PROJECT REPORT

ON

LAWYER.AI

By

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DEPARTMENT OF COMPUTER ENGINEERING

L.J.POLYTECHNIC, AHMEDABAD

2024-2025

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CERTIFICATE

Date:___/___/_____

This is to certify that **Mr. *HET SHAH*, Mr. *HET KIKANI*, Mr. *HETANSH ALMOULA*, Mr. *HET BHALANI*, Mr. *JAINAM GAJJAR And* Ms. *KAVYA MANWANI*** from LJ POLYTECHNIC having Enrollment No. ***22012250210134, 22012250210135, 22012250210137, 22012250210138, 22012250210152, 22012250210188*** have completed project documentation and partial development on the problem definition of semester V during the academic year 2024-25 having Title ***LAWYER.AI*** in a group consisting of 6 members.

Institute Guide **Head of the Department**

ACKNOWLEDGEMENT

We would thank God for being able to complete this project with success. Then We would like to thank our faculty whose valuable guidance has been the ones that helped us patch this project and make it full proof success his suggestions and his instructions has served as the major contributor towards the completion of the project. Secondly, we would also like to thank our parents who supported in our project.

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ABSTRACT

The Lawyer.AI project leverages artificial intelligence to transform the legal field by providing accessible, efficient, and reliable legal support. This system integrates Natural Language Processing and Deep learning algorithms to assist both legal professionals and the public in navigating complex legal information. The core functionality includes real-time legal advice. It is done by analyzing vast amounts of legal data. It aims to enhance decision- making processes, streamline legal research, and reduce the workload for lawyers. The project addresses the need for affordable legal services and aims to bridge the gap between complex legal systems and the general public. We also aim to educate normal people in regards of legalities and make them comfortable with legal system of India.

CHAPTER 1
INTRODUCTION

1.1 Need of the system

- In this world of growing technologies everything has been computerized. With large numbers of law and orders for Human Lawyer.AI has been developed. Thus, there is a need of a system which can handle the data of such a large number of Laws in an organization.
- Lawyer.AI helps the leman people (don't know about law) to understand the Law.

1.2 Detailed problem definition

- Accessibility: Many people find legal services expensive and difficult to access. Lawyer.AI aims to provide affordable legal support, making legal advice more accessible to the general public.
- Efficiency: By leveraging AI, the system can process and analyze vast amounts of legal data quickly, providing real-time legal advice and streamlining legal research.
- Reliability: AI algorithms can help reduce human error and provide consistent, reliable legal information.
- Education: The project aims to educate the public about legal matters, making them more comfortable and informed about the legal system in India.
- Government scheme: This AI aims to notify when the government launches a new scheme or program.

- Will Documentation: It serves as a legally binding record that specifies how property, money, and other personal belongings should be distributed among heirs or beneficiaries.

1.3 Viability of the system

- Guidance for Law: Guidance in law refers to the principles, regulations, and recommendations that help individuals, lawyers, judges, and lawmakers interpret and apply legal rules.
- Self-sufficient: refers to the ability of an individual or entity to provide for themselves without relying on public assistance, government aid, or external support.
- Educate law student: it's important to provide a well-rounded curriculum that integrates legal theory, practical skills, and ethical training.
- Complete elimination of paperwork: The complete elimination of paperwork refers to the shift from traditional paper-based processes to fully digital systems, where all documents, records, and transactions are handled electronically.

1.4 Presently available system

- https://www.lexisnexis.com/en-us/gateway.page
- It is not for normal people

- It works on Business purpose

- They only deal in professional domain.

1.5 Future prospects

- Notify all new law implementation

- Notify all government scheme

- Make mobile application.

- User can invite each other and form a community to deal with a particular problem.

- This AI will suggest lawyer who has delt with similar cases in their career and provides information of Lawyer.

CHAPTER-2
ANALYSIS

2.1 Requirement Analysis

Authentication

- **Login** – Customer would login the app then can login to the system with his/her username and password.
- **Logout** – the customer can log out from the system.

- **Login failure** – if the Customer does not exist in the database or the user has not yet been authorized by the admin of the system.
- **Update Profile** – Email, New-Password, Pin code

- **Sign up** – Email, Password, Pin code, Profession

Process data

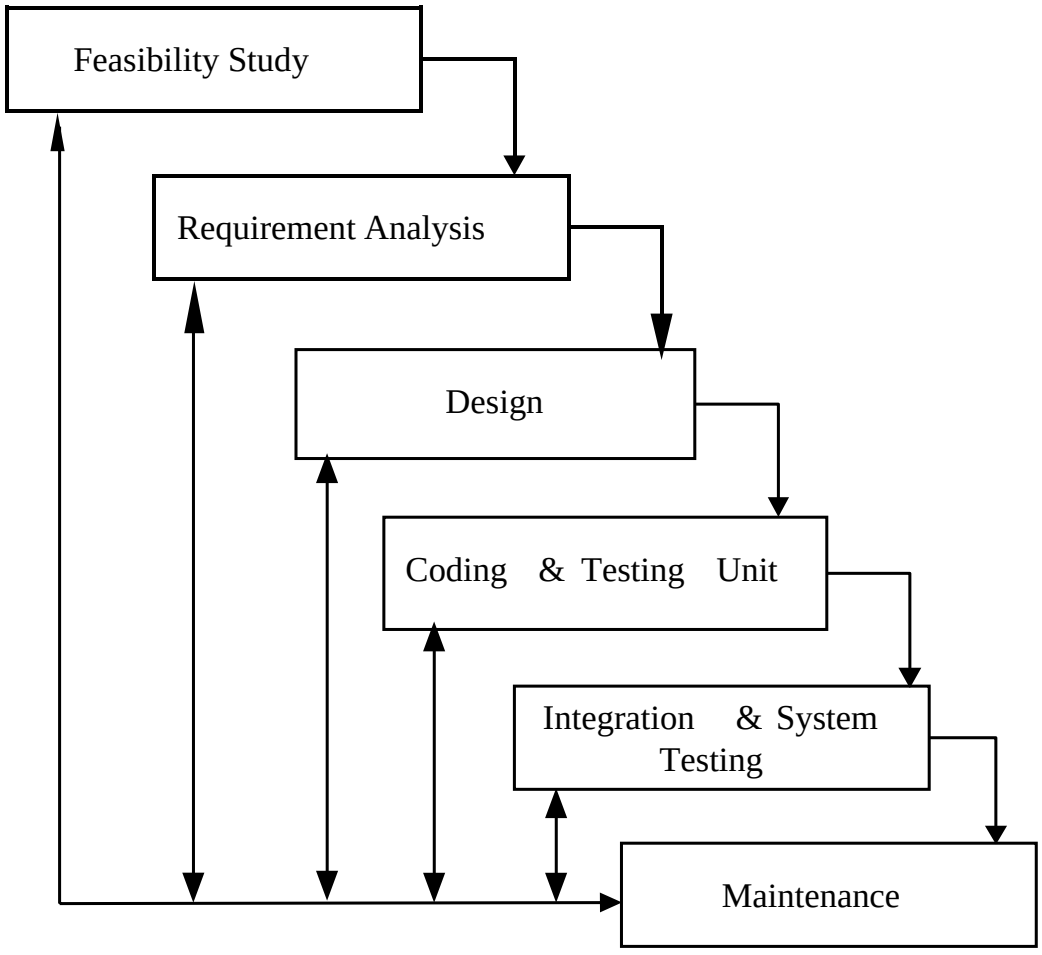
- **Display** – Finds the answer from the search history.
- **Search** – Users can search about anything related to legality.
- **Update authentication** – Any User can update their authentication.
- **Community search –** Lawyers can share and search their experience in blog.

- **Strategy Development**

    - This AI can help Law student to build their strategy

- **Step by Step Guidance -** Will Guide you how to defend your case with important information of laws passed.

2.2 Project Model



[Figure 1: Iterative Waterfall Model]

- This application is developed using Iterative model. Almost every other model is derived from the waterfall model.
- The phase of detecting errors is close to its points of introduction is known as face containment of errors.
- Incremental model is also referred as the successive version of waterfall model using incremental approach and evolutionary model.
- In this model, the system has broken down into several modules which can be incrementally implemented and delivered.
- First develop the core model and when customer evaluate the system then the initial product skeleton is redefined into increasing levels capacity by adding new functionalities in successive versions.

Advantages

- Each successive version performing more useful work than previous versions.
- The core modules get tested thoroughly, thereby reducing change of error in final product.
- The model is more flexible and less costly to change the scope and requirement.
- User gets a change to experiment with partially developed software.
- This model helps finishing exact user requirements.
- Feedback providing at each increment is useful for determining the better final product.

2.3 Schedule Representation

Generalized project scheduling tools and technique can be applied with

little modification to software projects.

Project evolution and review technique and critical paths method are two project scheduling method that can be applied to software development. Both techniques are driven by information already developed in earlier project planning activities:

- A decomposition of the product function.
- The selection of appropriate process model and task set.
- Estimate of effort.
- Decomposition of data.

[Table 1: Schedule Representation]

ACTIVITY	START DATE	FINISH DATE
Requirement Analysis		
System Analysis		
System Design		
System Coding		
Testing and Integration		

2.4 Feasibility Study:

2.4.1 Technical Feasibility:

- The proposed system will be developed in web bases completely and it is required to use web technologies appropriately. Technology to build the overall system is available.

- Currently available web technology – PHP, ASP.net, etc.
- Front-End: HTML, CSS, React JS
- Back-End: Python, Java
- Servers – Apache.
- DBMS – MongoDB etc.

2.4.2 Economical Feasibility:

- Market Analysis
- Scalability
- Cost Estimation
- Risk Assessment

2.4.3 Operational Feasibility:

- How app works.
- Law Student can access
- Lawyer can write their experience in blog form
- Future Prospect

CHAPTER-3
DESIGN

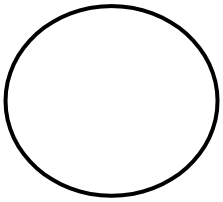
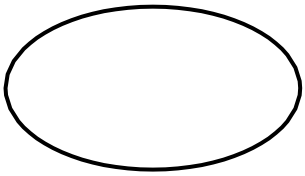
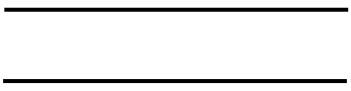
3.1 Data Flow Diagram

- DFD (data flow diagram) is also known as bubble chart or data flow graph.
- DFD's are very useful in understanding the system and can be effectively used during analysis. It shows flow of data through a system visually. The DFD is a hierarchical graphical model of a system the different processing activities or functions that the system performs and the data interchange among these functions.
- It views a system as a function that transforms the inputs into desired output.
- Each function is considered as a process that consumes some input data and produces some output data.
- Function model can be represented using DFD.
- DFD graphically representing the functions, or processes, which capture, manipulate, store, and distribute data between a system and its environment and between components of a system.
- The visual representation makes it a good communication tool between User and System designer.
- Structure of DFD allows starting from a broad overview and expand it to a hierarchy of detailed diagrams.

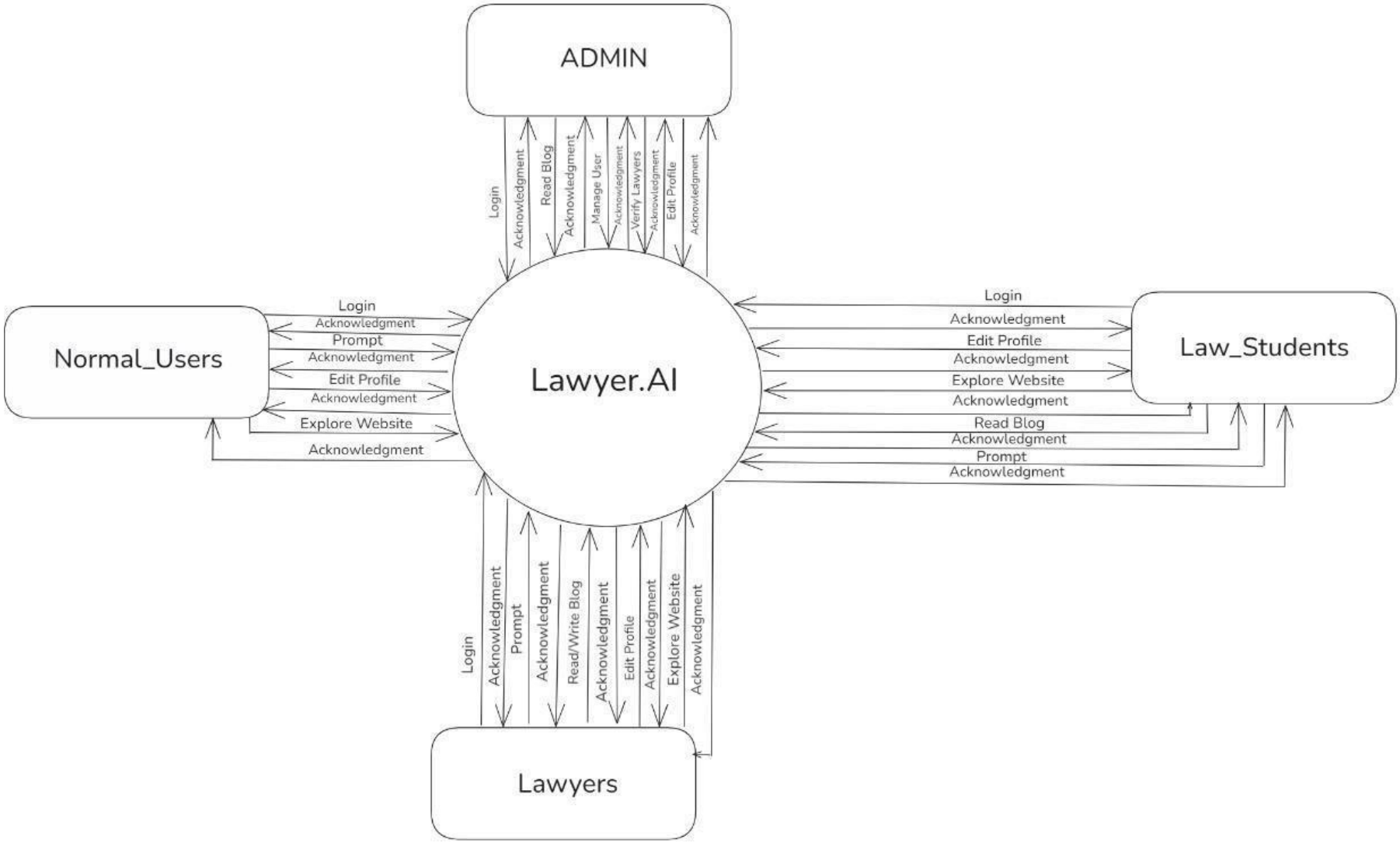
- DFD has often been used due to the following reasons:

1. Logical information flow of the system.
2. Determination of physical system construction requirements.
3. Simplicity of notation.
4. Establishment of manual and automated systems requirements.

[Table 2: Data Flow Diagram Symbols]

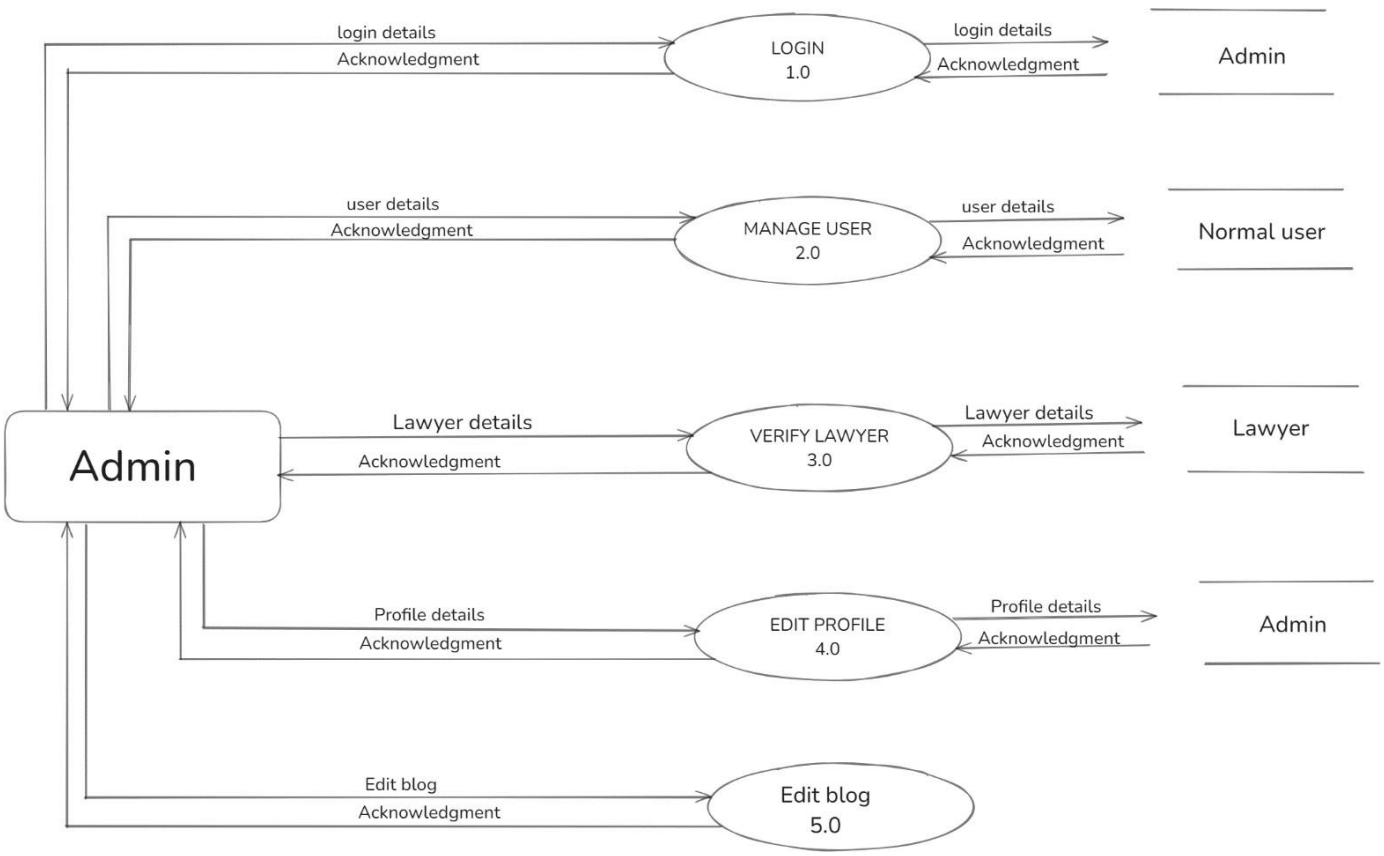
Symbols	Description
	**Entity:** Entities are external to the system which interacts by inputting the data.
	**System:** It shows the system name.
	**Process:** It shows the part of the system that transforms into outputs.
	Data Flow: It passes the data from one part to another.
	**Data Store:** Data store is represented by two parallel lines. It is generally logical file or database.

Level 0: context



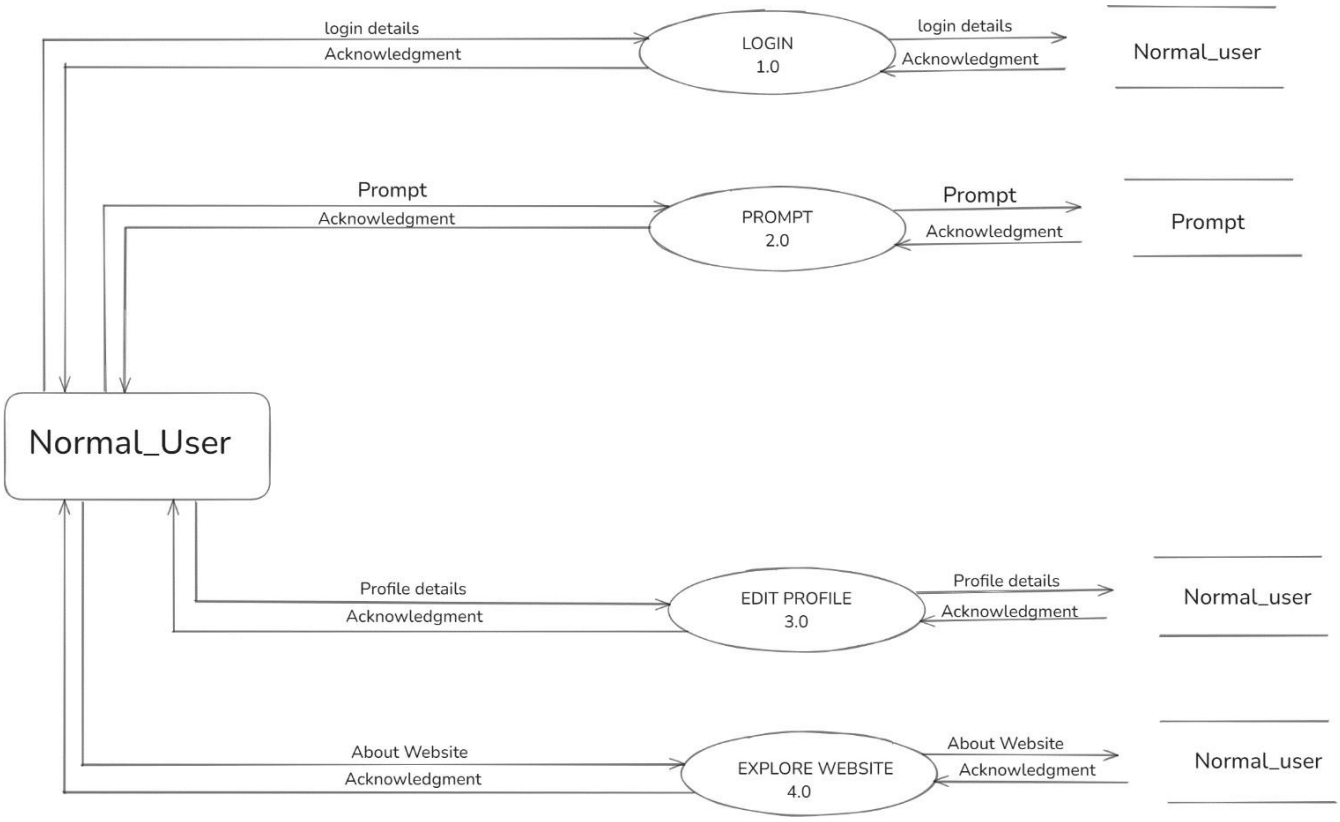
[Figure 2: Context level]

Level 1: Admin



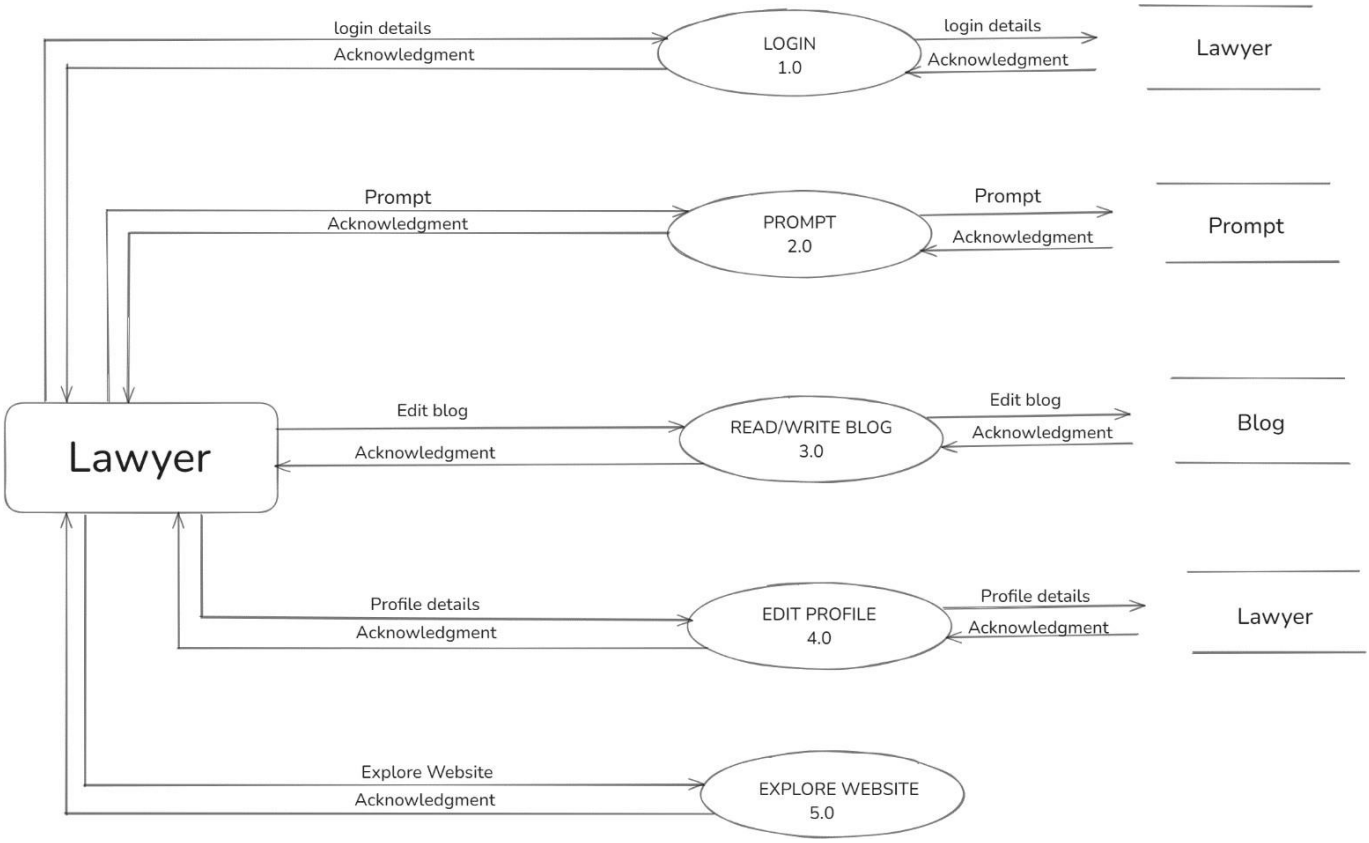
[Figure 3: DFD Level 1: Admin]

Level 1: Normal User



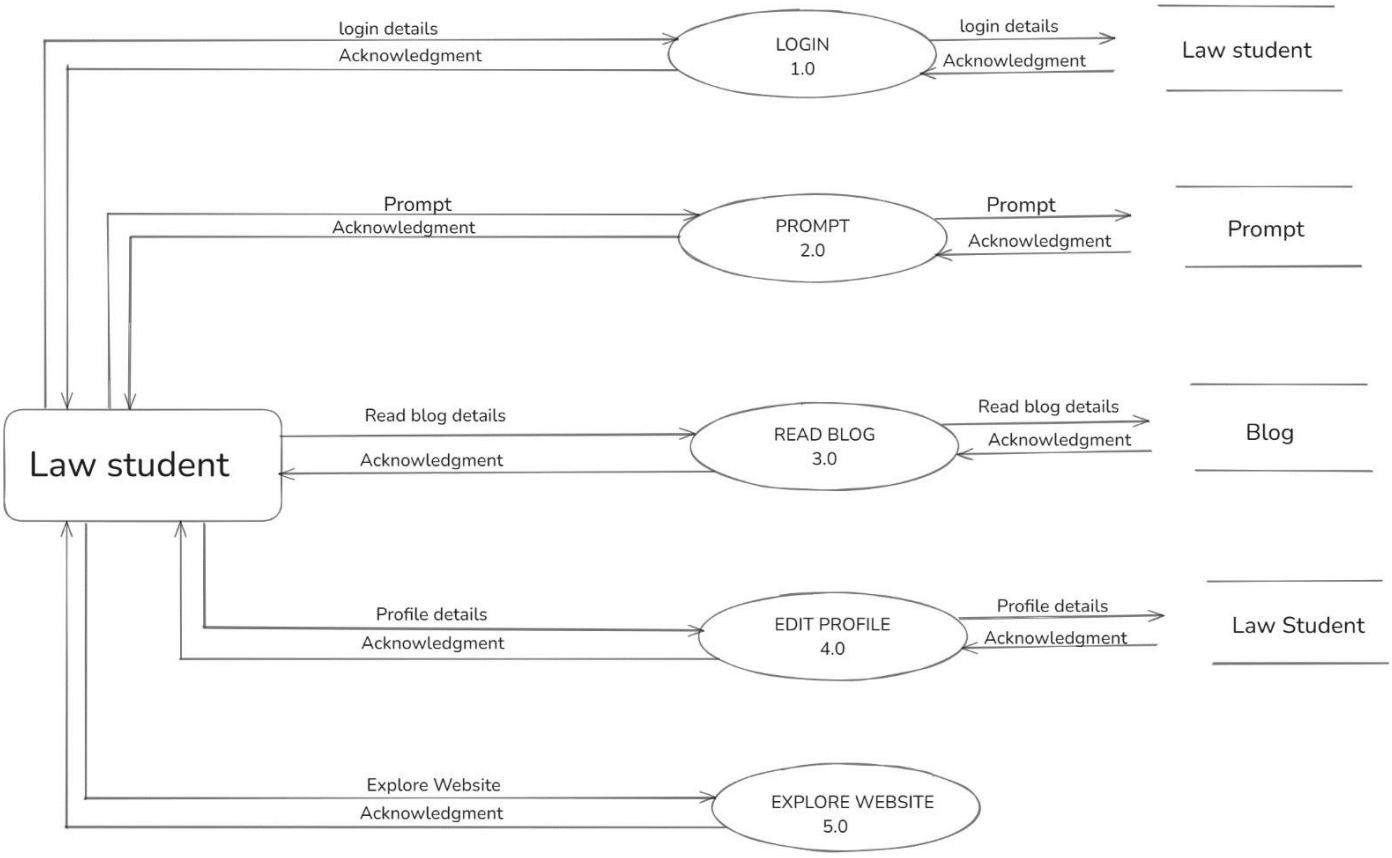
[Figure 4: DFD Level 1: Normal User]

Level 1: LAWYER



[Figure 5: DFD Level 1: Lawyer]

Level 1: Law Students

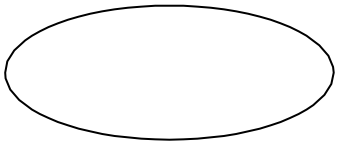
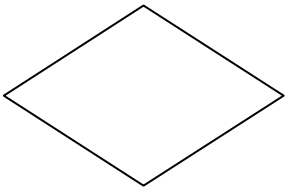
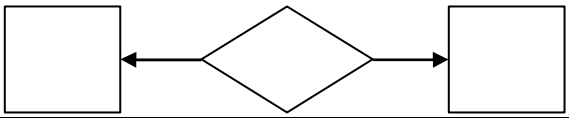
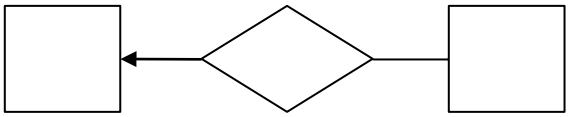
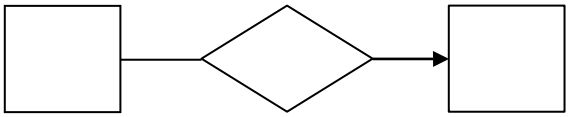
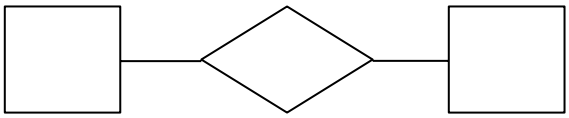


[Figure 6: DFD Level 1: Law Students]

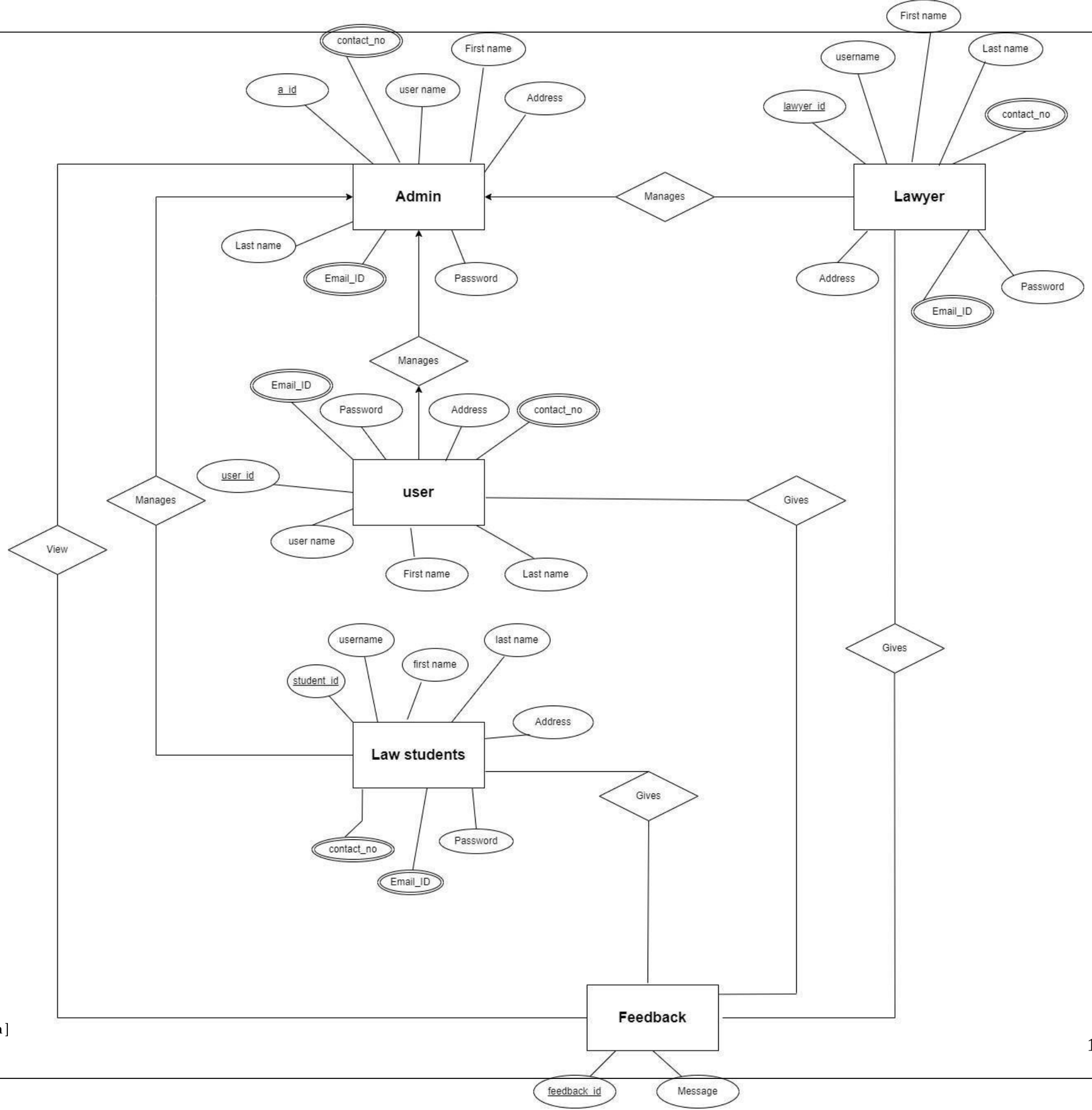
3.2 ER-Diagram

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system. ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes. They mirror grammatical structure, with entities as nouns and relationships as verbs.

[Table 3: ER-Diagram Symbols]

Symbols	Description
	**Entity:** Data object is real world entity or thing. It is represented by a rectangle shape. An entity is an object or concept about which you want to store information.
	**Attributes:** An attribute is property of characteristic of an entity. It is represented by oval shape.
	**Relationship:** Entity are connected each other via relations. Generally, relationships in binary because there are two entities are related to each other.
	**Cardinality (One to One):** An instance of entity A can relate to one instances of entity B.
	**Cardinality (One to Many):** An instance of entity A can relate to one or many instances of B but we can only relate one instance of A.
	**Cardinality (Many to One):** One or more instances of entity A can relate to one instances of B.
	**Cardinality (Many to Many):** One or more instances of entity A can relate to one more instance of entity B.

ER – Diagram:



[Figure 7:ER Diagram]

CHAPTER-4
SYSTEM MODELING

4.1 Database Dictionary

1. **Table Name:** admin
   Primary Key: a_id

[Table 1: admin]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	a_id	Int (3)	Primary key	Admin's id
2	Fname	Varchar (15)	Not null	Admin's First name
3	Lname	Varchar (15)	Not null	Admin's last name
5	Password	Varchar (15)	Not null	Password of admin
6	contact_no	Big_int (13)	Unique key	Contact no of admin
7	Email	Varchar (30)	Unique key	Email of admin
8	Address	Varchar (100)	Not null	Address of admin

2. **Table Name:** Normal user
   Primary Key: user_id

[Table 2: Normal user]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	user_id	Int (3)	Primary key	Id of user
2	Username	Varchar (10)	Unique key	User's name
3	First name	Varchar (15)	Not null	User's first name
4	Lastname	Varchar (15)	Not null	User's last name
5	Password	Varchar (10)	Not null	User's password
6	contact no	Big int (13)	Unique key	User's contact_no
7	Email	Varchar (30)	Unique key	User's email
8	Address	Varchar (100)	Not null	User's address

3. Table Name: Lawyer

Primary Key: lawyer_id

[Table 3: Lawyer]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	lawyer_id	Int (3)	Primary key	Id of lawyer
2	Username	Varchar (10)	Unique key	lawyer's user name
3	First name	Varchar (15)	Not null	lawyer's first name
4	Lastname	Varchar (15)	Not null	lawyer's last name
5	Password	Varchar (10)	Not null	lawyer's password
6	contact no	Big int (13)	Unique key	lawyer's contact no
7	Email	Varchar (30)	Unique key	lawyer's email
8	Address	Varchar (100)	Not null	lawyer's address

4. **Table Name:** Law Students

Primary Key: student_id

[Table 4: law students]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	student_id	Int (3)	Primary key	Id of law student
2	Username	Varchar (10)	Unique key	student's user name
3	First name	Varchar (15)	Not null	student's first name
4	Lastname	Varchar (15)	Not null	student's last name
5	Password	Varchar (10)	Not null	student's password
6	contact no	Big int (13)	Unique key	student's contact no
7	Email	Varchar (30)	Unique key	student's email
8	Address	Varchar (100)	Not null	student's address

5. **Table Name:** feedback
   Primary Key: feedback id

[Table 5: feedback]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	Feedback id	Int (3)	Primary key	feedback's id
2	feedback message	Varchar (15)	Not null	feedback's message

6. **Table Name:** Blog
   Primary Key: blog id

[Table 6: blog]

SR.NO	FIELD NAME	DATATYPE(SIZE)	CONSTRAINT	DESCRIPTION
1	Blog id	Int (3)	Primary key	blog's id
2	Blog message	Varchar (15)	Not null	blog's message

CHAPTER-5

TECHNICAL SPECIFICATION

5.1 Hardware Specification:

- **5.1.1 Ram:** 4GB
- **5.1.2 Hard drive Storage Needed:** 200GB
- **5.1.3 Other Hardware Requirements:** None

5.2 Platform:

- **5.2.1 Supported Operating System:** Windows XP and above LINUX and MacOS is compatible.
- **5.2.2 Programmer Server:** Apache Server 2.2.

5.3 Framework:

- **5.3.1 Mark-up Language:** HTML4 and HTML5.
- **5.3.2 Programming Language:** PHP 5.3

5.4 Technical Specification:

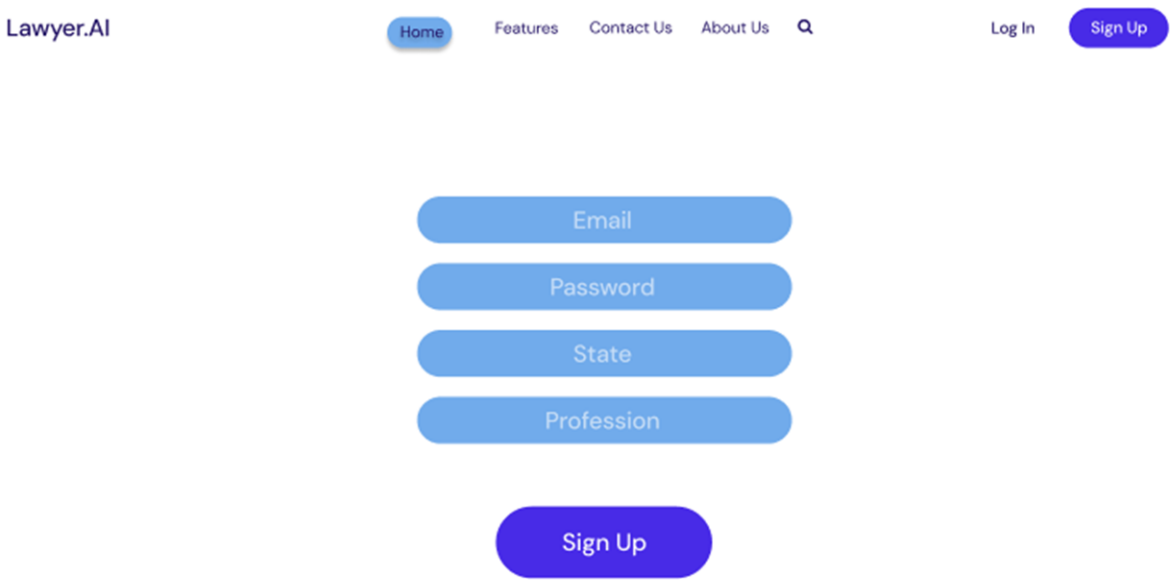
- **5.4.1 Front-End:** PHP 5.3
- **5.4.2 Back-End:** MySQL 5.5.24
- **IDE Tools:** Sublime Text3 and Marco Media Dreamweaver.
- **UML Tools:** Microsoft Office Visio 2007
- **SRS Tools:** Microsoft Word 2016.

5.5 DESIGN LAYOUT

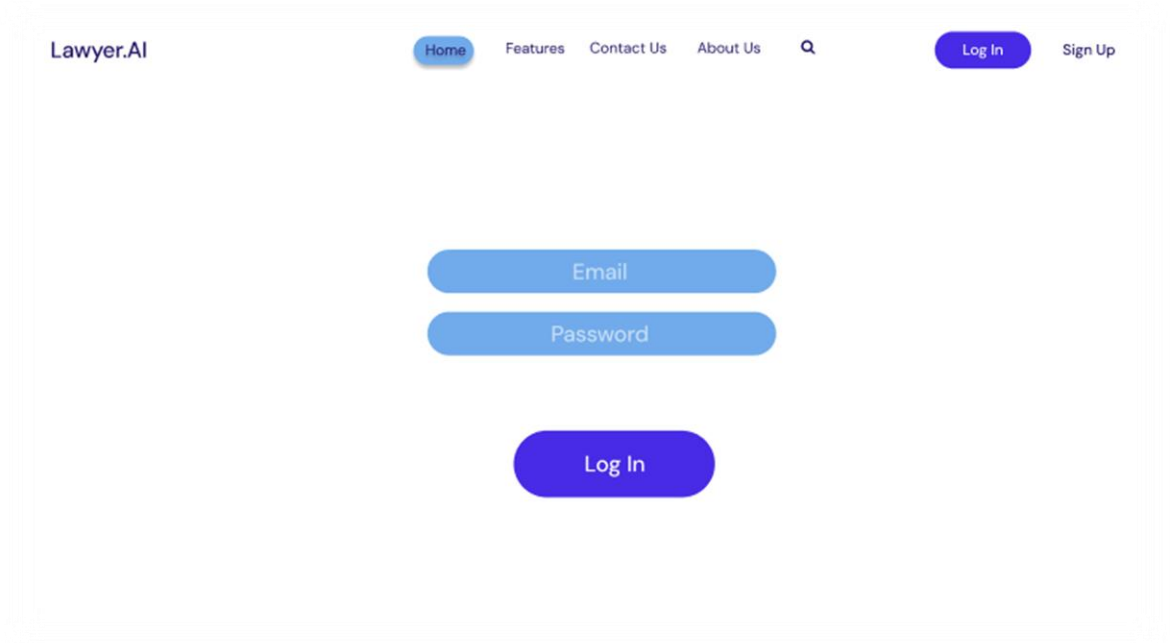
Homepage: -

[Figure 8: Homepage]

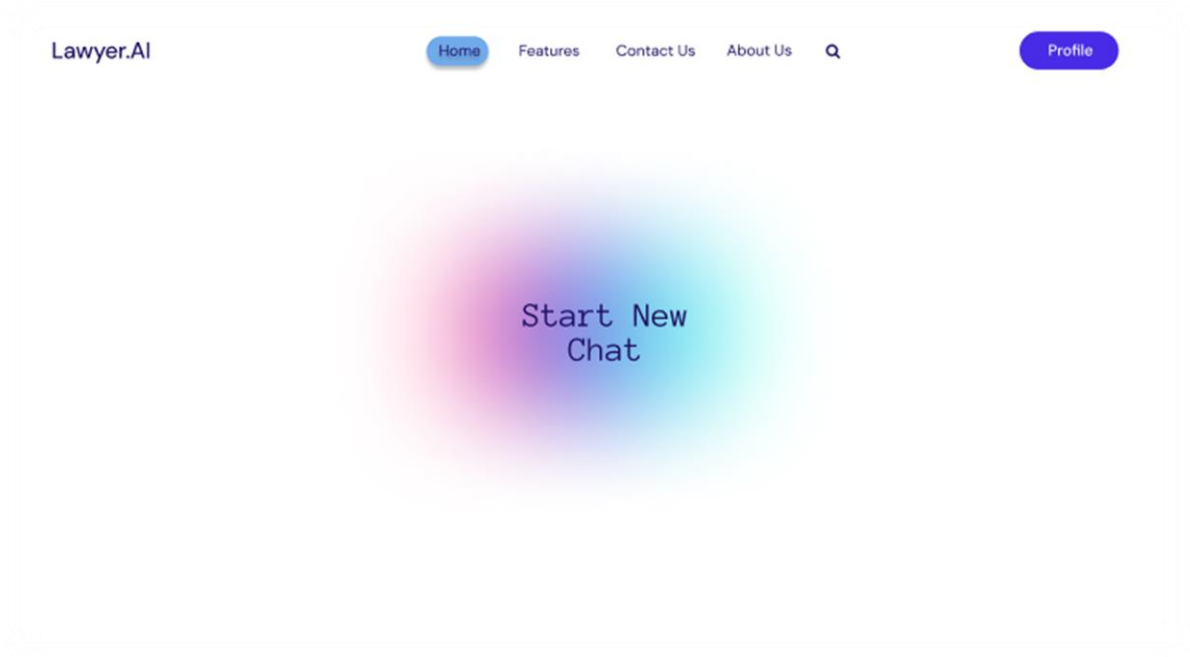
USER: -



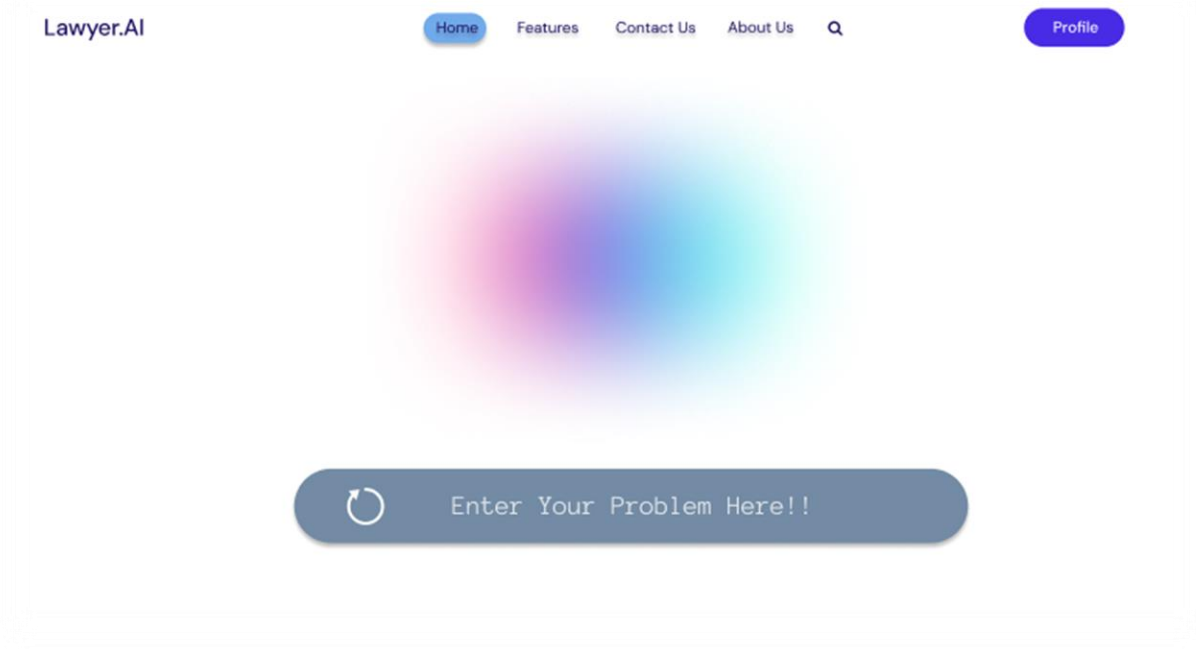
[Figure: Sign up page]



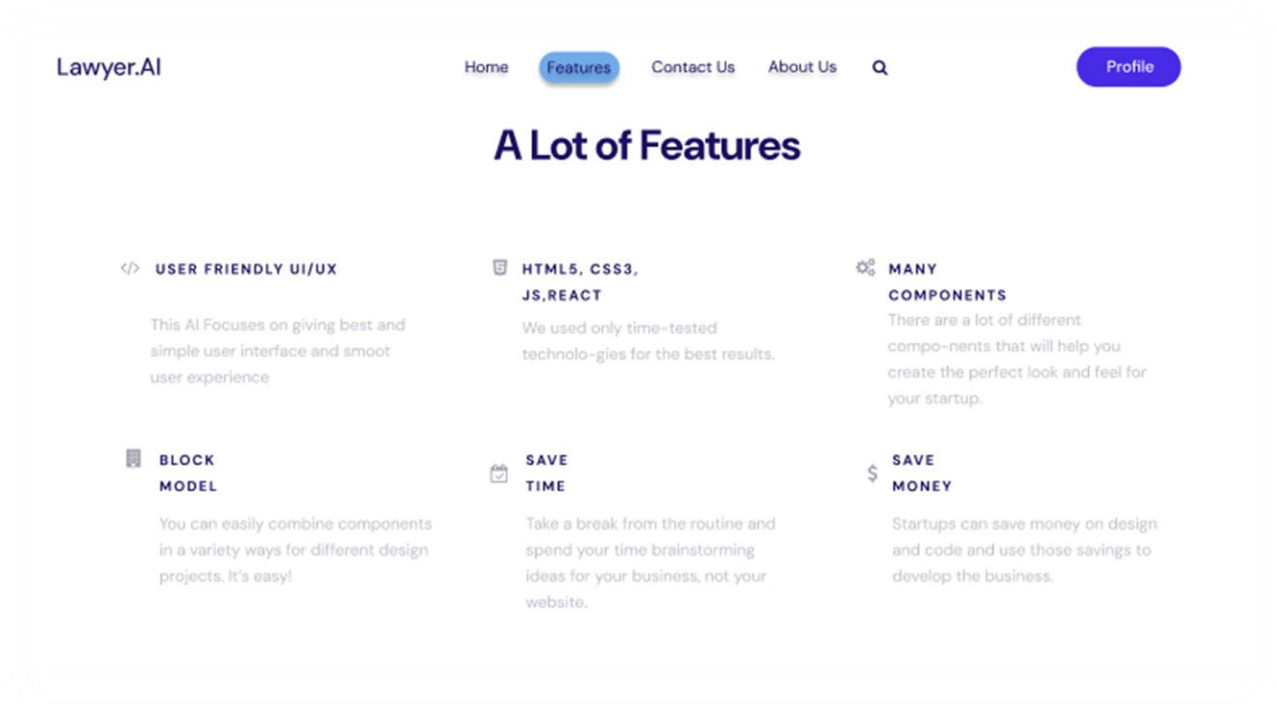
[Figure: Login page]



[Figure: Home Page]

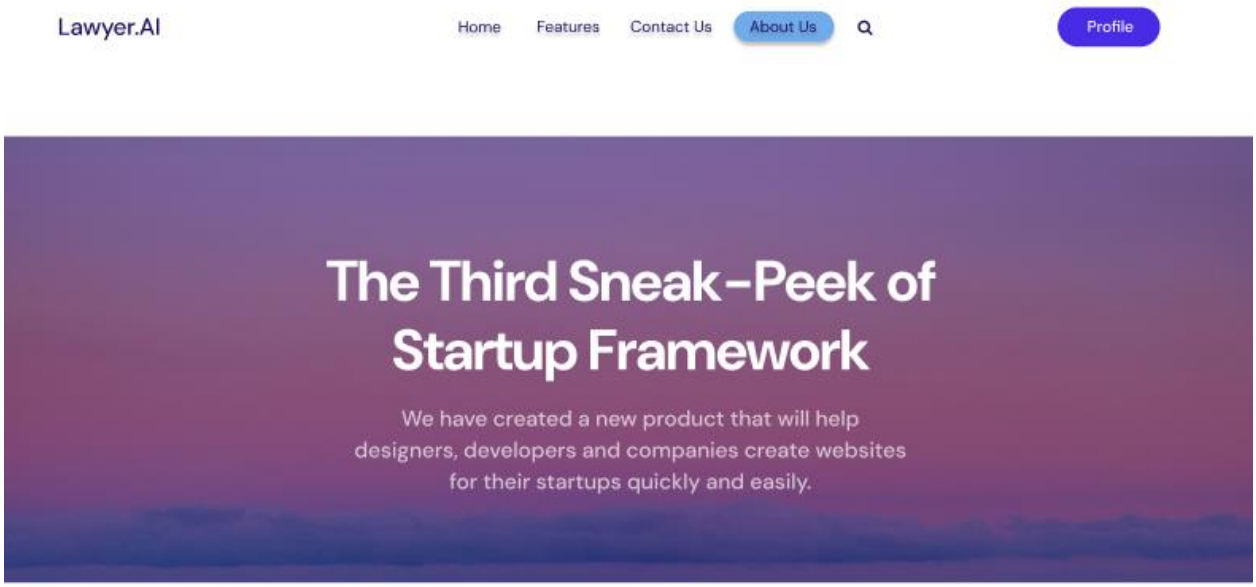


[Figure: Search Page]

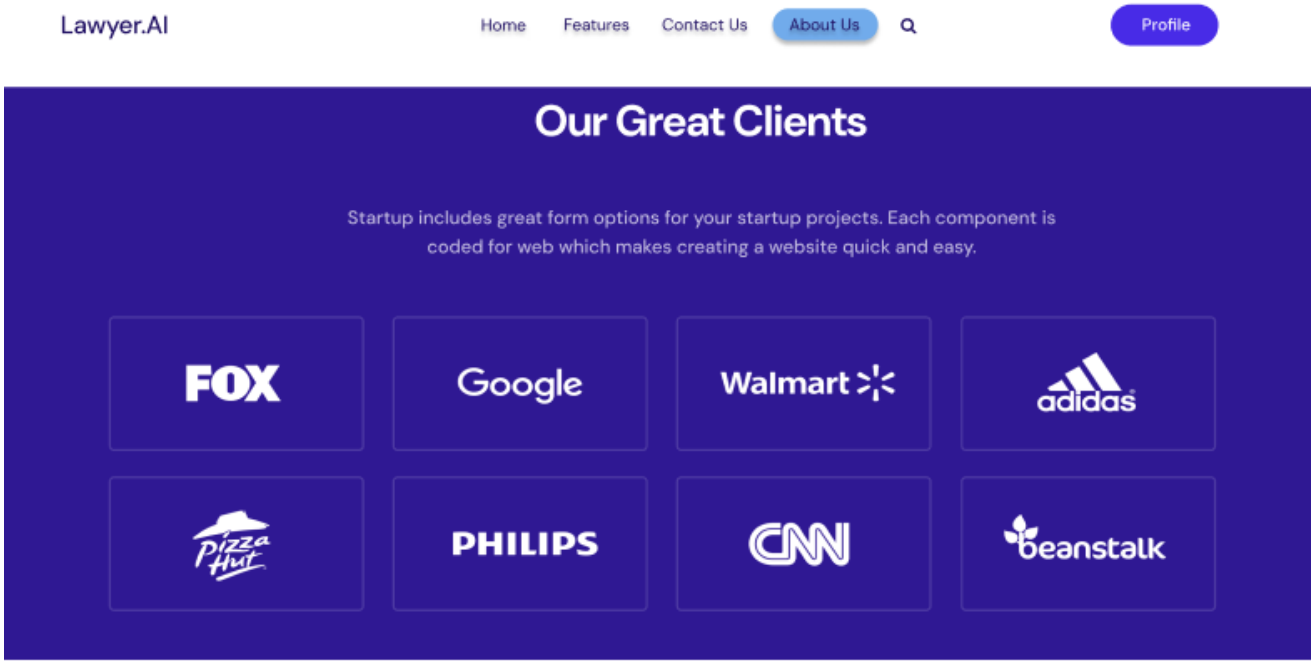


[Figure: Features Page]

[Figure: Contact Us Page]



[Figure: About Us Top Page]



[Figure: About Us Bottom Page]

CONCLUSION

Lawyer.AI documentation has successfully demonstrated the potential of AI-powered tools in revolutionizing the legal profession. By harnessing the capabilities of lawyers and law students they can streamline their workflow, improve efficiency, and enhance the quality of their legal writing. The documentation has provided a comprehensive guide on how Lawyer.AI is also for civilians for various legal tasks, including summarizing defined text, brainstorming cases, new laws & drafting documents. The Lawyer.AI documentation has shown that AI-powered can be a game-changer for lawyers, and it is up to them to harness its power to improve their practice.

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▪ BOOK REFERENCE

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[2] Natural Language Processing with Python by O'REILLY Authors: Steven Bird, Ewan Klein, Edward Loper

[3] AI For Lawyers Published by: Wiley Author : Noah Waisberg, Alexander Hudek

▪ WEB REFFERENCE

[1] Figma

Link: *https://www.figma.com/proto/7JdIl0n23oVVLbfGqlf2iU/Lawyer.AI?page-id=0%3A1&node-id=22-90&node-type=canvas&viewport=514%2C380%2C0.48&t=hxQwvzhuAp5f2Gd9-1&scaling=min-zoom&content-scaling=fixed*

[2] Medium

Link: *https://learningdaily.dev/what-is-web-scraping-and-how-we-can-use-it-71e50135a8a2*

[3] Medium

Link: *https://medium.com/bb-tutorials-and-thoughts/mastering-nlp-a-comprehensive-guide-for-developers-b5788d7dc00e*

[4] Medium

Link: *https://medium.com/@dhillemann/ai-in-law-7-myths-you-thought-were-true-efb0e357ca33*