



INTRODUCTION TO DATABASE SECTION: I

PROJECT NAME: Fashion House Management System
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GROUP NAME: TEAM ELITE

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INTRODUCTION

The expression “Fashion house” is also defined as a fashionable product company, a business that designs, makes, and sells fashionable clothes, bags and other accessories that are typically associated by a proficient designer, or a company that designs new styles of creative products. This project Fashion house management system has been developed on MySQL. The main purpose of this project is to manage the details of several attributes such as Employee, Customer, Product, Cart, Payment, Delivery, Category and Discount that has been done online and offline.

CASE STUDY

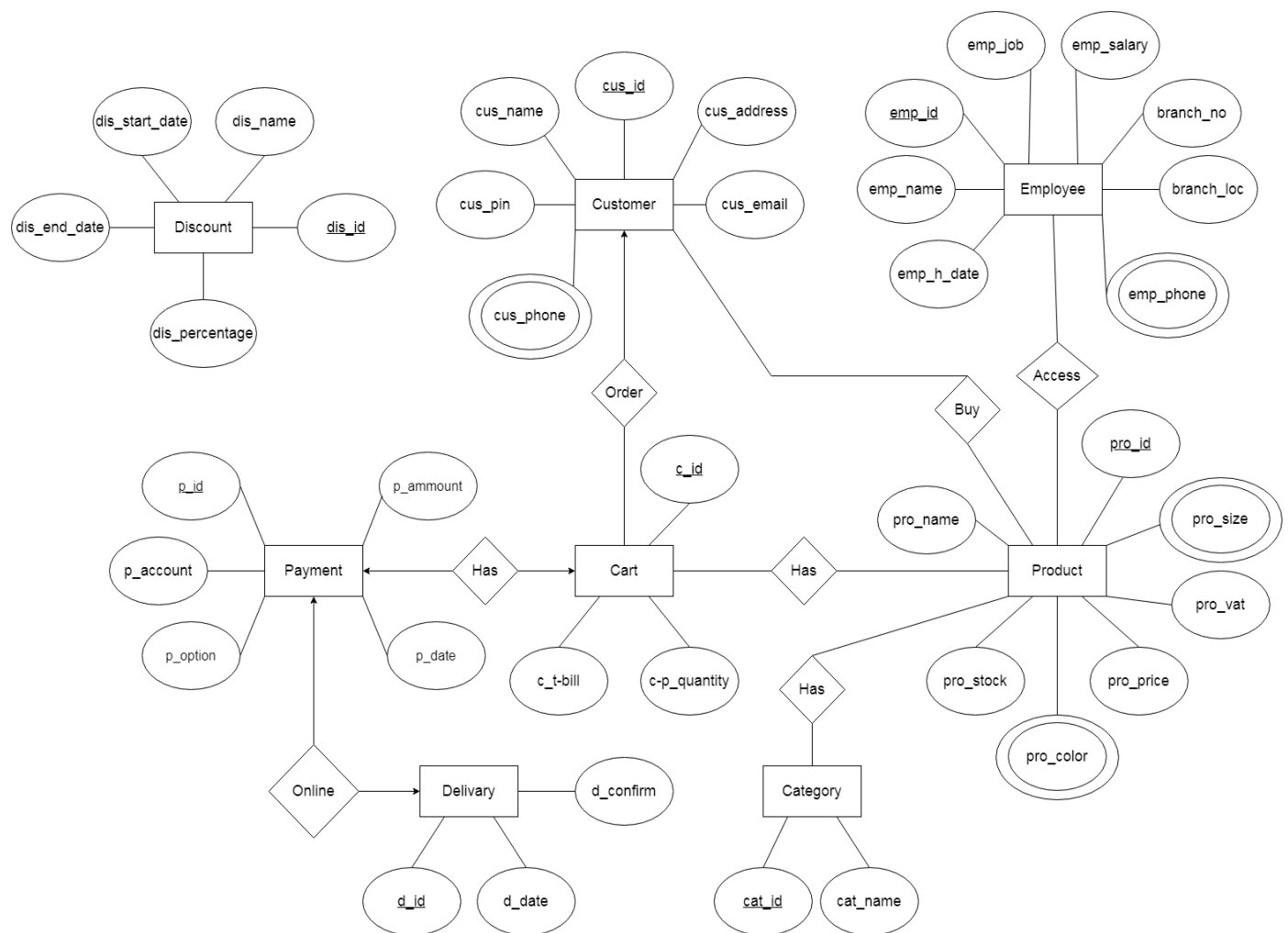
Fashion house management System plays a better and consistent control of major business processes. This project can insure greater and effective quality of products and services, improving internal and outside communication, increasing both profits and customer satisfaction also reduction of costly errors and waste. Basically, management system stores into diagram respective with all tables. Each entity (Employee, Customer, Product, Cart, Payment, Delivery, Category and Discount) contains primary key and unique keys will be stored in the database.

A customer has cus_name, cus_id, cus_address, cus_phone, cus_email, cus_pin. A fashion house is managed by employee. An employee has emp_name, emp_id, emp_job, emp_salary, branch_no, branch_loc, emp_phone, emp_h_date. Customers buy their products via category and then payment has been made through cart system. A product has pro_name, pro_id, pro_size, pro_vat, pro_color, pro_price, pro_stock besides category has cat_id and cat_name. Moreover, Cart has c_id, c_p_quantity, c_t-bill and in payment it has p_id, p_date, p_amount, p_option, p_account. After, the delivery has been made by

online and the delivery has d_id, d_date, d_confrim. As discount depend on time of payment, attributes of discount entity has dis_id,dis name,dis_start_date,dis_end_date.

All the above information will be stored in the database of Fashion House Management System tables. These are the relationships are perfectly symbolized where the structure reflects the scenario of the real world of this project named Fashion house management System.

ER DIAGRAM



NORMALIZATION

- order(**cus_id**, cus_name, cus_phone, cus_email, cus_pass, cus_address, **c_id**, c_p_quantity, c_t-bill)

1NF: cus_phone are multivalued attribute

2NF: **cus_id**, cus_name, cus_phone, cus_pin, cus_email, cus_address

c_id, c-p_quantity, c_t-bill, **cus_id**

3NF: **c_id**, **cus_id**

c_id, c_t-bill

c_id, c-p_quantity

- has(**c_id**, c_p_quantity, c_t-bill, **pro_id**, pro_name, pro_color, pro_size, pro_price, pro_vat, pro_stock)

1NF: pro_color, pro_size are multivalued attribute

2NF: **c_id**, c_p_quantity, c_t-bill

pro_id, pro_name, pro_price, pro_color, pro_size, pro_vat, pro_stock, **c_id**, **c-p_quantity**

→ **pro_id**, **pro_color**

→ **pro_id**, **pro_size**

3NF: **c_id**, c_t-bill

pro_id, **pro_size**, **pro_color**, **c-p_quantity**, **c_id**

pro_id, pro_name, pro_price, pro_stock

pro_price, pro_vat

- has(**c_id**, c-p_quantity, c_t-bill, **p_id**, p_option, p_account, p_ammount, p_date)

1NF: No multivalued attribute

2NF: **c_id**, c-p_quantity, c_t-bill

p_id, p_option, p_account, p_ammount, p_date, **c_id**

3NF: **p_id**, p_option, p_account, p_ammount, p_date

p_id, **c_id**

➤ online(**p_id**, p_option, p_account, p_ammount, p_date, **d_id**, d_date, d_confirm)

1NF: No multivalued attribute

2NF: **p_id**, p_option, p_account, p_ammount, p_date

d_id, d_date, d_confirm, **p_id**

3NF: No Transitive Dependencies

➤ buy(**cus_id**, cus_name, cus_phone, cus_email, cus_pass, cus_address, **pro_id**, pro_name, pro_color, pro_size, pro_price, pro_vat, pro_stock)

1NF: cus_phone, pro_color, pro_size are multivalued attribute

2NF: **cus_id**, cus_name, cus_phone, cus_email, cus_pass, cus_address

pro_id, pro_name, pro_price, pro_vat, pro_stock, **cus_id**

pro_id, pro_color

pro_id, pro_size

3NF: **pro_id**, **cus_id**

pro_id, pro_name, pro_price, pro_stock

pro_price, pro_vat

- has(**pro_id**, pro_name, pro_color, pro_size, pro_price, pro_vat, pro_stock, **cat_id**, cat_name)

1NF: pro_color, pro_size are multivalued attribute

2NF: **pro_id**, pro_name, pro_price, pro_vat, pro_stock

pro_id, pro_color

pro_id, pro_size

cat_id, cat_name, **pro_id**

3NF: **pro_id**, pro_name, pro_price, pro_stock

pro_price, pro_vat

- access(**emp_id**, emp_name, emp_phone, emp_phone, emp_job, emp_salary, branch_no, branch_name, branch_loc, **pro_id**, pro_name, pro_color, pro_size, pro_price, pro_vat, pro_stock)

1NF: pro_color, pro_size are multivalued attribute

2NF: **emp_id**, emp_name, emp_phone, emp_phone, emp_job, emp_salary, **branch_no**, branch_name, branch_loc

pro_id, pro_name, pro_price, pro_vat, pro_stock, **branch_id**

pro_id, pro_color

pro_id, pro_size

3NF: **emp_id**, emp_name, emp_phone, emp_phone, emp_job, emp_salary, **branch_no**

branch_no, branch_name, branch_loc

pro_id, pro_name, pro_price

pro_price, pro_vat

pro_id, **pro_color**, **pro_size**, pro_stock, **branch_id**

→(dis_id, dis_name, dis_start_date, dis_end_date, dis_amount)

TABLES FROM NORMALIZATION

cus_id, cus_name, cus_phone, cus_pin, cus_email, cus_address

c_id, cus_id

c_id, c-p_quantity, c_t-bill

c_id, c-p_quantity, c_t-bill

c_id, c_t-bill

c_id, c-p_quantity

pro_id, pro_size, pro_color, c-p_quantity, c_id

pro_id, pro_name, pro_price, pro_stock

pro_price, pro_vat

p_id, p_option, p_account, p_ammount, p_date

p_id, c_id

pro_id, cus_id

pro_id, pro_name, pro_price, pro_vat, pro_stock

pro_id, pro_color

pro_id, pro_size

pro_price, pro_vat

cat_id, cat_name, pro_id

emp_id, emp_name, emp_phone, emp_phone, emp_job, emp_salary, branch_no

branch_no, branch_loc

pro_id, pro_name, pro_price

pro_price, pro_vat

pro_id, **pro_color**, **pro_size**, pro_stock, **branch_id**

dis_id, dis_name, dis_start_date, dis_end_date, dis_amount

FINAL TABLE

CUSTOMER: **cus_id**, cus_name, cus_phone, cus_pin, cus_email, cus_address

PRODUCT: **pro_id**, pro_name, pro_price

COLOR: **pro_id**, **pro_color**

SIZE PRODUCT: **pro_id**, **pro_size**

VAT ON PRO: **pro_price**, pro_vat

CART_OWNER: **c_id**, **cus_id**

BUYING QUANTITY: **pro_id**, **pro_size**, **pro_color**, **c-p_quantity**, **c_id**

CART_DETAILS: **c_id**, c_t_bill

PAYMENT: **p_id**, p_option, p_account, p_amount, p_date

CONFIRMING CART: **p_id**, **c_id**

DELIVERY: **d_id**, d_date, d_confirm, **p_id**

CATEGORY: **cat_id**, cat_name, **pro_id**

EMPLOYEE: **emp_id**, emp_name, emp_phone, emp_job, emp_h_date, emp_salary, **branch_no**

BRANCH: **branch_no**, branch_loc

STOCK: **pro_id**, **pro_color**, **pro_size**, pro_stock, **branch_id**

Discount: **dis_id**, dis_name, dis_start_date, dis_end_date, dis_percentage

TABLE CREATION

1. CUSTOMER:

TABLE CUSTOMER

Column	Null?	Type
CUS_ID	NOT NULL	NUMBER(6,0)
CUS_NAME	-	VARCHAR2(14)
CUS_PHONE	-	NUMBER(13,0)
CUS_EMAIL	-	VARCHAR2(30)
CUS_PIN	-	NUMBER(6,0)
CUS_ADDRESS	-	VARCHAR2(25)

[Download CSV](#)

6 rows selected.

2. PRODUCT:

TABLE PRODUCT

Column	Null?	Type
PRO_ID	NOT NULL	NUMBER(6,0)
PRO_NAME	-	VARCHAR2(15)
PRO_PRICE	-	NUMBER(6,0)

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3 rows selected.

3. COLOR:

TABLE COLOR

Column	Null?	Type
PRO_ID	NOT NULL	NUMBER(10,0)
PRO_COLOR	NOT NULL	VARCHAR2(10)

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2 rows selected.

4. SIZE_PRODUCT

TABLE SIZE_PRODUCT

Column	Null?	Type
PRO_ID	NOT NULL	NUMBER(6,0)
PRO_SIZE	NOT NULL	VARCHAR2(3)

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2 rows selected.

5. VAT ON PRO

TABLE VAT_ON_PRO

Column	Null?	Type
PRO_PRICE	NOT NULL	NUMBER(5,0)
PRO_VAT	-	NUMBER(5,0)

[Download CSV](#)

2 rows selected.

6. CART_OWNER

TABLE CART_OWNER

Column	Null?	Type
C_ID	NOT NULL	NUMBER(10,0)
CUS_ID	-	NUMBER(6,0)

[Download CSV](#)

2 rows selected.

7. BUYING QUANTITY

TABLE BUYING_QUANTITY

Column	Null?	Type
PRO_ID	NOT NULL	NUMBER(6,0)
PRO_SIZE	NOT NULL	VARCHAR2(3)
PRO_COLOR	NOT NULL	VARCHAR2(10)
C_P_QUANTITY	-	NUMBER(3,0)
C_ID	-	NUMBER(6,0)

[Download CSV](#)

5 rows selected.

8. CART_DETAILS

TABLE CART_DETAILS

Column	Null?	Type
C_ID	NOT NULL	NUMBER(10,0)
C_T_BILL	-	NUMBER(6,0)

[Download CSV](#)

2 rows selected.

9. PAYMENT

TABLE PAYMENT

Column	Null?	Type
P_ID	NOT NULL	NUMBER(10,0)
P_DATE	-	VARCHAR2(30)
P_OPTION	-	VARCHAR2(10)
P_ACCOUNT	-	NUMBER(14,0)
P_AMOUNT	-	NUMBER(6,0)

[Download CSV](#)

5 rows selected.

10. CONFIRMING_CART

TABLE CONFIRMING_CART

Column	Null?	Type
P_ID	-	NUMBER(6,0)
C_ID	-	NUMBER(6,0)

[Download CSV](#)

2 rows selected.

11. DELIVERY

TABLE DELIVERY

Column	Null?	Type
D_ID	NOT NULL	NUMBER(5,0)
D_DATE	-	VARCHAR2(20)
D_CONFIRM	-	VARCHAR2(8)
P_ID	-	NUMBER(10,0)

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4 rows selected.

12. CATEGORY

TABLE CATEGORY

Column	Null?	Type
CAT_ID	NOT NULL	NUMBER(6,0)
CAT_NAME	-	VARCHAR2(14)
PRO_ID	-	NUMBER(6,0)

[Download CSV](#)

3 rows selected.

13. EMPLOYEE

TABLE EMPLOYEE

Column	Null?	Type
EMP_ID	NOT NULL	NUMBER(4,0)
EMP_NAME	-	VARCHAR2(25)
EMP_PHONE	-	NUMBER(14,0)
EMP_JOB	-	VARCHAR2(55)
EMP_H_DATE	-	DATE
EMP_SALARY	-	NUMBER(11,0)
BRANCH_NO	-	NUMBER(3,0)

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7 rows selected.

14. BRANCH

TABLE BRANCH

Column	Null?	Type
BRANCH_NO	NOT NULL	NUMBER(3,0)
BRANCH_LOC	-	VARCHAR2(16)

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2 rows selected.

15. STOCK

TABLE STOCK

Column	Null?	Type
PRO_ID	NOT NULL	NUMBER(3,0)
PRO_SIZE	NOT NULL	VARCHAR2(3)
PRO_COLOR	NOT NULL	VARCHAR2(10)
PRO_STOCK	-	NUMBER(6,0)
BRANCH_NO	-	NUMBER(6,0)

[Download CSV](#)

5 rows selected.

16. Discount

TABLE DISCOUNT

Column	Null?	Type
DIS_ID	NOT NULL	NUMBER(5,0)
DIS_NAME	-	VARCHAR2(14)
DIS_START_DATE	-	DATE
DIS_END_DATE	-	DATE
DIS_PERCENTAGE	-	NUMBER(3,0)

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5 rows selected.

Data Insert:

1. CUSTOMER

CUS_ID	CUS_NAME	CUS_PHONE	CUS_EMAIL	CUS_PIN	CUS_ADDRESS
101010	RAKIB	8801710000000	rakib@gmail.com	109876	MIRPUR-14
202020	SHOHEL	8801930000000	shohel@outlook.com	876543	BADDA
303030	ZIHAN	8801640000000	zihan@gmail.com	765432	KURATOLI
404040	NASIF	8801376000000	mdnasifrhman@gmail.com	589647	MYMENSHING
505050	ISHAN	8801950000000	ishan@yahoo.com	132564	SYLHET

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5 rows selected.

2. PRODUCT

PRO_ID	PRO_NAME	PRO_PRICE
601	SHIRT	2000
602	TROUSER	1000
603	HOODIE	2500
604	JACKET	3000
605	SWEATER	1500

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5 rows selected.

3. COLOR

PRO_ID	PRO_COLOR
601	BLACK
601	WHITE
602	RED
603	BLUE
604	OFFWHITE
605	GREEN

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6 rows selected.

4. SIZE PRODUCT

PRO_ID	PRO_SIZE
601	S
601	XL
602	M
603	L
604	XL
605	L
605	XL

[Download CSV](#)

7 rows selected.

5. VAT_ON_PRO

PRO_PRICE	PRO_VAT
2000	300
1000	150
2500	375
3000	450
1500	225

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5 rows selected.

6. CART_OWNER

C_ID	CUS_ID
201	101010
202	202020
203	303030
204	404040
205	505050

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5 rows selected.

7. BUYING QUANTITY

PRO_ID	PRO_SIZE	PRO_COLOR	C_P_QUANTITY	C_ID
601	S	WHITE	2	201
601	XL	WHITE	1	202
602	M	RED	1	201
603	XL	OFFWHITE	2	203
603	XL	GREEN	3	204
604	XL	GREEN	1	204
605	XL	GREEN	2	203
605	L	GREEN	1	205

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8 rows selected.

8. CART DETAILS

C_ID	C_T_BILL
201	5750
202	2300
203	9200
204	12075
205	1725

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5 rows selected.

9. PAYMENT

P_ID	P_DATE	P_OPTION	P_ACCOUNT	P_AMOUNT
401	18-AUG-21	BKASH	8801910000000	5750
402	19-AUG-21	NOGOD	8801720000000	2300
403	20-AUG-21	NCCB	333322221111	9200
404	21-AUG-21	UCB	444433332222	10263
405	22-AUG-21	DHAKA-BANK	555544443333	1466

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5 rows selected.

10. CONFIRMING CART

P_ID	C_ID
401	201
402	202
403	203
404	204
405	205

[Download CSV](#)

5 rows selected.

11. DELIVERY

D_ID	D_DATE	D_CONFIRM	P_ID
501	19-AUG-21	DONE	401
502	20-AUG-21	DONE	402
503	21-AUG-21	DONE	403
504	22-AUG-21	PENDING	404
505	23-AUG-21	PENDING	405

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5 rows selected.

12. CATEGORY

CAT_ID	CAT_NAME	PRO_ID
101010	F-SHIRT	601
202020	T-PANT	602
303030	C-STYLISH	603
404040	W-STYLISH	604
505050	W-CASUAL	605

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5 rows selected.

13. EMPLOYEE

EMP_ID	EMP_NAME	EMP_PHONE	EMP_JOB	EMP_H_DATE	EMP_SALARY	BRANCH_NO
1101	SHAKIB	1777889942	MD	01-DEC-13	75000	101
1202	RION	1745652154	DESIGNER	01-JAN-14	50000	101
2101	SIHAB	1955321456	MANAGER	01-DEC-13	30000	202
2202	RAZON	1655478965	SHOPKEEPER	01-DEC-13	15000	202
2303	MINHAZ	1845578965	SHOPKEEPER	01-DEC-13	12000	202
3101	MIZAN	1754889942	MANAGER	05-APR-14	25000	303
3202	ROCKY	1623889942	SHOPKEEPER	16-JUL-17	11500	303
4101	RIAZ	1564889942	MANAGER	15-DEC-15	27500	404
5101	RAYHAN	1566458965	MANAGER	15-DEC-15	26000	505
5202	HAMIM	1654189942	SHOPKEEPER	20-OCT-16	13000	505

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10 rows selected.

14. BRANCH

BRANCH_NO	BRANCH_LOC
101	GAZIPUR
202	MIRPUR
303	JATRABARI
404	MYMENSHING
505	SHYLET

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5 rows selected.

15. STOCK

PRO_ID	PRO_SIZE	PRO_COLOR	PRO_STOCK	BRANCH_NO
601	XL	WHITE	1000	101
601	XL	GREEN	300	505
601	S	BLACK	120	202
602	M	RED	500	303
603	L	BLUE	500	404
604	XL	OFFWHITE	300	505

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6 rows selected.

16. Discount

DIS_ID	DIS_NAME	DIS_START_DATE	DIS_END_DATE	DIS_PERCENTAGE
10101	BOISAKHI	10-APR-21	14-APR-21	10
20202	EID-DHAMAKA	03-MAY-21	12-MAY-21	30
30303	QURBANI-OFFER	11-JUL-21	12-JUL-21	20
40404	SPECIAL-DEALS	20-AUG-21	21-AUG-21	15
50505	WINTER-OFFER	15-SEP-21	25-SEP-21	25

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5 rows selected.

Query:

Sub-Query:

1. Show the details of the maximum salary holder of the employee table.

```
select * from employee where emp_salary = (select max(emp_salary) from employee);
```

EMP_ID	EMP_NAME	EMP_PHONE	EMP_JOB	EMP_H_DATE	EMP_SALARY	BRANCH_NO
1101	SHAKIB	1777889942	MD	01-DEC-13	75000	101

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2. Show the product name that has minimum amount in stock

```
select pro_name from product where pro_id=(select pro_id from stock where pro_stock=(select min(pro_stock) from stock));
```

PRO_NAME
SHIRT

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3. Display all customer whose total Bill is more than 10000.

```
select * from customer where cus_id in (select cus_id from cart_owner where c_id=(select c_id from cart_details where c_t_bill> 10000));
```

CUS_ID	CUS_NAME	CUS_PHONE	CUS_EMAIL	CUS_PIN	CUS_ADDRESS
404040	NASIF	8801376000000	mdnasifrhman@gmail.com	589647	MYMENSING

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4. Show the cus_id,cus_name,cus_address,cus_phone of a customer who's orders are pending.

```
select cus_id,cus_name,cus_address,cus_phone from customer where  
cus_id in (select cus_id from cart_owner where c_id in (select c_id from  
confirming_cart where p_id in (select p_id from delivery where  
d_confirm='pending')));
```

CUS_ID	CUS_NAME	CUS_ADDRESS	CUS_PHONE
404040	MOHSHIN	MYMENSING	8801376000000
505050	ISHAN	SYLHET	8801950000000

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2 rows selected.

5. Update MIZAN's branch location to MIRPUR

```
update employee set branch_no=(select branch_no from branch where  
branch_loc='mirpur') where emp_name='mizan';
```

1	UPDATE	EMPLOYEE	SET	BRANCH_NO=(SELECT	BRANCH_NO	FROM	BRANCH	WHERE	BRANCH_LOC='MIRPUR')	WHERE	EMP_NAME='MIZAN';
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1 row(s) updated.

Equi-join:

6. Find out the branch where highest no. of emps are working.

```
select branch_loc,count(*) from branch,employee where branch.branch_no  
= employee.branch_no group by branch_loc having count(*)=(select  
max(count(*)) from branch,employee where branch.branch_no =  
employee.branch_no group by branch_loc);
```

BRANCH_LOC	COUNT(*)
MIRPUR	3

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Non-Equi-join:

7. Show who has got for Discount

select payment.*,dis_percentage from payment,discount where p_date between discount.dis_start_date and discount.dis_end_date;

P_ID	P_DATE	P_OPTION	P_ACCOUNT	P_AMOUNT	DIS_PERCENTAGE
404	21-AUG-21	UCB	444433332222	10263	15
403	20-AUG-21	NCCB	333322221111	9200	15

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2 rows selected.

Self-Join

8. Find out the employees whose salary is greater than MIZAN's salary.

select p.* from employee p,employee m where m.emp_name = 'mizan' and m.emp_salary<p.emp_salary;

EMP_ID	EMP_NAME	EMP_PHONE	EMP_JOB	EMP_H_DATE	EMP_SALARY	BRANCH_NO
1101	SHAKIB	1777889942	MD	01-DEC-13	75000	101
1202	RION	1745652154	DESIGNER	01-JAN-14	50000	101
2101	SIHAB	1955321456	MANAGER	01-DEC-13	30000	202
4101	RIAZ	1564889942	MANAGER	15-DEC-15	27500	404
5101	RAYHAN	1566458965	MANAGER	15-DEC-15	26000	505

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5 rows selected.

View:

9. Select the customer who are not located 'KURATOLI','BANANI','BADDA'

```
select customer.* from customer where cus_address not  
in('kuratoli','banani','badda');
```

CUS_ID	CUS_NAME	CUS_PHONE	CUS_EMAIL	CUS_PIN	CUS_ADDRESS
101010	RAKIB	8801710000000	rakib@gmail.com	109876	MIRPUR-14
404040	MOHSHIN	8801376000000	mohshin@yahoo.com	589647	MYMENSHING
505050	ISHAN	8801950000000	ishan@yahoo.com	132564	SYLHET

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3 rows selected.

Group Function:

10. Display the average salary of the manager.

```
select avg(emp_salary) from employee where emp_job = 'manager'
```

AVG(EMP_SALARY)
27125

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PART B

From our project we get to learn about some significant term of database management system namely ER-Diagram, Normalization, Table create, Data entry and so on. Although we faced some complication while doing normalizations and SQL command, we overcome those in the company of our group work. As ER-Diagram

creation along with normalization is totally a new thing for us, we have achieved skills and experience while doing this experimental project. Also, the idea we got from the project would be a great opportunity to dive deeper in the near future, so that we can develop an advanced fashion house management system. In OOP2 and Advance Web Tach. we have to do certain projects where we can apply this concept and its unique idea.