CHAPTER-3
DESIGN

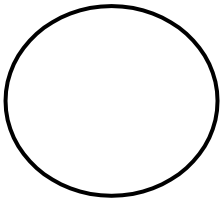
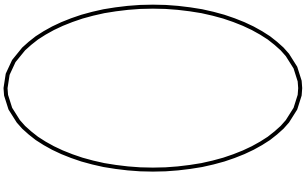
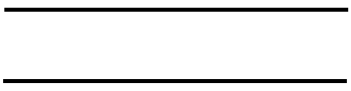
3.1 Data Flow Diagram

- 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.

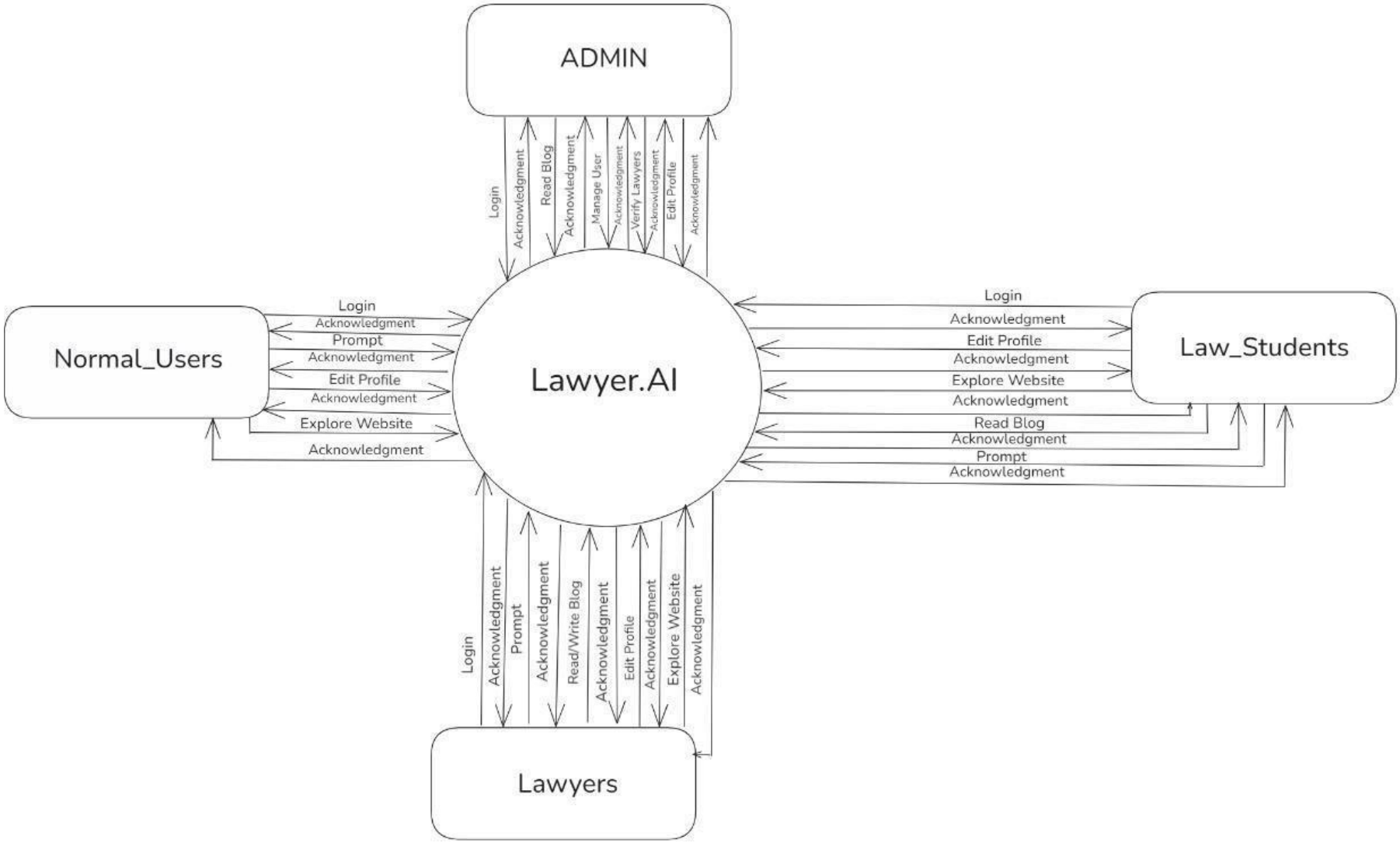
- DFD has often been used due to the following reasons:

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]

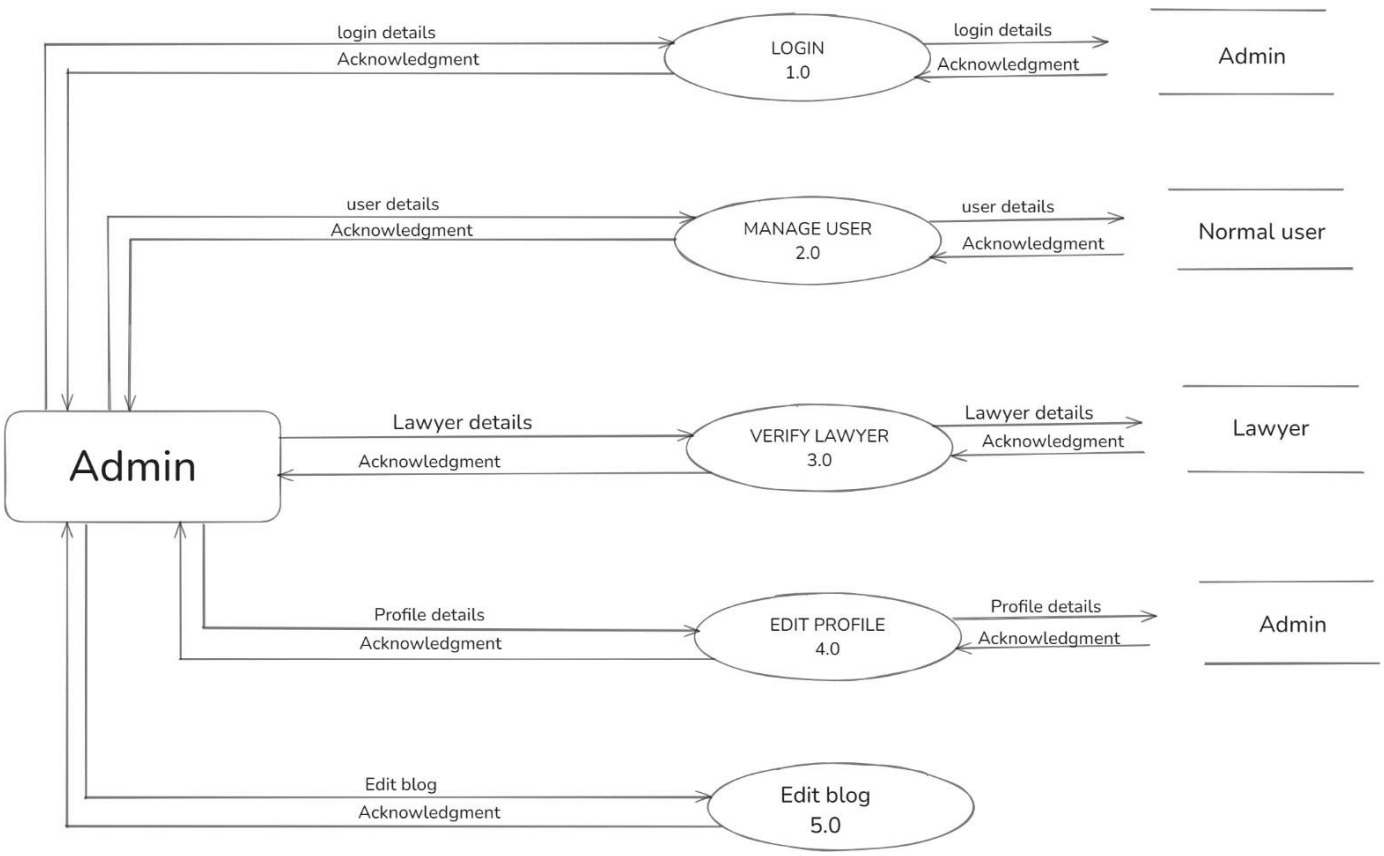
Symbols	Description
	**Entity:** Entities are external to the system which interacts by inputting the data.
	**System:** It shows the system name.
	**Process:** It shows the part of the system that transforms into outputs.
	Data Flow: It passes the data from one part to another.
	**Data Store:** Data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

Level 0: context



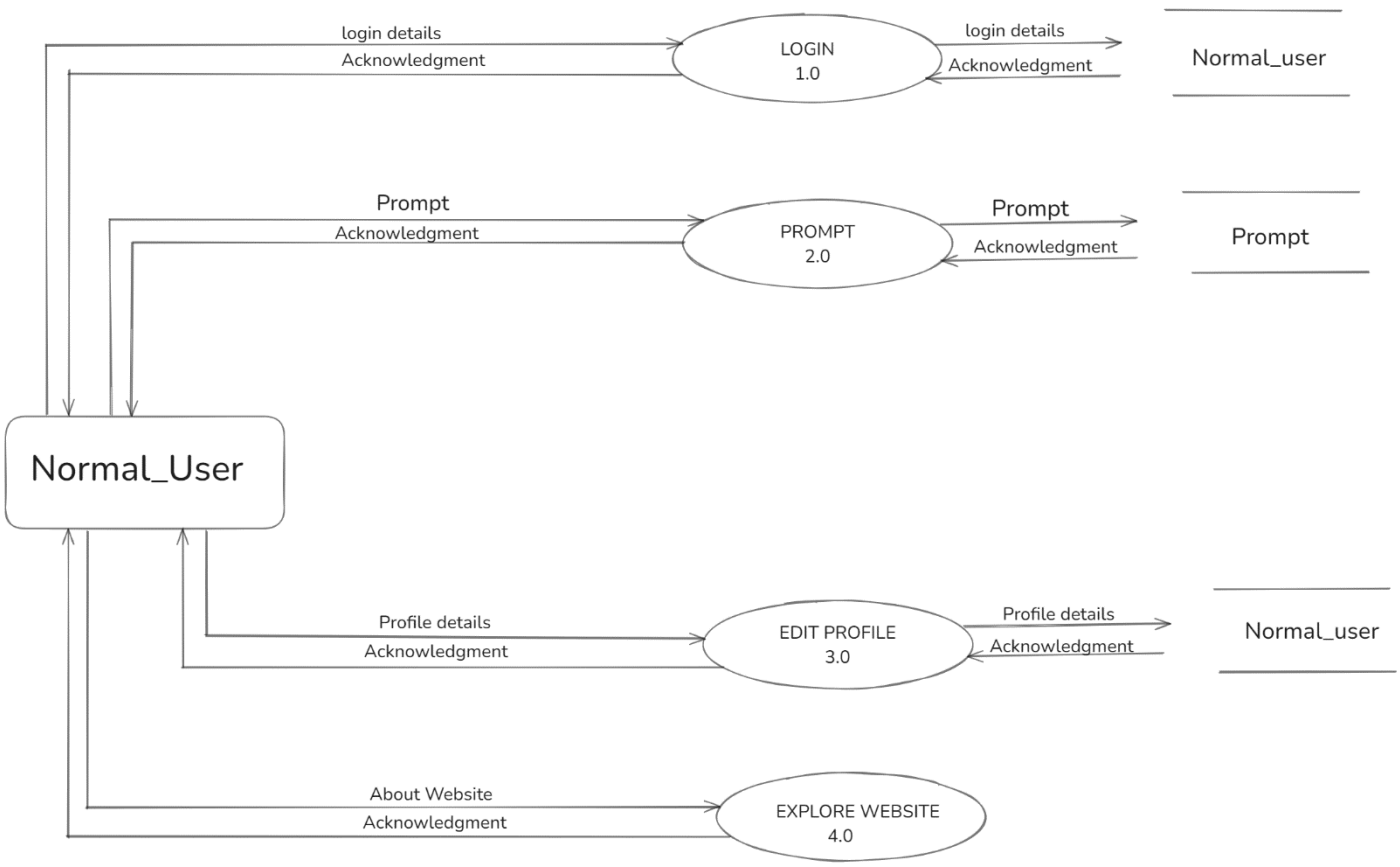
[Figure 2: Context level]

Level 1: Admin



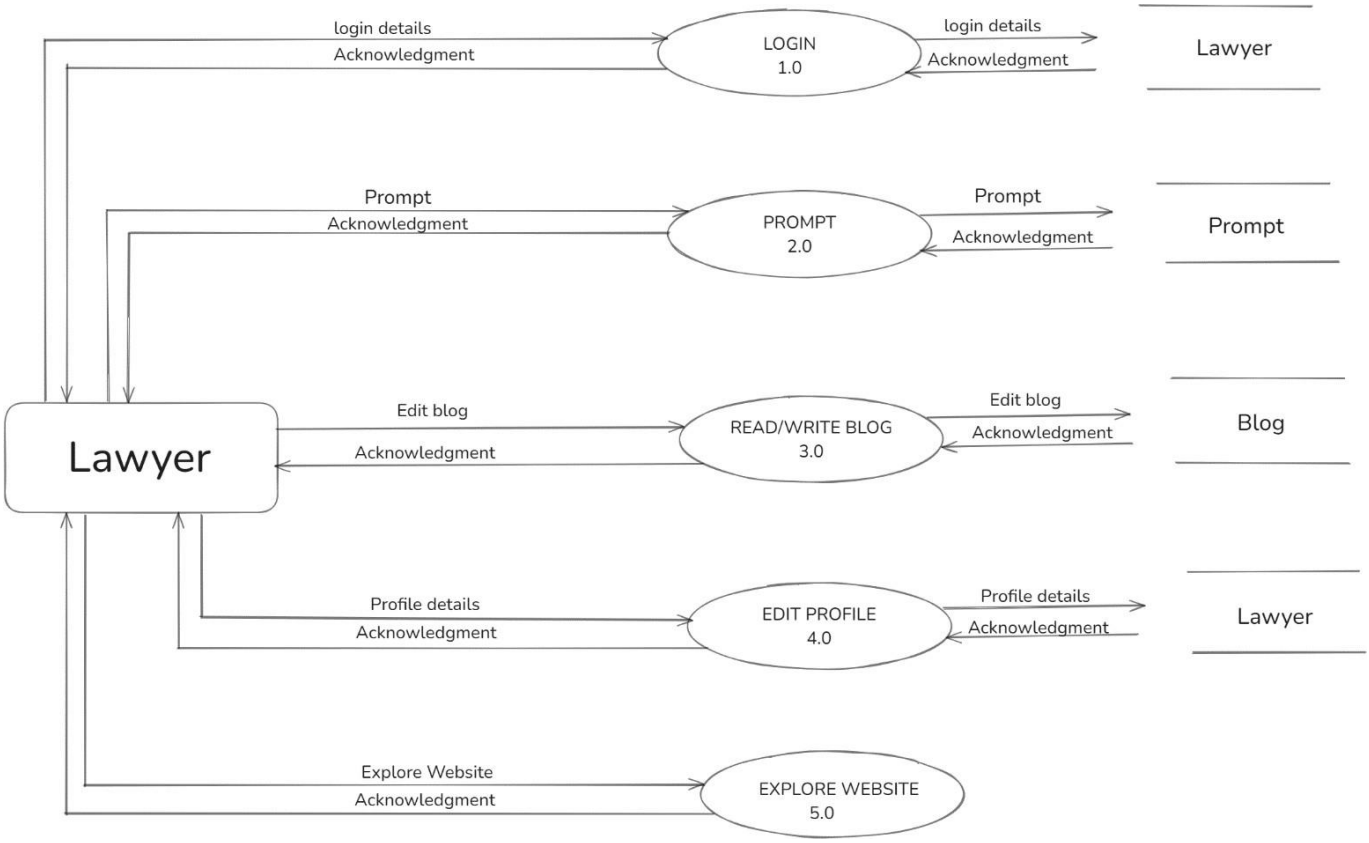
[Figure 3: DFD Level 1: Admin]

Level 1: Normal User



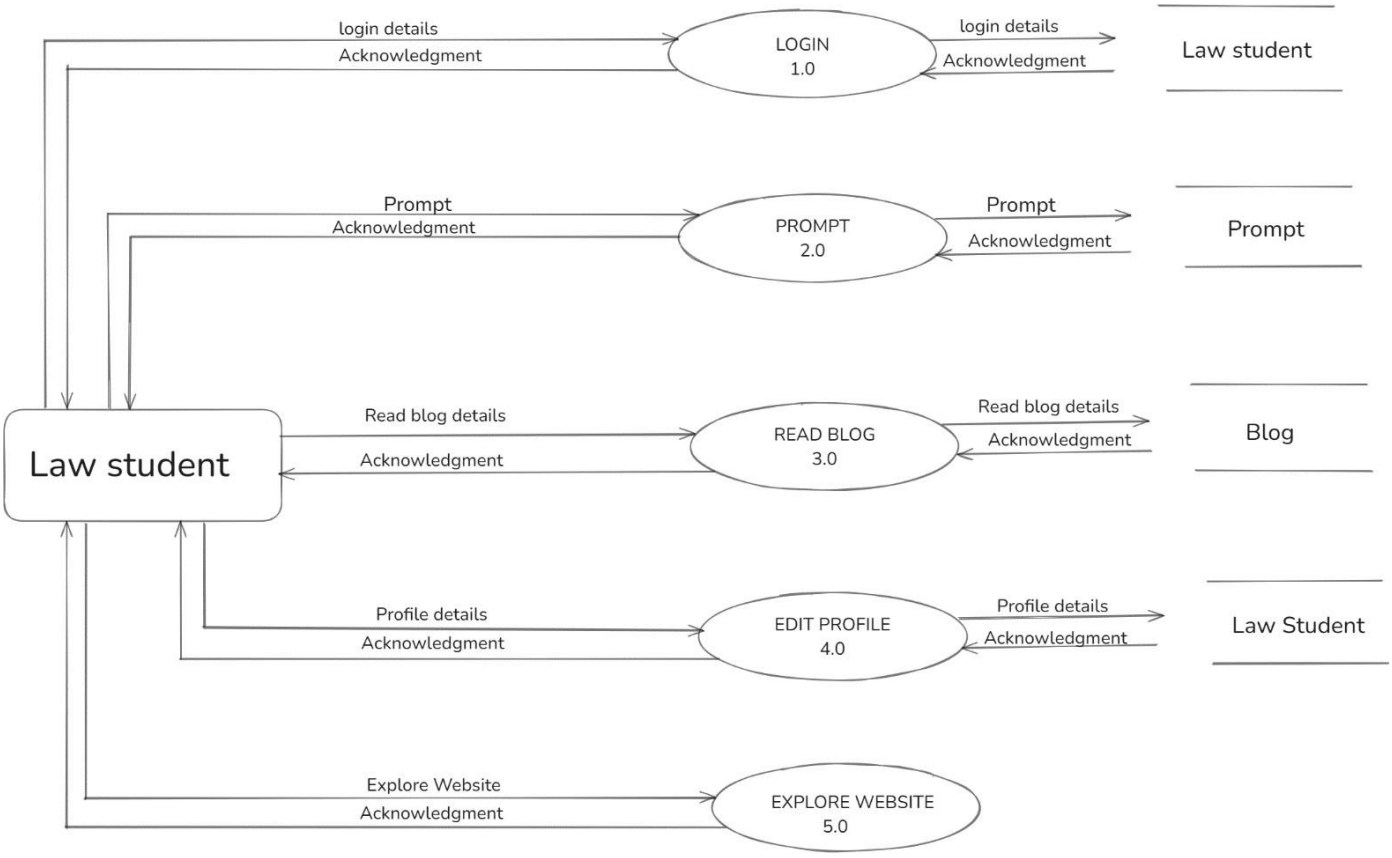
[Figure 4: DFD Level 1: Normal User]

Level 1: LAWYER



[Figure 5: DFD Level 1: Lawyer]

Level 1: Law Students

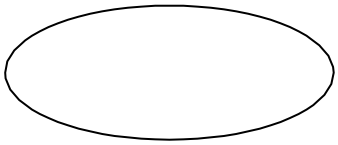
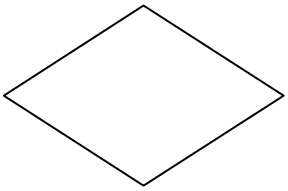
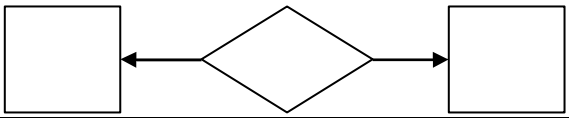
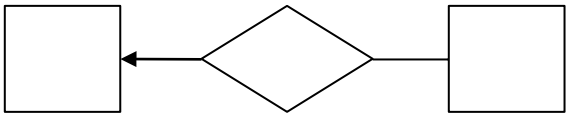
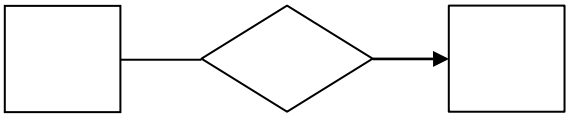
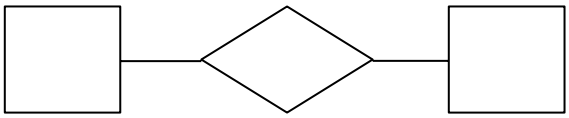


[Figure 6: DFD Level 1: Law Students]

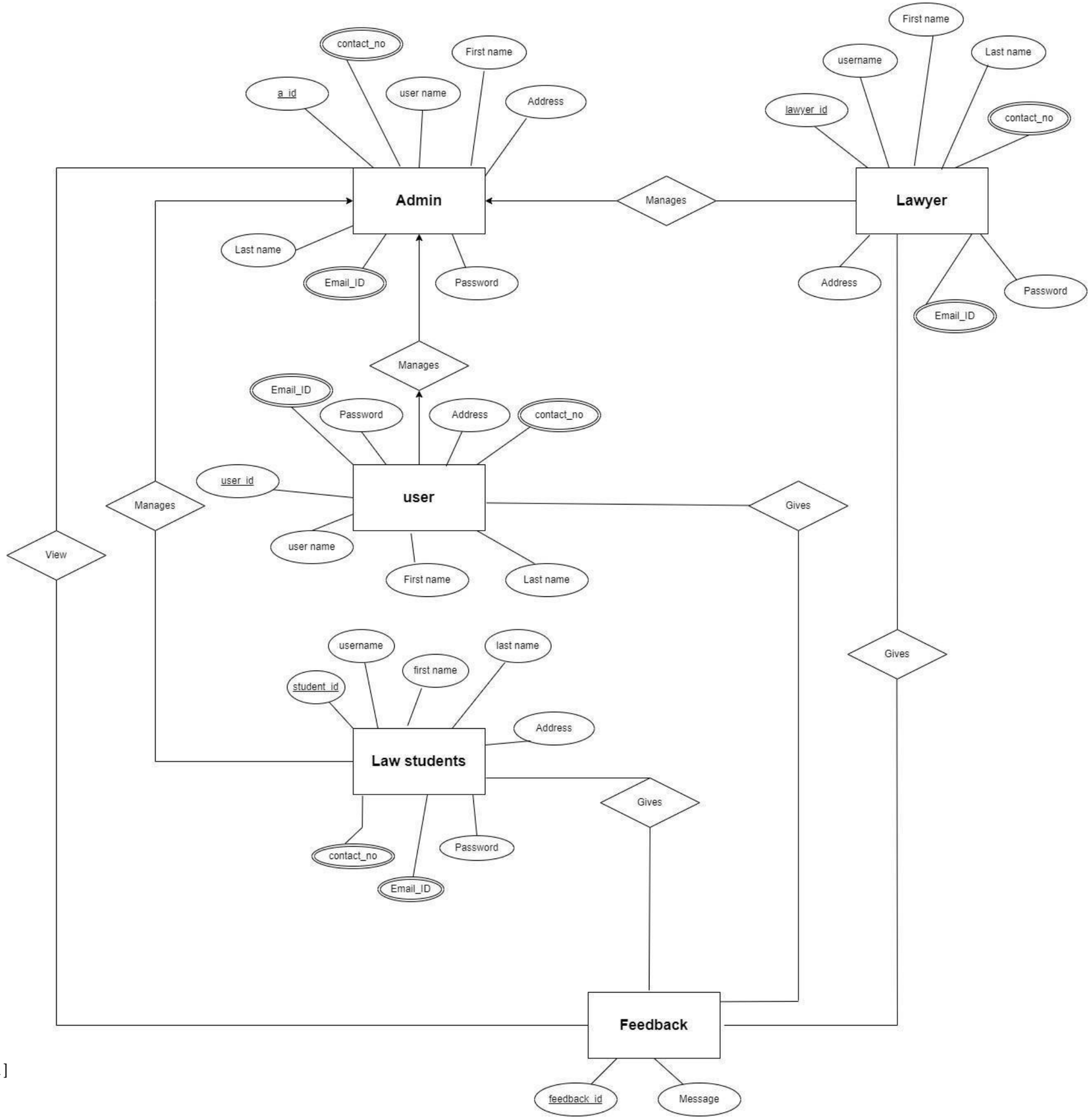
3.2 ER-Diagram

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