

DESIGN

ER- DIAGRAMS

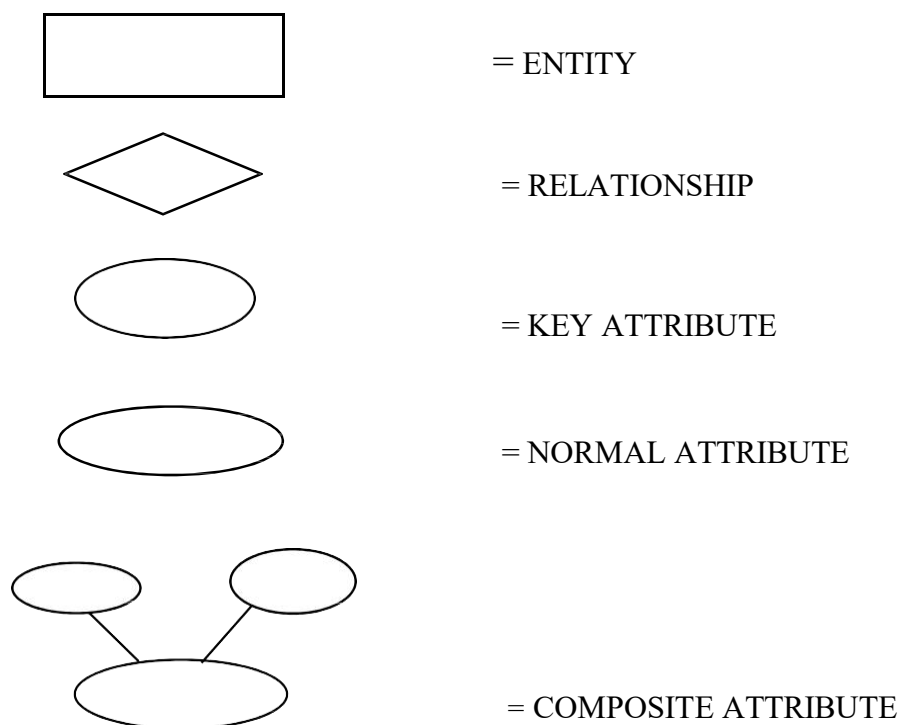
ER diagrams are used to represent the E-R model in a database, which makes them easy to convert into relations (tables). ER diagrams provide the purpose of real-world modelling of objects which makes them intently useful.

ER diagrams require no technical knowledge and no hardware support. These diagrams are very easy to understand and easy to create even for a naive user.

It gives a standard solution for visualizing the data logically.

Symbols Used in ER Model

ER Model is used to model the logical view of the system from a data perspective which consists of these symbols:



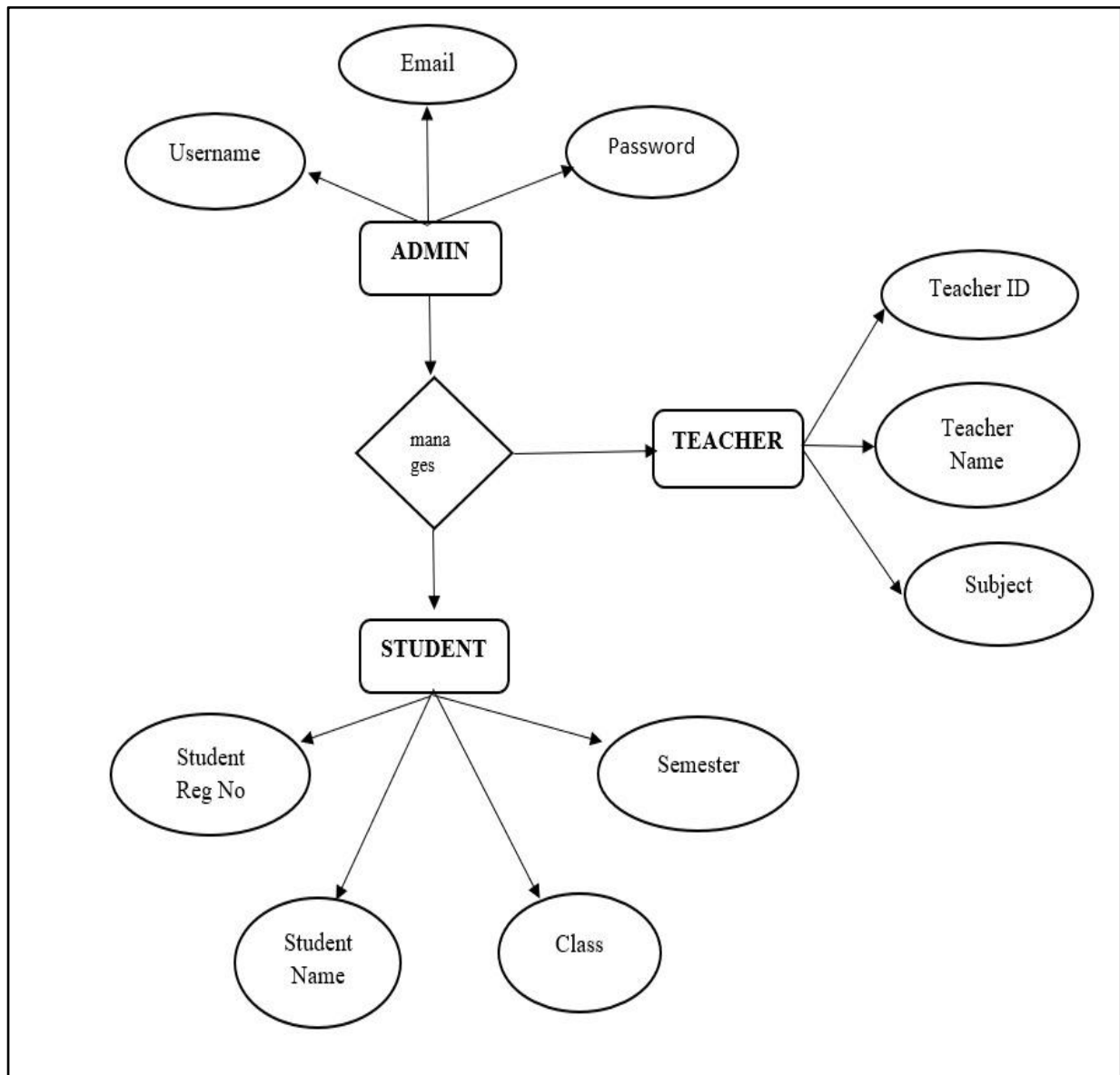
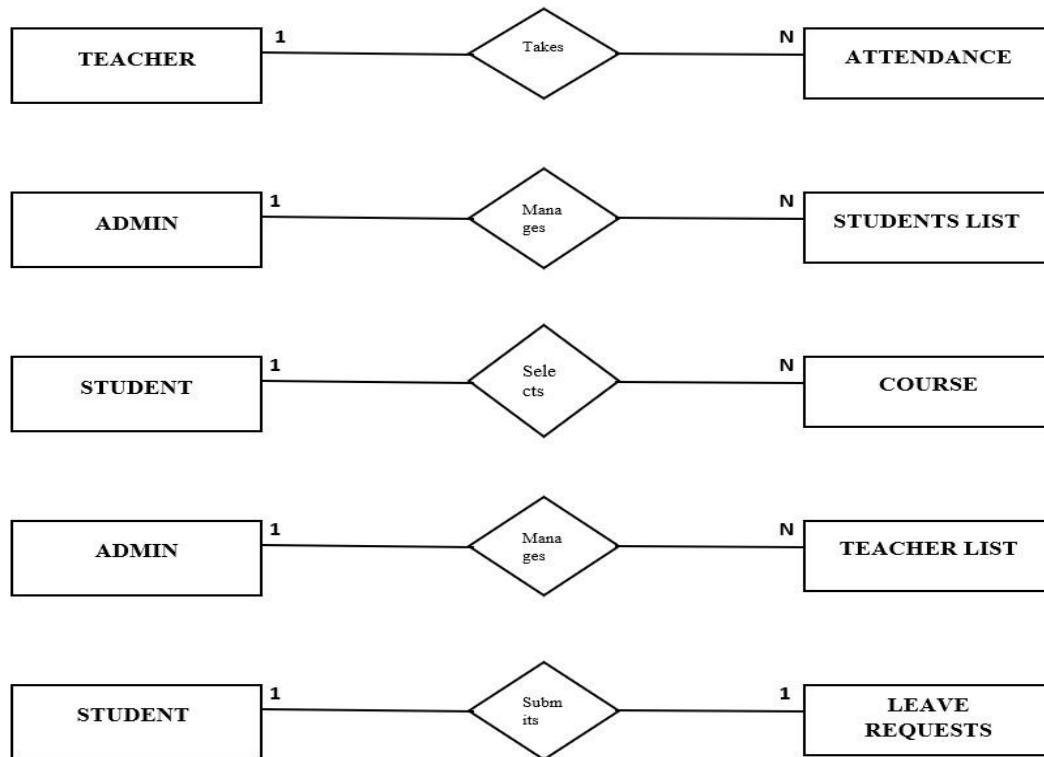


Figure 4.1 : Entity Relationship diagram

CARDINALITY ENTITY DIAGRAM:

The number of times an entity of an entity set participates in a relationship set is cardinality.

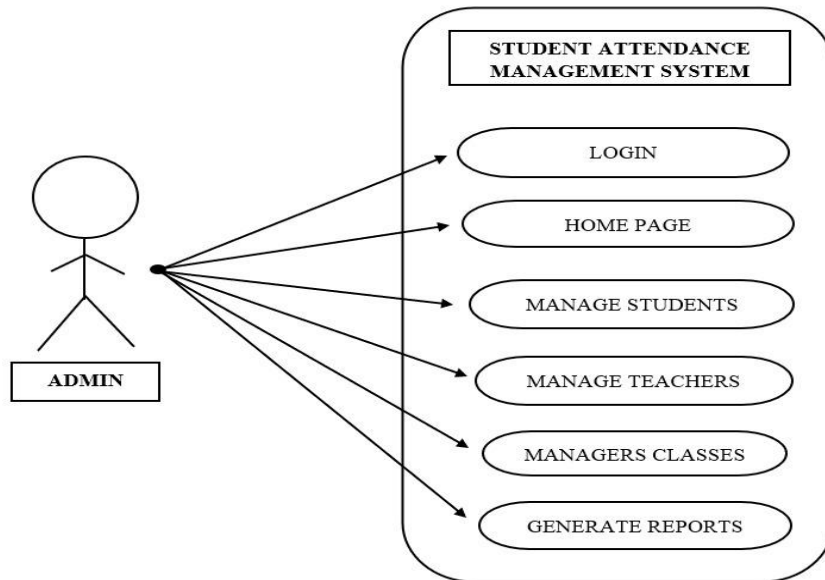


Cardinality Entity Diagram

USE CASE DIAGRAM :

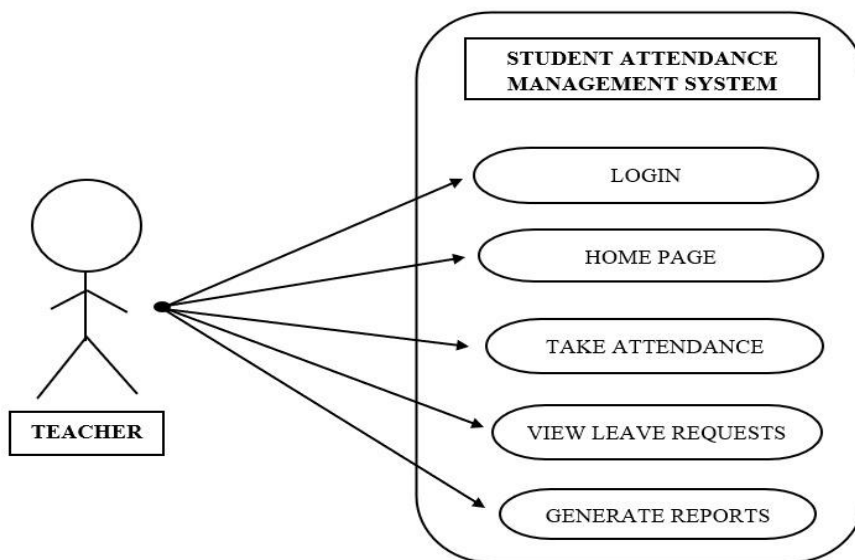
A use case diagram is a dynamic or behaviour diagram in UML. Use case diagrams model the functionality of a system using actors and use cases. Use cases are a set of actions, services, and functions that the system needs to perform. A UML diagram is a diagram based on the UML(Unified Modeling Language) with the purpose of visually representing a system along with its main actors, roles ,actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system.

USE CASE DIAGRAM FOR ADMIN:



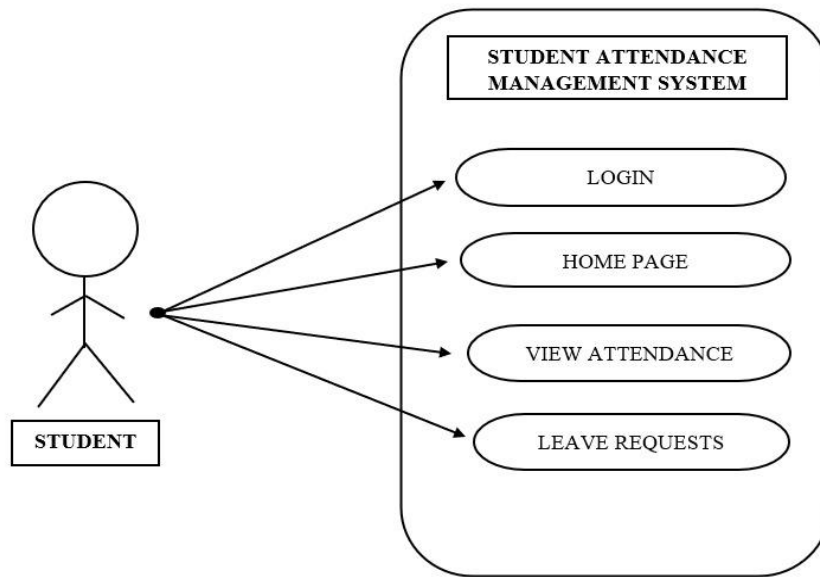
Admin use case diagram

USE CASE DIAGRAM FOR TEACHER:



Teacher use case diagram

USE CASE DIAGRAM FOR STUDENT:



Student use case diagram

DATA FLOW DIAGRAM:

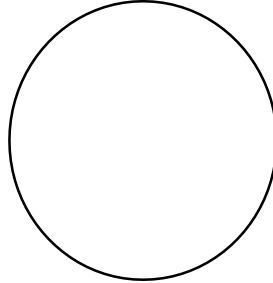
A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. It differs from the system flowchart as it shows the flow of data through processes instead of hardware. The DFD a way of expressing the system in a graphical format in a modular design was developed by Larry Constrains. This DFD is also known as “Bubble Chart” has the purpose to classify the system requirement and to identify the major information that will be a program in system design.

A Data Flow Diagram is logical model of the system and shows the flow of the data and the flow of logic so this all thing describes what takes place in a proposed system, not how the activities are accomplished. We have noted that the DFD describes what the flow is rather than how they are processed, so it means the DFD doesn't depend on the hardware, software, data structure or file organization.

DFD consist of a series of symbols joined together by a line. There may be a single DFD for the entire system or it may be exploded into various levels.

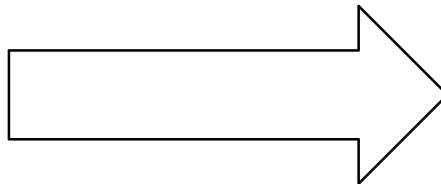
Circle :

The processes are represented by circle shows what the action take on the data-checking. A process accepts input data needed for the processes to be carried out and produces data that it passes on to another part of the DFD.



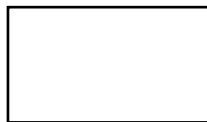
Arrow :

Arrow defines direction of the data flow. It shows the direction between a data store to another data store, source to processes.



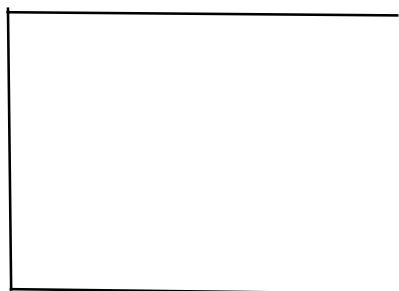
Square :

Square indicate the source and destination of the system.



Open Rectangle :

A database is a repository of data here it represented by open-ended box. This information may be stored either temporarily or permanently by admin. Data may be changed or updated.



LEVEL 0/CONTEXT FREE DFD:

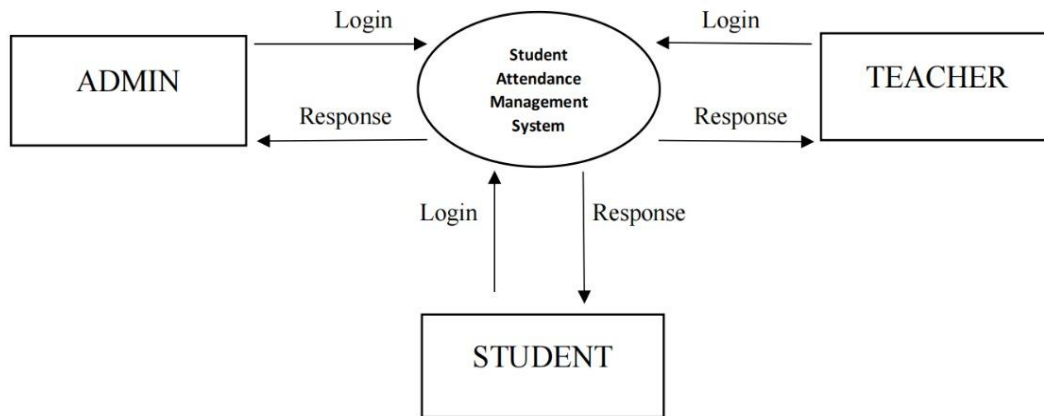


Figure 1: Level 0 / Context Free Diagram

LEVEL ONE DFD:

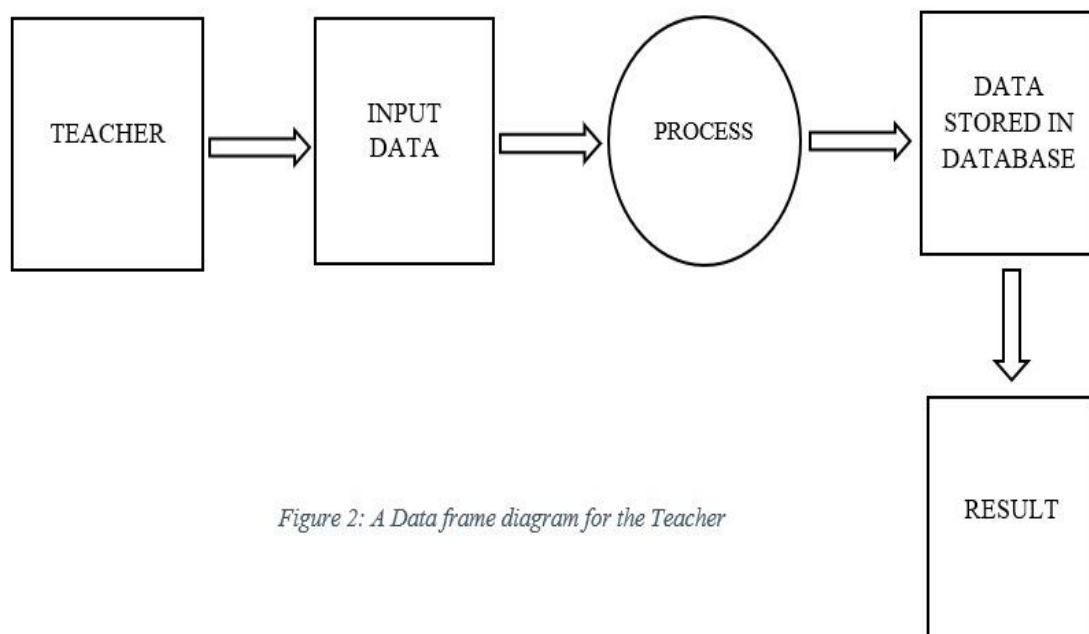


Figure 2: A Data frame diagram for the Teacher

LEVEL TWO DFD: LOGIN

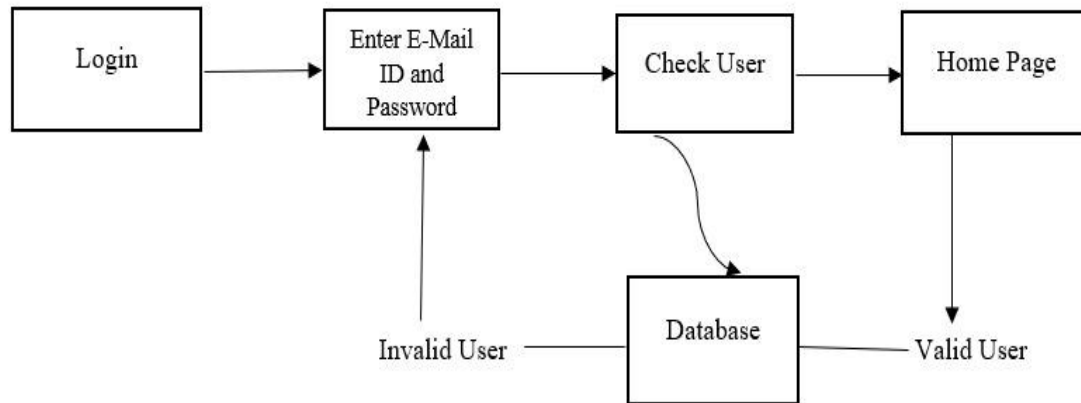


Figure 3: Level Two DFD

LEVEL THREE DFD: ADMIN

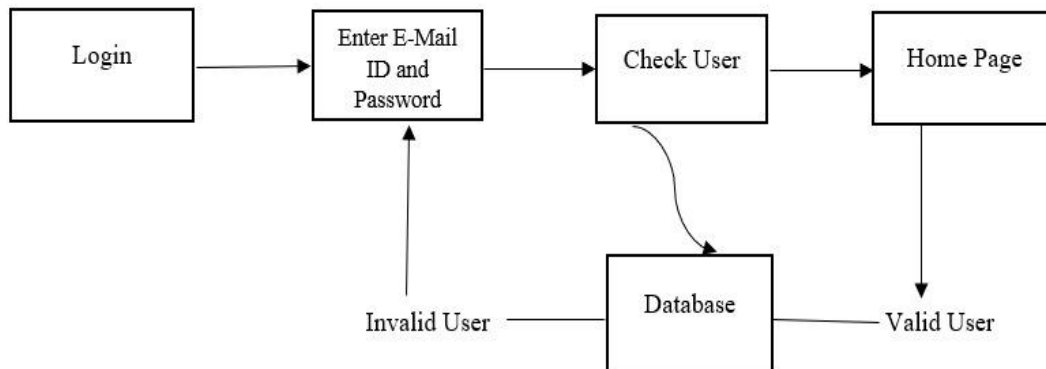


Figure 4: Level Three DFD