Tutoring Platform Documentation

Made By: Naol Feyisa

Contents

Acknowledgment

We want to express our sincere gratitude to Instructor Mr. Kassahun for his priceless advice, steady backing, and knowledge during the creation of our database system project on Tedor tutoring company. His valuable input and support have been crucial in influencing our project and improving its quality.
We are thankful to our colleagues for working together and providing helpful feedback that greatly contributed to the success of this project.

Moreover, we want to thank the educational institution for giving us the necessary resources and chances to complete this project.

1.Introduction

1.1 Background

Tutoring systems play a crucial role in supporting student learning, enhancing academic achievement, and fostering a lifelong love for learning. By providing personalized instruction, subject expertise, flexible access, skill development, monitoring, feedback, and a supportive environment, tutoring systems empower students to reach their full potential and succeed academically. Educational system often involves complex interactions between students, guardians, tutors, and administrative staff. To streamline these interactions and enhance efficiency, a comprehensive database management system is crucial.This tutoring system provides personalized learning experiences tailored to the individual needs, learning styles, and academic goals of each student.Tutors work closely with students to identify areas of weakness, reinforce understanding of concepts, and facilitate mastery of subject matter.

1.2 Purpose of the System

The primary purpose of the system is to facilitate seamless management of educational operations, including student enrollment, tutor assignments, course scheduling, and administrative tasks. By centralizing data and automating processes, the system aims to improve communication, increase transparency, and enhance overall productivity within educational institutions.

This system aims to provide these services:

- It allows for tracking student enrollment history, including subjects enrolled, tutor assignments, session schedules, and payment details.
- It maintains tutor profiles, including contact information, subject expertise, and teaching schedules, facilitating efficient tutor allocation and management.

- It supports the management of tutoring curriculum by linking subjects to tutors and students, tracking enrollment in specific subjects, and managing subject-specific resources.
- It allows for tracking student attendance in tutoring sessions, recording session participation, and monitoring student engagement.
- It supports billing and invoicing processes, tracks payment histories, and generates financial reports for analysis and reconciliation.
- It facilitates staff management by storing staff profiles, contact details, salaries, and department assignments, ensuring efficient staffing and resource allocation.

1.3 Problems in the Existing System

Educational institutions face numerous challenges in managing student information, coordinating tutor assignments, and ensuring effective communication between stakeholders. Manual processes are often time-consuming, error-prone, and inefficient, leading to delays and inaccuracies in data management. This project addresses these challenges by developing a robust database management system tailored to the unique needs of educational institutions.

1.4 Data requirements of the System

The Tutoring system requires a comprehensive data set for optimal functionality. Here's a breakdown of the key data categories:

1. **Student Information:** This includes comprehensive details like full name, unique ID number, gender, contact information (address, phone number).
2. **Guardian Information:** Information about the guardian of the student is crucial, including name, unique ID, gender, and contact details (address, phone number).
3. **Tutor Information:** This includes details like full name, unique ID number, gender, contact information (address, phone number).
4. **Subjects Taught Details:** The name of the subject taught by the tutor and a unique identifier for each subject(ID) are essential.
5. **Enrollment management**: This core component stores the amount paid for the enrollment, the name of the location where the tutoring sessions take place, the number of days per week the tutoring sessions occur, the starting time of the tutoring sessions, the ending time of the tutoring sessions, the duration of each tutoring session.
6. **Staff Members Details:** This includes comprehensive details like full name, unique ID number, gender,salary, contact information (address, phone number) and the department where the staff member works.
7. **Department Information:** A unique identifier for each department(ID), The name of the department, the number of staff members assigned to the department are all required.

These pieces of information are essential for effectively managing the tutoring system, including student enrollment, tutor assignments, session scheduling, financial transactions, staff management, and departmental organization. Additionally, further data attributes and requirements may be identified during the database design process to ensure the database adequately supports the needs of the tutoring system.

1.5 Scope of the System

This system encompasses various aspects related to managing and facilitating the tutoring services.Here's a breakdown of its scope:

- **Student Management:**The system manages student information, including enrollment, personal details, contact information, and guardian details.It facilitates the tracking of student progress, academic performance, and enrollment history.
- **Tutor Management:**The system oversees tutor assignments, profiles, subject expertise, contact information, and availability.It facilitates the scheduling of tutoring sessions and the allocation of tutors to students based on subject requirements and availability.
- **Subject and Curriculum Management:**The system manages subjects offered for tutoring, including subject names, IDs, and curriculum details.It facilitates the mapping of subjects to tutors and students, ensuring alignment with academic requirements and learning objectives.
- **Enrollment and Session Management:**The system handles the enrollment process, including student registration, subject selection, session scheduling, and payment processing.It tracks session details such as location, duration, days per week, starting and ending times, and attendance.
- **Financial Management:**The system manages financial transactions related to tutoring services, including payment processing, invoicing, billing, and revenue tracking.It generates financial reports, statements, and analytics to monitor revenue streams, expenses, and profitability.
- **Guardian and Parent Communication:**The system facilitates communication with guardians and parents regarding student progress, session schedules, academic concerns, and administrative matters.It supports automated notifications, reminders, and updates to keep guardians informed and engaged in the tutoring process.
- **Staff and Department Management:**The system manages staff profiles, including tutors and administrative staff, with details such as contact information, roles, responsibilities, and department assignments.It oversees departmental organization, including department names, numbers, staff assignments, and resource allocation.
- **Reporting and Analytics:**The system generates reports, analytics, and performance metrics to evaluate student progress, tutor effectiveness, enrollment trends, financial performance, and operational efficiency.It provides insights and data-driven recommendations to inform decision-making, strategic planning, and continuous improvement initiatives.

Overall, the scope of the tutoring system encompasses all aspects of managing tutoring services, from student enrollment and tutor assignments to session scheduling, financial management, communication, staff administration, and performance evaluation. By effectively addressing these areas, the system aims to optimize the delivery of tutoring services and enhance student learning outcomes.

1.6. Database Development Methodology.

The project will use a relational database model with normalization rules for effective data organization and structure. The system will use SQL (Structured Query Language) for data manipulation and retrieval.

1.6.1. Data Sources and Collection Methods.

Data will be collected from multiple sources such as student enrollment forms,tutor applications and resumes,subject curriculum,session scheduling and attendance records,financial records and payment processing systems,communication platforms and feedback surveys,staff HR records and performance evaluations and departmental reports and administrative documents.

These data can be collected when students or guardians fill out forms with personal information, contact details, and enrollment preferences, tutors provide information about their qualifications, subject expertise, teaching experience, contact details, and availability.Subject curriculum and syllabi outline the topics, learning objectives, and assessment criteria for each subject.Session schedules are planned and managed using scheduling software or spreadsheets. Attendance records are collected manually or through electronic attendance tracking systems during tutoring sessions.Financial data, including payment amounts, transaction dates, and payment methods, is collected through billing software, accounting systems, or payment processing platforms.

1.6.2. Database Analysis and Design Methods

The system will use Entity-Relationship Diagrams (ERD) to identify relationships among students, tutors, departments and other entities. Normalization optimizes the database, reduces redundancy, and improves data integrity.

1.7 Development Tools, Platforms, and Technologies.

The patient tracking system is built using SQL (Structured Query Language) programming language and MySQL Workbench 8.0 CE Database Management System.

2.Database Design

2.1 Conceptual Database Design

2.1.1 Entities Identification and Description

Data Modeling for Tutoring System

This section outlines the conceptual design of the tutoring system's database. The design identifies eight key entities (I-VIII) that represent the core components of the system.

I.Student Entity: Represents individuals who enroll in tutoring programs. Each student has a unique identifier and may be associated with a guardian.

II.Guardian Entity: Represents the guardians or parents responsible for the students enrolled in tutoring programs. Each guardian has a unique identifier and may be associated with one or more students.

III.Tutor Entity: Represents the tutors who provide instruction to students. Each tutor has a unique identifier and may teach multiple subjects.

IV.Subjects Taught Entity: Represents the subjects taught by each tutor. Each entry in this entity links a tutor to a subject they teach.

V.Subject Entity: Represents the subjects offered for tutoring. Each subject has a unique identifier and may be taught by multiple tutors.

VI.Enrollment Entity: Represents the enrollment of students in tutoring programs. Each enrollment record links a student to a tutor, subject, and other details such as payment amount and session schedule.

VII.Staff Entity: Represents the staff members involved in tutoring operations, such as administrative staff. Each staff member has a unique identifier and may be assigned to a department.

VIII.Department Entity: Represents the departments within the tutoring organization, such as administrative departments or subject-specific departments. Each department has a unique identifier and may have multiple staff members assigned to it.

2.1.2 Attributes Identification and Description

· **Student**

- **Student ID:** A unique identifier for each student.
- **First Name:** The first name of the student.
- **Last Name:** The last name of the student.
- **Sex:** The gender of the student.
- **Region:** The region where the student resides.
- **Town:** The town or locality within the region where the student resides.
- **Phone Number:** Contact information for the student.
- **Guardian ID:** A reference to the guardian entity to establish the relationship between students and their guardians.

· **Guardian**

- **Guardian ID:** A unique identifier for each guardian.
- **First Name:** The first name of the guardian.
- **Last Name:** The last name of the guardian.
- **Sex:** The gender of the guardian.
- **Region:** The region where the guardian resides.
- **Town:** The town or locality within the region where the guardian resides.
- **Guardian Phone Number:** Contact information for the guardian.

· **Tutor**

- **Tutor ID:** A unique identifier for each tutor.
- **First Name:** The first name of the tutor.
- **Last Name:** The last name of the tutor.
- **Sex:** The gender of the tutor.
- **Phone Number:** Contact information for the tutor.
- **Address:** The address of the tutor, including region and town.

❖ Since subjects taught is a multivalued attribute we create a unique table for it.

· **Subjects Taught**

- **Tutor ID:** A reference to the tutor entity to associate subjects with tutors.
- **Subject Name:** The name of the subject taught by the tutor.

· **Subject**

- **Subject ID:** A unique identifier for each subject.
- **Subject Name:** The name of the subject.

· **Enrollment**

- **Enrollment ID:** A unique identifier for each enrollment record.
- **Tutor ID:** A reference to the tutor entity for the tutor assigned to the enrollment.
- **Student ID:** A reference to the student entity for the enrolled student.
- **Subject ID:** A reference to the subject entity for the enrolled subject.
- **Payment Amount:** The amount paid for the enrollment.
- **Location Name:** The name of the location where the tutoring sessions take place.
- **Days per Week:** The number of days per week the tutoring sessions occur.
- **Starting Time:** The starting time of the tutoring sessions.
- **Ending Time:** The ending time of the tutoring sessions.
- **Duration:** The duration of each tutoring session.

· **Staff**

- **Staff ID:** A unique identifier for each staff member.
- **First Name:** The first name of the staff member.

- **Last Name:** The last name of the staff member.
- **Sex:** The gender of the staff member.
- **Address:** The address of the staff member, including region and town.
- **Salary:** The salary of the staff member.
- **Department Number:** A reference to the department entity for the department where the staff member works.

· **Department**

- **Department Number:** A unique identifier for each department.
- **Department Name:** The name of the department.
- **Number of Staffs:** The number of staff members assigned to the department.

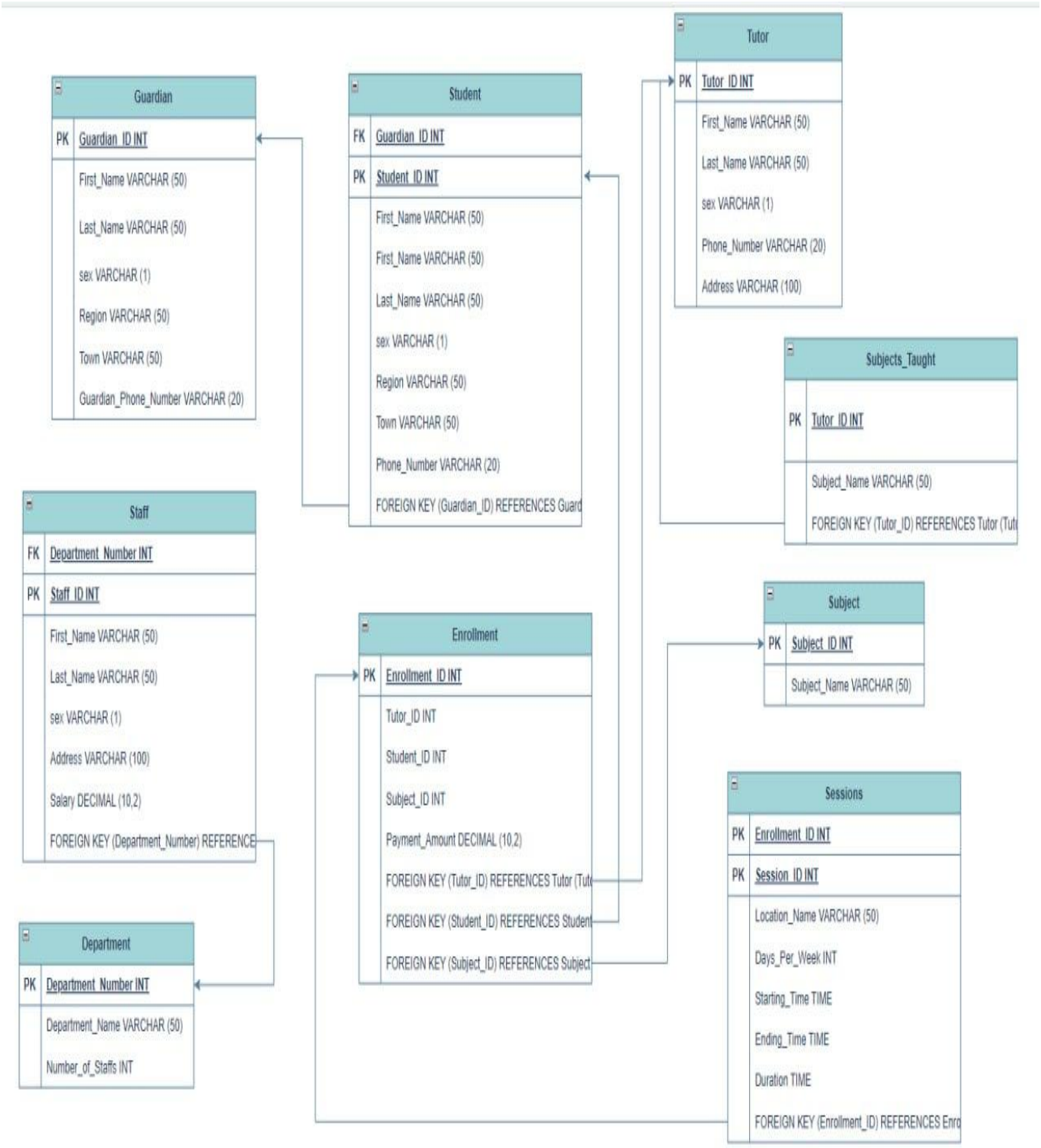
From the attributes mentioned above, the list of primary keys that uniquely identify each occurrence of that entity are as follows:

Entity	**Primary Key**
Student	Student ID
Guardian	Guardian ID
Tutor	Tutor ID
Subjects Taught	Tutor ID
Subject	Subject ID
Enrollment	Enrollment ID
Staff	Staff ID
Department	Department number

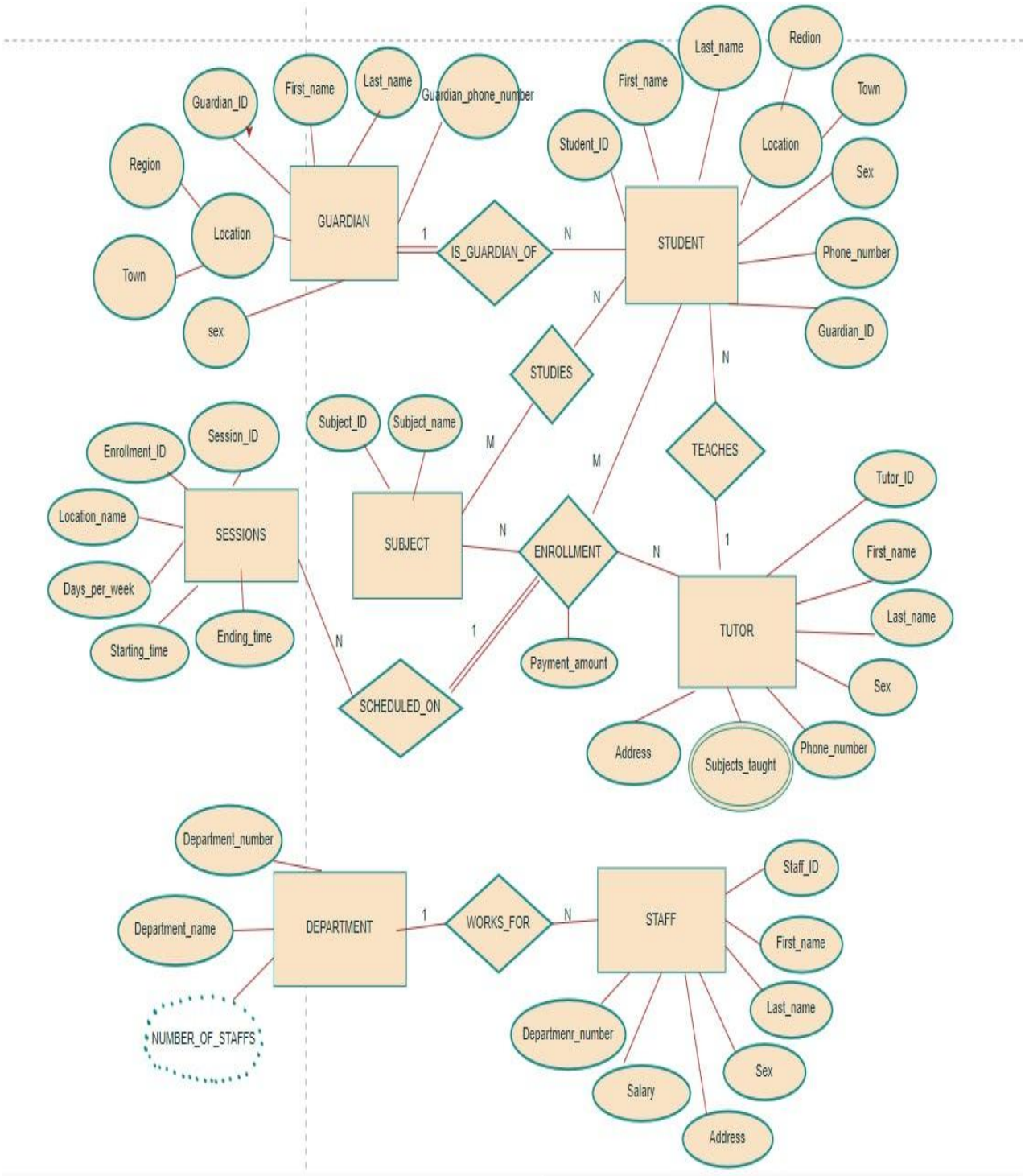
2.1.3 Relationship Identification and Description

	Student	Guardian	Tutor	Subjects Taught	Subject	Enrollment	Staff	Department
Student			Receives		Studies	Has to make		
Guardian	Guards							
Tutor	Teaches			Includes		Has		
Subjects Taught			Included in					
Subject								
Enrollment	Made by		Includes	Has	Contains			
Staff								Works for
Department							Has	

2.1.4 The relational database schema



2.1.5 Entity Relationship (ER) Diagram


Guardian_ID
First_name
Last_name
Guardian_phone_number
Region
Location
Town
sex
GUARDIAN
1
IS_GUARDIAN_OF
N
Last_name
Redion
First_name
Town
Student_ID
Location
Sex
STUDENT
Phone_number
Guardian_ID
N
STUDIES
N
TEACHES
Subject_ID
Subject_name
M
M
Session_ID
Enrollment_ID
Location_name
Days_per_week
Starting_time
Ending_time
SESSIONS
SUBJECT
N
ENROLLMENT
N
1
Tutor_ID
First_name
Last_name
Sex
TUTOR
Payment_amount
N
1
SCHEDULED_ON
Address
Subjects_taught
Phone_number
Department_number
Department_name
NUMBER_OF_STAFFS
DEPARTMENT
1
WORKS_FOR
N
Staff_ID
First_name
Last_name
Sex
Address
Salary
Departmenr_number
STAFF

2.2 Logical Database Design

GUARDIAN						
Guardian_ID	First_Name	Last_Name	Sex	Region	Town	Guardian_phone_number
0001	yohannes	belete	M	Central	Addis Ababa	0909090909
0002	belay	ashenafi	F	East	Dire Dawa	0908080808
0003	simon	belayneh	M	West	Jimma	0911111111
0004	emebet	dawit	F	South	Hawassa	0907070707
0005	abraham	tadesse	M	Central	Addis Ababa	0912121212
0006	sitra	ahmed	F	East	Dire Dawa	0906060606
0007	markos	abebe	M	West	Jimma	0913131313
0008	epherata	dereje	F	South	Hawassa	0914141414
0009	daniel	alemu	M	Central	Addis Ababa	0905050505
0010	elsa	daniel	F	North	Mekele	0915151515

STUDENT							
Student_ID	First_Name	Last_Name	Sex	Region	Town	Phone_Number	Guardian_ID
1000	Amen	Yohannes	F	Central	Addis Ababa	0916161616	0001
2000	Daniel	Maru	M	East	Dire Dawa	0917171717	0002
3000	Michael	Simon	M	West	Jimma	0918181818	0003
4000	Sophia	Habte	F	South	Hawassa	0919191919	0004
5000	Ruth	Abraham	F	Central	Addis Ababa	0920202020	0005
6000	Muaz	Mohammed	M	East	Dire Dawa	0921212121	0006
7000	Nahom	Markos	M	West	Jimma	0922222222	0007
8000	Eden	Eyosias	F	South	Hawassa	0923232323	0008
9000	Abenezer	Daniel	M	Central	Addis Ababa	0924242424	0009
11000	Mihiret	Mola	F	North	Mekele	0925252525	0010

TUTOR					
Tutor_ID	First_Name	Last_Name	Sex	Phone_Number	Address
01	Rahel	Hagos	F	0926262626	Dire Dawa
02	Lema	Liredaw	M	0927272727	Addis Ababa
03	Debebe	Hidru	M	0928282828	Jimma
04	Zewdu	Tesema	M	0929292929	Addis Ababa
05	Dania	Eyuel	F	0930303030	Hawassa
06	Amy	Kassahun	F	0931313131	Dire Dawa
07	Beminet	Zewedu	F	0932323232	Hawassa
08	Tesfaye	Mola	M	0933333333	Mekele
09	Selam	Yosef	F	0934343434	Jimma
10	Kebede	Tariku	M	0935353535	Addis Ababa

SUBJECTS_TAUGHT	
Tutor_ID	Subject_Name
01	Math
01	Physics
02	Biology
03	English
04	History
04	Economics
04	Geography
05	Geography
06	Chemistry
07	Physics
08	Economics
09	Business
09	History
10	Psychology

SUBJECT	
Subject_ID	Subject_Name
001	Math
002	Science
003	English
004	History
005	Geography
006	Chemistry
007	Physics
008	Economics
009	Business
010	Psychology

ENROLLMENT				
Enrollment_ID	Tutor_ID	Student_ID	Subject_ID	Payment_Amount
1	01	2000	001	150.00
2	08	11000	008	200.00
3	07	4000	004	175.00
4	02	5000	005	160.00
5	03	3000	004	175.00
6	05	8000	004	175.00
7	06	6000	004	175.00
8	04	9000	004	175.00
9	09	7000	004	175.00
10	10	1000	004	175.00

SESSIONS						
Session_ID	Enrollment_ID	Location_Name	Days_Per_Week	Starting_Time	Ending_Time	Duration
01	1	Dire Dawa	3	09:00:00	10:30:00	01:30:00
11	2	Mekele	2	10:00:00	12:30:00	02:30:00
21	3	Hawassa	3	11:00:00	12:30:00	01:30:00
31	4	Addis Ababa	2	12:00:00	13:30:00	01:30:00
41	5	Jimma	3	11:00:00	13:30:00	02:30:00
51	6	Hawassa	2	11:00:00	12:30:00	01:30:00
61	7	Dire Dawa	4	9:00:00	10:00:00	01:00:00
71	8	Addis Ababa	2	10:00:00	12:30:00	02:30:00
81	9	Jimma	4	11:00:00	12:00:00	01:00:00
91	10	Addis Ababa	3	1:00:00	2:30:00	01:30:00

DEPARTMENT		
Department_Number	Department_Name	Number_Of_Staff
1	Adminsters	2
2	Tutor evaluators	5
3	Tutor assigners	5
4	Receptionist	2

STAFF						
Staff_ID	First_Name	Last_Name	Sex	Address	Salary	Department_number
11	Ruhama	Leul	F	Dire Dawa	5000.00	3
222	Lensa	Tamene	F	Addis Ababa	5200.00	3
333	Debebe	Hiluf	M	Jimma	4800.00	3
444	Amare	Ambaw	M	Dire Dawa	4700.00	3
555	Beminet	Zelalem	F	Hawassa	4900.00	3
666	Zenegaw	Tiruneh	M	Addis Ababa	50000.00	2
777	Daniel	Eyasu	M	Hawassa	4800.00	2
888	Tesfaye	Muluken	M	Mekele	4600.00	2
999	Selamawit	Ytagesu	F	Jimma	4900.00	2
1100	Keteme	Tilahun	M	Addis Ababa	5000.00	2
1200	Biruk	Daniel	M	Addis Ababa	9000.00	1
1300	Heen	Mandefrot	F	Addis Ababa	10000.00	1
1400	Mariamawit	Kassahun	F	Addis Ababa	2500.00	4
1500	Kevin	Selamu	M	Jimma	2500.00	4

2.2.1 ER to Table Mapping

Student							
Guardian_ ID	Student ID	First_nam e	Last_nam e	sex	Region	Town	Phone_number

Guardian						
Guardian ID	First_name	Last_name	sex	Region	Town	Guardian_ Phone_number

Tutor					
Tutor_ID	First_name	Last_name	sex	Phone_number	Address

Staff						
Department number	Staff_ID	First name	Last name	Sex	Address	Salary

Enrollment				
Enrollment ID	Tutor ID	Student ID	Subject ID	Payment_Amount

Subject taught	
Tutor_ID	Subject_name

Subject	
Subject ID	Subject_name

Department		
Department_Number	Department_Name	Number_of_Staffs

Sessions						
Enrollment ID	Session ID	Location_Name	Days_Per_Week	Starting_Time	Ending_TIme	Duration

2.2.2 Validate Model using Normalization

Normalization Rule

Normalization rules are divided into the following normal forms:

1.First Normal Form

2.Second Normal Form

3.Third Normal Form

First Normal Form (1NF)

For a table to be in the First Normal Form, it should follow the following 4 rules: It should only have single (atomic) valued attributes/columns.

- Values stored in a column should be of the same domain
- All the columns in a table should have unique names.
- And the order in which data is stored, does not matter.

Second Normal Form (2NF)

For a table to be in the Second Normal Form,

- It should be in the First Normal form.
- And, it should not have Partial Dependency.

Third Normal Form (3NF)

A table is said to be in the Third Normal Form when,

- It is in the Second Normal form.
- And, it doesn't have Transitive Dependency.

Normalization of Tedor tutoring company database:

Student table

- ✓ The table is in 1NF because each attribute does not have repeating groups or multi-valued dependencies.
- ✓ The table is in 2NF because each non-key attribute is fully dependent on the primary key "Student ID"
- ✓ The table is in 3NF because there are no transitive dependencies.

Guardian table

- ✓ The table is in 1NF because each attribute does not have repeating groups or multi-valued dependencies.
- ✓ The table is in 2NF because each non-key attribute is fully dependent on the primary key `Guardian ID`.
- ✓ The table is in 3NF because there are no transitive dependencies.

Tutor table

- ✓ The table is in 1NF because each attribute does not have repeating groups or multi-valued dependencies.
- ✓ The table is in 2NF because each non-key attribute is fully dependent on the primary key `Tutor ID`.
- ✓ The table is in 3NF because there are no transitive dependencies.

Subjects Taught table

- ✓ The table is in 1NF because each attribute does not have repeating groups or multi-valued dependencies.
- ✓ The table is in 2NF because each non-key attribute is fully dependent on the primary key `Tutor ID`.
- ✓ The table is in 3NF because there are no transitive dependencies.

Subject table

- ✓ The table is in 1NF because each attribute does not have repeating groups or multi-valued dependencies.

- ✓ The table is in 2NF because each non-key attribute is fully dependent on the primary key `Subject ID`.
- ✓ The table is in 3NF because there are no transitive dependencies.

The other entities ("Staff", "Enrollment", "Sessions" and "Department") all seems to be already normalized and do not require further normalization.

3.Implementation and Testing

3.1 SQL script for creating the database

```
CREATE DATABASE TedorTutoringsystem;

USE TedorTutoringsystem;
```

3.2 SQL Scripts for creating the tables, view, indexes.

--1. Guardian Table

```
CREATE TABLE Guardian (

  Guardian_ID INT PRIMARY KEY,
  First_Name VARCHAR(50),
  Last_Name VARCHAR(50),
  sex VARCHAR(1),
  Region VARCHAR(50),
  Town VARCHAR(50),
  Guardian_Phone_Number VARCHAR(20)
);
```

--2. Student Table

```
CREATE TABLE Student (
```

```
  Student_ID INT PRIMARY KEY,
  First_Name VARCHAR(50),
  Last_Name VARCHAR(50),
  sex VARCHAR(1),
  Region VARCHAR(50),
  Town VARCHAR(50),
  Phone_Number VARCHAR(20),
  Guardian_ID INT,
  FOREIGN KEY (Guardian_ID) REFERENCES Guardian(Guardian_ID)
);
```

--3. Tutor Table

```
CREATE TABLE Tutor (
  Tutor_ID INT PRIMARY KEY,
  First_Name VARCHAR(50),
  Last_Name VARCHAR(50),
  sex VARCHAR(1),
  Phone_Number VARCHAR(20),
  Address VARCHAR(100)
);
```

--4. Subjects Taught Table

```
CREATE TABLE Subjects_Taught (
  Tutor_ID INT,
  Subject_Name VARCHAR(50),
  PRIMARY KEY (Tutor_ID, Subject_Name),
  FOREIGN KEY (Tutor_ID) REFERENCES Tutor(Tutor_ID)
);
```

--5. Subject Table

```
CREATE TABLE Subject (
  Subject_ID INT PRIMARY KEY,
  Subject_Name VARCHAR(50)
);
```

--6. Enrollment Table

```
CREATE TABLE Enrollment (
  Enrollment_ID INT PRIMARY KEY,
  Tutor_ID INT,
  Student_ID INT,
  Subject_ID INT,
  Payment_Amount DECIMAL(10,2),
  Location_Name VARCHAR(50),
  Days_Per_Week INT,
  Starting_Time TIME,
  Ending_Time TIME,
  Duration TIME,
  FOREIGN KEY (Tutor_ID) REFERENCES Tutor(Tutor_ID),
  FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID),
  FOREIGN KEY (Subject_ID) REFERENCES Subject(Subject_ID)
);
```

--7. Department Table

```
CREATE TABLE Department (
  Department_Number INT PRIMARY KEY,
  Department_Name VARCHAR(50),
  Number_of_Staffs INT
);
```

--8. Staff Table

```
CREATE TABLE Staff (
  Staff_ID INT PRIMARY KEY,
  First_Name VARCHAR(50),
  Last_Name VARCHAR(50),
  sex VARCHAR(1),
  Address VARCHAR(100),
  Salary DECIMAL(10,2),
  Department_Number INT,
```

```
  FOREIGN KEY (Department_Number) REFERENCES
Department(Department_Number)
);
```

4.Insertion of a sample data

--insert records into the guardian table

```
INSERT INTO Guardian (Guardian_ID, First_Name, Last_Name, sex,
Region, Town, Guardian_Phone_Number)
VALUES
(0001, 'Yohannes', 'Belete', 'M', 'central', 'Addis Ababa', '0909090909'),
(0002, 'Belay', 'Ashenafi', 'F', 'East', ' Dire Dawa', '0908080808'),
(0003, 'Simon', 'Belayneh', 'M', 'West', 'Jimma ', '0911111111'),
(0004, 'Emebet', 'Dawit', 'F', 'South', ' Hawassa', '0907070707'),
(0005, 'Abraham', 'Tadesse', 'M', 'Central', 'Addis Ababa', '0912121212'),
(0006, 'Sitra', 'Ahmed', 'F', 'East', 'Dire Dawa', '0906060606'),
(0007, 'Markos', 'Abebe', 'M', 'West', 'Jimma', '0913131313'),
(0008, 'Epherata', 'Dereje', 'F', 'South', 'Hawassa', '0914141414'),
(0009, 'Daniel', 'Alemu', 'M', 'Central', 'Addis Ababa', '0905050505'),
(0010, 'Elsa', 'Daniel', 'F', 'North', 'Mekele', '0915151515');
```

--insert records into the Student table

```
INSERT INTO Student (Student_ID, First_Name, Last_Name, sex,
Region, Town, Phone_Number, Guardian_ID)
VALUES
(1000, 'Amen', 'Yohannes', 'F', 'Central', 'Addis Ababa', '0916161616',
0001),
(2000, 'Daniel', 'Maru', 'M', 'East', 'Dire Dawa', '0917171717', 0002),
(3000, 'Michael', 'Simon', 'M', 'West', 'Jimma', '0918181818', 0003),
(4000, 'Sophia', 'Habte', 'F', 'South', 'Hawassa', '0919191919', 0004),
(5000, 'Ruth', 'Abraham', 'F', 'Central', 'Addis Ababa', '0920202020',
0005),
(6000, 'Muaz', 'Mohammed', 'M', 'East', 'Dire Dawa', '0921212121', 0006),
(7000, 'Nahom', 'Markos', 'M', 'West', 'Jimma', '0922222222', 0007),
```

(8000, 'Eden', 'Eyosias', 'F', 'South', 'Hawassa', '0923232323', 0008),
(9000, 'Abenezer', 'Daniel', 'M', 'central', 'Addis Ababa', '0924242424', 0009),
(11000, 'Mihiret', 'Mola', 'F', 'North', 'Mekele', '0925252525', 0010);

--insert records into the Tutor table

INSERT INTO Tutor (Tutor_ID, First_Name, Last_Name, sex, Phone_Number, Address)
VALUES
(01, 'Rahel', 'Hagos', 'F', '0926262626', 'Dire Dawa'),
(02, 'Lema', 'Liredaw', 'M', '0927272727', 'Addis Ababa'),
(03, 'Debebe', 'Hidru', 'M', '0928282828', 'Jimma'),
(04, 'Zewdu', 'Tesema', 'M', '0929292929', 'Addis Ababa'),
(05, 'Dania', 'Eyuel', 'F', '0930303030', 'Hawassa'),
(06, 'Amy', 'Kassahun', 'F', '0931313131', 'Dire Dawa'),
(07, 'Beminet', 'Zewdu', 'F', '0932323232', 'Hawassa'),
(08, 'Tesfaye', 'Mola', 'M', '0933333333', 'Mekele'),
(09, 'Selam', 'Yosef', 'F', '0934343434', 'Jimma'),
(10, 'Kebede', 'Tariku', 'M', '0935353535', 'Addis Ababa');

--insert records into the Subjects_Taught table

INSERT INTO Subjects_Taught (Tutor_ID, Subject_Name)
VALUES
(01, 'Math'),
(01, 'Physics'),
(02, 'Biology'),
(03, 'English'),
(04, 'History'),
(04, 'Economics'),
(04, 'Geography'),
(05, 'Geography'),
(06, 'Chemistry'),
(07, 'Physics'),
(08, 'Economics'),
(09, 'Business'),
(09, 'History'),
(10, 'Psychology');

--insert records into the Subject table

```
INSERT INTO Subject (Subject_ID, Subject_Name)
VALUES
(001, 'Math'),
(002, 'Science'),
(003, 'English'),
(004, 'History'),
(005, 'Geography'),
(006, 'Chemistry'),
(007, 'Physics'),
(008, 'Economics'),
(009, 'Business'),
(010, 'Psychology');
```

--insert records into the Enrollment table

```
INSERT INTO Enrollment (Enrollment_ID, Tutor_ID, Student_ID,
Subject_ID, Payment_Amount)
VALUES
(1, 01, 2000, 001, 150.00),
(2, 08, 11000,008, 200.00),
(3, 07,4000, 4, 175.00),
(4, 02, 5000, 5, 160.00),
(5, 03, 3000, 4, 175.00),
(6, 05, 8000, 4, 175.00),
(7, 06, 6000, 4, 175.00),
(8, 04, 9000, 4, 175.00),
(9, 09, 7000, 4, 175.00),
(10, 10,1000, 4, 175.00);
```

--insert records into the Session table

```
INSERT INTO Session (Session_ID, Enrollment_ID, Location_Name,
Days_Per_Week, starting_Time, Ending_Time, Duration)
VALUES
(01, 1, 'Dire Dawa', 3, '09:00:00', '10:30:00', '01:30:00'),
(11, 2, 'Mekele', 2, '10:00:00', '12:30:00', '02:30:00'),
(21, 3, 'Hawassa', 3, '11:00:00', '12:30:00', '01:30:00'),
(31, 4, 'Addis Ababa', 2, '12:00:00', '13:30:00', '01:30:00'),
```

(41, 5, 'Jimma', 3, '11:00:00', '13:30:00', '02:30:00'),
(51, 6, 'Hawassa', 2, '11:00:00', '12:30:00', '01:30:00'),
(61, 7, 'Dire Dawa', 4, '9:00:00', '10:00:00', '01:00:00'),
(71, 8, 'Addis Ababa', 2, '10:00:00', '12:30:00', '02:30:00'),
(81, 9, 'Jimma', 4, '11:00:00', '12:00:00', '01:00:00'),
(91, 10, 'Addis Ababa', 3, '1:00:00', '2:30:00', '01:30:00');

--insert records into the Department table

INSERT INTO Department (Department_Number, Department_Name, Number_of_Staffs)
VALUES
(1, 'Administers ', 2),
(2, 'Tutor evaluators',5),
(3, 'Tutor assigners',5),
(4, 'Receptionist', 2);

--insert records into the Staff table

INSERT INTO Staff (Staff_ID, First_Name, Last_Name, sex, Address, Salary, Department_Number)
VALUES
(11, 'Ruhama', 'leul', 'F', 'Dire Dawa', 5000.00, 3),
(222, 'Lensa', 'tamene', 'F', 'Addis Ababa', 5200.00, 3),
(333, 'Debebe', 'Hiluf', 'M', 'Jimma', 4800.00, 3),
(444, 'Amare', 'ambaw', 'M', 'Dire Dawa', 4700.00, 3),
(555, 'Beminet', 'Zelalem', 'F', 'Hawassa', 4900.00, 3),
(666, 'Zenegaw', 'Tiruneh', 'M', 'Addis Ababa', 50000.00, 2),
(777, 'Daniel', 'Eyasu', 'M', 'Hawassa', 4800.00, 2),
(888, 'Tesfaye', 'Muluken', 'M', 'Mekele', 4600.00, 2),
(999, 'Selamawit', 'Ytagesu', 'F', 'Jimma', 4900.00, 2),
(1100, 'Keteme', 'Tilahun', 'M', 'Addis Ababa', 5000.00, 2),
(1200, 'Biruk', 'daniel', 'M', 'Addis Ababa', 9000.00, 1),
(1300, 'Helen', 'Mandefrot', 'F', 'Addis Ababa', 10000.00, 1),
(1400, 'Mariamawit', 'Kassahun', 'F', 'Addis Ababa', 2500.00, 4),
(1500, 'Kevin', 'Selamu', 'M', 'Jimma', 2500.00, 4);

--insert records into the Guardian table

```
INSERT INTO Guardian (Guardian_ID, First_Name, Last_Name, sex,
Region, Town, Guardian_Phone_Number)
VALUES (0011, 'Samuel', 'Girma', 'M', 'North', 'Mekele', '0940404040');
```

-- Queries

```
SELECT * FROM Student WHERE Region = 'Central';

UPDATE Tutor SET Phone_Number = '0929999999' WHERE Tutor_ID
= 01;

DELETE FROM Student WHERE Student_ID = 2000;

SELECT First_Name, Last_Name, Address
FROM Staff
WHERE Department_Number = 3;

UPDATE Department SET Department_Name = 'NS Department'
WHERE Department_Number = 3;

DELETE FROM Guardian WHERE Guardian_ID = 0001;
DELETE FROM Student WHERE Guardian_ID = 0001;

SELECT * FROM Tutor WHERE sex = 'F';

SELECT AVG(Salary) AS Average_Salary FROM Staff;
```