# Database System 1

## Assignment # 3

## Section A

| Name: | Registration Number |
|---|---|
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| Nasheman Arshad | CUI/FA22-BCE-072/ATD |
| Fizza Razzaq | CUI/FA22-BCE-100/ATD |
| Abdul Ahad | CUI/FA22-BCE-004/ATD |

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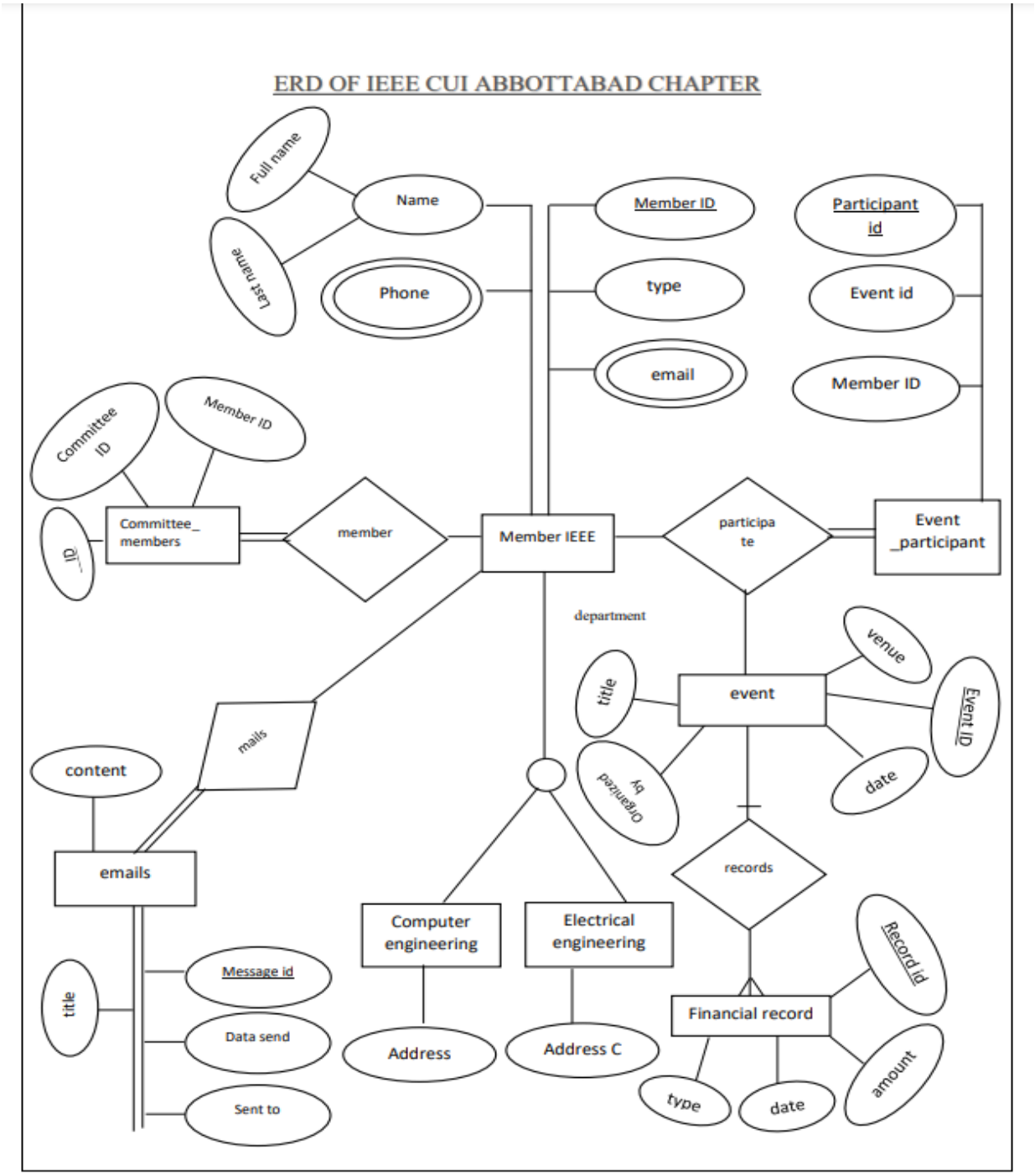
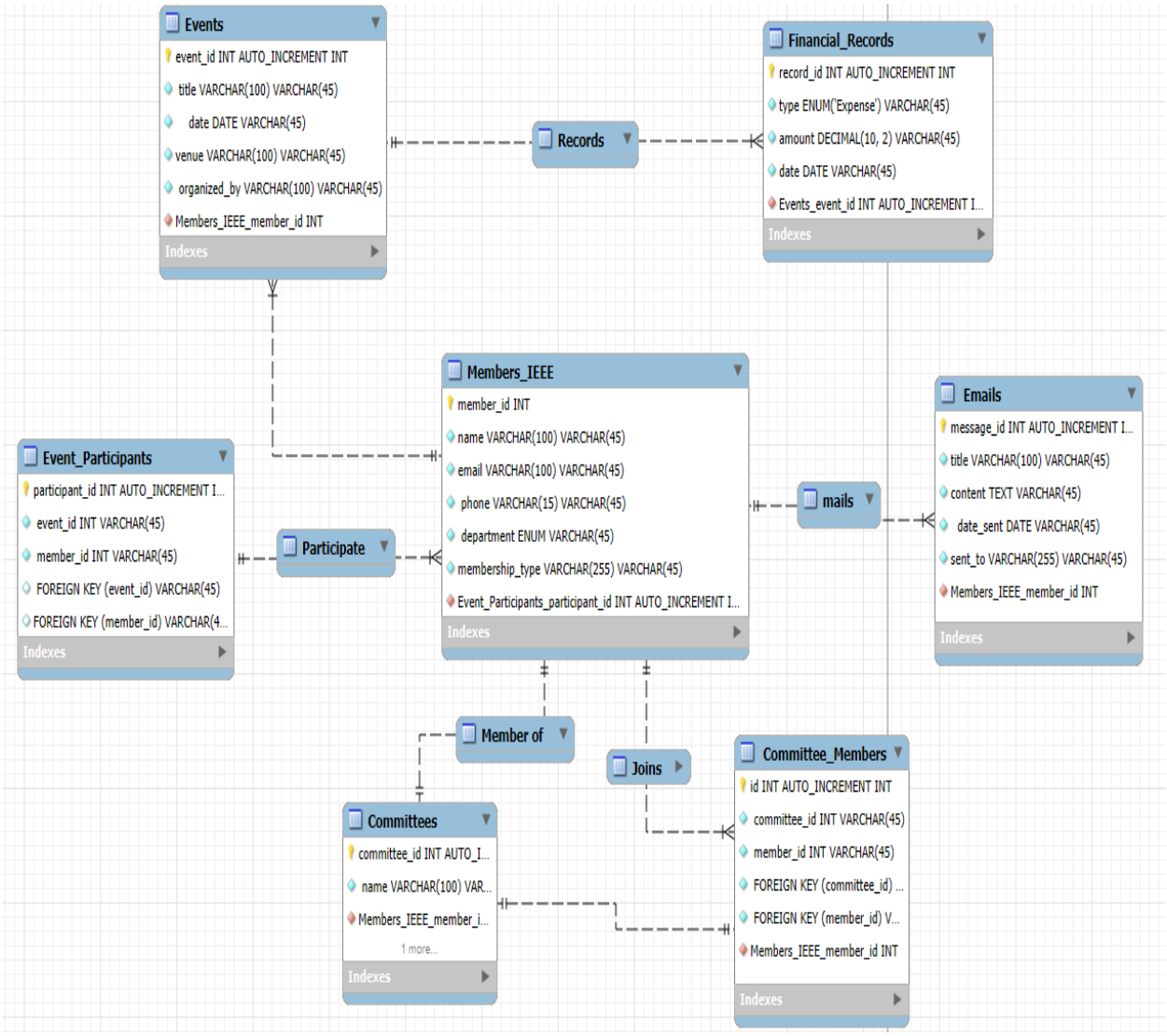
# Database of the IEEE CUI Abbottabad Chapter

## 1- Enhanced ERD of Database:



## 2- EERD's conversion into Relational DB Schema:



## 3- SQL code:

```
CREATE TABLE Members_IEEE (
   member_id INT AUTO_INCREMENT PRIMARY KEY,
   name VARCHAR(100) ,
   email VARCHAR(100) ,
   phone VARCHAR(15),
   department ENUM('Computer Engineering', 'Electrical Engineering') ,
   membership_type VARCHAR(255)
);
CREATE TABLE Events (
   event_id INT AUTO_INCREMENT PRIMARY KEY,
   title VARCHAR(100),
   date DATE,
   venue VARCHAR(100) ,
   organized_by VARCHAR(100)
);
CREATE TABLE Event_Participants (
   participant_id INT AUTO_INCREMENT PRIMARY KEY,
   event_id INT ,
   member_id INT ,
   FOREIGN KEY (event_id) REFERENCES Events(event_id) ON DELETE CASCADE,
   FOREIGN KEY (member_id) REFERENCES Members_IEEE(member_id) ON DELETE
CASCADE
);
CREATE TABLE Financial_Records (
```

```
  record_id INT AUTO_INCREMENT PRIMARY KEY,
  type ENUM('Expense'),
  amount DECIMAL(10, 2) ,
  date DATE);

CREATE TABLE Committees (
  committee_id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100)
);
CREATE TABLE Committee_Members (
  id INT AUTO_INCREMENT PRIMARY KEY,
  committee_id INT,
  member_id INT ,
  FOREIGN KEY (committee_id) REFERENCES Committees(committee_id) ON DELETE
CASCADE,
  FOREIGN KEY (member_id) REFERENCES Members_IEEE(member_id) ON DELETE
CASCADE
);
CREATE TABLE Emails (
  message_id INT AUTO_INCREMENT PRIMARY KEY,
  title VARCHAR(100) ,
  content TEXT ,
  date_sent DATE,
  sent_to VARCHAR(255)
);
INSERT INTO Events (title, date, venue, organized_by)
VALUES
```

('Google developer student club GCD', '2024-12-10', 'Language Lab', 'IEEE Student Chapter'),

('Workshop on Robotics', '2024-12-20', 'Lab 3', 'IEEE Faculty'),

('IEEE Conference', '2024-03-10', 'Auditorium', 'IEEE National Team');

INSERT INTO Event_Participants (event_id, member_id)

VALUES

(1, @new_member_id);

INSERT INTO Committees (name)

VALUES

('Outreach Committee'),

('Event Management Committee'),

('Finance Committee');

INSERT INTO Emails (title, content, date_sent, sent_to)

VALUES

('Welcome to IEEE','We are excited to have you!', '2024-12-05', 'All Members'),

('Event Reminder: GCD', 'Reminder for the upcoming Google developer student club ', '2024-01-12', 'All Memebers'),

('Important: Financial Report', 'For membership 300.00 rupees only', '2024-02-15', 'All Members');

INSERT INTO Members_IEEE (name, email, phone, department, membership_type)

VALUES

('Dawood Khan yousafzai', 'dawood@email.com', '03246718312', 'Electrical Engineering', 'Student'),

('Engr Mashood Murtaza', 'mash.who.then@email.com', '03232323', 'Computer Engineering', 'Teacher'),

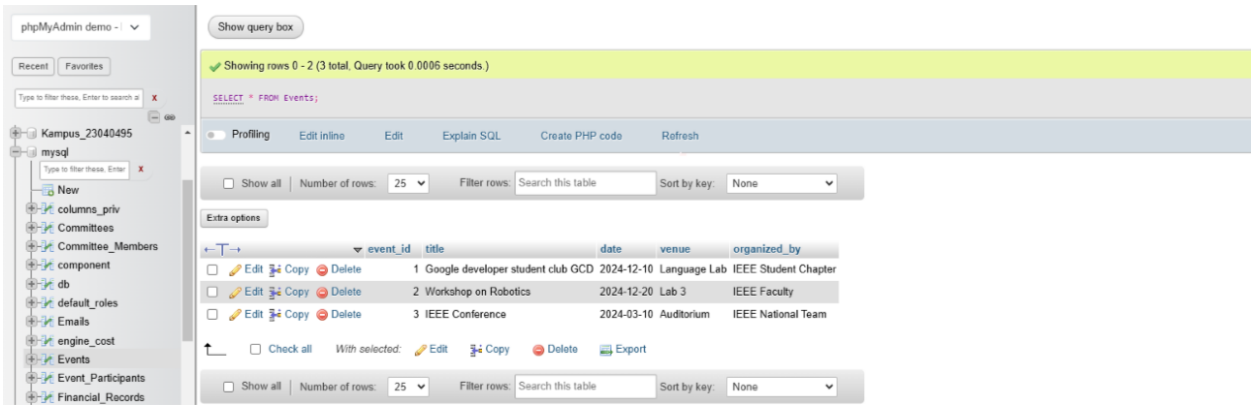
('Kashif Ali', 'kashii01@email.com', '345-678-9012', 'Electrical Engineering', 'Student');

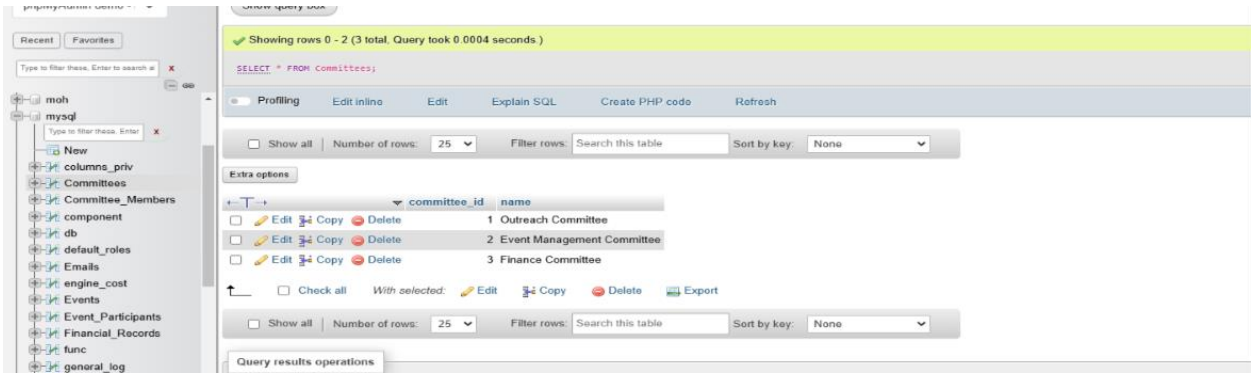
CREATE VIEW View_Member AS

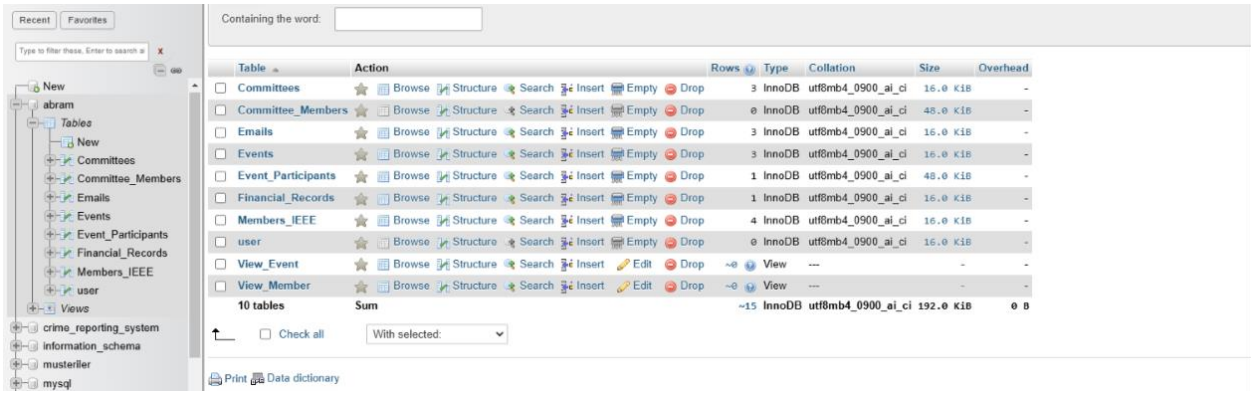
SELECT

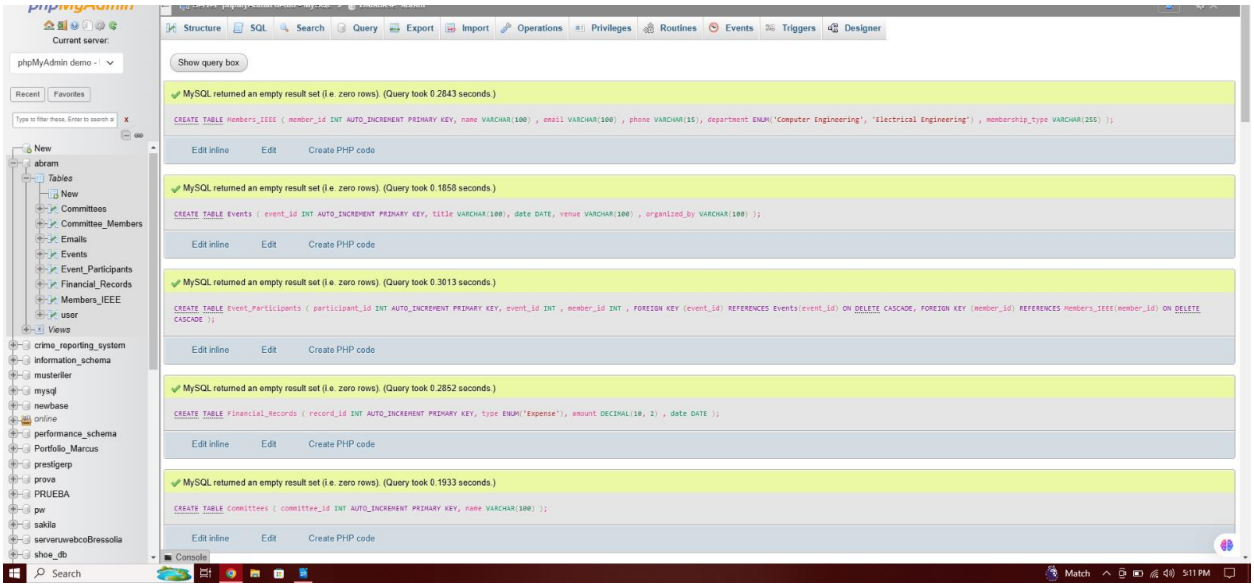
```
    Members_IEEE.member_id,
    Members_IEEE.name AS member_name
FROM
    Members_IEEE;
CREATE VIEW View_Event AS
SELECT
    Events.event_id,
    Events.title,
    Events.date,
    Events.venue,
    Events.organized_by AS organizer
FROM
    Events;

CREATE USER 'Dawood Khan yousafzai'@'localhost' IDENTIFIED BY '1122';
GRANT INSERT ON Members_IEEE TO 'Dawood Khan yousafzai'@'localhost';
GRANT INSERT ON Events TO 'Dawood Khan yousafzai'@'localhost';
CREATE USER 'Engr Mashood Murtaza'@'localhost' IDENTIFIED BY '2233';
GRANT INSERT ON Members_IEEE TO 'Engr Mashood Murtaza'@'localhost';
GRANT INSERT ON Events TO 'Engr Mashood Murtaza'@'localhost';
```

## **Outputs:**

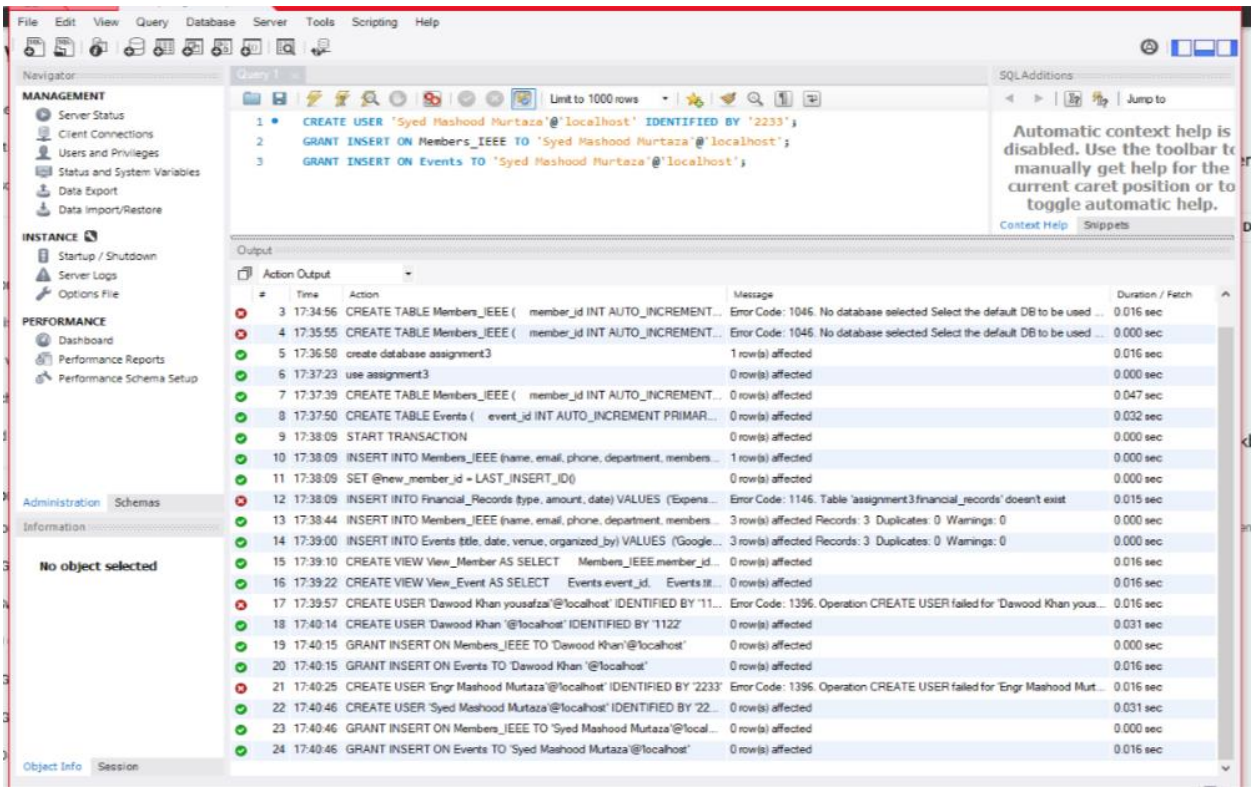

phpMyAdmin demo -
Show query box
Recent
Favorites
Showing rows 0 - 2 (3 total, Query took 0.0006 seconds.)
SELECT * FROM Events;
Profiling
Edit inline
Edit
Explain SQL
Create PHP code
Refresh
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options
Kampus_23040495
mysql
New
columns_priv
Committees
Committee_Members
component
db
default_roles
Emails
engine_cost
Events
Event_Participants
Financial_Records
event_id
title
date
venue
organized_by
Edit Copy Delete 1 Google developer student club GCD 2024-12-10 Language Lab IEEE Student Chapter
Edit Copy Delete 2 Workshop on Robotics 2024-12-20 Lab 3 IEEE Faculty
Edit Copy Delete 3 IEEE Conference 2024-03-10 Auditorium IEEE National Team
Check all
With selected:
Edit
Copy
Delete
Export


Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)
SELECT * FROM Committees;
Profiling
Edit inline
Edit
Explain SQL
Create PHP code
Refresh
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options
moh
mysql
New
columns_priv
Committees
Committee_Members
component
db
default_roles
Emails
engine_cost
Events
Event_Participants
Financial_Records
func
general_log
committee_id
name
Edit Copy Delete 1 Outreach Committee
Edit Copy Delete 2 Event Management Committee
Edit Copy Delete 3 Finance Committee
Check all
With selected:
Edit
Copy
Delete
Export
Query results operations


Recent
Favorites
Containing the word:
New
abram
Tables
New
Committees
Committee_Members
Emails
Events
Event_Participants
Financial_Records
Members_IEEE
user
Views
crime_reporting_system
information_schema
musterller
mysql
Table
Action
Rows
Type
Collation
Size
Overhead
Committees Browse Structure Search Insert Empty Drop 3 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
Committee_Members Browse Structure Search Insert Empty Drop 0 InnoDB utf8mb4_0900_ai_ci 48.0 KiB -
Emails Browse Structure Search Insert Empty Drop 3 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
Events Browse Structure Search Insert Empty Drop 3 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
Event_Participants Browse Structure Search Insert Empty Drop 1 InnoDB utf8mb4_0900_ai_ci 48.0 KiB -
Financial_Records Browse Structure Search Insert Empty Drop 1 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
Members_IEEE Browse Structure Search Insert Empty Drop 4 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
user Browse Structure Search Insert Empty Drop 0 InnoDB utf8mb4_0900_ai_ci 16.0 KiB -
View_Event Browse Structure Search Insert Edit Drop ~0 View --- - -
View_Member Browse Structure Search Insert Edit Drop ~0 View --- - -
10 tables Sum ~15 InnoDB utf8mb4_0900_ai_ci 192.0 KiB 0 B
Check all
With selected:
Print
Data dictionary

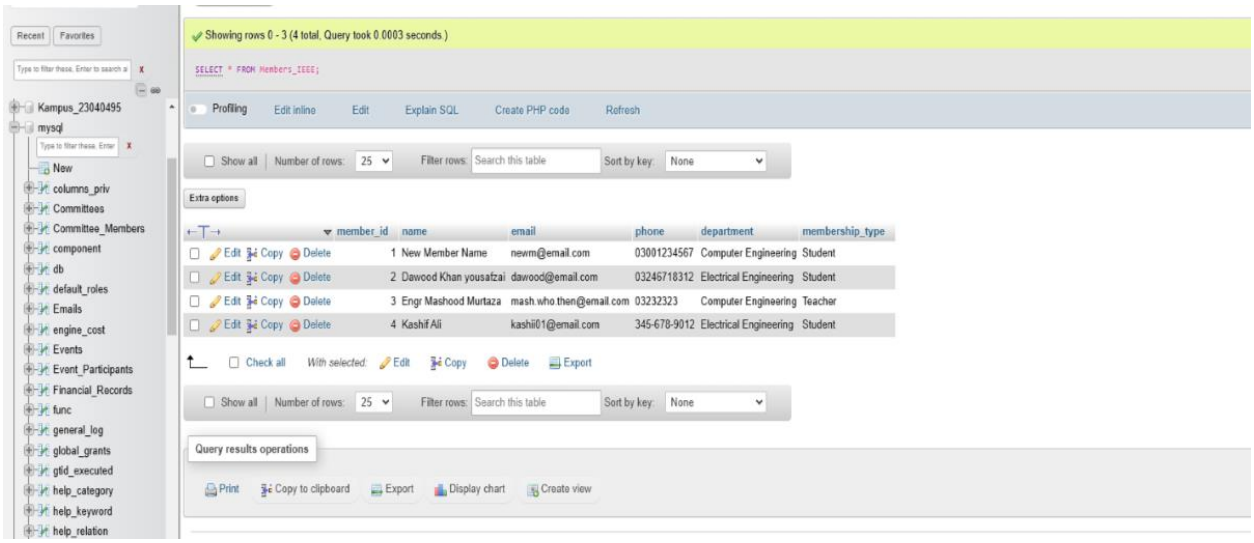



## Views and user creation:



## 4- Implementation of different Queries / Transactions

```
START TRANSACTION;

INSERT INTO Members_IEEE (name, email, phone, department, membership_type)

VALUES

('New Member Name', 'newm@email.com', '03001234567', 'Computer Engineering',
'Student');

SET @new_member_id = LAST_INSERT_ID();

INSERT INTO Financial_Records (type, amount, date)

VALUES

('Expense', 300.00, CURDATE());

COMMIT;
```


Recent
Favorites
Kampus_23040495
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New
columns_priv
Committees
Committee_Members
component
db
default_roles
Emails
engine_cost
Events
Event_Participants
Financial_Records
func
general_log
global_grants
gtid_executed
help_category
help_keyword
help_relation
Showing rows 0 - 3 (4 total, Query took 0.0003 seconds.)
SELECT * FROM Members_IEEE;
Profiling
Edit inline
Edit
Explain SQL
Create PHP code
Refresh
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Extra options
member_id
name
email
phone
department
membership_type
Edit Copy Delete 1 New Member Name newm@email.com 03001234567 Computer Engineering Student
Edit Copy Delete 2 Dawood Khan yousafzai dawood@email.com 03246718312 Electrical Engineering Student
Edit Copy Delete 3 Engr Mashood Murtaza mash.who then@email.com 03232323 Computer Engineering Teacher
Edit Copy Delete 4 Kashif Ali kashii01@email.com 345-678-9012 Electrical Engineering Student
Check all
With selected:
Edit
Copy
Delete
Export
Show all
Number of rows: 25
Filter rows: Search this table
Sort by key: None
Query results operations
Print
Copy to clipboard
Export
Display chart
Create view