

## **DATABASE**

**ASSIGNMENT** 

## **CS 242- Introduction to Database System**

**Tamoor Ahmad** 

4125-FBAS/BSSE/F20

Submitted To: Date:

Mr. Muhammad Imran Saeed 21/5/2022

### BRICK KILN MANAGEMENT SYSTEM

### 1) INTRODUCTION

I have created a database for my father's business (Brick Kiln) in which I will store his accounts information which used to be on the register. It was very difficult to get the information inside them. This method was not very secure and access to information was very difficult. Now with the help of this database it will be easier to manage the necessary information and access the information will also be easier. It will no longer need a lot of registers and no need to worry about handling it. Brick Kiln Management System is designed to improve the effectiveness and quantity of work.

### 2) EXISTING SYSTEM (MANUAL LEDGER SYSTEM)

Before the brick kiln management system, the manual ledger system is used in which several ledgers with separate books to record different types of accounts, such as vehicles, employees, raw-material or sales. The information recorded in these ledgers will be used to prepare the financial statements for the system.

#### 2.1) Drawbacks in Existing System

- Accounting, for any business, can be a complex undertaking.
- Time consuming
- Human Error
- No Backup Records in case of loss or damage
- May require specialized knowledge to maintain

## 3) PROPOSED SYSTEM

The proposed system in order to solve the problem is brick kiln management system. In this database we store information which used to be on the register. This brick kiln management system helps to manage the necessary information and access the information will also be easier. It will no longer need a lot of registers and no need to worry about handling it.

## 3.1) Advantages in Proposed System

- Automatic Backup Plan.
- Efficient.
- Reliable.
- Easy Access.
- Secure Data.
- Reduce Redundancy.
- Data Consistency Increase.
- Saves Time.
- Saves Money.

## 4) DATA REQUIREMENT

## 4.1) Entity Classes:

- 1) BILL
- 2) EMPLOYEE
- 3) RAW MATERIAL
- **4)** SELL
- **5)** VEHICLE

## 4.2) Attributes of each Entity Class

#### **Attributes of BILL:**

- Bill Type
- Bill Reference
- Bill Payer
- Amount
- Issued Date
- Submission Date
- Extra Charges

#### **Attributes of EMPLOYEE:**

- Name
- Father Name
- CNIC
- Position
- Joining Date
- Loan
- Reference
- Phone Number
- Address

#### **Attributes of RAW MATERIAL:**

- Material ID
- Material Type
- Quantity
- Price
- Date of Arrival
- Material Description

#### **Attributes of SELL:**

- Customer ID
- Customer Name
- Order
- Brick Type
- Amount
- Cash On Delivery
- On Loan
- Reference
- Payment Receiving Date
- Discount

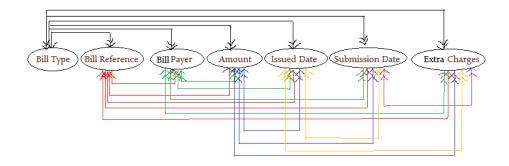
#### **Attributes of VEHICLE:**

- Vehicle Type
- Make
- Model
- Color
- License

# 4.3) BUBBLE CHART DIAGRAM (Candidate Key, Primary Key, Alternate Key, Secondary Key)

BILL (Bill Type, Bill Reference, Bill Payer, Amount, Issued Date,

Submission Date, Extra Charges)



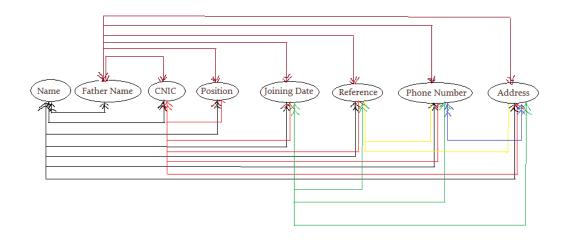
**Candidate Keys:** Bill Type, Bill Reference, Bill Payer, Amount, Issued Date, Submission Date, Extra Charges.

Primary Key: Bill Reference.

Non-Keys: Bill Type, Bill Payer, Amount, Issued Date, Submission Date, Extra Charges.

**Secondary Keys:** Bill Type, Bill Payer

**EMPLOYEE** (Name, Father Name, CNIC, Position, Joining Date, Loan, Reference Phone Number, Address)



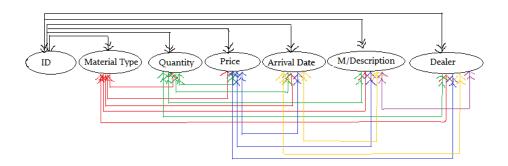
**Candidate Keys:** Name, Father Name, CNIC, Position, Joining Date, Loan, Reference, Phone Number, Address.

**Primary Key:** CNIC.

Non-Keys: Name, Father Name, Position, Joining Date, Loan, Reference, Address.

**Secondary Keys:** Position.

# RAW MATERIAL (ID, Material Type, Quantity, Price, Date of Arrival, Material Description)



**Candidate Keys:** ID, Material Type, Quantity, Price, Date of Arrival, Material Description.

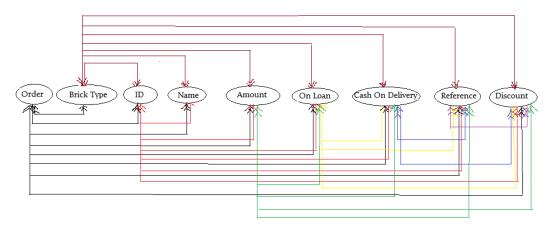
Primary Key: ID.

Non-Keys: Material Type, Quantity, Price, Date of Arrival, Material Description.

**Secondary Keys:** Material type, Material Description.

**SELL** (Customer ID, Customer Name, Order, Brick Type, Amount, Cash On Delivery,

On Loan, Reference, Payment Receiving Date, Discount)



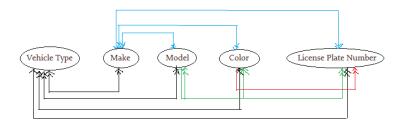
**Candidate Keys:** Customer ID, Customer Name, Order, Brick Type, Amount, Cash On Delivery, On Loan, Reference, Payment Receiving Date, Discount.

Primary Key: Customer ID.

**Non-Keys:** Customer Name, Order, Brick Type, Amount, Cash On Delivery, On Loan, Reference, Payment Receiving Date, Discount.

**Secondary Keys:** Reference.

## **VEHICLE** (Vehicle Type, Make, Model, Color, License Plate Number)

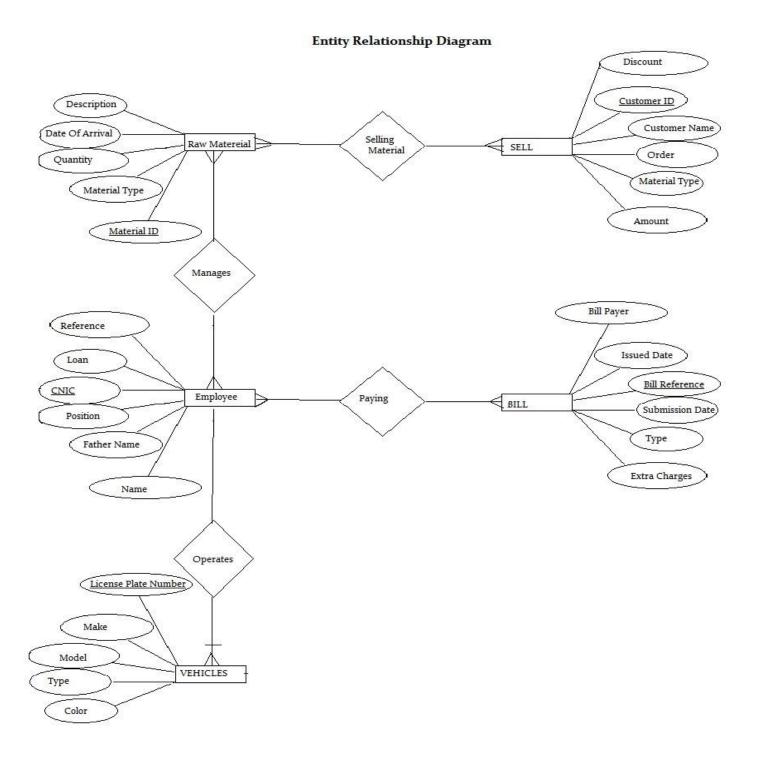


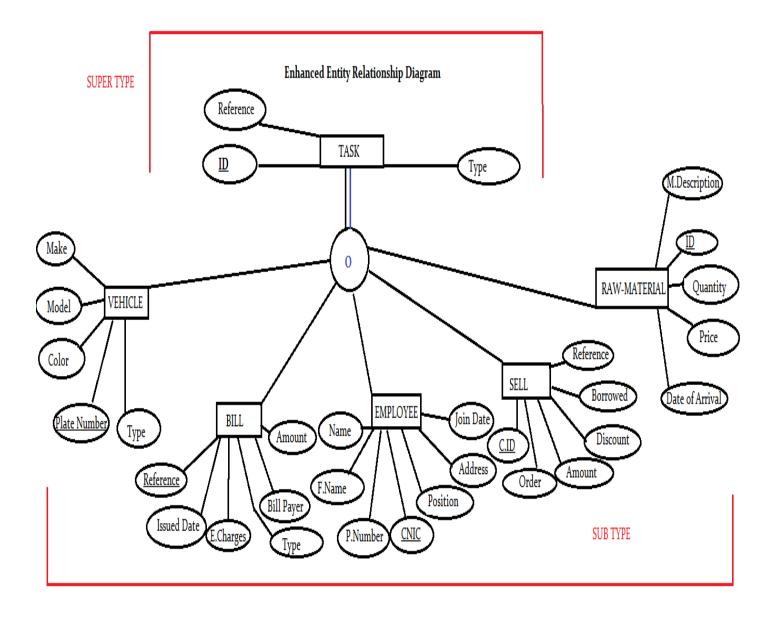
Candidate Keys: Vehicle Type, Make, Model, Color, License Plate Number.

**Primary Key:** License Plate Number.

Non-Keys: Vehicle Type, Make, Model, Color.

Secondary Keys: Make.





## 5) Logical Data Model

## 5.1) Representation of Entity Classes

## 1). BILL

Bill Type	Bill Reference	Bill Payer	Amount	Issued Date	Submission Date	Extra Charges
Electricity	02-028283-888	Shamshad	Rs 43,000/-	24/1/2022	28/1/2022	Rs o/-
Electricity	01-783438-737	Rehman	Rs 100,000/-	22/2/2022	26/2/2022	Rs o/-
Gas	00-867364-678	Nadeem	Rs 33000/-	21/3/2022	29/3/2022	Rs o/-
Gas	19-839843-827	Ashiq	Rs 78,000/-	20/4/2022	30/4/2022	Rs 1370/-
Water	78-89394-8949	Shamshad	Rs 99,000/-	24//5/2022	28/5/2022	Rs o/-

### 2). EMPLOYEE

Name	Father Name	Loan	Position	Join Date	CNIC	Reference	Phone Number
Rehman	Ahsan	Rs 100,000/-	Labour	22/2/2022	34610-727367-8	Muneeb (CH)	0312-87348748
Zaman	Aqib	Rs 225,000/-	Labour	3/4/2022	34501-718728-1	Rehman(Deal)	03334-8477474
Aqib	Javed	NULL	Manager	5/2/2022	34729-378378-1	Dhillon (CH)	0333-733438844
Hamaza	Ali	Rs 100,000/-	Driver	4/4/2022	34210-8177137-8	Owner	0312-242553612
Ghulam	Ehsan	NULL	Tester	5/3/2022	34601-827773-8	Muneen (CH)	0342-73723734

## 3). RAW MATERIAL

ID	Material Type	Quantity	Price	Arrival Date	Description	Reference
01	Soil	60 sq yards	Rs 545,000/-	22/2/2022	Clay	Mushtaq(Deal)
02	Soil	80 sq yards	Rs 645,000/-	6/7/2022	Sandy Soil	Rehman(Deal)
03	Coal	40 Ton	Rs 1200,000/-	3/3/2022	Punjab Coal	Hafeez(Deal)
04	Coal	40 Ton	Rs 1400,000/-	4/5/2022	Sindh Coal	Ali (Deal)
05	Wood	20 Ton	Rs 50,000/-	6/3/2022	Timber	Ashiq(Deal)

## 4). SELL

Customer. ID	Name	Father Name	Brick Type	Amount	Boorrowed	Reference	Cash	Discount
34601-0932938-9	Rehan	Amanat Ali	First Class	Rs 50,000/-	No	Null	Yes	Rs 2500/-
34601-8328378-0	Youasf	Mubarak ali	First Class	Rs 125,00/-	Yes	Manager (S)	No	Rs o/-
34701-8283883-3	Muneeb	Zahoor	Second Class	Rs 225,000/-	No	Null	Yes	Rs 12,500/-
34608-932847-8	Hafeez	Rehman	Second Class	Rs 50,000/-	No	Null	Yes	Rs 2500/-
34702-821872-9	Abid	Ali	Rotten	Rs 35,000/-	No	Null	Yes	Rs 1700/-

## 5). VEHICLE

L. Plate No.	Туре	Make	Model	Color
GJT-5363	WaterTanker	GSteel	2012	Blue
GRW-7347	Tractor	Millat	MF-360-4WD	Red
GRW-7090	Tractor	Ford 4560 Model		Blue
KRH-2356	Excavator	Volvo	EC7050E	Orange
LHR-5656	Tractor	Millat	MF-385-2WD	Red

## 5.2) Represent Relationship



## 1). BILL

Bill Type	Bill Reference	Bill Payer	Amount	Issued Date	Submission Date	Extra Charges	CNIC
Electricity	02-028283-888	Shamshad	Rs 43,000/-	24/1/2022	28/1/2022	Rs o/-	34610-727367-8
Electricity	01-783438-737	Rehman	Rs 100,000/-	22/2/2022	26/2/2022	Rs o/-	34501-718728-1 34729-378378-1
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Zaman	Aqib	Rs 225,000/-	Labour	3/4/2022	34501-718728-1	Rehman(Deal)	03334-8477474	_	02	G)1-5303
Aqib	Javed	NULL	Manager	5/2/2022	34729-378378-1	Dhillon (CH)	0333-733438844	01-783438-737		GRW-7347
Hamaza	Ali	Rs 100,000/-	Driver	4/4/2022	34210-8177137-8	Owner	0312-242553612	00-867364-678	03	
Ghulam	Ehsan	NULL	Tester	5/3/2022	34601-827773-8	Muneen (CH)	0342-73723734	19-839843-827	04	GRW-7090
								78-89394-8949	05	KRH-2356
3). RAW	MATERL	AL								LHR-5656

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## 4). SELL

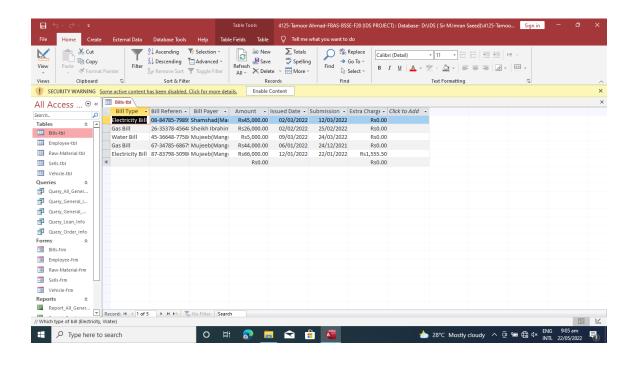
Customer. ID	Name	Father Name	Brick Type	Amount	Boorrowed	Reference	Cash	Discount	ID
34601-0932938-9	Rehan	Amanat Ali	First Class	Rs 50,000/-	No	Null	Yes	Rs 2500/-	01
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34701-8283883-3	Muneeb	Zahoor	Second Class	Rs 225,000/-	No	Null	Yes	Rs 12,500/-	02
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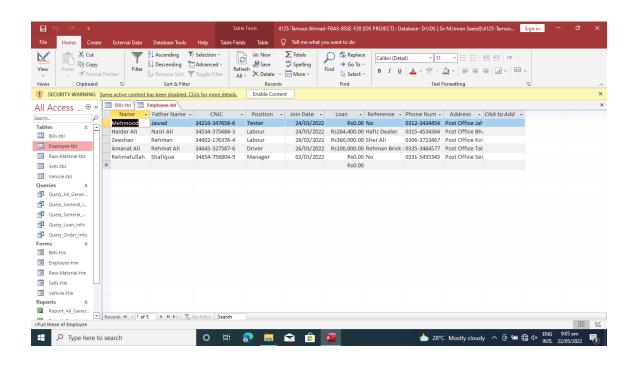
## 5). VEHICLE

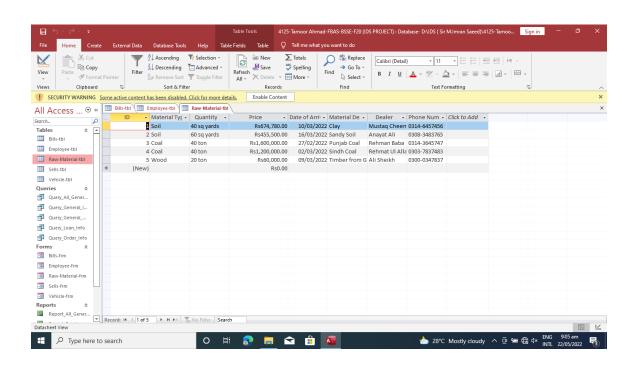
L. Plate No.	Туре	Make	Model	Color	CNIC 34610-727367-8
GJT-5363	WaterTanker	GSteel	2012	Blue	34501-718728-1
GRW-7347	Tractor	Millat	MF-360-4WD	Red	34729-378378-1
GRW-7090	Tractor	Ford	4560 Model	Blue	34210-8177137-8 34601-827773-8
KRH-2356	Excavator	Volvo	EC7050E	Orange	
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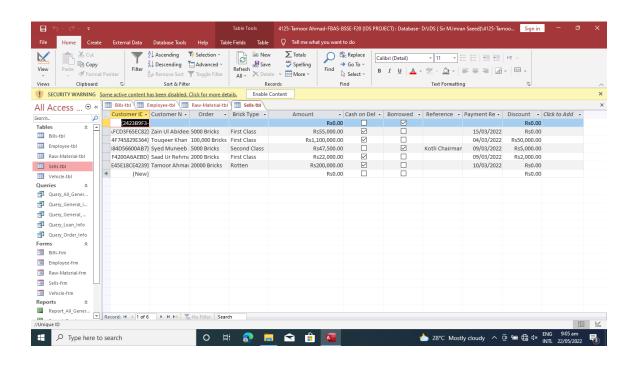
## **APPENDIX-A**

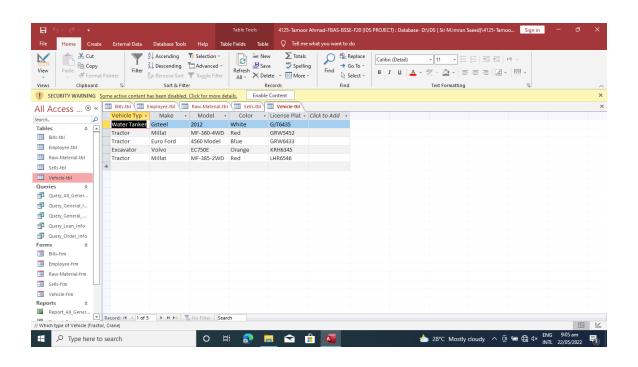
## **Tables**



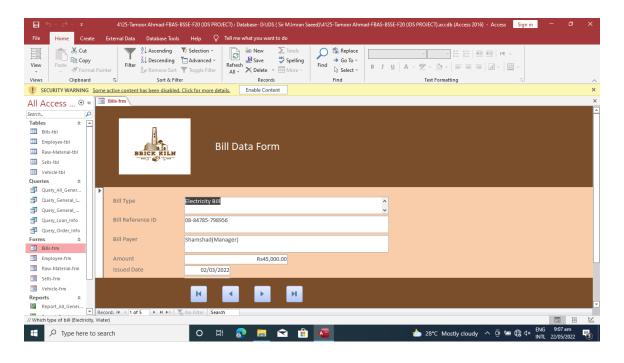


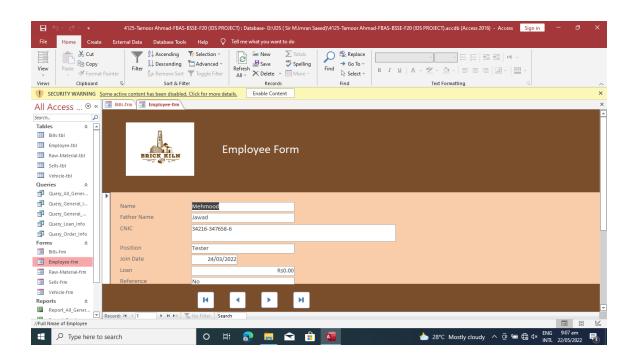


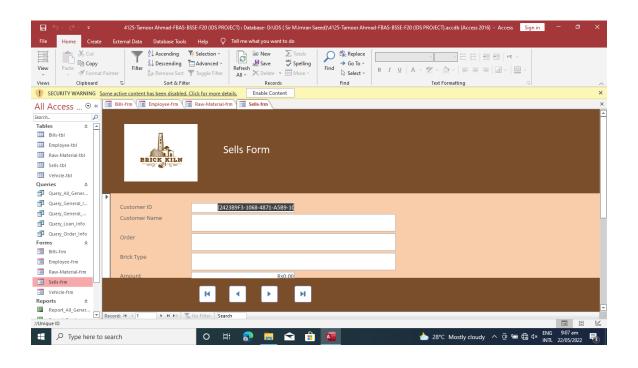


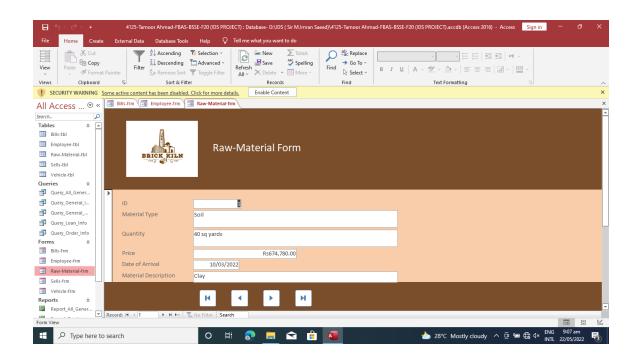


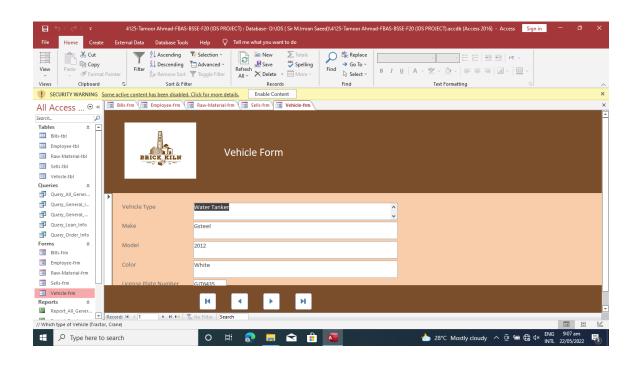
## **FORMS**



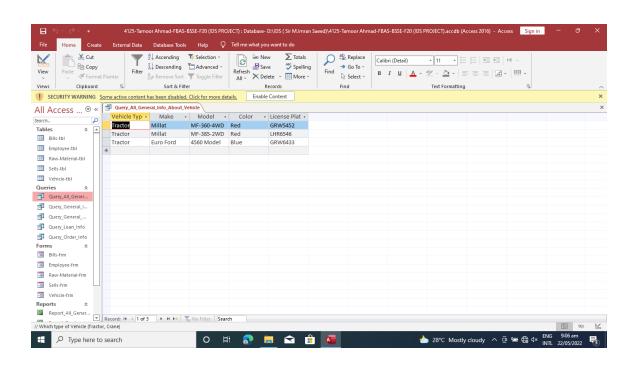


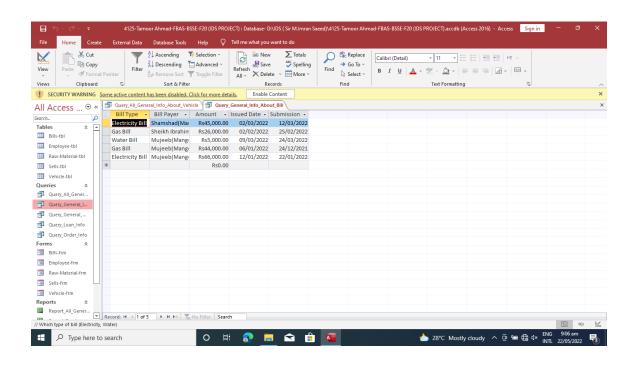


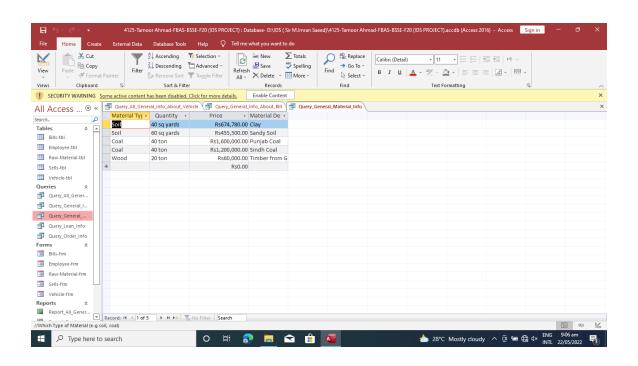


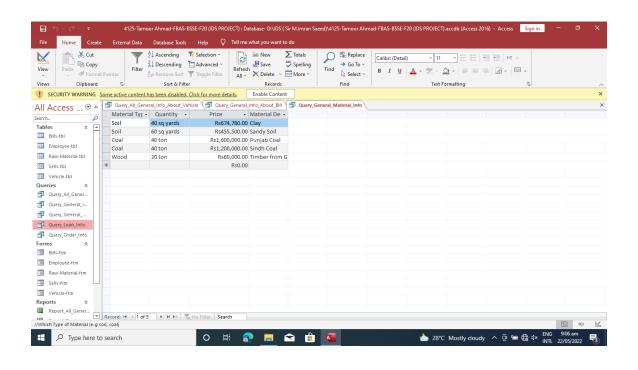


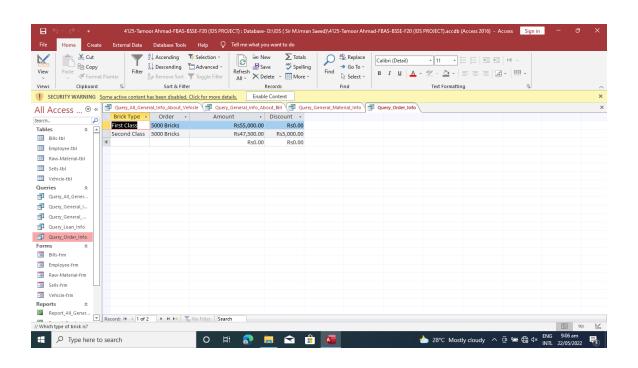
## **QUERIES**



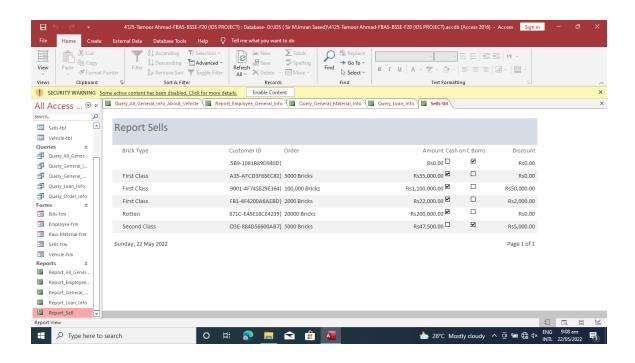


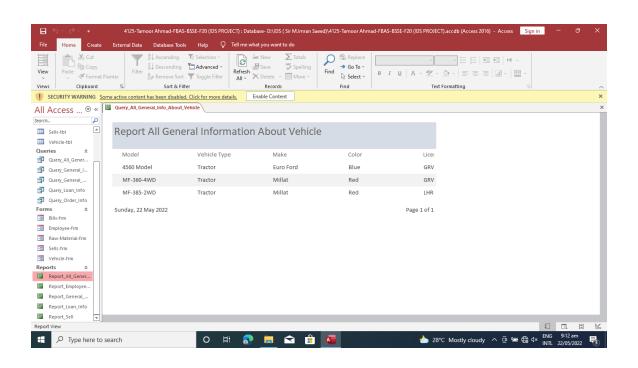


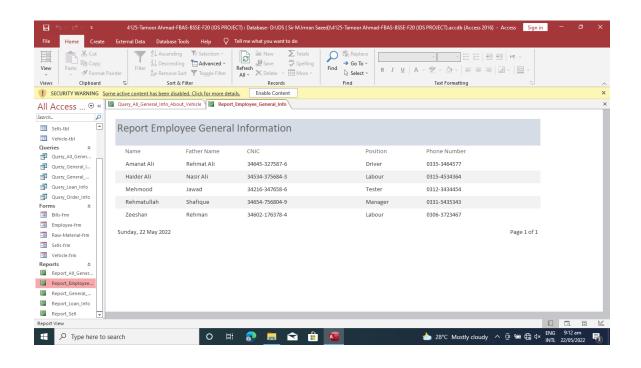


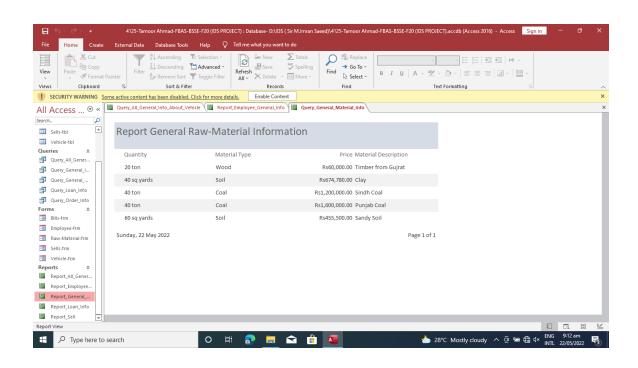


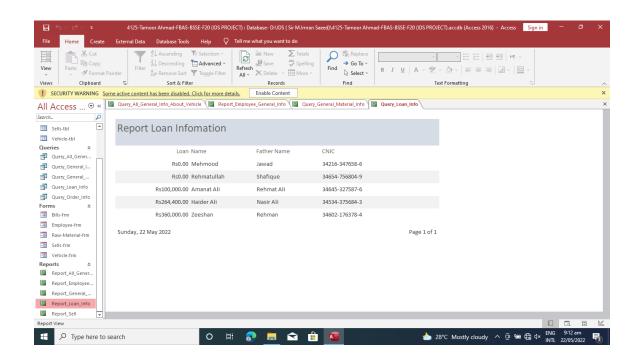
## **REPORTS**











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