_id	INT	Foreign Key	Country.country_id	Direct(Mode-1)
	city_id	INT	Foreign Key	City.city_id	INDirect (Mode 2) When a country is selected, the related states should be displayed in the dropdown menu.
	state_id	INT	Foreign Key	State.state_id	INDirect (Mode 2) When a State is selected, the related City should be displayed in the dropdown menu.
	zip_code	VARCHAR(10)	Optional	None	None
	status	VARCHAR(50)	Default: "Active"	None	None
	vat_number	VARCHAR(50)	Optional	None	None
	accounting_isolation	VARCHAR(300)	Optional	None	None
	minimum_trust_balance	FLOAT	Not Null	None	None
	payment_status	VARCHAR(50)	Default: "None"	None	None

	invoice_status	VARCHAR(50)	Default: "Pending"	None	None
	paid_amount	FLOAT	Default: 0.0	None	None
	total_amount	FLOAT	Default: 0.0	None	None
	client_type_id	INT	Foreign Key	ClientTypeMaster.client_type_id	Direct
	created_by	INT	Foreign Key	User.user_id	Direct
	updated_by	INT	Foreign Key	User.user_id	Direct
	creation_date	DATETIME	Auto-generated	None	None
	update_date	DATETIME	Auto-updated	None	None

3.4 Masters Section

Master Name	Screen Name	Table Name	Description
ClientTypeMaster	Client Type Management	ClientTypeMaster	Defines types of clients
KnownRelationships	Known Relationship Types	KnownRelationships	Stores known relationships

Notes:

- You can add multiple known relationships by clicking the "+" icon to add additional entries.

(Known Relationships)

Name

Email

Phone Number

-

Name

Email

Phone Number

-

Name

Email

Phone Number

+

Previous

Submit

3.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save client details to DB	Create New Client
On Update	Update Record	Update client details in DB	Edit Client Details
On Client Deletion	Delete Record	Remove client from system	Delete Client

- You can only delete the client if all associated matters are inactive. Once all matters are inactive, approval is required to proceed with the deletion.

3.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
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Client Create, Create_Client_Type	Notify client updates	/api/lawyer_erp	Email/JSON Request/Response
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3.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Client Status Report	Monitor active vs. inactive clients	Client Table	Status Filter
Client Type Report	Analyze client type distribution	Client, ClientTypeMaster	Client Type

SubMasterAddress

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Sub-Client Address Management (UCI-003)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Sub-Client Address	Client	Dropdow n	Optional	Foreign Key - Client	No
Sub-Client Address	Address Name	Textbox	Max Length: 100	None	No

Sub-Client Address	Address	Text Area	Optional	None	No
Sub-Client Address	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Sub-Client Address	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Sub-Client Address	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Sub-Client Address	Updated At	DateTime	Auto-generated, timestamp of record update	N/A	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Address Name	<code>validateAddressName()</code>	"Address name cannot exceed 100 characters."
Address	<code>validateAddress()</code>	"Please enter a valid address."
Client	<code>validateClient()</code>	"Please select a valid client."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubClientAddress	client_id	INT	Optional	Client.id	Direct
SubClientAddress	address_name	VARCHAR(100)	Max Length 100	None	None
SubClientAddress	address	TEXT	Optional	None	None
SubClientAddress	update_by_id	INT	Optional	User.id	Direct
SubClientAddress	created_by_id	INT	Not Null	User.id	Direct
SubClientAddress	created_at	DATETIME	Auto-generated	None	None
SubClientAddress	client_user_id	INT	Optional	User.id	Direct

3. Masters Section

Master Name	Screen Name	Table Name	Description
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Client	Sub-Client Address Screen	Client	Holds information about client entities.
User	Sub-Client Address Screen	User	Defines users who interact with the system.

4. Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to SubClientAddress Table	Create new Sub-Client Address
On Update by User	Update Record	Modify existing data	Update address details

5. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Client Address Service	Manage client addresses	/api/lawyer_e rp/	JSON Request/Response

6. Reporting Requirements

Report Name	Purpose	Data Source	Filters
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Sub-Client Address Report	View all sub-client addresses	SubClientAddress Table	Date Range, Client ID
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Use Case: Email Configuration (UCI-004)

Screen Details:

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Email Configuration	Email Type	Textbox	Mandatory, Max: 100	None	No
Email Configuration	created_by	INT	Foreign Key	User.user_id	Direct
Email Configuration	updated_by	INT	Foreign Key	User.user_id	Direct
Email Configuration	creation_date	DATETIME	Auto-generated	None	None
Email Configuration	update_date	DATETIME	Auto-updated	None	None

Field Validation Functions:

Field Name	Validation Function	Error Message
Email Type	<code>validateEmailType()</code>	"Email type is required."

Table Mapping:

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
EmailTypeMaster	email_type_name	VARCHAR(100)	Not Null	None	None
EmailTypeMaster	update_by_id	INT	Optional	lawyer_erp_backend_app.User	Direct
EmailTypeMaster	created_by_id	INT	Not Null	lawyer_erp_backend_app.User	Direct
EmailTypeMaster	created_at	DATETIME	Auto-generated	None	None
EmailTypeMaster	client_user_id	INT	Optional	lawyer_erp_backend_app.User	Direct

Use Case: SubClientEmail (UC-002)

Screen Details:

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Client Email	Client	Dropdown	Mandatory	Foreign Key - Client	No
Client Email	Email Type	Dropdown	Mandatory	Foreign Key - EmailTypeMaster	No

Client Email	Email	Email Field	Mandatory, Unique	None	No
Client Email	created_by	INT	Foreign Key	User.user_id	Direct
Client Email	updated_by	INT	Foreign Key	User.user_id	Direct
Client Email	creation_date	DATETIME	Auto-generated	None	None
Client Email	update_date	DATETIME	Auto-updated	None	None

Field Validation Functions:

Field Name	Validation Function	Error Message
Email	<code>validateEmailAddress()</code>	"Please enter a valid email."

Table Mapping:

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
SubClientEmail	client_id	INT	Not Null	Client	Direct

SubClientEmail	email_type_id	INT	Not Null	EmailTypeMaster	Direct
SubClientEmail	email	VARCHAR(100)	Unique, Not Null	None	None
SubClientEmail	update_by_id	INT	Optional	lawyer_erp_backend_app.User	Direct
SubClientEmail	created_by_id	INT	Not Null	lawyer_erp_backend_app.User	Direct
SubClientEmail	created_at	DATETIME	Auto-generated	None	None
SubClientEmail	client_user_id	INT	Optional	lawyer_erp_backend_app.User	Direct

Triggers and Actions:

Trigger Name	Trigger Type	Action Initiated	Example
On Email Configuration Save	Save Data	Save to EmailTypeMaster Table	Create Email Type
On Client Email Assignment	Save Data	Save to SubClientEmail Table	Assign Email to Client

Microservices and Custom Functions:

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Email Configuration Service	Manage Email Types	/api/lawyer_erp	JSON Request/Response
Client Email Service	Manage Client Emails	/api/lawyer_erp	JSON Request/Response

Client Information

4. Process Flow and Navigation

4.1 Use Case List (System Processes) and Required Flow Diagrams

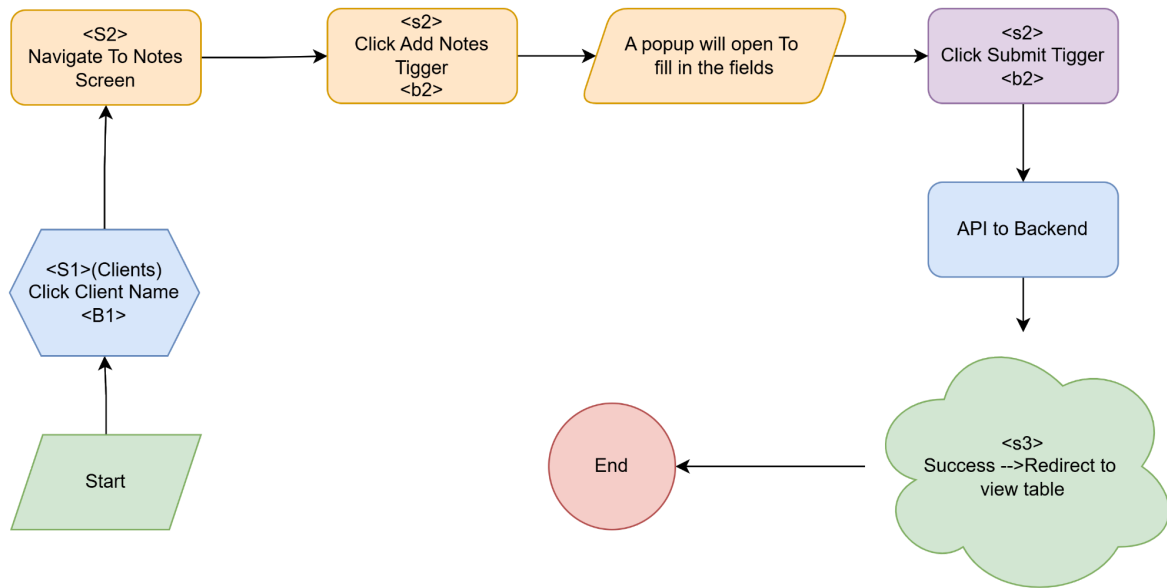
Module	Use Case ID	Use Case Description	Flow Diagram Required
Rate Management	UCC-001	Manage User Rates	Yes
Client Notes	UCC-002	Manage Client Notes	Yes
Client Contacts	UCC-003	Manage Client Contacts	Yes

4.2 Flow Diagram for System Processes

(Attach relevant flow diagrams for each process using tools like Lucidchart, Visio, or others.)

5. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Add Notes Screen Flow



Use Case: Manage User Rates (UC-001)

Notes:

- **LCY→FCY**
- **FCY→LCY**
- **FCY→FCY**
- **If a client rate is not available, use the assigned staff role-based rate for calculations. Otherwise, use the client rate for calculating the amount in the timesheet.**

Use Case: Client Contact Management (UC-001)

5.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Client Contact Entry	Client ID	Dropdown	Foreign Key	Client table	No
Client Contact Entry	First Name	Textbox	Optional	None	No

Client Contact Entry	Last Name	Textbox	Optional	None	No
Client Contact Entry	Organization Name	Textbox	Optional	None	No
Client Contact Entry	Email	Email Field	Email, Optional	None	No
Client Contact Entry	Country Code	Dropdown	Foreign Key	CountryCodeMaster	No
Client Contact Entry	Phone Number	Number Field	Numeric, Optional	None	No
Client Contact Entry	Description	Text Area	Optional	None	No
Client Contact Entry	Status	Dropdown	Choices: Active, Inactive	None	No
Client Contact Entry	Created By	Dropdown	Foreign Key	User table	No
Client Contact Entry	Updated By	Dropdown	Foreign Key	User table	No
Client Contact Entry	Created At	DateTime Field	Auto-generated	None	No

Client Contact Entry	Updated At	DateTime Field	Auto-updated	None	No
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52 Field Validation Functions

Field Name	Validation Function	Error Message
Email	validateEmail()	"Please enter a valid email."
Phone Number	validatePhoneNumber()	"Phone number must be numeric."
Client ID	validateClientId()	"Client ID is required."
Country Code	validateCountryCode()	"Country code selection is required."

5.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ClientContact	client_id	Foreign Key	Not Null	Client.client_id	Direct
ClientContact	first_name	VARCHAR(300)	Optional	None	None
ClientContact	last_name	VARCHAR(300)	Optional	None	None
ClientContact	organization_name	VARCHAR(300)	Optional	None	None

ClientContact	email_id	Email Field	Optional, Unique	None	None
ClientContact	country_code	Foreign Key	Not Null	CountryCodeMaster.country_code	Direct
ClientContact	phone_number	PositiveBigInt	Optional	None	None
ClientContact	description	Text	Optional	None	None
ClientContact	status	VARCHAR(8)	Default 'active'	None	None
ClientContact	created_by	Foreign Key	Not Null	User.user_id	Direct
ClientContact	update_by	Foreign Key	Optional	User.user_id	Direct
ClientContact	created_at	DateTime	Auto-generated	None	None
ClientContact	updated_at	DateTime	Auto-updated	None	None

6.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Client_billing_rates	Currency	Dropdown	Foreign Key	Currency	No

	Status	Dropdown	Optional	None	No
	All Rate	Number	Mandatory	None	No
	Billing Rate	Number	Mandatory	None	No
	Client	Dropdown	Foreign Key	Client	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

6.2 Field Validation Functions

Field Name	Validation Function	Error Message
All Rate	validatePositiveNumber()	"All rate must be a positive number."
Billing Rate	validatePositiveNumber()	"Billing rate must be a positive number."

6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
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AllUsersRate	currency_id	INT	Foreign Key	Currency.currency_id	Direct
AllUsersRate	all_rate	FLOAT	Not Null	None	None
AllUsersRate	billing_rate	FLOAT	Not Null	None	None
AllUsersRate	status	VARCHAR(100)	Default 'all_user'	None	None
AllUsersRate	client_id	INT	Foreign Key	Client.id	Direct
AllUsersRate	update_by	INT	Foreign Key	User.user_id	Direct
AllUsersRate	created_by	INT	Foreign Key	User.user_id	Direct
AllUsersRate	created_at	TIMESTAMP	Auto-generated	None	None
AllUsersRate	update_at	TIMESTAMP	Auto-updated	None	None

Use Case: Manage Client Notes (UC-002)

8.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
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Client Notes	Client ID	Dropdown	Mandatory	Client	No
	Date	Date Picker	Optional	None	No
	Subject	Textbox	Optional	None	No
	Note Text	Text Area	Mandatory	None	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

8.2 Field Validation Functions

Field Name	Validation Function	Error Message
Note Text	validateNoteText()	"Note text is required."

8.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ClientNotes	id	SERIAL	Primary Key	None	None

ClientNotes	client_id	INT	Foreign Key	Client.id	Direct
ClientNotes	date	DATE	Optional	None	None
ClientNotes	subject	VARCHAR(300)	Optional	None	None
ClientNotes	note_text	TEXT	Not Null	None	None
ClientNotes	status	VARCHAR(8)	Default 'open'	None	None
ClientNotes	created_by	INT	Foreign Key	User.user_id	Direct
ClientNotes	updated_by	INT	Foreign Key	User.user_id	Direct
ClientNotes	created_at	TIMESTAMP	Auto-generated	None	None
ClientNotes	updated_at	TIMESTAMP	Auto-updated	None	None

8.4 Masters Section

Master Name	Screen Name	Table Name	Description
Client	Client	Client	Defines types of clients

8.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save client details to DB	Create New Client Contact, Create New Client Notes
On Update	Update Record	Update client details in DB	Edit Client Contact, Edit Client Notes Details

8.6 Aggregation of Components

Component Type	Component Name
Navigation Menu	Client Management Menu
User Interface	Client Contact and Note Management UI
API	Client Management API for CRUD operations
Database Schema	Client, Client Contact, Client Notes Tables

8.7 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
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Client Notes Create and Client User Rate	Client User Rate and client Notes	/api/lawyer_erp	Email/JSON Request/Response
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8.8 Reporting Requirements

Report Name	Description
User Rate Report	Summary of user rates and changes
Client Notes Report	Detailed report on client notes

Matter Modules

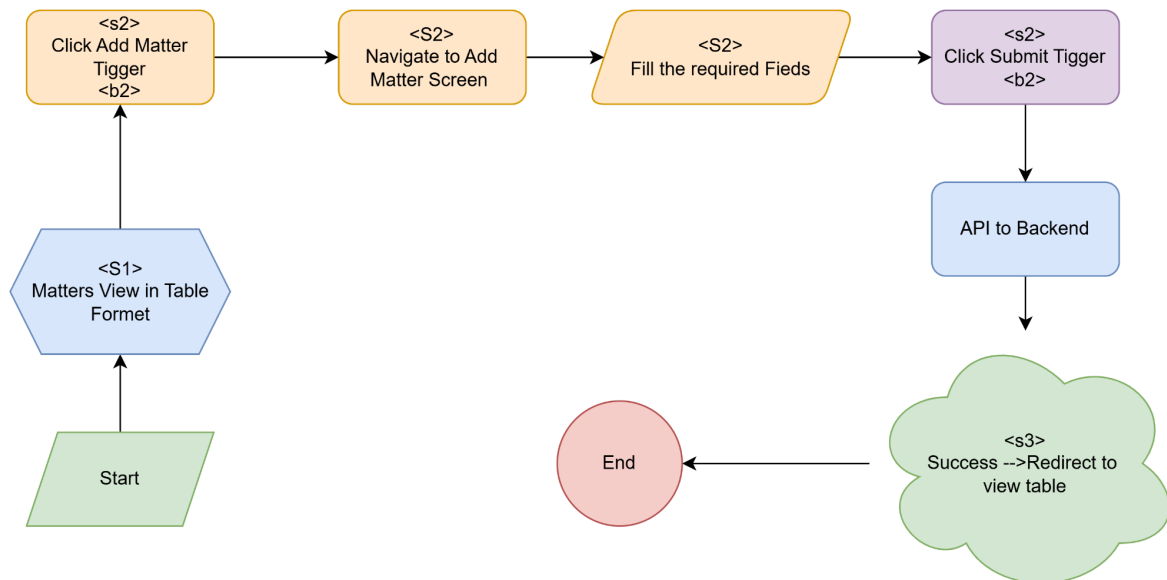
1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Matter	UMC-003	Manage Matters	Yes
Matter Type	UMC-001	Manage Matter Types	Yes
Activity Master	UMC-002	Manage Activities	Yes
Role	UMC-004	Manage Role Details	Yes

Employee Register	UMC-005	Manage Employee Details	yes
Favourite Matters	UMC-006	Manage User favourite Matters	Yes
MatterPrivate	UMC-007	Manage Matter and User Mapping	Yes
MatterConfidential1 Mapping	UMC-008	Manage Matter-Role Confidentiality	Yes
MatterConfidential2 Mapping	UMC-009	Manage Matter Type Confidentiality	Yes

1.2 Flow Diagram for System Processes



2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Employee Registration (UMC-005)

Notes:

- We can provide an option in contacts to convert a contact into a staff member.

2.1 Screen Details

Screen Name	Field Name	Field Type	Validation s	Relationships	Multivalued
Employee Registration	User ID	Textbox	Mandatory , Unique	Foreign Key - User table	No
Employee Registration	Employee ID	Textbox	Mandatory , Unique	None	No
Employee Registration	Address	Textarea	Mandatory	None	No
Employee Registration	City	Dropdown	Mandatory	Foreign Key - City table	No
Employee Registration	State	Dropdown	Mandatory	Foreign Key - State table	No
Employee Registration	Zip Code	Number	Numeric, Optional	None	No
Employee Registration	Account	Number	Default: 0.0	None	No
Employee Registration	Status	Dropdown	Mandatory	None	No

Employee Registration	Country	Dropdown	Mandatory	Foreign Key - Country table	No
Employee Registration	Interested Matter Types	Multi-select	Optional	Many-to-Many - MatterTypeMaster table	Yes
Employee Registration	Created By	Foreign Key	Mandatory , foreign key from User table	User	No
Employee Registration	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Employee ID	validateEmployeeID()	"Employee ID is required and must be unique."
Address	validateAddress()	"Address is required."
City	validateCity()	"City selection is required."
State	validateState()	"State selection is required."
Zip Code	validateZipCode()	"Zip Code must be numeric."

User ID	validateUserID()	"User ID is required."
Status	validateStatus()	"Status selection is required."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Employee Register	employee_id	VARCHAR(255)	Primary Key, Unique	None	None
Employee Register	user_id	VARCHAR(10)	Foreign Key, Not Null	User.user_id	Direct
Employee Register	address	TEXT	Not Null	None	None
Employee Register	city_id	INT	Foreign Key	City.city_id	INDirect
Employee Register	state_id	INT	Foreign Key	State.state_id	INDirect
Employee Register	zip_code	INTEGER	Optional	None	None
Employee Register	account	FLOAT	Default: 0.0	None	None

Employee Register	status	VARCHAR(100)	Default: "active"	None	None
Employee Register	country_id	INT	Foreign Key	Country.country_id	Direct
Employee Register	created_by	INT	Foreign Key, Not Null	User.user_id	Direct
Employee Register	updated_by	INT	Foreign Key, Optional	User.user_id	Direct
Employee Register	created_at	DATETIME	Auto-generated	None	None
Employee Register	updated_at	DATETIME	Auto-updated	None	None

Use Case: Manage Matter Types (UMC-001)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Matter Type Management	name	Textbox	Mandatory, Unique	None	No

Matter Type Management	ABA Codes	Multi-select	Mandatory	ActivityMaster table	Yes
Matter Type Management	description	Text Area	Optional	None	No
Matter Type Management	created_by_id	Dropdown	Foreign Key	User	No
Matter Type Management	updated_by_id	Dropdown	Foreign Key	User	No
Matter Type Management	created_at	Timestamp	Auto-generated	None	No
Matter Type Management	updated_at	Timestamp	Auto-updated	None	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
name	validateMatterTypeName()	"Matter type name is required."

3.3 Table Mapping

If the Matter ID is auto-generated but you would like to enter it manually, please let us know.

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode

MatterType Master	aba_code_id	INT	Foreign Key	ActivityMaster.ActivityMaster.id	Direct
MatterType Master	name	VARCHAR(200)	Not Null, Unique	None	None
MatterType Master	description	TEXT	Optional	None	None
MatterType Master	created_by_id	INT	Foreign Key	Users.user_id	Direct
MatterType Master	created_at	DATETIME	Auto-generated	None	None
MatterType Master	updated_by_id	INT	Foreign Key	Users.user_id	Direct
MatterType Master	updated_at	DATETIME	Auto-updated	None	None

Use Case: Manage Activities (UMC-002)

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Activity Management	activity_type_name	Textbox	Mandatory, Unique	None	No

Activity Management	description	Text Area	Optional	None	No
Activity Management	created_by_id	Dropdown	Foreign Key	User	No
Activity Management	updated_by_id	Dropdown	Foreign Key	User	No
Activity Management	created_at	Timestamp	Auto-generated	None	No
Activity Management	updated_at	Timestamp	Auto-updated	None	No

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
activity_type_name	validateActivityTypeName()	"Activity type name must be unique."

4.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ActivityMaster	activity_type_name	VARCHAR(200)	Not Null, Unique	None	None
	description	TEXT	Optional	None	None

	created_by_id	INT	Foreign Key	Users. user_id	Direct
	created_at	DATETIME	Auto-generated	None	None
	updated_by_id	INT	Foreign Key	Users. user_id	Direct
	updated_at	DATETIME	Auto-updated	None	None

Use Case: Role Management (UC-001)

5.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Role Management	Role Name	Textbox	Mandatory, Max Length: 200	None	No
Role Management	Minimum Work Time	Time Field	Mandatory	None	No
Role Management	Description	Text Area	Optional	None	No
Role Management	Account Balance	Number Field	Numeric	None	No

Role Management	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Role Management	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Role Management	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Role Management	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

5.2 Field Validation Functions

Field Name	Validation Function	Error Message
Role Name	validateRoleName()	"Role name is required and must be unique."
Minimum Work Time	validateMinWorkTime()	"Minimum work time is required."
Account Balance	validateAccountBalance() ()	"Account balance must be a valid number."

5.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
------------	-------------	-----------	-------------	-------------	------------------

Roles	name	VARCHAR(200)	Not Null	None	None
Roles	min_time_of_work	TIME	Not Null	None	None
Roles	description	TEXT	Optional	None	None
Roles	account	FLOAT	Default: 0.0	None	None
Roles	created_by_id	INT	Foreign Key	User.user_id	Direct
Roles	created_at	DATETIME	Auto-generated	None	None
Roles	updated_by_id	INT	Foreign Key	User.user_id	Direct
Roles	updated_at	DATETIME	Auto-updated	None	None

Use Case: Manage Matters (UMC-003)

6.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Matters	Matter ID	Textbox	Unique, Mandatory	None	No

	(auto-generated) if you would like to enter it manually,also				
	Matter Name	Textbox	Mandatory	None	No
	Client	Dropdown	Mandatory	Client table	No
	Assigned To	Dropdown	Mandatory	EmployeeRegister table	No
	Email	Email Field	Unique, Optional	None	No
	Matter Type	Dropdown	Mandatory	MatterTypeMaster table	No
	Billing Method	Dropdown	Optional	None	No
	Payment Due Upon	Dropdown	Optional	None	No
	Description	Text Area	Optional	None	No
	Status	Dropdown	Optional	None	No
	Invoice Status	Dropdown	Optional	None	No

	Approve	Checkbox	Optional	None	No
	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
	Subscribers	Dropdown	Foreign Key	User table	No
	Client Contact	Number	Optional	None	No
	Hide Time From Invoices	Checkbox	Optional	None	No

	Hide Expenses From Invoices	Checkbox	Optional	None	No
	Internal	Checkbox	Optional	None	No
	Non-Lawyers	Checkbox	Optional	None	No
	Private	Checkbox	Optional	None	No
	Confidential 1	Checkbox	Optional	None	No
	Confidential 2	Checkbox	Optional	None	No

6.2 Field Validation Functions

Field Name	Validation Function	Error Message
Matter ID	validateMatterID()	"Matter ID must be unique."
Matter Name	validateMatterName()	"Matter name is required."
Email	validateEmail()	"Please enter a valid email address."

6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Matters	matter_id	VARCHAR(100)	Primary Key	None	None

Matters	matter_name	VARCHAR(255)	Not Null	None	None
Matters	client_id	INT	Foreign Key	Client.client_id	Direct
Matters	assigned_to_id	INT	Foreign Key	EmployeeRegister.employee_id	Direct
Matters	email	VARCHAR(100)	Unique, Optional	None	None
Matters	matter_type_id	INT	Foreign Key	MatterTypeMaster.matter_type_id	Direct
Matters	billing_method	VARCHAR(100)	Optional	None	None
Matters	payment_due_upon	VARCHAR(100)	Optional	None	None
Matters	description	TEXT	Optional	None	None
Matters	approve	BOOLEAN	Default: False	None	None
Matters	hide_time_from_invoices	BOOLEAN	Optional	None	None
Matters	hide_expenses_from_invoices	BOOLEAN	Optional	None	None

Matters	status	VARCHAR(100)	Default: "inactive"	None	None
Matters	invoice_status	VARCHAR(50)	Default: "Pending"	None	None
Matters	created_at	DATETIME	Auto-generated	None	None
Matters	updated_at	DATETIME	Auto-updated	None	None
Matters	created_by_id	INT	Foreign Key	User.user_id	Direct
Matters	updated_by_id	INT	Foreign Key	User.user_id	Direct

6.4 Masters Section

Master Name	Screen Name	Table Name	Description
Client	Client Management Screen	Client	Defines client details
MatterTypeMaster	Matter Type Assignment Screen	MatterTypeMaster	Defines different matter types
ActivityMaster	Activity Management Screen	ActivityMaster	Defines activities associated with matters
Role	Role Management Screen	Role	Defines user roles

EmployeeRegister	Employee Management Screen	EmployeeRegister	Defines employee details
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6.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Matters Table	Create Matter
On Matter Update	Update Data	Update Matter Record	Update Matter
On Deletion	Delete Data	Remove from Matters Table	Delete Matter

Notes:

- You can only delete a matter if all associated invoices and tasks are pending. If there are no dependencies on that matter, it can be approved for deletion.

6.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Create Matter,Create Matter Type , Create Activity Master,Create Role and Create EmployeeRegister	Manage Matters,Mattres Types, Activity Master ,Role Master and Employee Register	/api/lawyer_erp	JSON Request/Response

6.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
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Matter Overview Report	Overview of all matters	Matters Table	Date Range, Client
Matter Status Distribution	Analyze status distribution	Matters Table	Matter Status
Matter Activity Report	Monitor activities related to matters	ActivityMaster Table	Matter ID, Date Range

Favorite Matters

Use Case: Favorite Matters (UC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Favorite Matters	User	Dropdow n	Mandatory	Foreign Key - User	No
Favorite Matters	Matter	Dropdow n	Mandatory	Foreign Key - Matters	No
Favorite Matters	Is Favorite	Checkbo x	Optional	None	No
Favorite Matters	Updated At	DateTime	Auto-updated	None	No
Favorite Matters	Updated By	Dropdow n	Optional, Mandatory*	Foreign Key - User	No

Favorite Matters	Created By	Dropdown	Mandatory	Foreign Key - User	No
Favorite Matters	Created At	DateTime	Auto-generated	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
User	validateUser()	"Please select a valid user."
Matter	validateMatter()	"Please select a valid matter."
Updated By	validateUpdatedBy()	"Updated by user cannot be empty if selected."
Created By	validateCreatedBy()	"Created by user cannot be empty."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
FavoriteMatters	id	INT	Primary Key	None	None
FavoriteMatters	user_id	INT	Not Null	Users.user_id	Direct

FavoriteMatters	matter_id	INT	Not Null	Matters.matter_id	Direct
FavoriteMatters	is_favorite	BOOLEAN	Default False	None	None
FavoriteMatters	update_at	DATETIME	Auto-updated	None	None
FavoriteMatters	update_by_id	INT	Optional	Users.user_id	Direct
FavoriteMatters	created_by_id	INT	Not Null	Users.user_id	Direct
FavoriteMatters	created_at	DATETIME	Auto-generated	None	None

Use Case: MatterPrivate (UC-001)

2.1 Screen Details`

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Matter User Mapping	Matter ID	Foreign Key	Mandatory	Matters table	No
Matter User Mapping	User ID	MultiSelect	Mandatory	User table	Yes
Matter User Mapping	Update By	Foreign Key	Optional	User table	No

Matter User Mapping	Created By	Foreign Key	Mandatory	User table	No
Matter User Mapping	Updated At	DateTime	Auto-updated	None	No
Matter User Mapping	Created At	DateTime	Auto-generated	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
User ID	validateUserSelection()	"Please select at least one user."
Matter ID	validateMatterSelection()	"Matter selection is required."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
MatterPrivate	matter_id	Foreign Key	Not Null	Matters.matter_id	Direct
MatterPrivate	user_id	ManyToMany	Not Null	User.user_id	Direct
MatterPrivate	created_by	Foreign Key	Not Null	User.user_id	Direct

MatterPrivate	updated_by	Foreign Key	Optional	User.user_id	Direct
MatterPrivate	created_at	DateTime	Auto-generated	None	None
MatterPrivate	updated_at	DateTime	Auto-updated	None	None

Use Case: MatterConfidential1Mapping (UC-002)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Confidential Role Mapping	Matter ID	Foreign Key	Mandatory	Matters table	No
Confidential Role Mapping	Role ID	MultiSelect	Mandatory	Role table	Yes
Confidential Role Mapping	Updated By	Foreign Key	Optional	User table	No
Confidential Role Mapping	Created By	Foreign Key	Mandatory	User table	No
Confidential Role Mapping	Updated At	DateTime	Auto-updated	None	No

Confidential Role Mapping	Created At	DateTime	Auto-generated	None	No
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2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Role ID	validateRoleSelection()	"At least one role must be assigned."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
MatterConfidential1Mapping	matter_id	Foreign Key	Not Null	Matters.matter_id	Direct
MatterConfidential1Mapping	role_id	ManyToMany	Not Null	Role.role_id	Direct
MatterConfidential1Mapping	created_by	Foreign Key	Not Null	User.user_id	Direct
MatterConfidential1Mapping	updated_by	Foreign Key	Optional	User.user_id	Direct
MatterConfidential1Mapping	created_at	DateTime	Auto-generated	None	None

MatterConfidential1Mapping	updated_at	DateTime	Auto-updated	None	None
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Use Case: MatterConfidential2Mapping (UC-003)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Matter Type Confidential Mapping	Matter ID	Foreign Key	Mandatory	Matters table	No
Matter Type Confidential Mapping	Matter Type ID	MultiSelect	Mandatory	MatterTypeMaster table	Yes
Matter Type Confidential Mapping	Updated By	Foreign Key	Optional	User table	No
Matter Type Confidential Mapping	Created By	Foreign Key	Mandatory	User table	No
Matter Type Confidential Mapping	Updated At	DateTime	Auto-updated	None	No
Matter Type Confidential Mapping	Created At	DateTime	Auto-generated	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Matter Type ID	validateMatterTypeSelection()	"Please select at least one matter type."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
MatterConfidential2 Mapping	matter_id	Foreign Key	Not Null	Matters.matter_id	Direct
MatterConfidential2 Mapping	matter_type_id	ManyToOne	Not Null	MatterTypeMaster.matter_type_id	Direct
MatterConfidential2 Mapping	created_by	Foreign Key	Not Null	User.user_id	Direct
MatterConfidential2 Mapping	updated_by	Foreign Key	Optional	User.user_id	Direct
MatterConfidential2 Mapping	created_at	DateTime	Auto-generated	None	None
MatterConfidential2 Mapping	updated_at	DateTime	Auto-updated	None	None

Matters Informations

Process Flow and Navigation

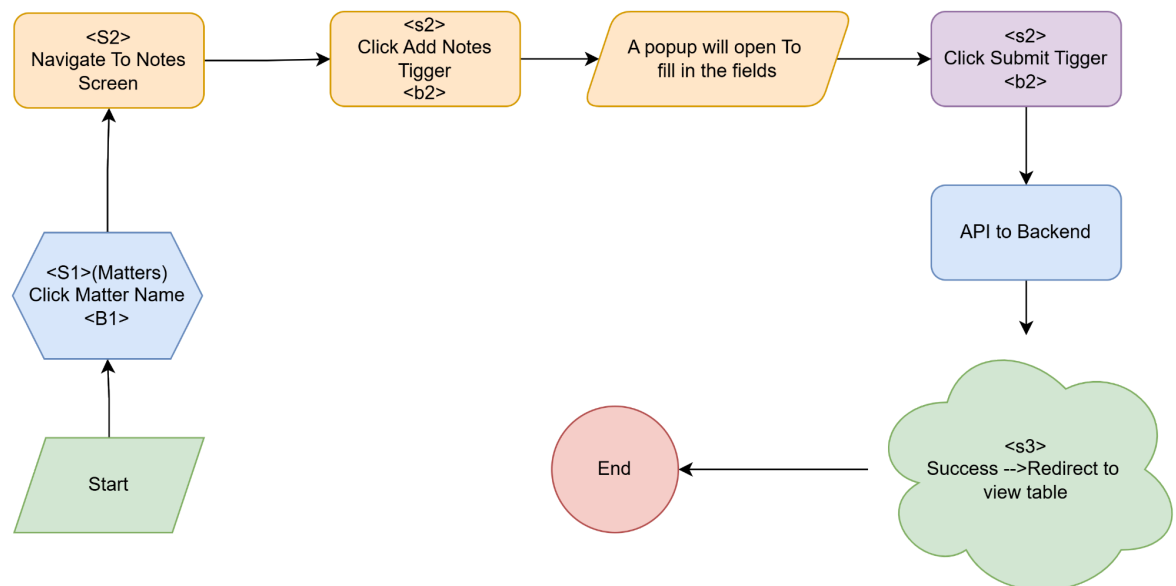
7. Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
MattersNotes	UMC-00	Manage Matters Notes	Yes

7.2 Flow Diagram for System Processes

Please create the following flow diagrams in Lucidchart, Visio, or another tool:

- **UC-007: Manage Matters Notes Flow Diagram**



8. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Matters Notes (UMC-007)

8.1. Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Matters Notes	Client ID	Dropdown	Optional	Foreign Key - Client	No
Matters Notes	Matter ID	Dropdown	Mandatory	Foreign Key - Matters	No
Matters Notes	Date	Date Picker (default data: Today)	Optional	None	No
Matters Notes	Note Text	Text Area	Optional	None	No
Matters Notes	Status	Dropdown	Default: Open	Status Choices	No
Matters Notes	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Matters Notes	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

9.2. Field Validation Functions

Field Name	Validation Function	Error Message
Note Text	validateText()	"Note text is invalid."
Date	validateDate()	"Enter a valid date format."

9.3. Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
MattersNotes	client_id	INT	Optional	Foreign Key - Client.client_id	Direct
MattersNotes	matters_id	INT	Not Null	Foreign Key - Matters.matters_id	Direct
MattersNotes	date	DATE	Optional	None	None
MattersNotes	note_text	TEXT	Optional	None	None
MattersNotes	status	CHAR(8)	Default: Open	Status	None
MattersNotes	created_by	INT	Not Null	Foreign Key - User.user_id	Direct

MattersNotes	update_by	INT	Optional	Foreign Key - User.user_id	Direct
MattersNotes	created_at	DATETIME	Auto-generated	None	None
MattersNotes	update_at	DATETIME	Auto-updated	None	None

9.4. Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Note Addition	Save Data	Save to MattersNotes Table	Add New Matter Note
On Status Change	Update Data	Modify Note Status	Set Note as Completed

9.5 Masters Section

Master Name	Screen Name	Table Name	Description
Matter	Matter Assignment Screen	Matterr	Defines different matter details

9.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
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Create Matter Type and Create Matter Notes	Manage Matter Notes	/api/lawyer_erp	JSON Request/Response
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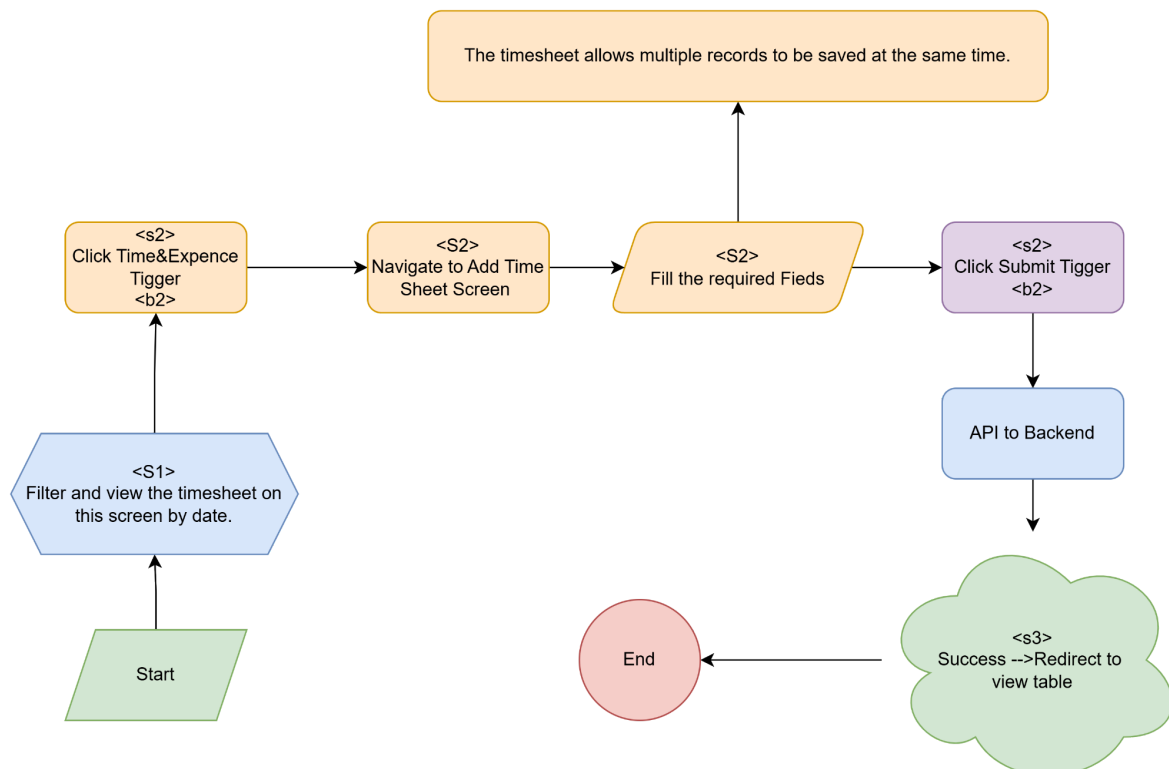
Time Sheet Module

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
TimeSheet Management	UTC-001	Manage TimeSheets	Yes
TimeSheetSub Management	UTC-002	Manage TimeSheet Sub-records	Yes

1.2 Flow Diagram for System Processes



Notes:

- All Clients Matters Appointments **Time & Expense** Calendar Email

Add Time Add Expense Time Sheet View

Add Row

admin

Total Working Hours

Date

Actual working hours

No data found for the selected date.

Client-Matter	Task Code	Notes	Work Time / hr	Action
----Select----	---Select---		HH : MM	X
----Select----	---Select---		HH : MM	X
----Select----	---Select---		HH : MM	X

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
TimeSheet Management	User	Foreign Key	Mandatory	Users Table	No

	Total Working Hr	Time Field	Time format	None	No
	Actual Working Hr	Time Field	Time format, Default = 00:00	None	No
	Date of Work	Date Field	Optional	None	No
	Status Check	Checkbox	Optional	None	No
	Approve	Checkbox	Optional	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
User	validateUser()	"User is required."
Total Working Hr	validateTimeFormat()	"Enter a valid time format."
Actual Working Hr	validateTimeFormat()	"Enter a valid time format."

2.3 Table Mapping Use Case: TimeSheetSub Management (UTC-002)

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
TimeSheet	time_sheet_id	VARCHAR(10)	Primary Key	None	None
TimeSheet	user_id	INT	Foreign Key	Users.user_id	Direct
TimeSheet	total_working_hr	TIME	Not Null	None	None
TimeSheet	actual_working_h ours	TIME	Default = 00:00	None	None
TimeSheet	date_of_work	DATE	Optional	None	None
TimeSheet	status_check	BOOLEAN	Default = False	None	None
TimeSheet	approve	BOOLEAN	Default = False	None	None
TimeSheet	created_at	DATETIME	Auto-generated	None	None

TimeSheet	updated_at	DATETIME	Auto-updated	None	None
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3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
TimeSheetSub Management	TimeSheet	Foreign Key	Mandatory	TimeSheet Table	No
TimeSheetSub Management	Client	Foreign Key	Mandatory	Client Table	No
TimeSheetSub Management	Matter	Foreign Key	Mandatory	Matters Table	No
TimeSheetSub Management	ABA Code	Foreign Key	Mandatory	Activity Table	No
TimeSheetSub Management	Description	Text Area	Optional	None	No
TimeSheetSub Management	Work Time	Time Field	Time format, Mandatory	None	No
TimeSheetSub Management	Rate (Backend Proposed)	Float	Optional, Numeric	None	No
TimeSheetSub Management	Invoice Status	Dropdown	Default = "Pending"	None	No
TimeSheetSub Management	Created By	Foreign Key	Mandatory	Users Table	No
TimeSheetSub Management	Updated By	Foreign Key	Optional	Users Table	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
TimeSheet	validateTimeSheet()	"TimeSheet is required."
Client	validateClient()	"Client is required."
Matter	validateMatter()	"Matter is required."
ABA Code	validateActivityCode()	"ABA Code is required."

Work Time	validateWorkTime()	"Work time must be in a valid format."
Rate	validateRate()	"Rate must be a valid number."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
TimeSheet Sub	time_sheet_sub_id	VARCHAR(10)	Primary Key	None	None
TimeSheet Sub	time_sheet_id	INT	Foreign Key	TimeSheet.time_sheet_id	Direct
TimeSheet Sub	client_id	INT	Foreign Key	Client.client_id	Direct
TimeSheet Sub	matter_id	INT	Foreign Key	Matters.matter_id	Direct
TimeSheet Sub	aba_code_id	INT	Foreign Key	Activity.aba_code_id	INDirect (MODE-2) In Mode 2, the selected matters related to the ABA code will be displayed.
TimeSheet Sub	description	TEXT	Optional	None	None
TimeSheet Sub	work_time	TIME	Not Null	None	None
TimeSheet Sub	rate	FLOAT	Optional	None	None
TimeSheet Sub	invoice_status	VARCHAR(50)	Default = "Pending"	None	None
TimeSheet Sub	created_by_id	INT	Foreign Key	Users.user_id	Direct
TimeSheet Sub	created_at	DATETIME	Auto-generated	None	None

TimeSheet Sub	updated_by_id	INT	Foreign Key	Users.user_id	Direct
TimeSheet Sub	updated_at	DATETIME	Auto-updated	None	None

3.4 Masters Section

Master Name	Screen Name	Table Name	Description
Usergroupmaster	User Role Assignment	Usergroupmaster	Defines user roles for permissions
Client	Client Assignment	Client	Details of clients for selection
Matters	Matter Assignment	Matters	Available matters for TimeSheet
Activity	Matter Codes	Activity	ABA codes for work categorization

3.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On TimeSheet Save	Save Data	Save to TimeSheet Table	Create new TimeSheet
On TimeSheetSub Save	Save Data	Save to TimeSheetSub Table	Create new TimeSheetSub
On Invoice Status Update	Update Record	Update invoice status	Mark as "Generated"

3.6. Aggregation of Components

Component Type	Component Name
Tables	TimeSheet and TimeSheetSub
Screens	Add Time Sheet

Fields	(Client-Matter),aba Code,Notes ,Rate,Working Time,date of work, Total Working Hours and Status Check
Buttons	Submit, Cancel
Pop-Up Messages	Success, Error
Microservices	Timesheetsub create and TimeSheet Create

3.7. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
TimeSheetsub create and TimeSheet Create	Create	/api/lawyer_erp/	JSON Request/Response

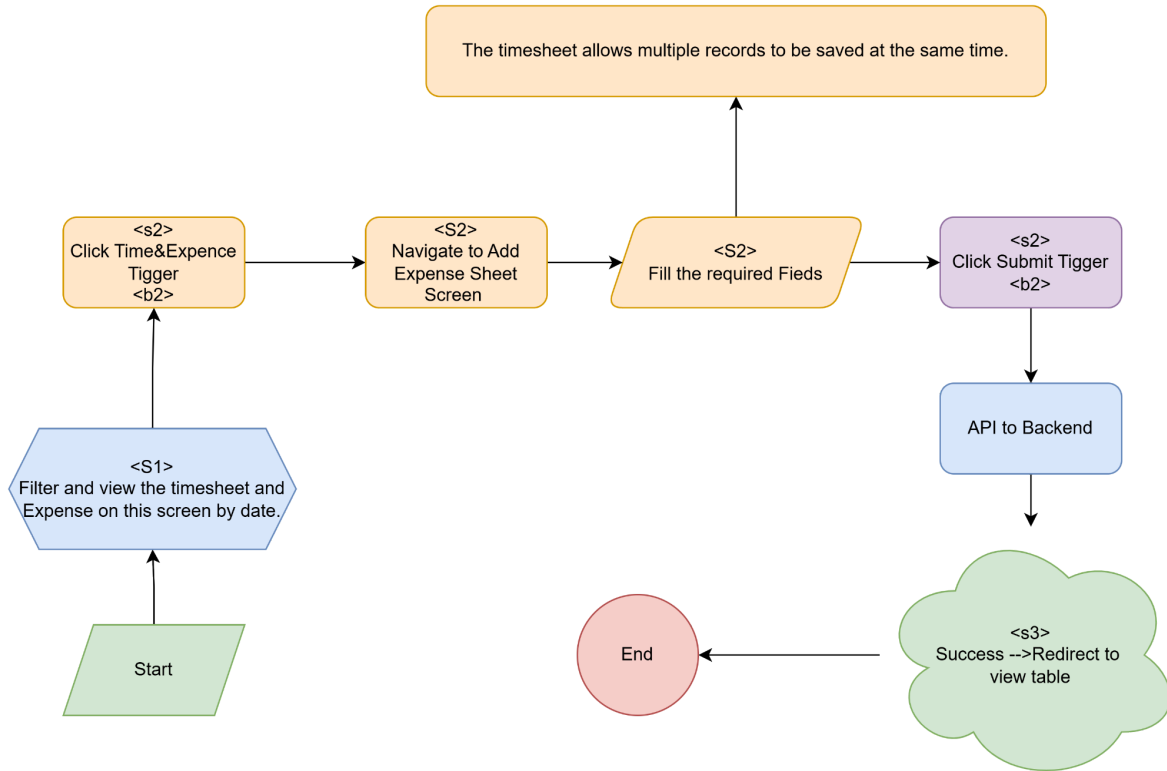
Expense modules

Process Flow and Navigation

1. Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Expense Management	UEC-001	Manage Expense Types	Yes
Expense Entry Master	UEC-002	Record and Track Expenses	Yes

1.1 Flow Diagram for System Processes



Notes:

- It allows multiple records to be added at the same time.

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Expense Type Management (UEC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Expense Type	Expense Name	Textbox	Mandatory	None	No
	Description	Text Area	Optional	None	No
	Created By	Dropdown	Foreign Key	User Table	No
	Updated By	Dropdown	Foreign Key	User Table	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Expense Name	<code>validateExpenseName()</code>	"Expense name is required."
Description	<code>validateDescription()</code>	"Description should not exceed limits"

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ExpenseTypeMaster	add_expense	VARCHAR(100)	Not Null	None	None
ExpenseTypeMaster	description	TEXT	Optional	None	None
ExpenseTypeMaster	created_by_id	INT	Foreign Key	User.user_id	Direct
ExpenseTypeMaster	updated_by_id	INT	Foreign Key	User.user_id	Direct
ExpenseTypeMaster	created_at	DATETIME	Auto-generate	None	None
ExpenseTypeMaster	updated_at	DATETIME	Auto-update	None	None

2.4 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Expense Save	Save Data	Save to Expense Table	Create Expense
On Update Expense	Update Data	Update Expense Table	Update Expense Information

Use Case: Expense Record Entry (UEC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
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Expense Entry	User	Dropdown	Foreign Key	User	No
	Expense Date	Date Picker	Mandatory	None	No
	Client	Dropdown	Foreign Key	Client Table	No
	Matter	Dropdown	Foreign Key	Matters Table	No
	Expense Type	Dropdown	Foreign Key	ExpenseTypeMaster Table	No
	Cost	Number	Numeric, Optional	None	No
	Quantity	Number	Positive, Optional	None	No
	Total	Calculated Field	Auto-calculated	None	No
	Invoice Status	Dropdown	Default "Pending"	None	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
Expense Date	<code>validateExpenseDate()</code>	"Expense date is required."
Cost	<code>validateCost()</code>	"Cost must be a valid number."
Quantity	<code>validateQuantity()</code>	"Quantity must be positive."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
AddExpense	expense_id	INT	Primary Key	None	None

AddExpense	user_id	INT	Foreign Key	User.user_id	Direct
AddExpense	expense_date	DATE	Not Null	None	None
AddExpense	client_id	INT	Foreign Key	Client.client_id	Direct
AddExpense	matter_id	INT	Foreign Key	Matters.matter_id	Direct
AddExpense	expense_type_id	INT	Foreign Key	ExpenseTypeMaster.expense_id	Direct
AddExpense	cost	FLOAT	Optional	None	None
AddExpense	quantity	INT	Positive Optional	None	None
AddExpense	total	FLOAT	Auto-calculated	None	None
AddExpense	invoice_status	VARCHAR(50)	Default "Pending"	None	None
AddExpense	created_at	DATETIME	Auto-generate	None	None
AddExpense	updated_at	DATETIME	Auto-update	None	None

3.4 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Expense Entry Save	Save Data	Save to AddExpense Table	Record New Expense Entry
On Update Expense Entry	Update Data	Update AddExpense Table	Modify Expense Record

3.5 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
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Expense Notification Service	Send notifications on expense entries	/api/lawyer_erp/	JSON Input / Success message
Expense Report Service	Generate reports on expenses	/api/lawyer_erp/	Filters (date, client) / Report data

3.6 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Expense Overview Report	Overview of expenses recorded	AddExpense Table	Date Range, Expense Type
Expense Type Analysis	Analyze expenses by type	AddExpense, ExpenseTypeMaster Tables	Date Range, Client, Matter

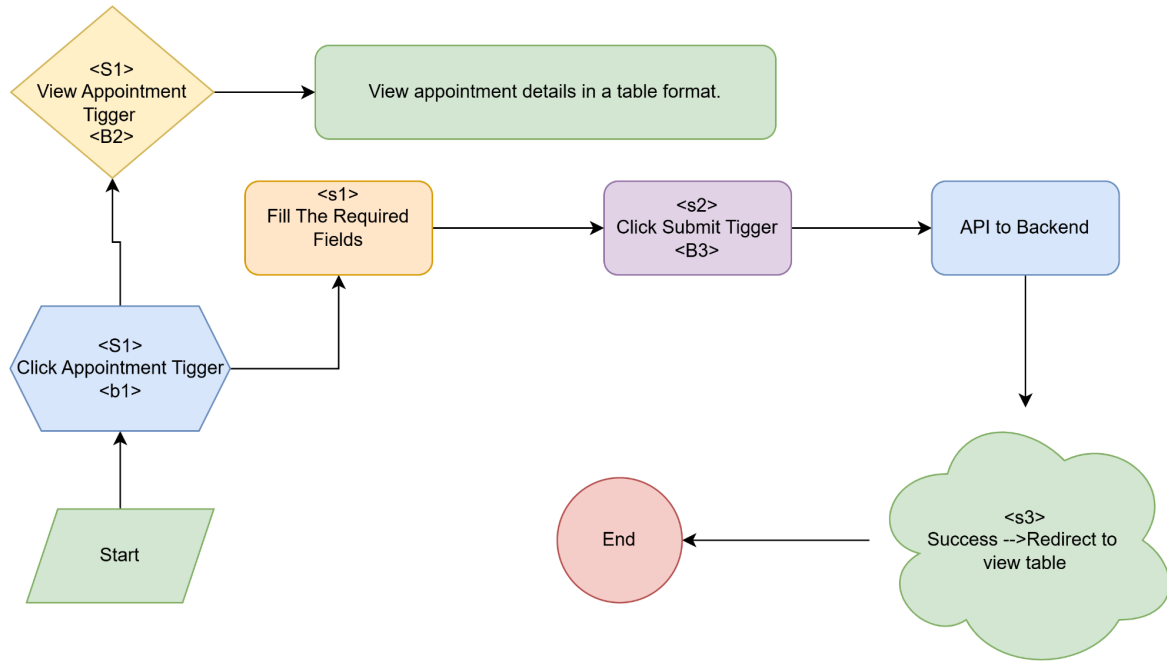
Appointment

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Event Appointment	UAC-001	Manage Event Details	Yes
Email Sent	UAC-002	Manage Emails	Yes

1.2 Flow Diagram for System Processes



2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Event Management (UAC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Event Details	Event Title	Textbox	Mandatory	None	No
	Client	Dropdown	Foreign Key	Client Table	No
	Matter	Dropdown	Foreign Key	Matters Table	No
	Start Date	Date Field	Mandatory	None	No
	Start Time	Time Field	Mandatory	None	No
	End Date	Date Field	Optional	None	No

	End Time	Time Field	Optional	None	No
	Type	Dropdown	Choice Field	Choices: Appointment, Reminder, Contingency	No
	Status	Dropdown	Choice Field	Choices: Approve, Waiting, Completed, Cancel	No
	Available	Dropdown	Choice Field	Choices: Free, Busy	No
	Completed	Checkbox	Optional	None	No
	Private	Checkbox	Optional	None	No
	Notes	Text Area	Optional	None	No
	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Event Title	<code>validateEventTitle()</code>	"Event title is required."
Start Date	<code>validateStartDate()</code>	"Please enter a valid start date."
Start Time	<code>validateStartTime()</code>	"Please enter a valid start time."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Events	event_id	VARCHAR(10)	Primary Key	None	None
Events	event_title	VARCHAR(100)	Not Null	None	None
Events	client_id	INT	Foreign Key	Client.client_id	Direct
Events	matter_id	INT	Foreign Key	Matters.matter_id	Direct
Events	start_date	DATE	Not Null	None	None
Events	start_time	TIME	Not Null	None	None
Events	end_date	DATE	Optional	None	None
Events	end_time	TIME	Optional	None	None
Events	type	VARCHAR(50)	Not Null	None	None
Events	status	VARCHAR(50)	Default: "approve"	None	None
Events	available	VARCHAR(50)	Default: "free"	None	None
Events	completed	BOOLEAN	Optional	None	None
Events	private	BOOLEAN	Optional	None	None
Events	notes	TEXT	Optional	None	None
Events	created_by_id	INT	Foreign Key	User.user_id	Direct
Events	updated_by_id	INT	Foreign Key	User.user_id	Direct
Events	created_at	DATETIME	Auto-generated	None	None
Events	updated_at	DATETIME	Auto-updated	None	None

2.4 Masters Section

Master Name	Screen Name	Table Name	Description
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Client Master	Event Details	Client	Stores details of clients
Matters Master	Event Details	Matters	Stores details of matters
User Master	Event Details	User	Manages users in the system

Use Case: Email Management (UAC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Email Management	Event ID	Dropdown (Foreign Key)	Mandatory	CreateEvent	No
Email Management	Invite All Users	Checkbox	None	None	No
Email Management	Invited Users	Multi-select Dropdown	None	User (ManyToMany)	Yes
Email Management	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Email Management	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Email Management	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Email Management	Updated By	Foreign Key	Optional, foreign key from User table,	User	No

			updates on data modification		
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3.2 Field Validation Functions

Field Name	Validation Function	Error Message
Event ID	validateEventID()	"Event ID is required."
Invited Users	validateUserSelection()	"At least one user must be selected."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
UserEmailSend	id	SERIAL	Primary Key	None	None
UserEmailSend	event_id	INT	Not Null	CreateEvent. event_id	Direct
UserEmailSend	invite_all_users	BOOLEAN	Optional	None	None
UserEmailSend	updated_at	TIMESTAMP	Auto-updated	None	None
UserEmailSend	updated_by	INT	Not Null	User.user_id	Direct
UserEmailSend	created_by	INT	Not Null	User.user_id	Direct
UserEmailSend	created_at	TIMESTAMP	Auto-generated	None	None

3.4. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Event Notification Service	Send event-related notifications	/api/lawyer_erp/	Email/SMS Notification
Client Service	Retrieve client information	/api/lawyer_erp/	JSON Request/Response

User Service	Retrieve user information	/api/lawyer_erp/	JSON Request/Response
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3.5. Reporting Requirements

Report Name	Purpose	Data Source	Filters
Event Summary Report	Summarize events by type and status	Events Table	Date Range, Event Type, Event Status
Client Activity Report	List events linked to each client	Events Table	Date Range, Client

Email Modules

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Email Configuration	UEMC-001	Manage Email Configuration	Yes
Email Log	UEMC-002	Manage Email Logs	Yes
Email Tracking	UEMC-003	Track Email Status	Yes

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Email Configuration (UEMC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Email Configuration	From Email	Email Field	Unique, Mandatory	None	No
Email Configuration	Email Port	Number	Mandatory	None	No
Email Configuration	Email Host	Email Field	Mandatory	None	No
Email Configuration	Gmail	Email Field	Mandatory	None	No
Email Configuration	Password	Char	Mandatory	None	No
Email Configuration	Email Protocol	Dropdown	Mandatory	None	No
Email Configuration	Status	Dropdown	Optional	None	No
Email Configuration	Created By	Foreign Key	Mandatory, foreign key from User table	User	No

Email Configuration	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Email Configuration	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Email Configuration	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
From Email	validateEmail()	"Please enter a valid email address."
Email Port	validatePort()	"Port must be numeric."
Email Host	validateHost()	"Email host is required."
Gmail	validateEmail()	"Please enter a valid Gmail address."
Password	validatePassword()	"Password is required."

Email Protocol	validateProtocol()	"Select a valid email protocol."
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2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
EmailConfiguration	email_config_id	VARCHAR(10)	Primary Key	None	None
EmailConfiguration	from_mail	VARCHAR(100)	Not Null, Unique	None	None
EmailConfiguration	email_port	INTEGER	Not Null	None	None
EmailConfiguration	email_host	VARCHAR(100)	Not Null	None	None
EmailConfiguration	gmail	VARCHAR(100)	Not Null	None	None
EmailConfiguration	password	VARCHAR(50)	Not Null	None	None
EmailConfiguration	email_protocol	VARCHAR(50)	Not Null	None	None
EmailConfiguration	status	VARCHAR(8)	Default 'open'	None	None
EmailConfiguration	created_by	INT	Foreign Key	Users.user_id	Direct

EmailConfiguration	updated_by	INT	Foreign Key	Users.user_id	Direct
EmailConfiguration	created_at	DATETIME	Auto-generated	None	None
EmailConfiguration	updated_at	DATETIME	Auto-updated	None	None

2.4 Masters Section

Master Name	Screen Name	Table Name	Description
User	User Assignment Screen	Usergroupmaster	Defines user roles for permissions

2.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Email Configuration Save	Save Data	Save Email Configuration	Create Email Configuration
On Email Log Entry	Save Data	Log Email Activity	Log Email Sent
On Email Tracking Update	Update Status	Update Email Status	Update Status to Sent

2.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Email Notification Service	Send User Notifications	/api/email/notify	JSON Request/Response
Email Management Service	Manage Email Configurations	/api/email/config	JSON Request/Response
Email Tracking Service	Manage Email Tracking	/api/email/trackin g	JSON Request/Response

2.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Email Activity Report	Monitor email sending activity	Email Log	Date Range, Status
Email Configuration Report	Analyze email configuration status	Email Configuration	Status, Protocol

Use Case: Email Log (UEMC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Email Log	From Email	Dropdown	Foreign Key	Email Configuration	No

Email Log	To Email	Email Field	Mandatory	None	No
Email Log	Subject	Textbox	Mandatory	None	No
Email Log	Attachment	File Upload	Optional	None	No
Email Log	Email Status	Dropdown	Optional	None	No
Email Log	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Email Log	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Email Log	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Email Log	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
To Email	validateEmail()	"Please enter a valid email address."
Subject	validateSubject()	"Subject is required."
Attachment	validateAttachment()	"Attachment must be a valid file."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
EmailLog	email_log_id	VARCHAR(10)	Primary Key	None	None
EmailLog	tracking_id	INT	Foreign Key	EmailTracking.tracking_id	Direct
EmailLog	from_email	INT	Foreign Key	EmailConfiguration.email_config_id	Direct
EmailLog	to_email	VARCHAR(300)	Optional	None	None
EmailLog	subject	VARCHAR(100)	Not Null	None	None

EmailLog	attachment	FileField	Optional	None	None
EmailLog	email_status	VARCHAR(50)	Not Null	None	None
EmailLog	created_by	INT	Foreign Key	Users.user_id	Direct
EmailLog	updated_by	INT	Foreign Key	Users.user_id	Direct
EmailLog	created_at	DATETIME	Auto-generated	None	None
EmailLog	updated_at	DATETIME	Auto-updated	None	None

Use Case: Email Tracking (UEMC-003)

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Email Tracking	Log ID	Dropdown	Foreign Key	Email Log	No
Email Tracking	Sent At	DateTime	Mandatory	None	No
Email Tracking	Opened At	DateTime	Optional	None	No

Email Tracking	Clicked At	DateTime	Optional	None	No
Email Tracking	Status	Dropdown	Optional	None	No

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
Sent At	validateDate()	"Sent date is required."
Opened At	validateDate()	"Opened date must be a valid date."
Clicked At	validateDate()	"Clicked date must be a valid date."

4.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
EmailTracking	tracking_id	VARCHAR(10)	Primary Key	None	None
EmailTracking	log_id	INT	Foreign Key	EmailLog.email_log_id	Direct
EmailTracking	sent_at	DATETIME	Not Null	None	None
EmailTracking	opened_at	DATETIME	Optional	None	None

EmailTracking	clicked_at	DATETIME	Optional	None	None
EmailTracking	status	VARCHAR(50)	Default 'Pending'	None	None

5. Integration Points

5.1 API Integration Requirements

- **Email Notification Service:** To send email notifications when actions are performed in the system.
- **Email Tracking Service:** To log and track the status of sent emails.

5.2 External Services

- **Email Providers (SMTP, IMAP):** Integration with external email providers to send and receive emails.
-

6. Security Measures

- **Field-level Encryption:** For sensitive data such as passwords in Email Configuration.
 - **Access Control:** Ensure only authorized users can access email configurations and logs.
-

7. Testing and Quality Assurance

7.1 Testing Strategy

- **Unit Testing:** For individual validation functions and models.
- **Integration Testing:** To test the integration of the email services.
- **User Acceptance Testing (UAT):** To validate the functionality with end-users.

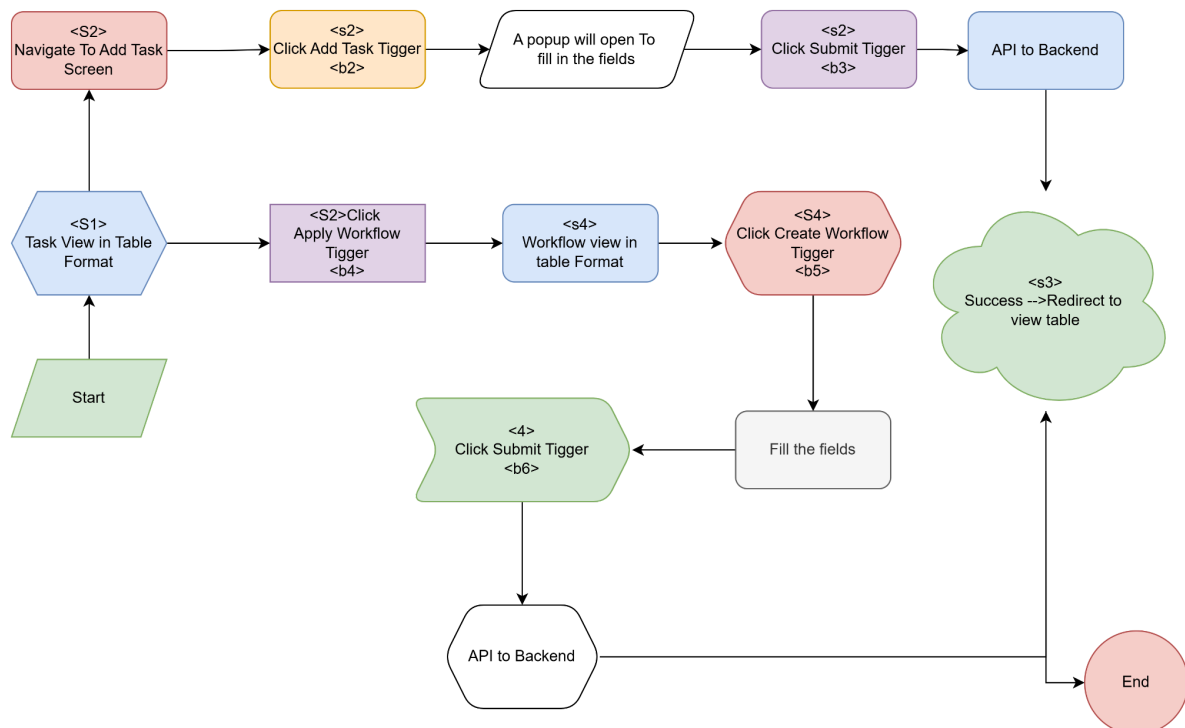
Task Module

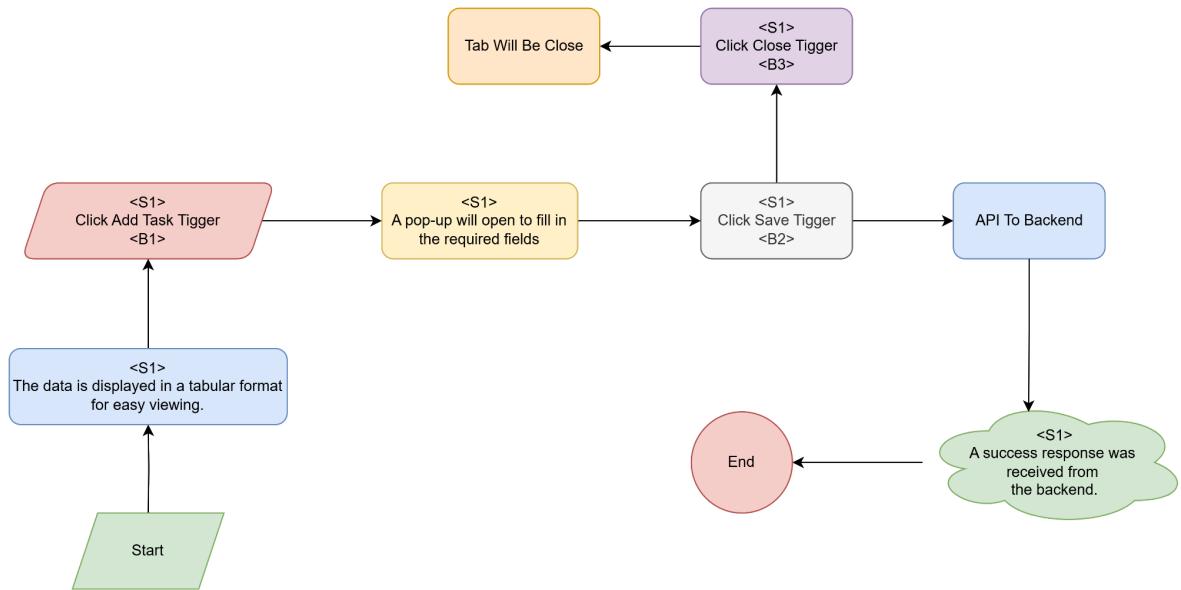
1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

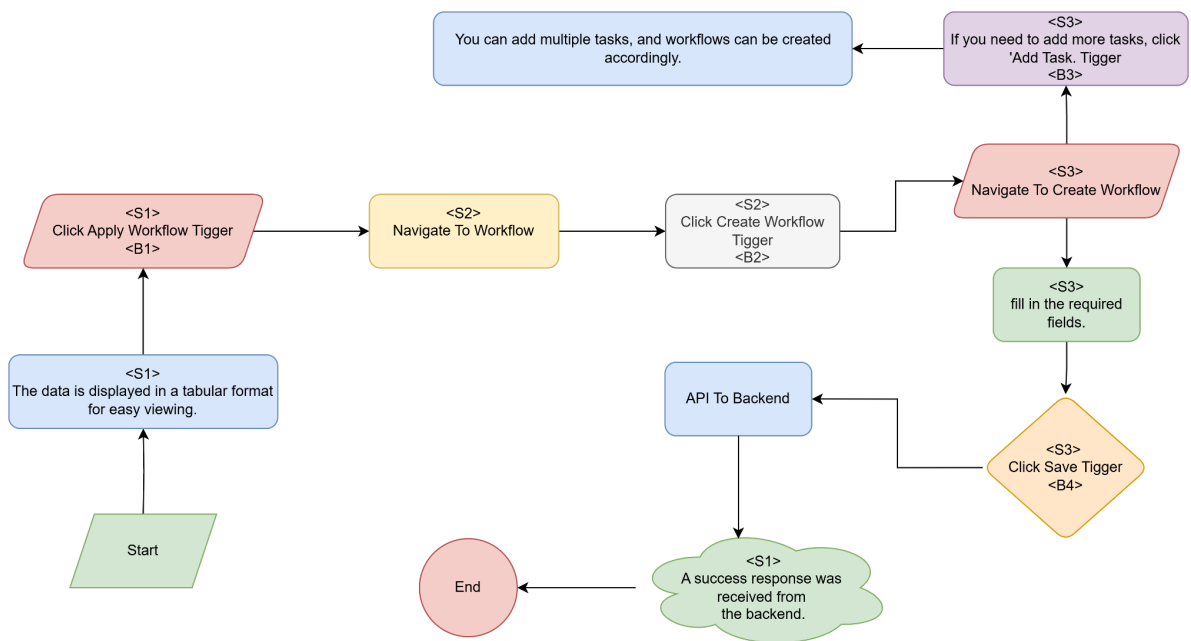
Module	Use Case ID	Use Case Description	Flow Diagram Required
Workflow Type	UTC-001	Manage Workflow Types	Yes
Task Workflows	UTC-002	Manage Task Workflows	Yes
GroupMaster	UTC-03	Manage Group Master	Yes
Assign Tasks	UTC-004	Assign Tasks	Yes
Client Task Assignments	UTC-005	Manage Client Task Assignments	Yes
Additional Task Info	UTC-006	Manage Additional Task Info	Yes

1.2 Flow Diagram for System Processes





WorkFlow



Use Case: Manage Workflow Types (UTC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Workflow Management	Name	Textbox	Mandatory	None	No
Workflow Management	Description	Text Area	Optional	None	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Name	validateName()	"Workflow name is required."
Description	validateDescription()	"Description is too long."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
WorkflowType	id	VARCHAR(10)	Primary Key	None	None
WorkflowType	name	VARCHAR(100)	Not Null	None	None
WorkflowType	description	TEXT	Optional	None	None
WorkflowType	created_by	INT	Foreign Key	User.user_id	Direct
WorkflowType	created_at	DATETIME	Auto-generated	None	None
WorkflowType	updated_by	INT	Foreign Key	User.user_id	Direct
WorkflowType	updated_at	DATETIME	Auto-updated	None	None

Use Case: Manage Task Workflows (UTC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Task Workflow	Title	Textbox	Mandatory	None	No
Task Workflow	Description	Text Area	Optional	None	No

Task Workflow	Type	Dropdown	Foreign Key	WorkflowType	No
Task Workflow	Created By	Dropdown	Foreign Key	User	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
Title	validateTitle()	"Title is required."
Type	validateType()	"Task type is required."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
TaskWorkflow	id	VARCHAR(10)	Primary Key	None	None
TaskWorkflow	title	VARCHAR(100)	Not Null	None	None
TaskWorkflow	description	TEXT	Optional	None	None
TaskWorkflow	type_id	INT	Foreign Key	WorkflowType.id	Direct
TaskWorkflow	created_by	INT	Foreign Key	User.user_id	Direct
TaskWorkflow	created_at	DATETIME	Auto-generated	None	None
TaskWorkflow	updated_by	INT	Foreign Key	User.user_id	Direct
TaskWorkflow	updated_at	DATETIME	Auto-updated	None	None

Use Case: Group Management (UTC-003)

- This Group master is used to assign a group to the related staff members. Alternatively, we also have the option to assign tasks to individual members.

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Group Management	Name	Textbox	Mandatory, Unique	None	No

Group Management	Description	Text Area	Optional	None	No
Group Management	Status	Dropdown	Mandatory	None	No
Group Management	Employees	Multi-select	Optional	Employee Table	Yes

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
Name	validateGroupName()	"Group name must be unique."

4.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Groups	group_id	VARCHAR(10)	Primary Key	None	None
Groups	name	VARCHAR(255)	Not Null, Unique	None	None
Groups	description	TEXT	Optional	None	None
Groups	status	VARCHAR(100)	Default: "active"	None	None
Groups	created_by_id	INT	Foreign Key	User.user_id	Direct
Groups	created_at	DATETIME	Auto-generated	None	None

Groups	updated_at	DATETIME	Auto-updated	None	None
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Use Case: Assign Tasks (UTC-004)

5.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Task Assignment	Task	Dropdown	Foreign Key	TaskWorkflow	No
Task Assignment	Title	Textbox	Mandatory	None	No
Task Assignment	Assigned To	Dropdown	Foreign Key	EmployeeRegister	No
Task Assignment	Group Assigned To	Dropdown	Foreign Key	Group	No
Task Assignment	Due Date	Date	Optional	None	No
Task Assignment	Assigned Date	Date	Optional	None	No

5.2 Field Validation Functions

Field Name	Validation Function	Error Message
Title	validateTitle()	"Title is required."
Task	validateTask()	"Task is required."

5.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
TaskAssign	id	VARCHAR(10)	Primary Key	None	None
TaskAssign	title	VARCHAR(100)	Not Null	None	None
TaskAssign	task_id	INT	Foreign Key	TaskWorkflow.id	Direct

TaskAssign	individual_assigned_to	INT	Foreign Key	EmployeeRegister.id	Direct
TaskAssign	group_assigned_to	INT	Foreign Key	Group.id	Direct
TaskAssign	due_date	DATE	Optional	None	None
TaskAssign	assigned_date	DATE	Optional	None	None
TaskAssign	created_by	INT	Foreign Key	User.user_id	Direct
TaskAssign	created_at	DATETIME	Auto-generated	None	None
TaskAssign	updated_by	INT	Foreign Key	User.user_id	Direct
TaskAssign	updated_at	DATETIME	Auto-updated	None	None

Use Case: Manage Client Task Assignments (UTC-005)

6.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Client Task Assignment	Client	Dropdown	Foreign Key	Client	No
Client Task Assignment	Matter	Dropdown	Foreign Key	Matters	No
Client Task Assignment	Task	Dropdown	Foreign Key	TaskAssign	No
Client Task Assignment	Completed	Checkbox	Optional	None	No

6.2 Field Validation Functions

Field Name	Validation Function	Error Message
Client	validateClient()	"Client is required."
Task	validateTask()	"Task assignment is required."

6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
ClientTaskAssign	id	VARCHAR(10)	Primary Key	None	None
ClientTaskAssign	client_id	INT	Foreign Key	Client.id	Direct
ClientTaskAssign	matter_id	INT	Foreign Key	Matters.id	Direct
ClientTaskAssign	task_id	INT	Foreign Key	TaskAssign.id	Direct
ClientTaskAssign	completed	BOOLEAN	Optional	None	None
ClientTaskAssign	created_by	INT	Foreign Key	User.user_id	Direct
ClientTaskAssign	created_at	DATETIME	Auto-generated	None	None
ClientTaskAssign	updated_by	INT	Foreign Key	User.user_id	Direct
ClientTaskAssign	updated_at	DATETIME	Auto-updated	None	None

Use Case: Additional Task Information (UTC-006)

7.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Additional Task Information	Task	Dropdown	Foreign Key	TaskWorkflow	No
Additional Task Information	Title	Textbox	Mandatory	None	No
Additional Task Information	Description	Text Area	Optional	None	No
Additional Task Information	Assigned Date	Date	Optional	None	No
Additional Task Information	Individual Assigned To	Dropdown	Foreign Key	EmployeeRegister	No
Additional Task Information	Group Assigned To	Dropdown	Foreign Key	Group	No

Additional Task Information	Due Date	Date	Mandatory	None	No
Additional Task Information	Priority	Dropdown	Choices Required	None	No
Additional Task Information	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Additional Task Information	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Additional Task Information	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Additional Task Information	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

7.2 Field Validation Functions

Field Name	Validation Function	Error Message
Title	<code>validateTitle()</code>	"Title is required."
Task	<code>validateTask()</code>	"Task is required."
Due Date	<code>validateDueDate()</code>	"Due date is required."
Priority	<code>validatePriority()</code>	"Priority is required."

7.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
AdditionalTask Info	id	VARCHAR(10)	Primary Key	None	None
AdditionalTask Info	task_id	INT	Foreign Key	TaskWorkflow.id	Direct
AdditionalTask Info	title	VARCHAR(100)	Not Null	None	None
AdditionalTask Info	description	TEXT	Optional	None	None
AdditionalTask Info	assigned_date	DATE	Optional	None	None
AdditionalTask Info	individual_assigned_to_id	INT	Foreign Key	EmployeeRegister.id	Direct
AdditionalTask Info	group_assigned_to_id	INT	Foreign Key	Group.id	Direct
AdditionalTask Info	due_date	DATE	Not Null	None	None
AdditionalTask Info	priority	VARCHAR(100)	Optional	None	None
AdditionalTask Info	created_by	INT	Foreign Key	User.user_id	Direct
AdditionalTask Info	created_at	DATETIME	Auto-generated	None	None
AdditionalTask Info	updated_by	INT	Foreign Key	User.user_id	Direct
AdditionalTask Info	updated_at	DATETIME	Auto-updated	None	None

7.4 Master Section

Master Name	Screen Name	Table Name	Description
Work flow Master	Work flow	Workflow Type	Manages workflows
Task Work Flow Master	Task Work Flow	Task Workflows	Manages task workflows
Group Master	Create Group	GroupMaster	Manages groups
Employee Register	Employee Register	Employee register	Registers employees
Activity Master	Activity	ActivityMaster	Manages activities
Client	Client	Clients	Manages clients
Matter	Matter	Matters	Manages matters

7.5. Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Users table	Create WorkFlow

7.6. Aggregation of Components

Component Type	Component Name
Tables	Workflow Type, Task Workflows, GroupMaster, Employee register, ActivityMaster, Clients and Matter
Screens	Work flow, Task Work Flow, Create Group, Employee Register, Activity, Client and Matter
Fields	Task, Title, description, assigned to, individual assigned to , Group assigned to , due date etc..(Workflow Type, Task Workflows, GroupMaster, Employee register, ActivityMaster, Clients and Matter)Masters
Buttons	Submit, Cancel

Pop-Up Messages	Success, Error
Microservices	Create task,Create Group Master,Create workflow Type Master,Create Matters ,Create Clients ,Create Activity Masters

7.7. Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Create task,Create Group Master,Create workflow Type Master,Create Matters ,Create Clients and Create Activity Masters	Create	/api/lawyer_erp/	JSON Request/Response

DMS Modules

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Document Management	UDC-001	Manage Custom Document Entities	Yes
Folder Management	UDC-002	Manage Folder Master Structure	Yes

1.2 Flow Diagram for System Processes

- Full Workspace	
- Library	
+ Forms & Templates + Internal + IT + People + Finance - Purchase Order Form - Per Diem Accounting form - Asset Requisition form - RFQ Tender - ... + Practice + Application Forms + Letter form - Letter of Engagement - ...	+ Knowledge + Internal + IT + People + Finance + Policies - Asset Disposal Policy - Accounting Policy - Training Policy - ... + Administration + Vendor Contracts + Purchases ... + Practice + Practice Area 1 + Practice Area 2 + Practice Area n + Precedents + Opinions + Transaction Bibles - ...
- Matter Workspace (Listing of All Client Matter Workspaces as per the structure defined during matter creation ...) (Index Tabbed for Recent, Common, My Favorite, My Matter Workspace, Saved Searches etc...)	
+ Dispute Resolution + Real Estate + Family Law + Banking & Finance + Tax - Corporate + Matter A + Matter B + Matter C - Matter N + Administration + Email + Advisory Documents + Transaction Documents + Memo - Final Executed Documents - Doc 1 - Doc 2 - Doc 3 - ...	

- The structure is created by default. For example, if you create a Matters type, a folder for that entity is generated. Then, when you create a client using that Matter type, a folder for the matter is automatically created within that entity's folder.

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Custom Document Entity (UDC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Document Entity Creation	Entity ID	Textbox	Unique, Mandatory	None	No
Document Entity Creation	Entity Name	Textbox	Mandatory	None	No

Document Entity Creation	Entity Type	Dropdown	Mandatory	Choice Field	No
Document Entity Creation	Description	Text Area	Optional	None	No
Document Entity Creation	Created By	Foreign Key	Mandatory, foreign key from User table	User	No
Document Entity Creation	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Entity ID	validateEntityID()	"Entity ID must be unique."
	validateEntityName()	"Entity name is required."
Entity Type	validateEntityType()	"Please select a valid entity type."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
CustomDocumentEntity	entity_id	VARCHAR(100)	Primary Key	None	None
CustomDocumentEntity	entity_name	VARCHAR(100)	Not Null	None	None
CustomDocumentEntity	entity_type	VARCHAR(100)	Choice Field	None	None
CustomDocumentEntity	description	TEXT	Optional	None	None

CustomDocumentEntity	created_by_id	INT	Foreign Key	User.user_id	Direct
CustomDocumentEntity	created_at	DATETIME	Auto-generated	None	None
CustomDocumentEntity	updated_by_id	INT	Foreign Key	User.user_id	Direct
CustomDocumentEntity	updated_at	DATETIME	Auto-updated	None	None

2.4 Masters Section

Master Name	Screen Name	Table Name	Description
CustomDocumentEntity	Document Entity Creation	CustomDocumentEntity	Defines entities related to documents

2.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Document Entity Table	Create Document Entity

2.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Document Notification	Send Document Notifications	'EDMS/api'	Email/SMS Notification

2.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Document Entity Activity Report	Monitor document entity updates	CustomDocumentEntity Table	Date Range, Entity Type

Use Case: Folder Master (UDC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
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Folder Creation	Folder ID	Textbox	Unique, Mandatory	None	No
Folder Creation	Folder Name	Textbox	Mandatory	None	No
Folder Creation	Description	Text Area	Optional	None	No
Folder Creation	Entity	Dropdown	Mandatory	Foreign Key - CustomDocumentEntity	No
Folder Creation	Client	Dropdown	Optional	Foreign Key - Client	No
Folder Creation	Matter	Dropdown	Optional	Foreign Key - Matters	No
Folder Creation	Master Checkbox File	Checkbox	Optional	None	No
Folder Creation	Parent Folder	Dropdown	Optional	Foreign Key - Folder Master	No
Folder Creation	Default Folder	Checkbox	Optional	None	No
Folder Creation	Created By	Dropdown	Mandatory	Foreign Key - User	No
Folder Creation	Updated By	Dropdown	Optional	Foreign Key - User	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
Folder ID	validateFolderID()	"Folder ID must be unique."
Folder Name	validateFolderName()	"Folder name is required."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
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FolderMaster	folder_id	VARCHAR(100)	Primary Key	None	None
FolderMaster	folder_name	VARCHAR(100)	Not Null	None	None
FolderMaster	description	TEXT	Optional	None	None
FolderMaster	entity_id	INT	Foreign Key	CustomDocumentEntity.entity_id	Direct
FolderMaster	client_id	INT	Foreign Key	Client.client_id	Direct
FolderMaster	matter_id	INT	Foreign Key	Matters.matter_id	Direct
FolderMaster	parent_folder_id	INT	Foreign Key	FolderMaster.folder_id	Direct
FolderMaster	created_by_id	INT	Foreign Key	User.user_id	Direct
FolderMaster	created_at	DATETIME	Auto-generated	None	None
FolderMaster	updated_by_id	INT	Foreign Key	User.user_id	Direct
FolderMaster	updated_at	DATETIME	Auto-updated	None	None

3.4 Masters Section

Master Name	Screen Name	Table Name	Description
FolderMaster	Folder Management	FolderMaster	Defines folder structure for documents

3.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to Folder Table	Create Folder

3.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
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Folder Notification	Notify Folder Actions	'EDMS/api/	Email/SMS Notification
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3.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Folder Structure Report	Overview of folder structure	FolderMaster Table	Entity, Client

4. Process Flow and Navigation

Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Document Type Management	UDC-003	Manage Document Types	Yes
Document Category Management	UDC-004	Manage Document Categories	Yes
Document Upload Management	UDC-005	Manage Document Uploads	Yes

4. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Document Type Management (UDC-003)

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Document Type	Type Name	Textbox	Mandatory, Unique	None	No
Document Type	Short Name	Textbox	Mandatory	None	No
Document Type	Description	Text Area	Optional	None	No
Document Type	Created By	Dropdown	Foreign Key	User table	No

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
Type Name	validateTypeName()	"Type name must be unique and mandatory."
Short Name	validateShortName()	"Short name is required."

4.3Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
DocumentType	type_id	VARCHAR(100)	Primary Key	None	None
DocumentType	type_name	VARCHAR(100)	Unique, Not Null	None	None
DocumentType	short_name	VARCHAR(100)	Not Null	None	None
DocumentType	created_by_id	INT	Foreign Key	Users.user_id	Direct
DocumentType	created_at	DATETIME	Auto-generated	None	None

Use Case: Document Category Management (UDC-004)

5.1Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Document Category	Category Name	Textbox	Mandatory, Unique	None	No
Document Category	Department	Dropdown	Mandatory	Department table	No
Document Category	Description	Text Area	Optional	None	No
Document Category	Created By	Dropdown	Foreign Key	User table	No

5.2Field Validation Functions

Field Name	Validation Function	Error Message
Category Name	validateCategoryName()	"Category name is required and must be unique."
Department	validateDepartment()	"Department selection is mandatory."

5.3Table Mapping

Table Name	Column Name	Data Type	Constraint s	Foreign Key	Foreign Key Mode
DocumentCategory	category_id	VARCHAR(100)	Primary Key	None	None
DocumentCategory	category_name	VARCHAR(100)	Unique, Not Null	None	None
DocumentCategory	department_id	INT	Foreign Key	Department.id	Direct
DocumentCategory	created_by_id	INT	Foreign Key	Users.user_id	Direct
DocumentCategory	created_at	DATETIME	Auto-generated	None	None

Use Case: Document Upload Management (UDC-005)

6.1Screen Details

Screen Name	Field Name	Field Type	Validation s	Relationships	Multivalu e
Document Upload	Document ID	Textbox	Primary Key	None	No
Document Upload	Document Title	Textbox	Mandatory	None	No
Document Upload	Document Category	Dropdown	Foreign Key	DocumentCategory	No
Document Upload	Document Type	Dropdown	Foreign Key	DocumentType	No

Document Upload	Entity Type	MultiSelect	Optional	CustomDocumentEntity	Yes
Document Upload	Folder	Dropdown	Optional	FolderMaster	No
Document Upload	Document Size	Number	Optional	None	No
Document Upload	Document Upload	File Upload	Optional	None	No
Document Upload	Upload Date	Date	Optional	None	No
Document Upload	Expiry Date	Date	Optional	None	No
Document Upload	Created By	Dropdown	Foreign Key	User table	No

6.2.Field Validation Functions

Field Name	Validation Function	Error Message
Document Title	validateDocumentTitle()	"Document title is required."
Document Category	validateDocumentCategory()	"Document category selection is required."

6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
DocumentUpload	document_id	VARCHAR(100)	Primary Key	None	None
DocumentUpload	document_title	VARCHAR(100)	Not Null	None	None
DocumentUpload	document_category_id	INT	Foreign Key	DocumentCategory.id	Direct
DocumentUpload	document_type_id	INT	Foreign Key	DocumentType.id	Direct

DocumentUpload	created_by_id	INT	Foreign Key	Users.user_id	Direct
DocumentUpload	created_at	DATETIME	Auto-generated	None	None

6.4 Masters Section

Master Name	Screen Name	Table Name	Description
Usergroupmaster	User Role Assignment	Usergroupmaster	Defines user roles for assigning permissions
Department	Department Details	Department	Defines departments linked to documents
FolderMaster	Folder Details	FolderMaster	Organizes document folders

6.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Document Upload	Save Data	Save Document Data	Upload Document
On Category Select	Field Validation	Validate Category	Select Category in Document
On Type Select	Field Validation	Validate Document Type	Select Type in Document

6.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Document Service	Manage Document Details	'EDMS/api/'	JSON Request/Response

6.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Document Usage Report	Track uploaded document usage	DocumentUpload table	Date Range, Category, Type
Category Distribution	Analyze document categories	DocumentCategory table	Category

7. Process Flow and Navigation

7.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Document Access	UDC-006	Manage Document Access Details	Yes
File Download Reason	UDC-007	Manage File Download Reasons	Yes
Document Upload	UDC-008	Manage Document Upload History	Yes
Document Audit Trail	UDC-009	Audit Document Upload Events	Yes

For each process, attach flow diagrams created with tools like Lucidchart, Visio, or similar tools.

8. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Document Access (UDC-006)

8.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Document Access Screen	Document	Dropdow n	Mandatory	Foreign Key - DocumentUpload	No
	Access To	Dropdow n	Mandatory	Foreign Key - User	No
	Permissio n	Text Area	Optional	None	No
	Expiry From	Date	Optional	None	No

	Expiry To	Date	Optional	None	No
	Created By	Dropdown	Mandatory	Foreign Key - User	No
	Created At	DateTime	Auto-generated	None	No
	Updated By	Dropdown	Optional	Foreign Key - User	No
	Updated At	DateTime	Auto-updated	None	No

8.2 Field Validation Functions

Field Name	Validation Function	Error Message
Document	validateDocument()	"Document selection is required."
Access To	validateAccessTo()	"User selection is required."

8.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
DocumentAccess	document_id	INT	Not Null	DocumentUpload.id	Direct
	access_to	INT	Not Null	User.id	Direct
	permission	TEXT	Optional	None	None
	expiry_from_at	DATETIME	Optional	None	None
	expiry_to_at	DATETIME	Optional	None	None
	created_by	INT	Not Null	User.id	Direct
	created_at	DATETIME	Auto-added	None	None
	update_by	INT	Optional	User.id	Direct
	update_at	DATETIME	Auto-updated	None	None

Use Case: File Download Reason (UDC-007)

9.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
File Download Screen	Document	Dropdown	Mandatory	Foreign Key - DocumentUpload	No
	Reason	Text Area	Mandatory	None	No
	Created By	Dropdown	Mandatory	Foreign Key - User	No
	Created At	DateTime	Auto-generated	None	No
	Updated By	Dropdown	Optional	Foreign Key - User	No
	Updated At	DateTime	Auto-updated	None	No

9.2. Field Validation Functions

Field Name	Validation Function	Error Message
Document	validateDocument()	"Document selection is required."
Reason	validateReason()	"Reason for download is required."

9.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
FileDownloadReason	document_id	INT	Not Null	DocumentUpload.id	Direct
	reason	TEXT	Not Null	None	None
	created_by	INT	Not Null	User.id	Direct
	created_at	DATETIME	Auto-added	None	None
	update_by	INT	Optional	User.id	Direct
	update_at	DATETIME	Auto-updated	None	None

Use Case: Document Upload History (UDC-008)

10.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Document History Screen	Document Title	Textbox	Mandatory	None	No
	Document Category	Dropdown	Mandatory	Foreign Key - DocumentCategory	No
	Document Type	Dropdown	Mandatory	Foreign Key - DocumentType	No
	Entity Type	MultiSelect	Optional	Many-to-Many - CustomDocumentEntity	Yes
	Folder	Dropdown	Optional	Foreign Key - FolderMaster	No
	Document Size	Number	Optional	None	No
	Description	Text Area	Optional	None	No
	Document Upload	File Upload	Optional	None	No
	Upload Date	Date	Optional	None	No
	Expiry Date	Date	Optional	None	No
	Start Date	Date	Optional	None	No
	End Date	Date	Optional	None	No
	Is Deactivate	Checkbox	Optional	None	No
	Version	Number	Mandatory	None	No

10.2 Field Validation Functions

Field Name	Validation Function	Error Message
Document Title	validateDocumentTitle()	"Document title is required."

Document Category	validateCategory()	"Document category selection is required."
Document Type	validateType()	"Document type selection is required."

10.3 Table Mapping

Table Name	Column Name	Data Type	Constra ints	Foreign Key	Forei gn Key Mode
DocumentUpload History	document_id	VARCHAR(100)	Primary Key	None	None
	document_title	VARCHAR(100)	Not Null	None	None
	document_category	INT	Foreign Key	DocumentCategory.id	Direct
	document_type	INT	Foreign Key	DocumentType.id	Direct
	entity_type	ManyToMany	Optional	CustomDocumentEntity.id	None
	folder	INT	Foreign Key	FolderMaster.id	Optional
	document_size	BIGINT	Optional	None	None
	description	TEXT	Optional	None	None
	document_upload	FileField	Optional	None	None
	upload_date	DATE	Optional	None	None
	expiry_date	DATE	Optional	None	None
	start_date	DATE	Optional	None	None
	end_date	DATE	Optional	None	None
	is_deactivate	BOOLEAN	Optional	None	None
	version	INT	Not Null	None	None

Use Case: Document Audit Trail (UDC-009)

11.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
Document Audit Trail	Document	Dropdown	Mandatory	Foreign Key - DocumentUpload	No
	Event Type	Dropdown	Mandatory	Foreign Key - EventType	No
	Timestamp	DateTime	Auto-added	None	No
	Performed By	Dropdown	Mandatory	Foreign Key - User	No
	Notes	Text Area	Optional	None	No

11.2 Field Validation Functions

Field Name	Validation Function	Error Message
Document	validateDocument()	"Document selection is required."
Event Type	validateEventType()	"Event type selection is required."
Performed By	validatePerformedBy()	"Performed by selection is required."

11.3 Table Mapping

Table Name	Column Name	Data Type	Constraint s	Foreign Key	Foreign Key Mode
DocumentAuditTrail	document_id	INT	Not Null	DocumentUpload.id	Direct
	event_type	INT	Not Null	EventType.id	Direct
	timestamp	DATETIME	Auto-added	None	None
	performed_by	INT	Not Null	User.id	Direct
	notes	TEXT	Optional	None	None

11.4 Masters Section

Master Name	Screen Name	Table Name	Description
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Document Access	Document Access	Document Access	Controls access permissions for documents, defining who can view, edit, or download specific files.
FileDownloadReason	File Download Reason	FileDownloadReason	Specifies the reasons for downloading files, used for tracking and compliance purposes.
DocumentUpload	Document Upload	DocumentUpload	Manages the uploading of documents, ensuring they are securely stored and accessible.
DocumentAudit Trail	Document Audit Trail	DocumentAudit Trail	Logs actions on documents (e.g., uploads, downloads) to create a record for auditing and tracking.

11.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Document Upload	Save Data	Save Document Data	Upload Document
On Category Select	Field Validation	Validate Category	Select Category in Document
On Type Select	Field Validation	Validate Document Type	Select Type in Document

11.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Document_Access,FileDownloadReason,DocumentUpload and Document Audit Trail	Manage Document Details	'EDMS/api/','	JSON Request/Response

Invoice Module

1. Process Flow and Navigation

1.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Invoice Management	UIC-001	Manage Invoice Batches	Yes
Invoice Management	UIC-002	Manage Invoices	Yes
Terms Management	UIC-003	Manage Terms Type	Yes

2. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Invoice Batch Management (UIC-001)

2.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Invoice Batch	Batch ID	Textbox	Mandatory, Unique	None	No
Invoice Batch	Off Month Batch	Checkbox	Optional	None	No
Invoice Batch	Billing Start Date	Date	Optional	None	No
Invoice Batch	Billing Through Date	Date	Mandatory	None	No
Invoice Batch	Invoice Date	Date	Mandatory	None	No
Invoice Batch	Invoice Start Number	Textbox	Mandatory	None	No
Invoice Batch	Batch Description	Text Area	Optional	None	No
Invoice Batch	Invoice Amount	Number	Default: 0.0	None	No

Invoice Batch	Paid Amount	Number	Default: 0.0	None	No
Invoice Batch	Actual Amount	Number	Default: 0.0	None	No
Invoice Batch	Payable Amount	Number	Default: 0.0	None	No
Invoice Batch	Status	Dropdown	Default: 'Pre-bill'	None	No
Invoice Batch	Payment Status	Dropdown	Default: 'Unpaid'	None	No
Invoice Batch	Invoice Type	Dropdown	Optional	None	No
Invoice Batch	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Invoice Batch	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Invoice Batch	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

2.2 Field Validation Functions

Field Name	Validation Function	Error Message
Batch ID	validateBatchID()	"Batch ID is required and must be unique."

Invoice Start Number	validateInvoiceStartNumber()	"Invoice start number is required."
Billing Through Date	validateBillingThroughDate()	"Billing through date is required."
Invoice Date	validateInvoiceDate()	"Invoice date is required."

2.3 Table Mapping

Table Name	Column Name	Data Type	Constraint s	Foreign Key	Foreign Key Mode
InvoiceBatch	batchid	VARCHAR(50)	Primary Key	None	None
InvoiceBatch	off_month_batch	BOOLEAN	Default: False	None	None
InvoiceBatch	billing_start_date	DATE	Optional	None	None
InvoiceBatch	billing_through_date	DATE	Not Null	None	None
InvoiceBatch	invoice_date	DATE	Not Null	None	None
InvoiceBatch	invoice_start_number	VARCHAR(50)	Not Null	None	None
InvoiceBatch	batch_description	VARCHAR(500)	Optional	None	None
InvoiceBatch	invoice_amount	FLOAT	Default: 0.0	None	None
InvoiceBatch	paid_amount	FLOAT	Default: 0.0	None	None
InvoiceBatch	actual_amount	FLOAT	Default: 0.0	None	None
InvoiceBatch	payable_amt	FLOAT	Default: 0.0	None	None
InvoiceBatch	status	VARCHAR(50)	Default: 'Pre-bill'	None	None
InvoiceBatch	payment_status	VARCHAR(50)	Default: 'Unpaid'	None	None
InvoiceBatch	invoicetype	VARCHAR(50)	Optional	None	None
InvoiceBatch	created_by	INT	Foreign Key: User	User.user_id	Direct

InvoiceBatch	created_at	DATETIME	Auto-generated	None	None
InvoiceBatch	updated_at	DATETIME	Auto-updated	None	None

Use Case: Invoice Management (UIC-002)

3.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Invoice	Invoice ID	Textbox	Mandatory, Unique	None	No
Invoice	Batch ID	Dropdown	Foreign Key: InvoiceBatch	InvoiceBatch Table	No
Invoice	Client	Dropdown	Foreign Key: Client	Client Table	No
Invoice	Matter	Dropdown	Foreign Key: Matters	Matters Table	No
Invoice	Invoice Description	Text Area	Optional	None	No
Invoice	Terms	Dropdown	Foreign Key: TermsTypeMaster	TermsTypeMaster Table	No
Invoice	Invoice Notes	Text Area	Optional	None	No
Invoice	Invoice Type	Dropdown	Optional	None	No
Invoice	Labor Time	Number	Default: 0	None	No
Invoice	Labor Amount	Number	Default: 0.0	None	No
Invoice	Expense Amount	Number	Default: 0.0	None	No
Invoice	Invoice Amount	Number	Default: 0.0	None	No
Invoice	Actual Amount	Number	Default: 0.0	None	No

Invoice	Paid Amount	Number	Default: 0.0	None	No
Invoice	Payable Amount	Number	Default: 0.0	None	No
Invoice	Discount Amount	Number	Default: 0.0	None	No
Invoice	Late Fee	Number	Default: 0.0	None	No
Invoice	Discount Type	Dropdown	Optional	None	No
Invoice	Discount Option	Text Area	Optional	None	No
Invoice	Status	Dropdown	Default: 'Pre-bill'	None	No
Invoice	Payment Status	Dropdown	Default: 'Unpaid'	None	No
Invoice	Client Status	Dropdown	Default: 'Pending'	None	No
Invoice	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Invoice	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Invoice	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

3.2 Field Validation Functions

Field Name	Validation Function	Error Message
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Invoice ID	validateInvoiceID()	"Invoice ID is required and must be unique."
Batch ID	validateBatchID()	"Batch ID is required."
Client	validateClient()	"Client is required."
Matter	validateMatter()	"Matter is required."
Invoice Amount	validateInvoiceAmount()	"Invoice amount must be a valid number."

3.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Invoice	invoice_id	VARCHAR(50)	Primary Key	None	None
Invoice	batch_id	VARCHAR(50)	Foreign Key: InvoiceBatch	InvoiceBatch.batch_id	Direct
Invoice	client	INT	Foreign Key: Client	Client.client_id	Direct
Invoice	matter	INT	Foreign Key: Matters	Matters.matter_id	Direct
Invoice	invoice_description	VARCHAR(500)	Optional	None	None
Invoice	terms	INT	Foreign Key: TermsTypeMaster	TermsTypeMaster.terms_type_id	Direct
Invoice	invoice_notes	VARCHAR(500)	Optional	None	None
Invoice	invoice_type	VARCHAR(50)	Optional	None	None
Invoice	labor_time	FLOAT	Default: 0	None	None
Invoice	labor_amount	FLOAT	Default: 0	None	None
Invoice	expense_amount	FLOAT	Default: 0	None	None
Invoice	invoice_amount	FLOAT	Default: 0	None	None
Invoice	actual_amount	FLOAT	Default: 0	None	None

Invoice	paid_amount	FLOAT	Default: 0	None	None
Invoice	payable_amount	FLOAT	Default: 0	None	None
Invoice	discount_amount	FLOAT	Default: 0	None	None
Invoice	late_fee	FLOAT	Default: 0	None	None
Invoice	discount_type	VARCHAR(50)	Optional	None	None
Invoice	discount_option	VARCHAR(500)	Optional	None	None
Invoice	status	VARCHAR(50)	Default: 'Pre-bill'	None	None
Invoice	payment_status	VARCHAR(50)	Default: 'Unpaid'	None	None
Invoice	client_status	VARCHAR(50)	Default: 'Pending'	None	None
Invoice	created_by	INT	Foreign Key: User	User.user_id	Direct
Invoice	created_at	DATETIME	Auto-generated	None	None
Invoice	updated_at	DATETIME	Auto-updated	None	None

Use Case: Terms Type Management (UIC-003)

4.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Terms Type	Terms ID	Textbox	Mandatory, Unique	None	No
Terms Type	Terms Description	Text Area	Optional	None	No
Terms Type	Terms Code	Textbox	Mandatory	None	No

Terms Type	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
Terms Type	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Terms Type	Created At	DateTime	Auto-generated, timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

4.2 Field Validation Functions

Field Name	Validation Function	Error Message
Terms ID	validateTermsID()	"Terms ID is required and must be unique."
Terms Code	validateTermsCode()	"Terms code is required."

4.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
TermsTypeMaster	terms_type_id	VARCHAR(50)	Primary Key	None	None
TermsTypeMaster	terms_description	VARCHAR(500)	Optional	None	None
TermsTypeMaster	terms_code	VARCHAR(50)	Not Null	None	None
TermsTypeMaster	created_by	INT	Foreign Key: User	User.user_id	Direct
TermsTypeMaster	created_at	DATETIME	Auto-generated	None	None
TermsTypeMaster	updated_at	DATETIME	Auto-updated	None	None

5.1 Use Case List (System Processes) and Required Flow Diagrams

Module	Use Case ID	Use Case Description	Flow Diagram Required
Invoice Management	UIC-004	Manage Invoice Summaries	Yes
Late Fee Management	UIC-005	Manage Late Fees for Invoices	Yes
Statement	UIC-006	Manage Client Statements	Yes
StatementClient	UIC-007	Manage Statement Clients	Yes
StatementMatter	UIC-008	Manage Statement Matters	Yes
Invoice Management	UIC-009	Manage Invoice Drafts	Yes

6. Process-wise Details: Tables, Screens, Fields, and Validation Functions

Use Case: Invoice Summary Management (UIC-004)

6.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Invoice Summary	Batch ID	Dropdown	Mandatory	Foreign Key - InvoiceBatch	No
Invoice Summary	Invoice ID	Dropdown	Mandatory	Foreign Key - Invoice	No
Invoice Summary	Summary For	Textbox	Max Length: 200, Mandatory	None	No
Invoice Summary	Combine Summary	Text Area	Optional	None	No
Invoice Summary	Labor Summary	Textbox	Max Length: 200, Optional	None	No

Invoice Summary	Expense Summary	Textbox	Max Length: 200, Optional	None	No
Invoice Summary	Created At	DateTime	Auto-generated , timestamp of record creation	N/A	No
Invoice Summary	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No
Invoice Summary	Created At	DateTime	Auto-generated , timestamp of record creation	N/A	No
	Updated By	Foreign Key	Optional, foreign key from User table, updates on data modification	User	No

6.2 Field Validation Functions

Field Name	Validation Function	Error Message
Batch ID	validateBatchID()	"Batch ID is required."
Invoice ID	validateInvoiceID()	"Invoice ID is required."
Summary For	validateSummaryFor()	"Summary description is required."

6.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
InvoiceSummary	summary_id	VARCHAR(10)	Primary Key	None	None

InvoiceSummary	batch_id	INT	Not Null	InvoiceBatch.batch_id	Direct
InvoiceSummary	invoice_id	INT	Not Null	Invoice.invoice_id	Direct
InvoiceSummary	summary_for	VARCHAR(200)	Not Null	None	None
InvoiceSummary	combine_summary	VARCHAR(500)	Optional	None	None
InvoiceSummary	labor_summary	VARCHAR(200)	Optional	None	None
InvoiceSummary	expense_summary	VARCHAR(200)	Optional	None	None
InvoiceSummary	created_by_id	INT	Optional	Users.user_id	Direct
InvoiceSummary	created_at	DATETIME	Auto-generated	None	None
InvoiceSummary	updated_at	DATETIME	Auto-updated	None	None

6.4 Masters Section

Master Name	Screen Name	Table Name	Description
InvoiceBatchMaster	Invoice Batch Assignment	InvoiceBatch	Defines batches of invoices for processing
UserMaster	User Assignment	Users	Manages user details, especially for created_by

6.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Summary Creation	Create Record	Save to InvoiceSummary Table	Create a new summary record
On Summary Update	Update Record	Update summary data	Edit an existing summary

6.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Summary Notification Service	Send Summary Alerts	/api/lawyer_erp/	Email/ SMS Notification
Summary Data Service	Retrieve Summary Data	/api/lawyer_erp/	JSON Request/Response

6.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Invoice Summary Report	Monitor invoice summaries	InvoiceSummary Table	Date Range, Batch ID, Created By
Invoice Batch Report	Analyze batch data	InvoiceBatch, InvoiceSummary	Batch ID

Use Case: Late Fee Management (UIC-004)

7.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalu e
Late Fee Entry	Late Fee ID	Textbox	Unique, Mandatory	None	No
Late Fee Entry	Batch ID	Dropdown	Mandatory	Foreign Key - InvoiceBatch	No
Late Fee Entry	Invoice ID	Dropdown	Mandatory	Foreign Key - Invoice	No
Late Fee Entry	Interest Rate	Decimal Field	Optional, Numeric	None	No
Late Fee Entry	Flat Amount	Decimal Field	Optional, Numeric	None	No

Late Fee Entry	Late Fee	Decimal Field	Calculated Field	None	No
Late Fee Entry	Grace Period	Number	Numeric, Default: 30	None	No
Late Fee Entry	Days Overdue	Number	Numeric, Calculated Field	None	No
Late Fee Entry	Status	Dropdown	Mandatory, Default: "Unpaid"	Choices: "Unpaid," "Paid"	No
Late Fee Entry	Created By	Dropdown	Optional	Foreign Key - User	No
Late Fee Entry	Created At	Date Field	Auto-generated	None	No
Late Fee Entry	Updated At	Date Field	Auto-updated	None	No

7.2 Field Validation Functions

Field Name	Validation Function	Error Message
Late Fee ID	validateUniqueLateFeeID()	"Late Fee ID must be unique."
Interest Rate	validateInterestRate()	"Interest rate must be a positive number."
Flat Amount	validateFlatAmount()	"Flat amount must be a positive number."
Days Overdue	validateDaysOverdue()	"Days overdue must be a calculated value."

7.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
LateFee	latefee_id	VARCHAR(100)	Primary Key, Unique	None	None
LateFee	batch_id	INT	Mandatory	InvoiceBatch.id	Direct
LateFee	invoice_id	INT	Mandatory	Invoice.id	Direct
LateFee	interest_rate	FLOAT	Default: 0.0	None	None

LateFee	flat_amt	FLOAT	Default: 0.0	None	None
LateFee	late_fee	FLOAT	Calculated Field	None	None
LateFee	grace_period	INT	Default: 30	None	None
LateFee	days_overdue	INT	Calculated after grace period	None	None
LateFee	status	VARCHAR(500)	Default: "Unpaid"	None	None
LateFee	created_by	INT	Optional	User.id	Direct
LateFee	created_at	DATE	Auto-generated	None	None
LateFee	updated_at	DATE	Auto-updated	None	None

7.4 Masters Section

Master Name	Screen Name	Table Name	Description
InvoiceBatch	Late Fee Entry	InvoiceBatch	Stores details of invoice batches.
Invoice	Late Fee Entry	Invoice	Stores individual invoice details.
User	Late Fee Entry	User	Stores user data who created entries.

7.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Late Fee Creation	Save Data	Save to LateFee Table	Create Late Fee Entry
On Status Update	Update Status	Update LateFee Status	Mark Late Fee as Paid
Calculate Overdue Days	Scheduled	Recalculate days_overdue based on created_at and grace_period	Daily Calculation

7.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Late Fee Notification	Send Late Fee Notifications	/api/lawyer_erp/	Invoice/Late Fee Details
Payment Status Service	Update Payment Status	/api/lawyer_erp/	JSON Response (Status Update)

7.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Late Fees Report	Monitor unpaid fees	LateFee Table	Date Range, Status
Overdue Invoices	Identify overdue invoices	LateFee, Invoice Tables	Grace Period, Batch ID

8 Use Case: Statement (UIC-006)

8.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
Statement Details	Statement ID	Textbox	Unique, Mandatory	None	No
Statement Details	Statement Date	Date Picker	Mandatory	None	No
Statement Details	Statement Type	Dropdown	Mandatory	None	No
Statement Details	Client List	Dropdown	Mandatory	Client Table	Yes
Statement Details	Status	Dropdown	Optional	None	No
Statement Details	Created By	Dropdown	Foreign Key	User Table	No

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8.2 Field Validation Functions

Field Name	Validation Function	Error Message
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Statement ID	validateStatementID	"Statement ID must be unique."
Statement Type	validateStatementType	"Please select a valid statement type."

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8.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
Statement	statement_id	VARCHAR(50)	Primary Key, Unique	None	None
Statement	statement_date	DATE	Not Null	None	None
Statement	statement_type	VARCHAR(100)	Not Null	None	None
Statement	list_client	VARCHAR(100)		None	None
Statement	status	VARCHAR(50)	Optional	None	None
Statement	created_by	INT		User.user_id	Direct
Statement	created_at	DATE	Auto-generated	None	None
Statement	updated_at	DATE	Auto-updated	None	None

9 Use Case: StatementClient (UIC-007)

9.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalue
StatementClient Details	Statement Client ID	Textbox	Unique, Mandatory	StatementClient Table	No
StatementClient Details	Client ID	Dropdown	Mandatory	Client Table	No
StatementClient Details	Balance Amount	Numeric	Default: 0.0	None	No

StatementClient Details	Downloaded Date	Date Picker	Optional	None	No
StatementClient Details	Created By	Dropdown	Foreign Key	User Table	No

9.2 Field Validation Functions

Field Name	Validation Function	Error Message
Statement Client ID	validateStatementClientID	"Statement Client ID must be unique."

○

9.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
StatementClient	statement_id	INT	Foreign Key	Statement.statement_id	Direct
StatementClient	statementclient	VARCHAR(50)	Primary Key, Unique	None	None
StatementClient	client_id	INT	Foreign Key	Client.client_id	Direct
StatementClient	balance_amt	FLOAT	Default: 0.0	None	None
StatementClient	downloaded_date	DATE	Optional	None	None
StatementClient	created_by	INT	Foreign Key	User.user_id	Direct
StatementClient	created_at	DATE	Auto-generated	None	None
StatementClient	updated_at	DATE	Auto-updated	None	None

10 Use Case: StatementMatter (UIC-008)

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10.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalues
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StatementMatter Details	Matter ID	Dropdown	Mandatory	Matter Table	Yes
StatementMatter Details	Client ID	Dropdown	Foreign Key	Client Table	No
StatementMatter Details	Invoices	Dropdown	Many-to-Many	Invoice Table	Yes
StatementMatter Details	Created By	Dropdown	Foreign Key	User Table	No

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10.2 Field Validation Functions

Field Name	Validation Function	Error Message
Matter ID	validateMatterID	"Please select a valid matter ID."

○

10.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
StatementMatter	statement_id	INT	Foreign Key	Statement.statement_id	Direct
StatementMatter	statementclient_id	INT	Foreign Key	StatementClient.statement_id	Direct
StatementMatter	client_id	INT	Foreign Key	Client.client_id	Direct
StatementMatter	matters	INT	Foreign Key	Matter.matter_id	Direct
StatementMatter	invoices	ManyToMany		Invoice.invoice_id	Direct
StatementMatter	created_by	INT	Foreign Key	User.user_id	Direct
StatementMatter	created_at	DATE	Auto-generated	None	None
StatementMatter	updated_at	DATE	Auto-updated	None	None

10.4 Masters Section

Master Name	Screen Name	Table Name	Description
Statement	Statement Management Screen	Statement	Defines statement records.
StatementClient	Statement Client Assignment	StatementClient	Defines statement client records.
Client	Client Management Screen	Client	Defines client records.
Matters	Matters Management Screen	Matters	Defines matters records.

10.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Form Submission	Save Data	Save to StatementMatter Table	Create Statement Matter
On Matter Assignment	Update Record	Update Matter Details	Assign Matter to Client
On Invoice Creation	Create Record	Create Invoice	Generate Invoice

10.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Statement Service	Manage Statement Matters	/api/lawyer_erp/	JSON Request/Response
Invoice Service	Manage Invoices	/api/lawyer_erp/	JSON Request/Response
Client Service	Manage Clients	/api/lawyer_erp/	JSON Request/Response
Matter Service	Manage Matters	/api/lawyer_erp/	JSON Request/Response

10.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
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Statement Report	Monitor statement matters	StatementMatter Table	Date Range, Client ID
Invoice Report	Analyze invoice details	Invoice Table	Statement ID
Client Matter Report	Analyze client matter distribution	StatementMatter Table	Client ID

Use Case: Invoice Draft (UIC-009)

11.1 Screen Details

Screen Name	Field Name	Field Type	Validations	Relationships	Multivalued
Invoice Draft	Draft ID	Textbox	Unique, Mandatory	None	No
Invoice Draft	Client	Dropdown	Mandatory	Client Table	No
Invoice Draft	Matter	Dropdown	Mandatory	Matters Table	No
Invoice Draft	Client Status	Textbox	Default: "Draft"	None	No
Invoice Draft	Reject Reason	Text Area	Optional	None	No
Invoice Draft	Created By	Dropdown	Mandatory	User Table	No
Invoice Draft	Created At	Date Field	Auto-generated	None	No
Invoice Draft	Updated At	Date Field	Optional	None	No

11.2 Field Validation Functions

Field Name	Validation Function	Error Message
Draft ID	validateDraftID()	"Draft ID must be unique."
Client	validateClientSelection()	"Client selection is required."
Matter	validateMatterSelection()	"Matter selection is required."

11.3 Table Mapping

Table Name	Column Name	Data Type	Constraints	Foreign Key	Foreign Key Mode
InvoiceDraft	draft_id	VARCHAR(100)	Primary Key	None	None
InvoiceDraft	client_id	INT	Foreign Key	Client.client_id	Direct
InvoiceDraft	matter_id	INT	Foreign Key	Matters.matter_id	Direct
InvoiceDraft	client_status	VARCHAR(50)	Default: "Draft"	None	None
InvoiceDraft	reject_reason	VARCHAR(500)	Optional	None	None
InvoiceDraft	created_by_id	INT	Foreign Key	User.user_id	Direct
InvoiceDraft	created_at	DATE	Auto-generated	None	None
InvoiceDraft	updated_at	DATE	Optional	None	None

11.4 Masters Section

Master Name	Screen Name	Table Name	Description
User	User Assignment Screen	User	Defines users who can create invoices
Client	Client Management Screen	Client	Manages client details for invoice drafting
Matters	Matter Management Screen	Matters	Manages matter details for invoicing

11.5 Triggers and Actions

Trigger Name	Trigger Type	Action Initiated	Example
On Invoice Save	Save Data	Save to InvoiceDraft Table	Create Invoice Draft
On Invoice Approval	Update Status	Change Status in Invoice Draft	Approve/Reject Draft

11.6 Microservices and Custom Functions

Microservice Name	Purpose	API Endpoint	Expected Inputs/Outputs
Invoice Service	Manage Invoice Operations	/api/invoice	JSON Request/Response
Notification Service	Send Notifications	/api/notify	Email/SMS Notification

11.7 Reporting Requirements

Report Name	Purpose	Data Source	Filters
Invoice Summary Report	Summarize Invoice Drafts	InvoiceDraft Table	Date Range, Client, Matter
Draft Status Report	Analyze Draft Statuses	InvoiceDraft Table	Client, Status