AMERICAN INTERNATIONAL
UNIVERSITY-BANGLADESH
Faculty of Science and Technology

SUPERSHOP MANAGEMENT

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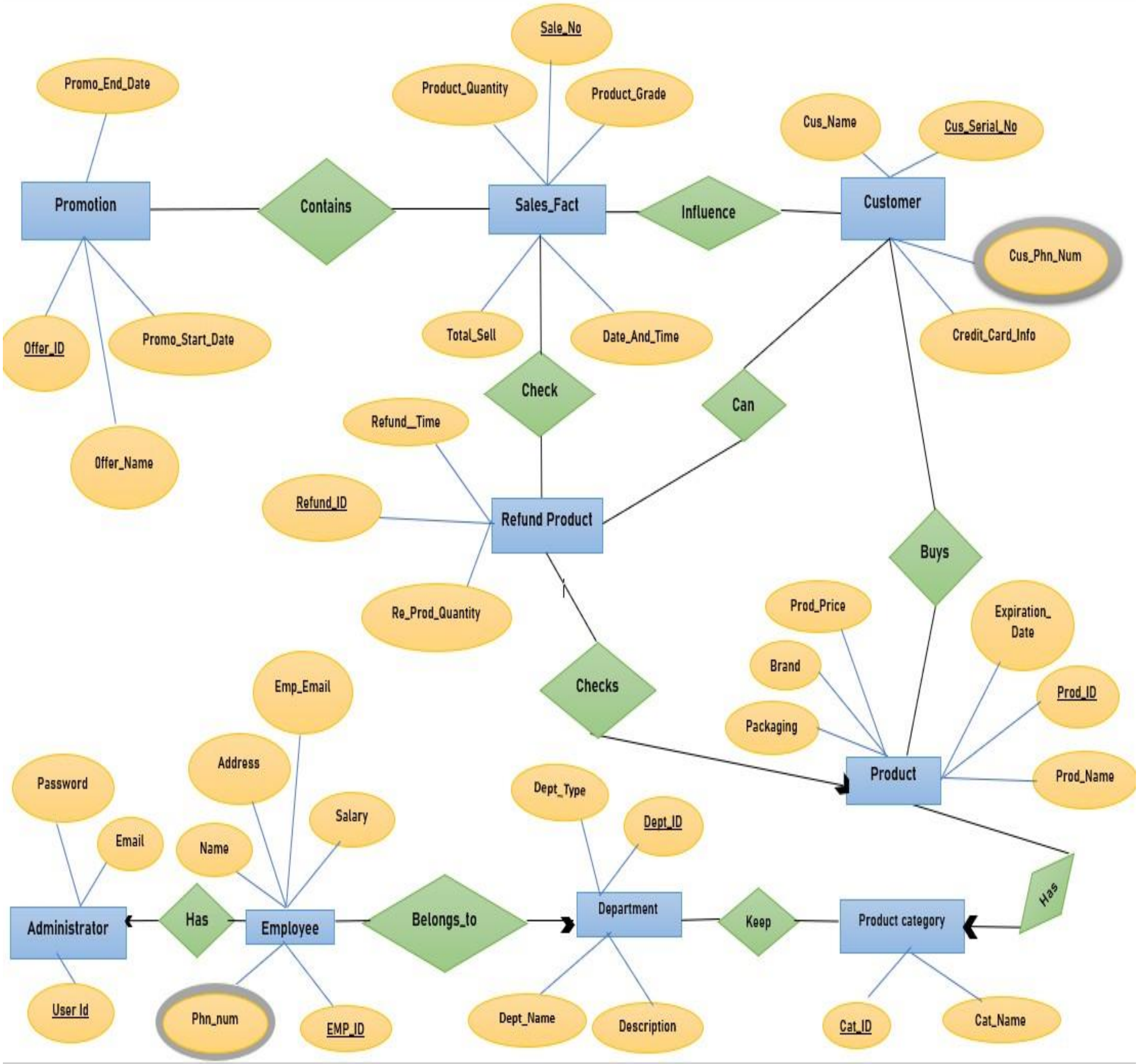
Introduction

This project deals with Superstore automation. A Superstore is a self-service store offering a wide variety of items related to food, household or daily use. Includes both purchase and sale of products. Designed to make the existing system more informative, reliable, fast and easy for all the stake-holders. There are many reasons for the starting of the project because in the selling of items through the manual system of salesperson faces a lot of inefficiencies. It requires handling of large record books that consist of both irrelevant and important information's thus making it difficult to find out the required information as per necessity

Scenario Description

In this management system administration will give all employee user id(will be unique for all employee), password and email id. All employee will use it. For work at this super shop, all employee must have to registration. All employee will submit their name, address, Emp_email, Emp_id, department id),salary, phone no(will be unique for all employee). All employee belongs to a department. Here we will get department details like department_id (will be unique for all employee), department type, department name, department description. All department keeps their product category details like cat_id(will be unique for all product), cat name, product category description. Then all products has product price, packaging of product, product id, brand, expire date, product name. When a customer will buy the product that time customer name, customer's serial number, product id, customer's phone number, product id, customer's credit card information will be record . here customer's phone number and customer's serial number will be unique. Customer can refund product. That time some information need like product id, customer serial number, refund id, product quantity. Here sales facts are total sell, date and time, product quantity, product id(will be unique),refund id(will be unique), product grade, sale no. customer serial number, product price, promo id. If someone want to refund any product that time employee will check refund_time, refund_id, Re_prod_quality.When sometimes promotion will be start that time sales contains offer id(It will be unique), offer_Name, Promo_start_date, Promo_end_date. This is over all view of our project on super shop management system.

E-R DIAGRAM


Sale_No
Promo_End_Date
Product_Quantity
Product_Grade
Cus_Name
Cus_Serial_No
Promotion
Contains
Sales_Fact
Influence
Customer
Cus_Phn_Num
Offer_ID
Promo_Start_Date
Total_Sell
Date_And_Time
Credit_Card_Info
Check
Can
Refund__Time
Offer_Name
Refund_ID
Refund Product
Buys
Re_Prod_Quantity
Prod_Price
Expiration_ Date
Brand
Emp_Email
Checks
Prod_ID
Packaging
Address
Product
Prod_Name
Password
Salary
Dept_Type
Dept_ID
Email
Name
Has
Administrator
Has
Employee
Belongs_to
Department
Keep
Product category
User Id
Phn_num
EMP_ID
Dept_Name
Description
Cat_ID
Cat_Name

NORMALIZATION

Has

UNF

Has(User_ID, Password,Email,Name,Address,Emp_Email,Salary,EMP_ID,Phn_num)

1NF

Phn_num is a multi valued attribute.

1. User_ID, Password,Email, Name,Address,Emp_Email,Salary, EMP_ID,Phn_num

2NF

1. User_ID, Password,Email
2. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num

3NF

There is no Transitive dependency. Relation already in 3NF.

1. User_ID, Password,Email
2. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num

Table Creation

1. User_ID, Password,Email
2. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num, **User_ID**

Belongs_to

UNF

Belongs_to(Name,Address,Emp_Email,Salary,EMP_ID,Phn_num,Dept_typ, Dept_ID,Dept_Name,Decription)

1NF

Phn_num is a multi valuedattribute.

1. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num,Dept_typ,Dept_ID,Dept_Name, Decription.

2NF

1. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num
2. Dept_typ,Dept_ID,Dept_Name, Decription.

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num ,
2. Dept_typ,Dept_ID,Dept_Name, Decription.

Table Creation

1. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num ,**Dept_ID**
2. Dept_typ,Dept_ID,Dept_Name, Decription,

Keep

UNF

Keep(Dept_typ,Dept_ID,Dept_Name,Decription,Cat_ID,Cat_Name)

1NF

There is no multi valued attribute.Relation already in 1NF.

1. Dept_typ,Dept_ID,Dept_Name,Decription,Cat_ID,Cat_Name

2NF

1. Dept_typ,Dept_ID,Dept_Name, Decription.
2. Cat_ID,Cat_Name

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Dept_typ,Dept_ID,Dept_Name, Decription.
2. Cat_ID,Cat_Name

Table Creation

1. Dept_typ,Dept_ID,Dept_Name, Decription.
2. Cat_ID,Cat_Name
3. **Cat_ID, Dept_ID**

Has

UNF

Has(Cat_ID,Cat_Name,Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name)

1NF

There is no multi valued attribute.Relation already in 1NF.

1. Cat_ID,Cat_Name,Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID, Prod_Name

2NF

1. Cat_ID,Cat_Name
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Cat_ID,Cat_Name
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

Table Creation

1. Cat_ID,Cat_Name,
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID, Prod_Name,**Cat_ID**

Buys

UNF

Buys(Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name,Cus_N ame, Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info)

1NF

Cus_Phn_Num is a multi valuedattribute.

1. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name,Cus_N ame, Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

2NF

1. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

Table Creation

1. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
3. **Prod_ID, Cus_Serial_No**

Can

UNF

can(Cus_Name,Cus_Serial_no,Cus_Phn_Num,Credit_Card_Info,Refund_Time, Refund_ID, Re_Prod_Quantity)

1NF

Cus_Phn_Num is a multi valuedattribute.

1. Cus_Name,Cus_Serial_no,Cus_Phn_Num,Credit_Card_Info,Refund_Time, Refund_ID, Re_Prod_Quantity

2NF

1. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
2. Refund_Time,Refund_ID, Re_Prod_Quantity

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
2. Refund_Time,Refund_ID, Re_Prod_Quantity

Table Creation

1. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
2. Refund_Time,Refund_ID, Re_Prod_Quantity
3. **Cus_Serial_no, Refund_ID**

Checks

UNF

Checks(Refund_Time,Refund_ID, Re_Prod_Quantity, Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name)

1NF

There is no multi valued attribute. Relation already in 1NF

1. Refund_Time,Refund_ID, Re_Prod_Quantity, Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

2NF

1. Refund_Time,Refund_ID, Re_Prod_Quantity
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Refund_Time,Refund_ID, Re_Prod_Quantity
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

Table Creation

1. Refund_Time,Refund_ID, Re_Prod_Quantity, **Prod_ID**
2. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name

Check

UNF

Check(Refund_Time,Refund_ID,Re_Prod_Quantity,Sale_No.,Food_Quantity, Food_Grade, Total_Sell, Date_And_Time)

1NF

There is no multi valued attribute. Relation already in 1NF

1. Refund_Time,Refund_ID, Re_Prod_Quantity,Sale_No., Food_Quantity,Food_Grade,Total_Sell, Date_And_Time

2NF

1. Refund_Time,Refund_ID, Re_Prod_Quantity
2. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Refund_Time,Refund_ID, Re_Prod_Quantity
2. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time

Table Creation

1. Refund_Time,Refund_ID, Re_Prod_Quantity
2. Sale_No., Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
3. **Refund_ID, Sale_No.**

Influence

UNF

Influence(Sale_No. ,Food_Quantity,Food_Grade,Total_Sell, Date_And_Time, Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info)

1NF

Cus_Phn_Num is a multi valuedattribute.

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time, Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

2NF

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info

Table Creation

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
2. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
3. **Cus_Serial_no, Sale_No.**

Contains

UNF

Contains(Sale_No. , Food_Quantity,Food_Grade,Total_Sell,
Date_And_Time,Promo_ID, Promo_Start_Date,Promo_End_Date)

1NF

There is no multi valued attribute. Relation already in 1NF

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time,Promo_ID, Promo_Start_Date,Promo_End_Date

2NF

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
2. Promo_ID, Promo_Start_Date,Promo_End_Date

3NF

There is no Transitive dependency. Relation already in 3NF.

1. Sale_No. ,Food_Quantity,Food_Grade,Total_Sell,Date_And_Time
2. Promo_ID, Promo_Start_Date,Promo_End_Date

Table Creation

1. Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time
2. Offer_ID, Offer_Name,Promo_Start_Date,Promo_End_Date
3. **Sale_No. , Offer_ID**

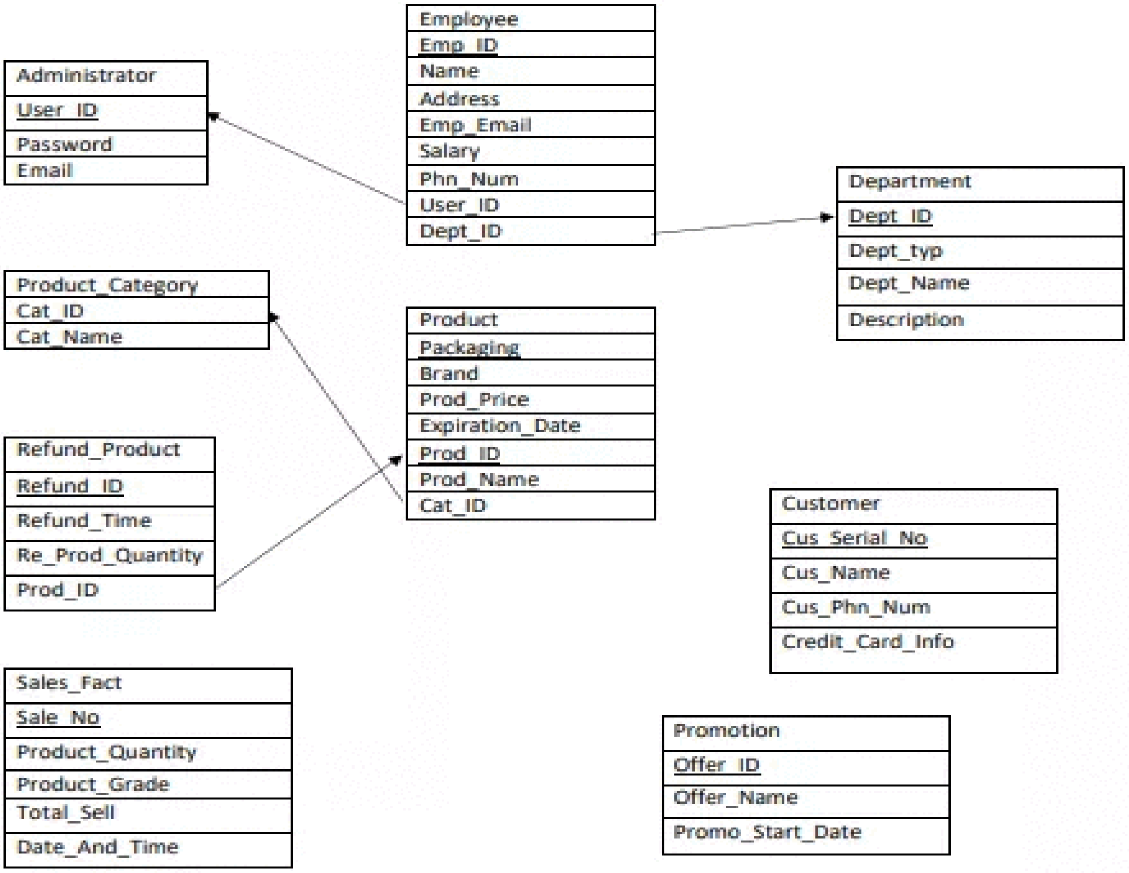
Temporary Tables

1. User_ID, Password,Email
2. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num, **User_ID**
3. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num ,**Dept_ID**
4. ~~Dept_typ,Dept_ID,Dept_Name, Decription,~~
5. Dept_typ,Dept_ID,Dept_Name, Decription.
6. **Cat_ID,Cat_Name**
7. **Cat_ID, Dept_ID**
8. ~~Cat_ID,Cat_Name,~~
9. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name,**Cat_I D**
10. ~~Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name~~
11. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
12. **Prod_ID, Cus_Serial_no**
13. ~~Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info~~
14. ~~Refund_Time,Refund_ID, Re_Prod_Quantity~~
15. **Cus_Serial_no, Refund_ID**
16. Refund_Time,Refund_ID, Re_Prod_Quantity, **Prod_ID**
17. ~~Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name~~
18. ~~Refund_Time,Refund_ID, Re_Prod_Quantity~~
19. Sale_No., Food_Quantity,Food_Grade,Total_Sell,Date_And_Time
20. **Refund_ID**, **Sale_No.**
21. ~~Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time 22.~~
~~Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info~~
23. **Cus_Serial_no**, **Sale_No.**
24. ~~Sale_No. , Food_Quantity,Food_Grade,Total_Sell, Date_And_Time~~
25. Offer_ID, Offer_Name,Promo_Start_Date,Promo_End_Date
26. **Sale_No.** , **Offer_ID**

Final Tables

1. User_ID, Password,Email
2. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num, **User_ID**
3. Name,Address,Emp_Email,Salary,EMP_ID,Phn_num ,**Dept_ID**
4. Dept_typ,Dept_ID,Dept_Name, Decription.
5. **Cat_ID,Cat_Name**
6. **Cat_ID, Dept_ID**
7. Packaging,Brand,Prod_Price,Expiration_Date,Prod_ID,Prod_Name, **Cat_ID**
8. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
9. **Prod_ID, Cus_Serial_no**
10. **Cus_Serial_no, Refund_ID**
11. Refund_Time,Refund_ID, Re_Prod_Quantity, **Prod_ID**
12. Sale_No., Product_Quantity, Product_Grade,Total_Sell, Date_And_Time
13. **Refund_ID**, **Sale_No.**
14. Cus_Name,Cus_Serial_no, Cus_Phn_Num,Credit_Card_Info
15. **Cus_Serial_no**, **Sale_No.**
16. Offer_ID, Offer_Name,Promo_Start_Date,Promo_End_Date
17. **Sale_No.** , **Offer_ID**

Schema Diagram



Employee
Emp_ID
Name
Address
Emp_Email
Salary
Phn_Num
User_ID
Dept_ID

Administrator
User_ID
Password
Email

Department
Dept_ID
Dept_typ
Dept_Name
Description

Product_Category
Cat_ID
Cat_Name

Product
Packaging
Brand
Prod_Price
Expiration_Date
Prod_ID
Prod_Name
Cat_ID

Refund_Product
Refund_ID
Refund_Time
Re_Prod_Quantity
Prod_ID

Customer
Cus_Serial_No
Cus_Name
Cus_Phn_Num
Credit_Card_Info

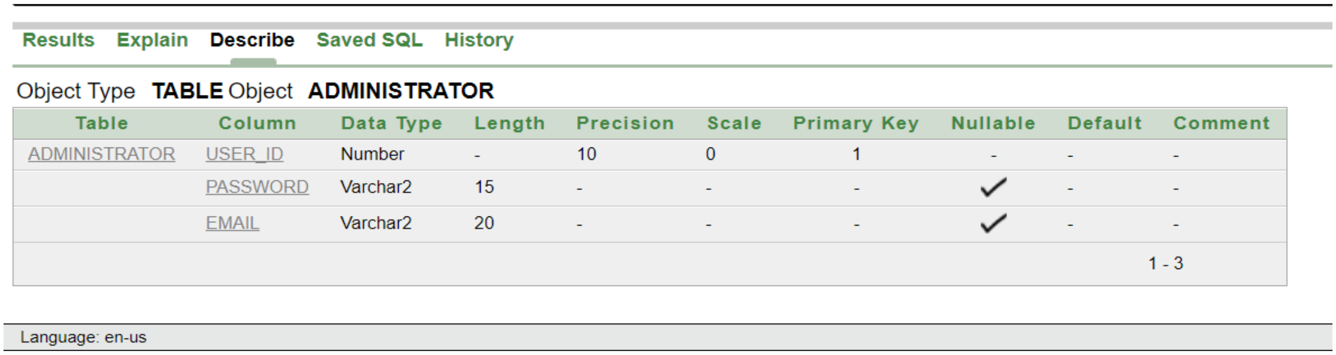
Sales_Fact
Sale_No
Product_Quantity
Product_Grade
Total_Sell
Date_And_Time

Promotion
Offer_ID
Offer_Name
Promo_Start_Date

TABLE CREATION

Administrator Table:

Create Table Administrator(User_ID number(10)primary key, Password varchar2(15),Email varchar2(20));



Object Type **TABLE** Object **ADMINISTRATOR**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ADMINISTRATOR	USER_ID	Number	-	10	0	1	-	-	-
	PASSWORD	Varchar2	15	-	-	-	✓	-	-
	EMAIL	Varchar2	20	-	-	-	✓	-	-

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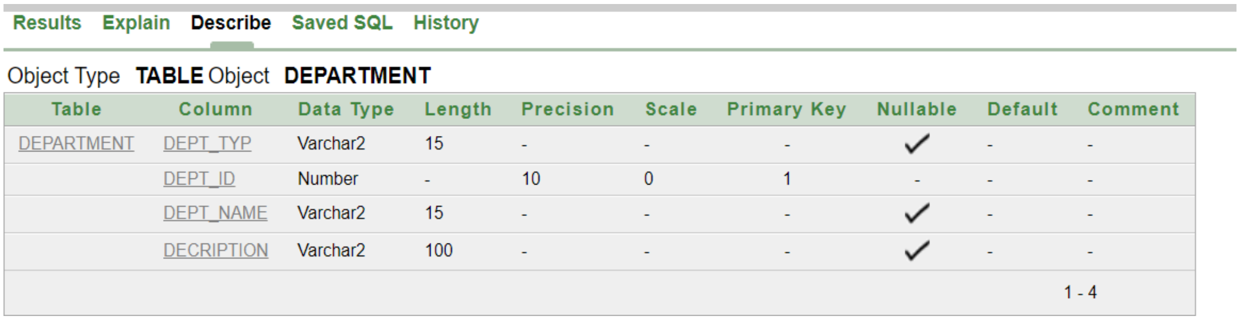
Language: en-us

Department Table:

Create Table Department(Dept_typ varchar2(15),Dept_ID number(10)primary key ,Dept_Name varchar2(15), Decription varchar2(100));



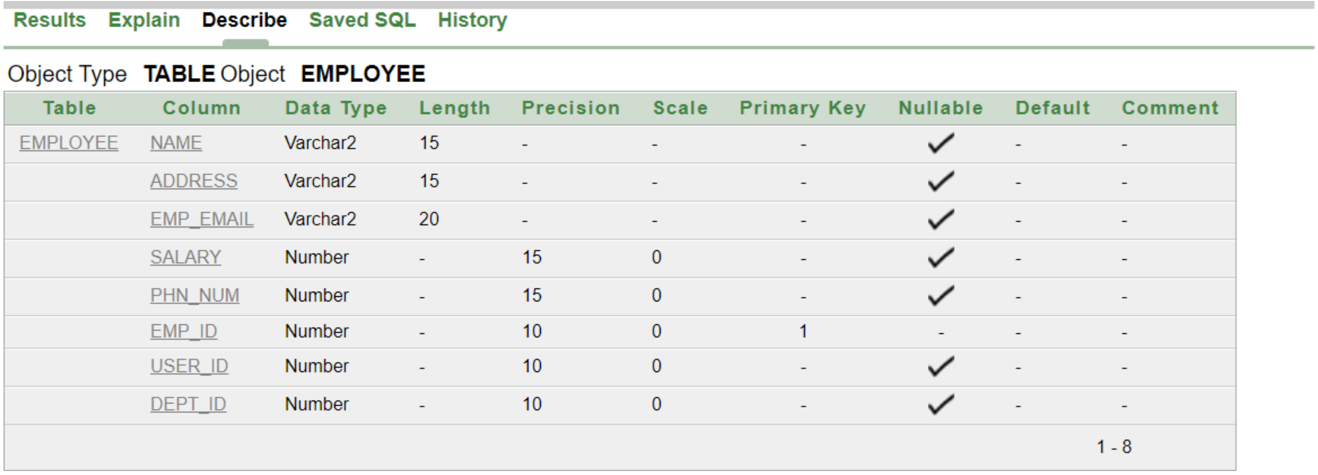
Object Type **TABLE** Object **DEPARTMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DEPARTMENT	DEPT_TYP	Varchar2	15	-	-	-	✓	-	-
	DEPT_ID	Number	-	10	0	1	-	-	-
	DEPT_NAME	Varchar2	15	-	-	-	✓	-	-
	DECRIPTION	Varchar2	100	-	-	-	✓	-	-

1 - 4

Employee Table:

Create Table Employee(Name varchar2(15),Address varchar2(15),Emp_Email varchar2(20),Salary number(15),Phn_num number(15),EMP_ID number(10) constraint pa primary key,User_ID number(10), constraint fa foreign key (User_ID) REFERENCES Administrator(User_ID),Dept_ID number(10), constraint fd foreign key (Dept_ID) REFERENCES Department(Dept_ID));



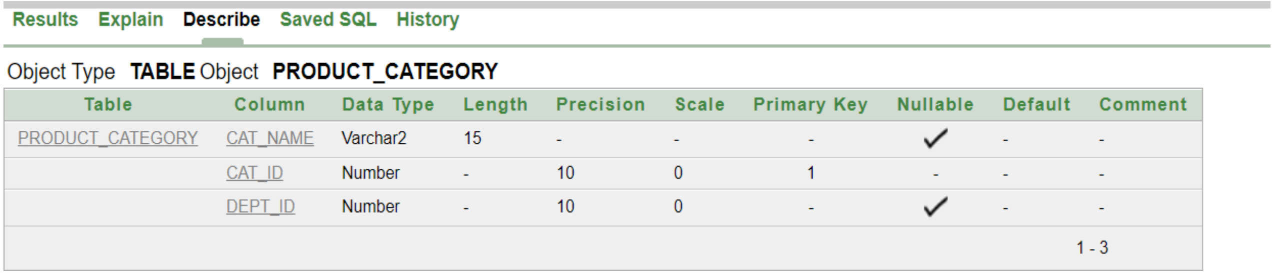
Object Type **TABLE** Object **EMPLOYEE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEE	NAME	Varchar2	15	-	-	-	✓	-	-
	ADDRESS	Varchar2	15	-	-	-	✓	-	-
	EMP_EMAIL	Varchar2	20	-	-	-	✓	-	-
	SALARY	Number	-	15	0	-	✓	-	-
	PHN_NUM	Number	-	15	0	-	✓	-	-
	EMP_ID	Number	-	10	0	1	-	-	-
	USER_ID	Number	-	10	0	-	✓	-	-
	DEPT_ID	Number	-	10	0	-	✓	-	-

1 - 8

Product_Category Table:

create table Product_Category(Cat_Name varchar2(15),Cat_ID number(10)constraint pc primary key,Dept_ID number(10), constraint fc foreign key (Dept_ID) REFERENCES Department(Dept_ID));



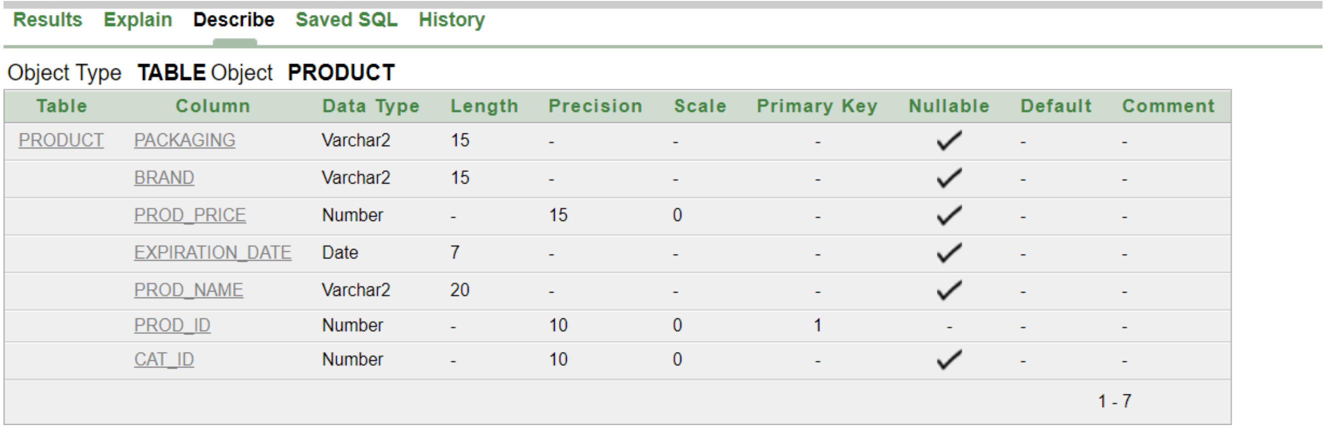
Object Type **TABLE** Object **PRODUCT_CATEGORY**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PRODUCT_CATEGORY	CAT_NAME	Varchar2	15	-	-	-	✓	-	-
	CAT_ID	Number	-	10	0	1	-	-	-
	DEPT_ID	Number	-	10	0	-	✓	-	-

1 - 3

Product Table:

create table Product(Packaging varchar2(15),Brand varchar2(15),Prod_Price number(15),Expiration_Date date,Prod_Name varchar2(20),Prod_ID number(10)constraint pp primary key,Cat_ID number(10), constraint fp foreign key (Cat_ID) REFERENCES Product_Category(Cat_ID));



Object Type **TABLE** Object **PRODUCT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PRODUCT	PACKAGING	Varchar2	15	-	-	-	✓	-	-
	BRAND	Varchar2	15	-	-	-	✓	-	-
	PROD_PRICE	Number	-	15	0	-	✓	-	-
	EXPIRATION_DATE	Date	7	-	-	-	✓	-	-
	PROD_NAME	Varchar2	20	-	-	-	✓	-	-
	PROD_ID	Number	-	10	0	1	-	-	-
	CAT_ID	Number	-	10	0	-	✓	-	-

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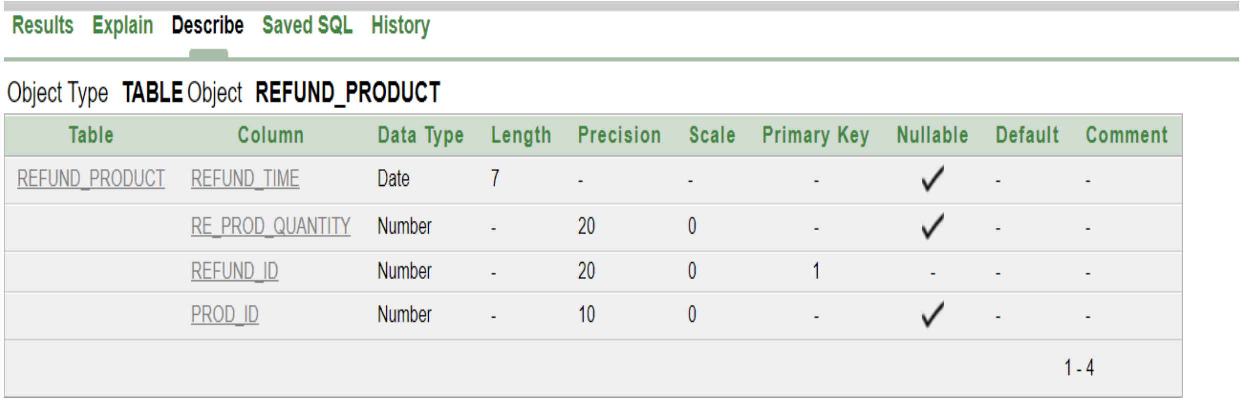
Refund_Product Table:

create table Refund_Product(Refund_Time date,Re_Prod_Quantity number(20),Refund_ID number(20) constraint pr primary key,Prod_ID number(10), constraint fr foreign key (Prod_ID) REFERENCES Product(Prod_ID));



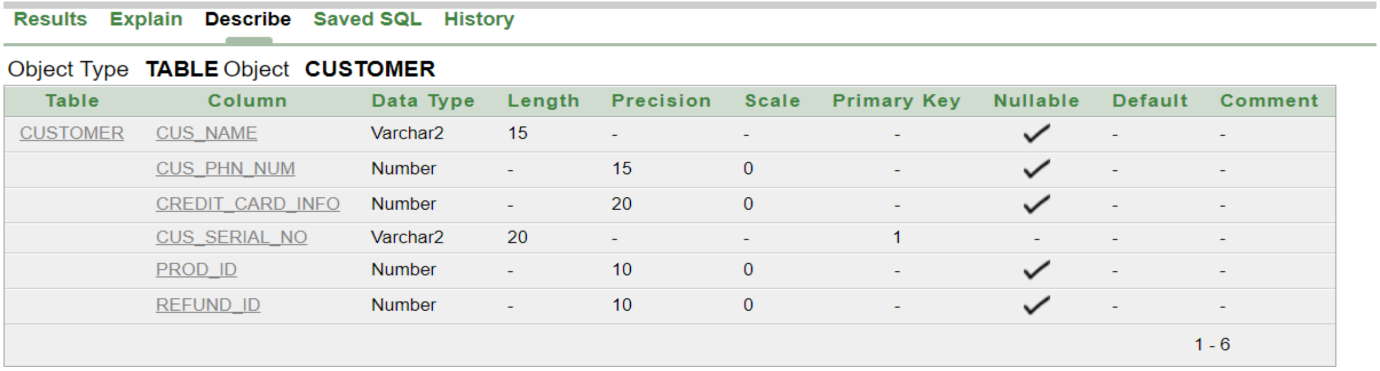
Object Type **TABLE** Object **REFUND_PRODUCT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
REFUND_PRODUCT	REFUND_TIME	Date	7	-	-	-	✓	-	-
	RE_PROD_QUANTITY	Number	-	20	0	-	✓	-	-
	REFUND_ID	Number	-	20	0	1	-	-	-
	PROD_ID	Number	-	10	0	-	✓	-	-

1 - 4

Customer Table:

create table Customer(Cus_Name varchar2(15),Cus_Phn_Num number(15),Credit_Card_Info number(20),Cus_Serial_No varchar2(20) constraint pcu primary key,Prod_ID number(10), constraint fcu foreign key (Prod_ID) REFERENCES Product(Prod_ID),Refund_ID number(10), constraint fcr foreign key (Refund_ID) REFERENCES Refund_Product(Refund_ID));



Object Type **TABLE** Object **CUSTOMER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMER	CUS_NAME	Varchar2	15	-	-	-	✓	-	-
	CUS_PHN_NUM	Number	-	15	0	-	✓	-	-
	CREDIT_CARD_INFO	Number	-	20	0	-	✓	-	-
	CUS_SERIAL_NO	Varchar2	20	-	-	1	-	-	-
	PROD_ID	Number	-	10	0	-	✓	-	-
	REFUND_ID	Number	-	10	0	-	✓	-	-

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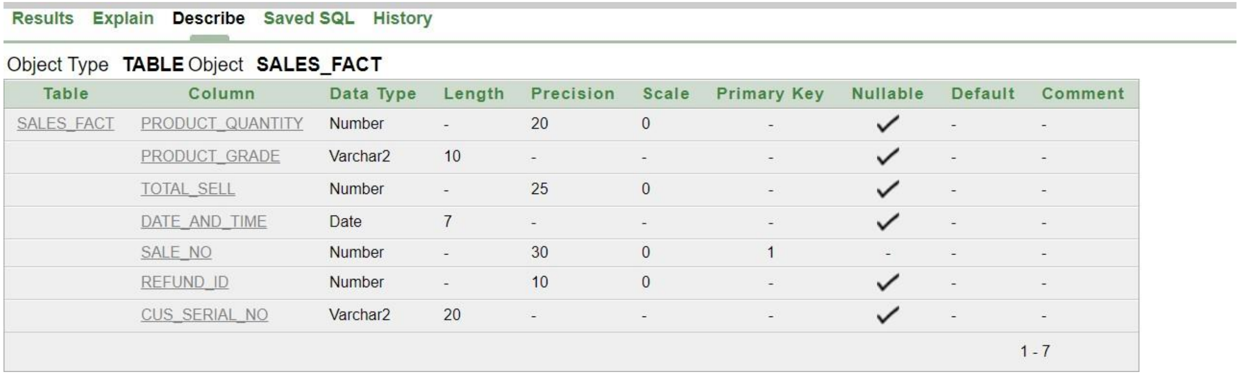
Sales_Fact Table:

create table Sales_Fact(Product_Quantity number(20),Product_Grade varchar2(10),Total_Sell number(25), Date_And_Time date,Sale_No number(30)constraint psa primary key,Refund_ID number(10), constraint fsr foreign key (Refund_ID) REFERENCES Refund_Product(Refund_ID),Cus_Serial_No varchar2(20), constraint fsc foreign key (Cus_Serial_No) REFERENCES Customer(Cus_Serial_no));



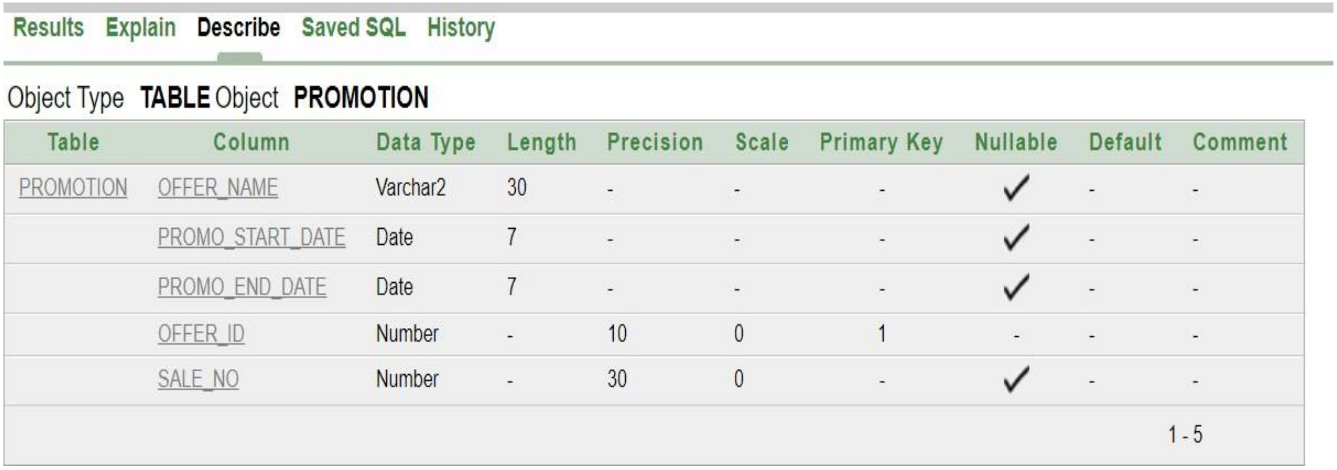
Object Type **TABLE** Object **SALES_FACT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
SALES_FACT	PRODUCT_QUANTITY	Number	-	20	0	-	✓	-	-
	PRODUCT_GRADE	Varchar2	10	-	-	-	✓	-	-
	TOTAL_SELL	Number	-	25	0	-	✓	-	-
	DATE_AND_TIME	Date	7	-	-	-	✓	-	-
	SALE_NO	Number	-	30	0	1	-	-	-
	REFUND_ID	Number	-	10	0	-	✓	-	-
	CUS_SERIAL_NO	Varchar2	20	-	-	-	✓	-	-

1 - 7

Promotion Table:

```
create table Promotion(Offer_Name varchar2(30),Promo_Start_Date
date,Promo_End_Date date,Offer_ID number(10) constraint ppr primary
key,Sale_No number(30), constraint fpr foreign key (Sale_No)
REFERENCES Sales_Fact(Sale_No));
```



Object Type **TABLE** Object **PROMOTION**

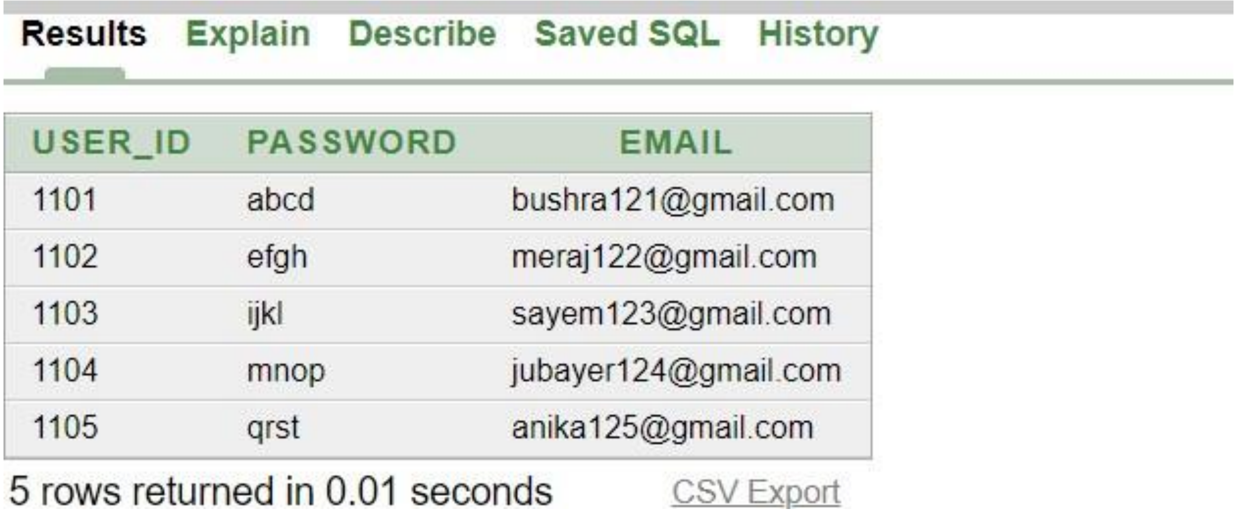
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PROMOTION	OFFER_NAME	Varchar2	30	-	-	-	✓	-	-
	PROMO_START_DATE	Date	7	-	-	-	✓	-	-
	PROMO_END_DATE	Date	7	-	-	-	✓	-	-
	OFFER_ID	Number	-	10	0	1	-	-	-
	SALE_NO	Number	-	30	0	-	✓	-	-

1 - 5

Data Insertion

Administrator Table:

```
INSERT INTO Administrator VALUES (1101, 'abcd',
'bushra121@gmail.com'); INSERT INTO Administrator VALUES (1102,
'efgh', 'meraj122@gmail.com'); INSERT INTO Administrator VALUES
(1103, 'ijkl', 'sayem123@gmail.com'); INSERT INTO Administrator
VALUES (1104, 'mnop', 'jubayer124@gmail.com'); INSERT INTO
Administrator VALUES (1105, 'qrst', 'anika125@gmail.com');
```



USER_ID	PASSWORD	EMAIL
1101	abcd	bushra121@gmail.com
1102	efgh	meraj122@gmail.com
1103	ijkl	sayem123@gmail.com
1104	mnop	jubayer124@gmail.com
1105	qrst	anika125@gmail.com

5 rows returned in 0.01 seconds

Department Table:

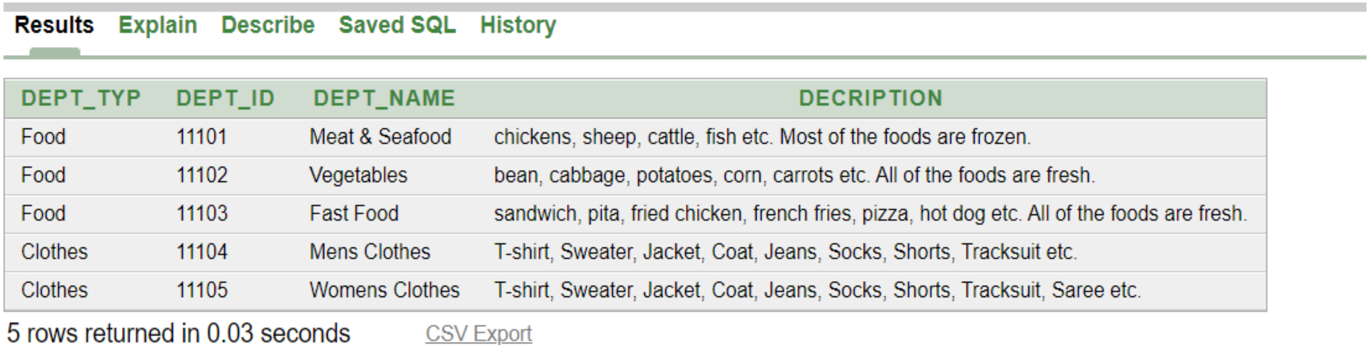
```
INSERT INTO Department VALUES ('Food', 11101, 'Meat & Seafood',
'chickens, sheep, cattle, fish etc. Most of the foods are frozen.');
```

```
INSERT INTO Department VALUES ('Food', 11102, 'Vegetables', 'bean,
cabbage, potatoes, corn, carrots etc. All of the foods are fresh.');
```

```
INSERT INTO Department VALUES ('Food', 11103, 'Fast Food',
'sandwich, pita, fried chicken, french fries, pizza, hot dog etc. All of the
foods are fresh.');

INSERT INTO Department VALUES ('Clothes', 11104, 'Mens Clothes',
'T-shirt, Sweater, Jacket, Coat, Jeans, Socks, Shorts, Tracksuit etc.');

INSERT INTO Department VALUES ('Clothes', 11105, 'Womens Clothes',
'T-shirt, Sweater, Jacket, Coat, Jeans, Socks, Shorts, Tracksuit, Saree etc.');
```



DEPT_TYP	DEPT_ID	DEPT_NAME	DECRIPTION
Food	11101	Meat & Seafood	chickens, sheep, cattle, fish etc. Most of the foods are frozen.
Food	11102	Vegetables	bean, cabbage, potatoes, corn, carrots etc. All of the foods are fresh.
Food	11103	Fast Food	sandwich, pita, fried chicken, french fries, pizza, hot dog etc. All of the foods are fresh.
Clothes	11104	Mens Clothes	T-shirt, Sweater, Jacket, Coat, Jeans, Socks, Shorts, Tracksuit etc.
Clothes	11105	Womens Clothes	T-shirt, Sweater, Jacket, Coat, Jeans, Socks, Shorts, Tracksuit, Saree etc.

5 rows returned in 0.03 seconds

Employee Table:

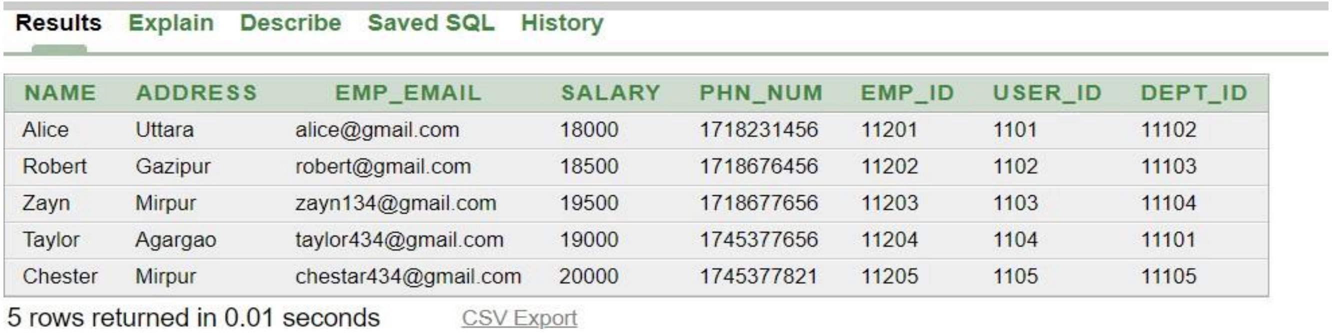
```
INSERT INTO Employee VALUES('Alice', 'Uttara', 'alice@gmail.com',
18000, 01718231456, 11201, 1101, 11102);

INSERT INTO Employee VALUES('Robert', 'Gazipur', 'robert@gmail.com',18500,
01718676456, 11202, 1102, 11103);

INSERT INTO Employee VALUES('Zayn', 'Mirpur', 'zayn134@gmail.com',
19500, 01718677656, 11203, 1102, 11104);

INSERT INTO Employee VALUES('Taylor', 'Agargao',
'taylor434@gmail.com', 19000, 01745377656, 11204, 1104, 11101);

INSERT INTO Employee VALUES('Chester', 'Mirpur',
'chestar434@gmail.com', 20000, 01745377821, 11205, 1105, 11105);
```

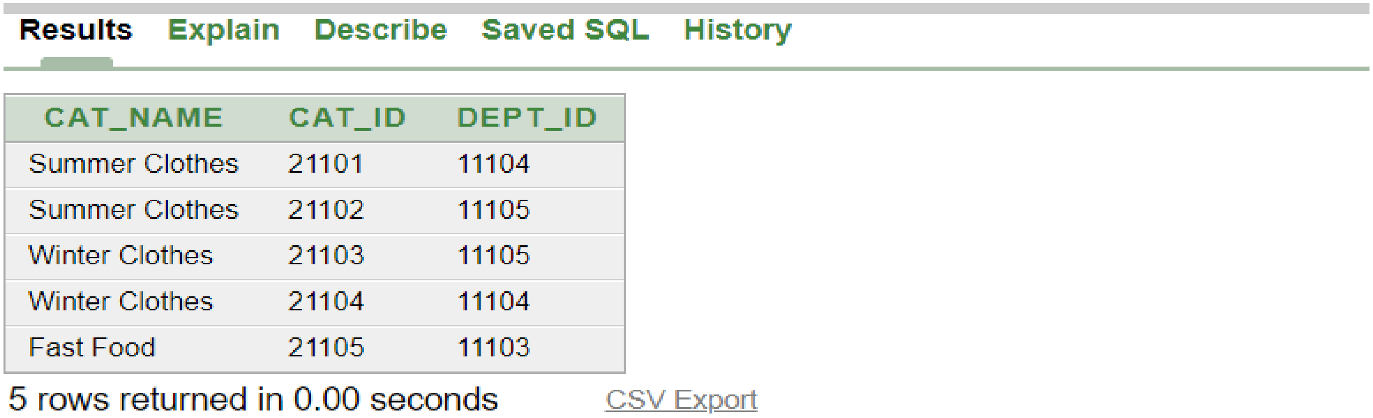


NAME	ADDRESS	EMP_EMAIL	SALARY	PHN_NUM	EMP_ID	USER_ID	DEPT_ID
Alice	Uttara	alice@gmail.com	18000	1718231456	11201	1101	11102
Robert	Gazipur	robert@gmail.com	18500	1718676456	11202	1102	11103
Zayn	Mirpur	zayn134@gmail.com	19500	1718677656	11203	1103	11104
Taylor	Agargao	taylor434@gmail.com	19000	1745377656	11204	1104	11101
Chester	Mirpur	chestar434@gmail.com	20000	1745377821	11205	1105	11105

5 rows returned in 0.01 seconds

Product_Category Table:

INSERT INTO Product_Category VALUES('Summer Clothes', 21101, 11104); INSERT INTO Product_Category VALUES('Summer Clothes', 21102, 11105); INSERT INTO Product_Category VALUES('Winter Clothes', 21103, 11105); INSERT INTO Product_Category VALUES('Winter Clothes', 21104, 11104); INSERT INTO Product_Category VALUES('Fast Food', 21105, 11103);



CAT_NAME	CAT_ID	DEPT_ID
Summer Clothes	21101	11104
Summer Clothes	21102	11105
Winter Clothes	21103	11105
Winter Clothes	21104	11104
Fast Food	21105	11103

5 rows returned in 0.00 seconds

Product Table:

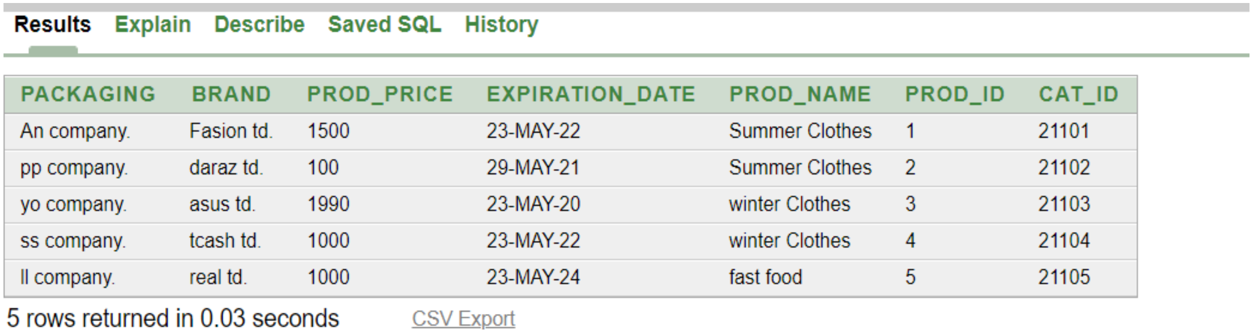
insert into Product values('An company.', 'Fasion td.', '1500', '23-may-2022', 'Summer Clothes', '01', '21101');

insert into Product values('pp company.', 'daraz td.', '100', '29-may-2021', 'Summer Clothes', '02', '21102');

insert into Product values('yo company.', 'asus td.', '1990', '23-may-2020', 'winter Clothes', '03', '21103');

insert into Product values('ss company.', 'tcash td.', '1000', '23-may-2022', 'winter Clothes', '04', '21104');

insert into Product values('ll company.', 'real td.', '1000', '23-may-2024', 'fast food', '05', '21105');



PACKAGING	BRAND	PROD_PRICE	EXPIRATION_DATE	PROD_NAME	PROD_ID	CAT_ID
An company.	Fasion td.	1500	23-MAY-22	Summer Clothes	1	21101
pp company.	daraz td.	100	29-MAY-21	Summer Clothes	2	21102
yo company.	asus td.	1990	23-MAY-20	winter Clothes	3	21103
ss company.	tcash td.	1000	23-MAY-22	winter Clothes	4	21104
ll company.	real td.	1000	23-MAY-24	fast food	5	21105

5 rows returned in 0.03 seconds CSV Export

Refund_Product Table:

insert into Refund_Product values ('23-may-2022', '1', '01', '01');

insert into Refund_Product values ('20-april-2020', '2', '02', '02');

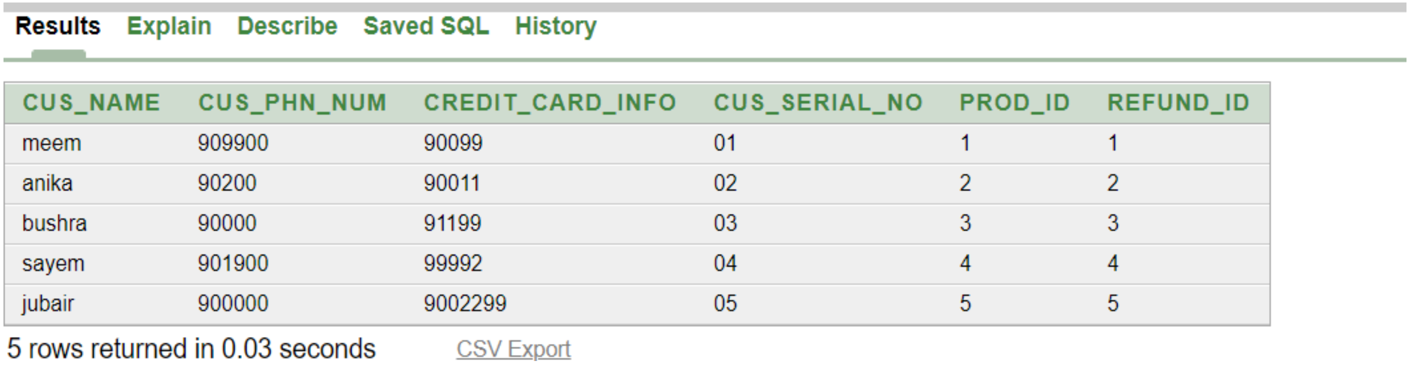
insert into Refund_Product values ('23-may-2022', '3', '03', '03');

insert into Refund_Product values ('23-jun-2022', '4', '04', '04');

insert into Refund_Product values ('23-may-2022', '5', '05', '05');

Customer Table:

```
insert into Customer values ( 'meem', '0909900', '90099', '01', '01', '01');
insert into Customer values ( 'anika', '090200', '90011', '02', '02', '02');
insert into Customer values ( 'bushra', '090000', '91199', '03', '03', '03');
insert into Customer values ( 'sayem', '0901900', '99992', '04', '04', '04');
insert into Customer values ( 'jubair', '0900000', '9002299', '05', '05', '05');
```

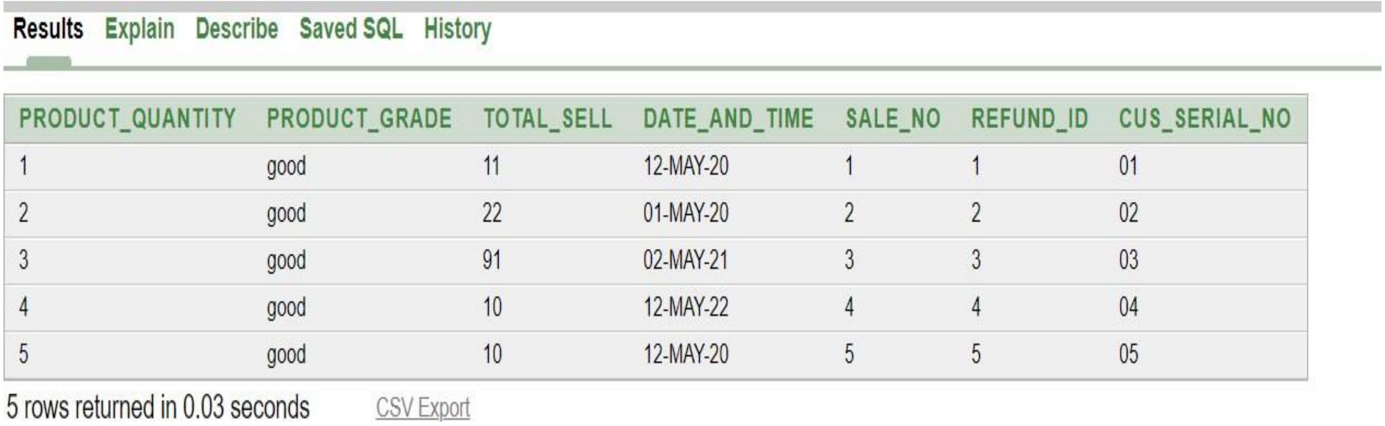


CUS_NAME	CUS_PHN_NUM	CREDIT_CARD_INFO	CUS_SERIAL_NO	PROD_ID	REFUND_ID
meem	909900	90099	01	1	1
anika	90200	90011	02	2	2
bushra	90000	91199	03	3	3
sayem	901900	99992	04	4	4
jubair	900000	9002299	05	5	5

5 rows returned in 0.03 seconds

Sales_Fact Table:

```
insert into Sales_Fact values ('01', 'good', '011', '12-may-2020', '01', '01', '01');
insert into Sales_Fact values ('02', 'good', '022', '1-may-2020', '02', '02','02');
insert into Sales_Fact values ('03', 'good', '091', '2-may-2021', '03', '03','03');
insert into Sales_Fact values ('04', 'good', '010', '12-may-2022', '04', '04','04');
insert into Sales_Fact values ('05', 'good', '010', '12-may-2020', '05', '05','05');
```

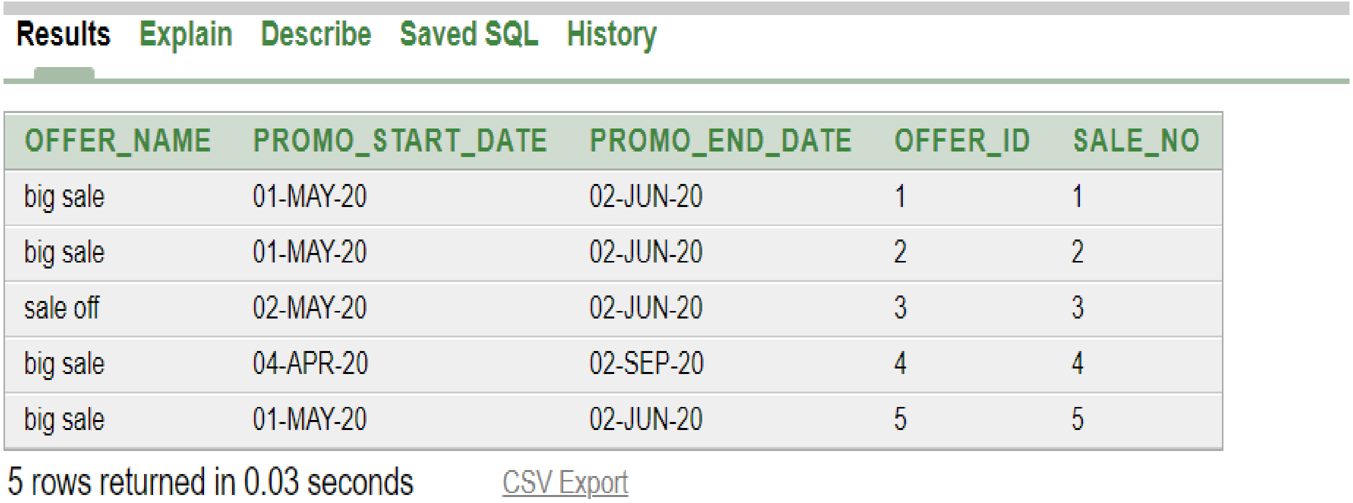


PRODUCT_QUANTITY	PRODUCT_GRADE	TOTAL_SELL	DATE_AND_TIME	SALE_NO	REFUND_ID	CUS_SERIAL_NO
1	good	11	12-MAY-20	1	1	01
2	good	22	01-MAY-20	2	2	02
3	good	91	02-MAY-21	3	3	03
4	good	10	12-MAY-22	4	4	04
5	good	10	12-MAY-20	5	5	05

5 rows returned in 0.03 seconds

Promotion Table:

insert into Promotion values ('big sale', '01-may-2020','02-june-2020', '01', '01'); insert into Promotion values ('big sale', '01-may-2020','02-june-2020', '02', '02'); insert into Promotion values ('sale off', '02-may-2020','02-june-2020', '03', '03'); insert into Promotion values ('big sale', '04-april-2020','02-sep-2020', '04','04'); insert into Promotion values ('big sale', '01-may-2020','02-june-2020', '05', '05');



OFFER_NAME	PROMO_START_DATE	PROMO_END_DATE	OFFER_ID	SALE_NO
big sale	01-MAY-20	02-JUN-20	1	1
big sale	01-MAY-20	02-JUN-20	2	2
sale off	02-MAY-20	02-JUN-20	3	3
big sale	04-APR-20	02-SEP-20	4	4
big sale	01-MAY-20	02-JUN-20	5	5

5 rows returned in 0.03 seconds

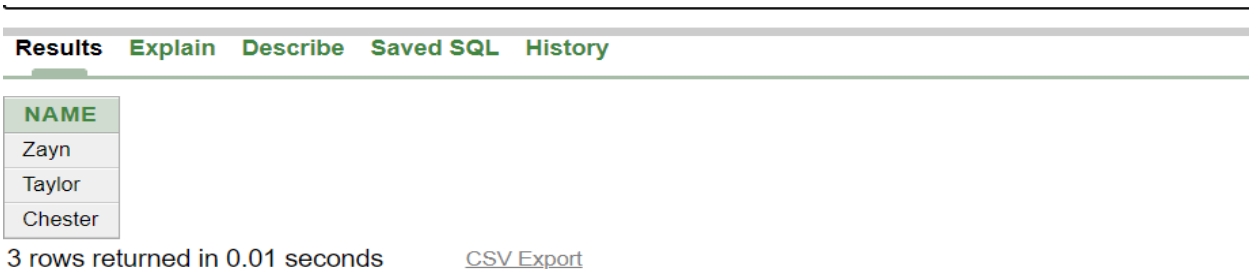
SUB-QUERY

Q. Who hasa salary greater than Robert?

Answer:

select Name from Employee

where Salary>(select Salary from Employee where Name='Robert');



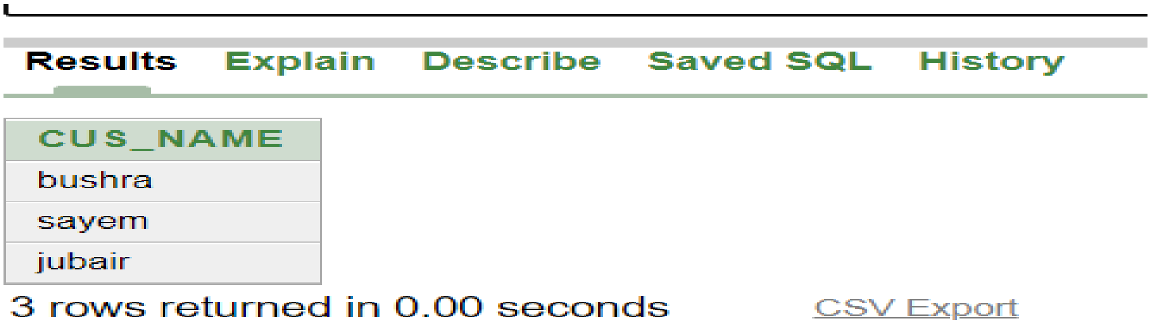
NAME
Zayn
Taylor
Chester

3 rows returned in 0.01 seconds

Q. Which Customer has serial no more than anika ? Answer:

select Cus_Name from Customer

where Cus_Serial_No>(select Cus_Serial_No from Customer where Cus_Name='anika');



CUS_NAME
bushra
sayem
jubair

3 rows returned in 0.00 seconds

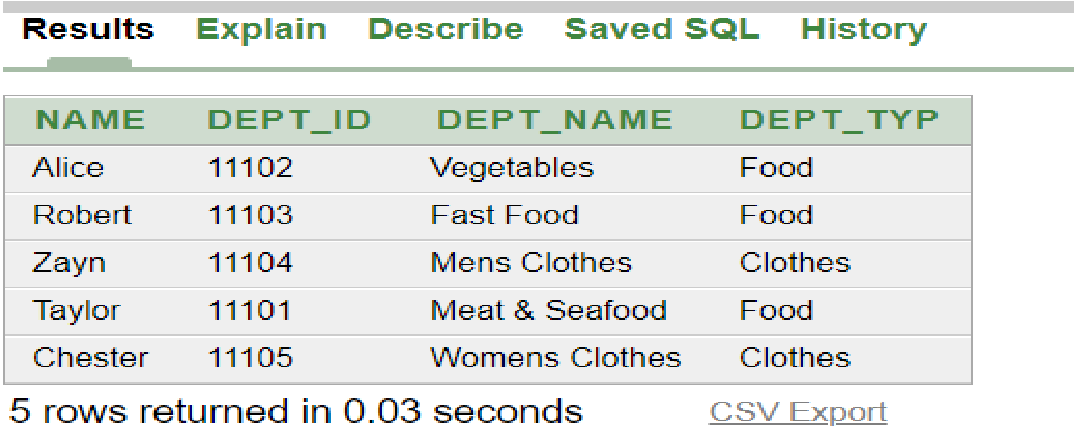
JOINING

Q. list all the employees department's details[equity join]

Answer:

select e.name, d.dept_id, d.dept_name, d.dept_typ from employee e, department d

where e.dept_id = d.dept_id;



NAME	DEPT_ID	DEPT_NAME	DEPT_TYP
Alice	11102	Vegetables	Food
Robert	11103	Fast Food	Food
Zayn	11104	Mens Clothes	Clothes
Taylor	11101	Meat & Seafood	Food
Chester	11105	Womens Clothes	Clothes

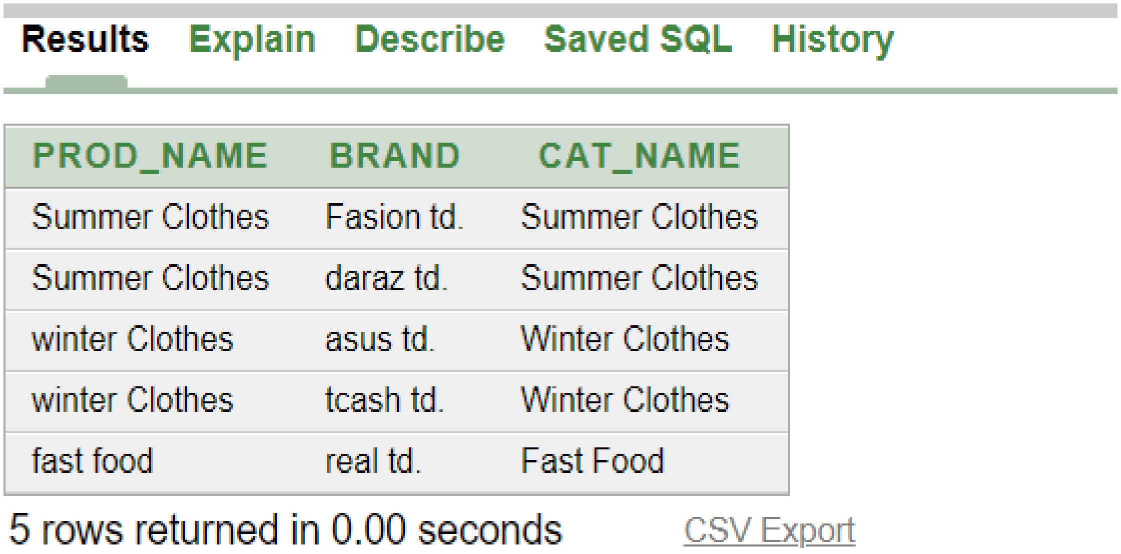
5 rows returned in 0.03 seconds

Q. Show all the categorized or noncategorized product [outer join]

Answer:

select p.prod_name, p.brand, pc.cat_name from product p, product_category pc where

p.cat_id = pc.cat_id(+);



PROD_NAME	BRAND	CAT_NAME
Summer Clothes	Fasion td.	Summer Clothes
Summer Clothes	daraz td.	Summer Clothes
winter Clothes	asus td.	Winter Clothes
winter Clothes	tcash td.	Winter Clothes
fast food	real td.	Fast Food

5 rows returned in 0.00 seconds

VIEW

Q . customer brief .

Answer:

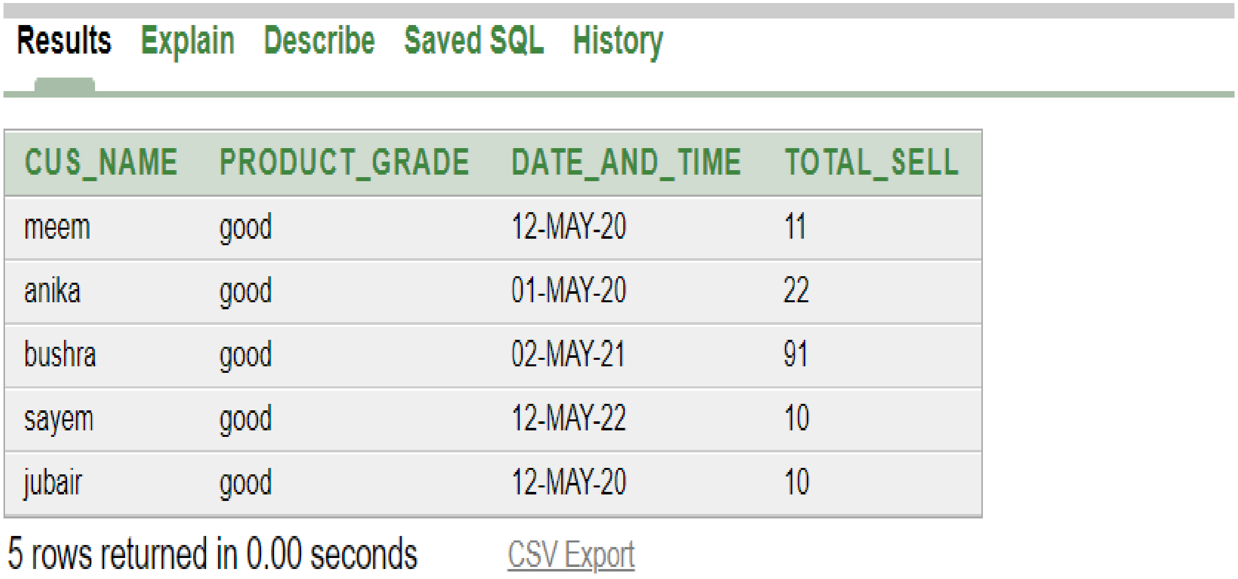
create or replace view cus_brief as

select c.cus_name, sf.product_grade, sf.date_and_time, sf.total_sell

from customer c, sales_fact sf

where c.cus_serial_no = sf.cus_serial_no; select * from

cus_brief;



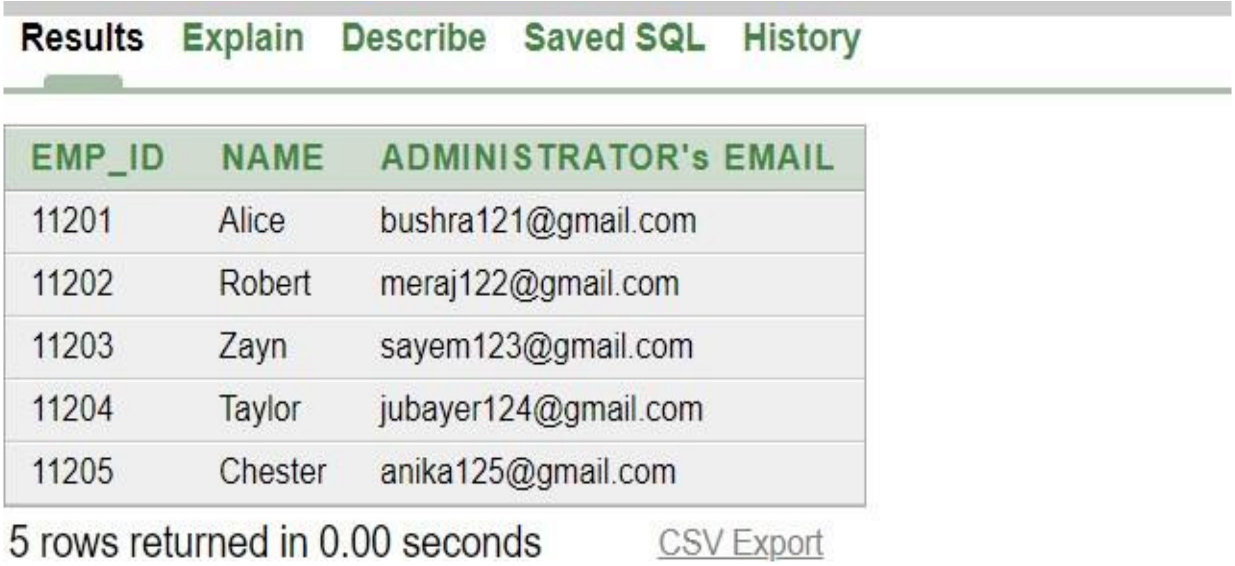
CUS_NAME	PRODUCT_GRADE	DATE_AND_TIME	TOTAL_SELL
meem	good	12-MAY-20	11
anika	good	01-MAY-20	22
bushra	good	02-MAY-21	91
sayem	good	12-MAY-22	10
jubair	good	12-MAY-20	10

5 rows returned in 0.00 seconds

Q. View the employees with administrator Answer:

```
create or replace view E_A_101 as
select e.emp_id, e.name, a.email as "ADMINISTRATOR's EMAIL"
from employee e, administrator a where
e.user_id = a.user_id;

select * from E_A_101;
```



EMP_ID	NAME	ADMINISTRATOR's EMAIL
11201	Alice	bushra121@gmail.com
11202	Robert	meraj122@gmail.com
11203	Zayn	sayem123@gmail.com
11204	Taylor	jubayer124@gmail.com
11205	Chester	anika125@gmail.com

```
5 rows returned in 0.00 seconds
```

Relational Algebra

Q.Employees with salary>18500. Ans:

ƱSalary>18500 Employee

Q. Employees with salary>18000 and UserID=1102. Ans:

ƱSalary>18000^UserID=1102 Employee

Q. Product with price>50. Ans:

ƱPrice>50 Product

Q. ID and Salary of all employee. Ans:

ΠEMP_ID, Salary Employee

Q. Combine Product category table with Product table.

Ans: Product Category × Product

Conclusion

Our project is about a supermarket management system, we gave our best to create this project in given time. Our aim was to build a small but effective project and keep it simple for modifying it in future. Our project deals with customers, employees,product categories, product prices, refund products, sales etc. A supermarket is a huge place for dealing with many customers, products, employee and so on. So, it doesn't need to tell how much effective database management system is required for handling this big datas.

Our project is close to a perfect supermarket management system. But we have also some lackings in our project. We will work in future and will make it more effective.