Kingdom of Saudi Arabia
Ministry of Higher Education
Najran University
Faculty of Computer Science and Information Systems
Department of computer Science

المملكة العربية السعودية
وزارة التعليم العالي
جامعة نجران
كلية علوم الحاسب ونظم المعلومات
قسم علوم الحاسب

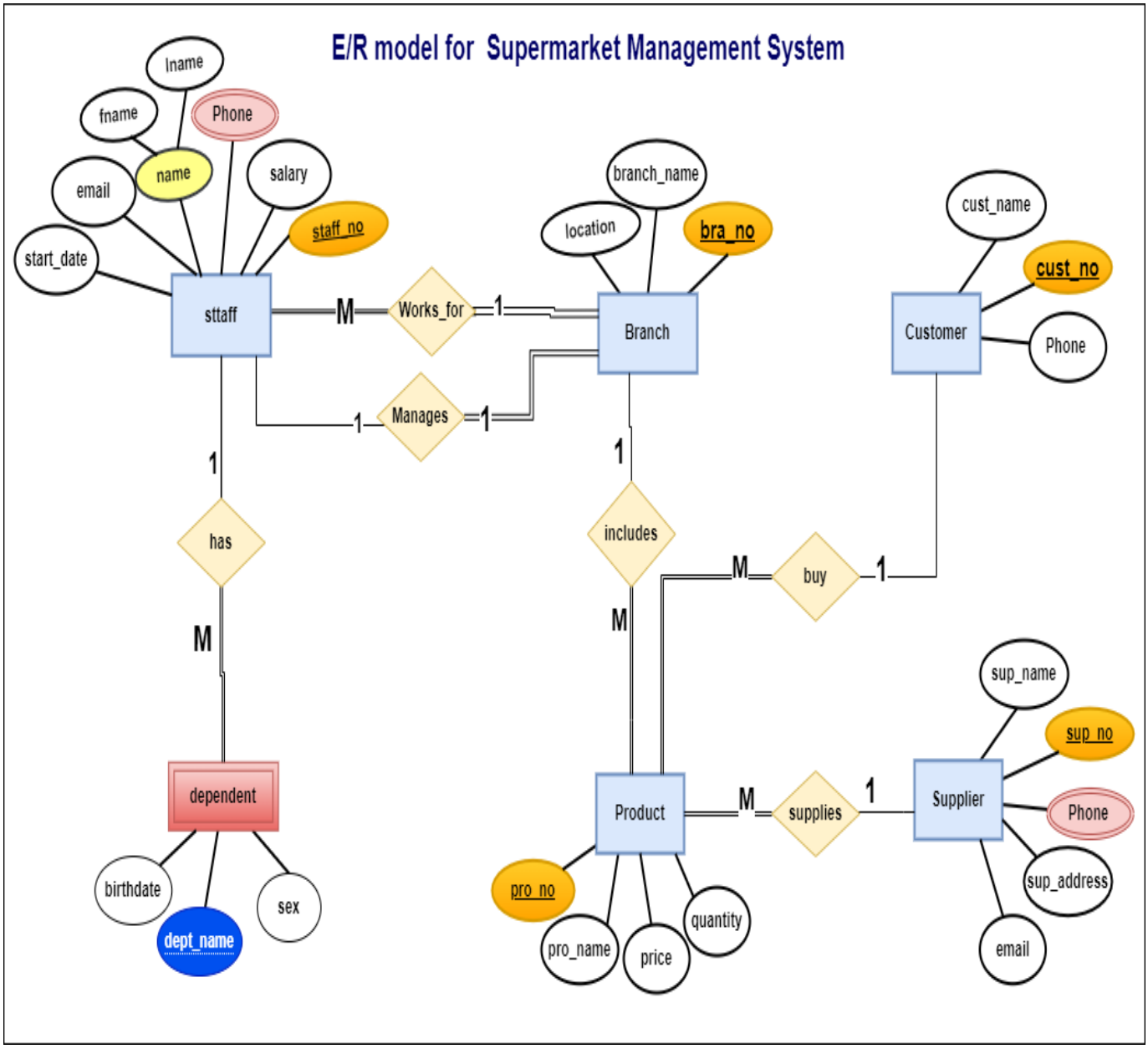
Najran University
College of Computer Science and Information Systems

340CIS-3 Databases
Main Project

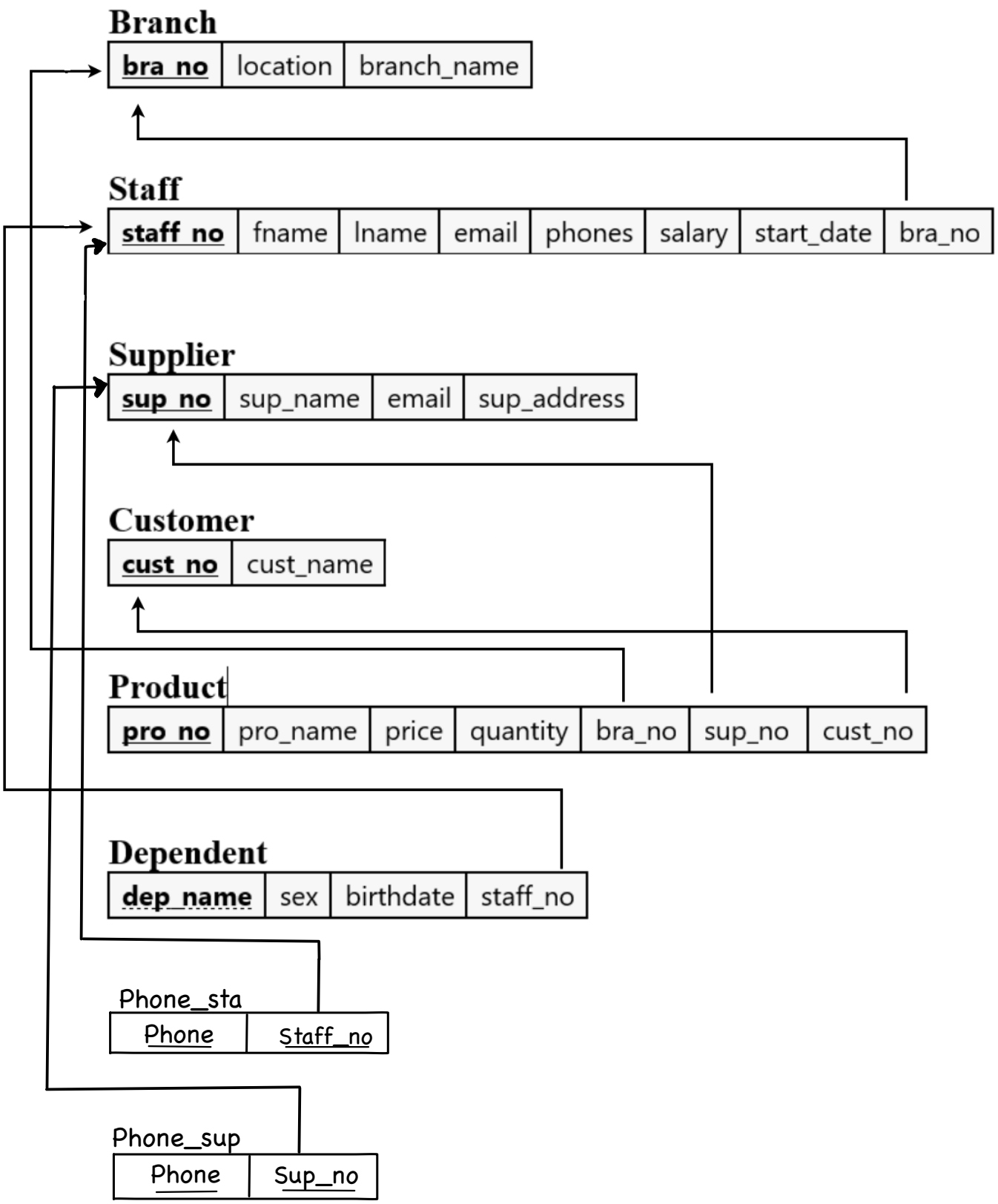
Title: Supermarket Management System

Group	Students Name	ID
Group	علي مسفر الحداد	
	عبدالله صالح ال شريف	
	عامر صالح ال الحارث	
	فارس حسين ال عباس	
	علي هادي ال عباس	

E/R MODEL OF SUPERMARKET



RATIONAL MODEL SCHEMAS OF SUPERMARKET SYSTEM



LIST OF ALL SCHEMAS AND THEIR ATTRIBUTES

Branch Table:

Column	Data Type	Constraints
bra_no (PK)	NUMBER(10)	Primary Key
location	VARCHAR(25)	
branch_name	VARCHAR(20)	

Staff Table:

Column	Data Type	Constraints
staff_no (PK)	NUMBER(10)	Primary Key
fname	VARCHAR(15)	
lname	VARCHAR(15)	
email	VARCHAR(20)	
phones	VARCHAR(20)	
salary	DECIMAL(10, 2)	
start_date	DATE	
bra_no	NUMBER(10)	Foreign Key (Branch.bra_no)

Supplier Table:

Column	Data Type	Constraints
sup_no (PK)	NUMBER(10)	Primary Key
sup_name	VARCHAR(20)	
email	VARCHAR(20)	
sup_address	VARCHAR(20)	
phones	VARCHAR(20)	

Customer Table:

Column	Data Type	Constraints
cust_no (PK)	NUMBER(10)	Primary Key
cust_name	VARCHAR(25)	
phone	VARCHAR(20)	

Product Table:

Column	Data Type	Constraints
pro_no (PK)	NUMBER(10)	Primary Key
pro_name	VARCHAR(20)	
price	DECIMAL(10, 2)	
quantity	NUMBER(10)	
bra_no	NUMBER(10)	Foreign Key (**Branch**.bra_no)
cust_no	NUMBER(10)	Foreign Key (**Customer**. cust_no)
sup_no	NUMBER(10)	Foreign Key (**Supplier**. sup_no)

Dependent Table:

Column	Data Type	Constraints
dep_name	VARCHAR(25)	
sex	VARCHAR(10)	
birthdate	DATE	
staff_no	NUMBER(10)	Foreign Key (Staff.staff_no)

Phone_Sta Table:

Column	Date Type	Constraints
Phone	Varchar(15)	Primary key
Staff_no	Number(10)	Primary key

Phone_Sup Table:

Column	Date Type	Constraints
Phone	Varchar(15)	Primary key
Sup_no	Number(10)	Primary key

CREATE ALL TABLES:

```
CREATE TABLE Branch (
   bra_no NUMBER(10)  PRIMARY KEY,
   location VARCHAR(25),
   branch_name VARCHAR(20)
);
```

```
SQL> CREATE TABLE Branch (
  2       bra_no NUMBER(10)  PRIMARY KEY,
  3       location VARCHAR(25),
  4       branch_name VARCHAR(20)
  5   );

Table created.

SQL>
```

```
CREATE TABLE Staff (
   staff_no NUMBER(10)  PRIMARY KEY,
   fname VARCHAR(15),
  lname VARCHAR(15),
   email VARCHAR(20),
   phones VARCHAR(20),
   salary DECIMAL(10, 2),
   start_date DATE,
   bra_no NUMBER(10),
   FOREIGN KEY (bra_no) REFERENCES Branch(bra_no)
);
```

```
SQL> CREATE TABLE Staff (
  2       staff_no NUMBER(10)  PRIMARY KEY,
  3       fname VARCHAR(15),
  4      lname VARCHAR(15),
  5       email VARCHAR(20),
  6       phones VARCHAR(20),
  7       salary DECIMAL(10, 2),
  8       start_date DATE,
  9       bra_no NUMBER(10),
 10       FOREIGN KEY (bra_no) REFERENCES Branch(bra_no)
 11   );

Table created.

SQL>
```

```
CREATE TABLE Supplier (
   sup_no NUMBER(10)  PRIMARY KEY,
   sup_name VARCHAR(20),
   email VARCHAR(20),
   sup_address VARCHAR(20),
   phones VARCHAR(20)
);
```

```
SQL> CREATE TABLE Supplier (
  2       sup_no NUMBER(10)  PRIMARY KEY,
  3       sup_name VARCHAR(20),
  4       email VARCHAR(20),
  5       sup_address VARCHAR(20),
  6       phones VARCHAR(20)
  7  );

Table created.

SQL>
```

```
CREATE TABLE Customer (
   cust_no NUMBER(10)  PRIMARY KEY,
   cust_name VARCHAR(25),
   phone VARCHAR(20)
);
```

```
SQL> CREATE TABLE Customer (
  2       cust_no NUMBER(10)  PRIMARY KEY,
  3       cust_name VARCHAR(25),
  4       phone VARCHAR(20)
  5  );

Table created.

SQL>
```

```
CREATE TABLE Product (
   pro_no NUMBER(10)  PRIMARY KEY,
   pro_name VARCHAR(20),
   price DECIMAL(10, 2),
   quantity NUMBER(10)  ,
   bra_no NUMBER(10)  ,
   sup_no NUMBER(10)  ,
  cust_no NUMBER(10)  ,
   FOREIGN KEY (bra_no) REFERENCES Branch(bra_no),
   FOREIGN KEY (sup_no) REFERENCES Supplier (sup_no),
   FOREIGN KEY (cust_no) REFERENCES Customer(cust_no)
);
```

```
SQL> CREATE TABLE Product (
  2      pro_no NUMBER(10)  PRIMARY KEY,
  3      pro_name VARCHAR(20),
  4      price DECIMAL(10, 2),
  5      quantity NUMBER(10)  ,
  6      bra_no NUMBER(10)  ,
  7      sup_no NUMBER(10)  ,
  8     cust_no NUMBER(10)  ,
  9      FOREIGN KEY (bra_no) REFERENCES Branch(bra_no),
 10      FOREIGN KEY (sup_no) REFERENCES Supplier (sup_no),
 11      FOREIGN KEY (cust_no) REFERENCES Customer(cust_no)
 12  );

Table created.

SQL> _
```

```
CREATE TABLE Dependent (
   dep_name VARCHAR(25),
   sex VARCHAR(10),
   birthdate DATE,
   staff_no NUMBER(10)  ,
   FOREIGN KEY (staff_no) REFERENCES Staff(staff_no)
);
```

```
SQL> CREATE TABLE Dependent (
  2      dep_name VARCHAR(25),
  3      sex VARCHAR(10),
  4      birthdate DATE,
  5      staff_no NUMBER(10)  ,
  6      FOREIGN KEY (staff_no) REFERENCES Staff(staff_no)
  7  );

Table created.

SQL> _
```

```
CREATE TABLE Phone_Sta (
  Staff_no INT PRIMARY KEY,
  phone VARCHAR(15)
);
```

```
SQL> CREATE TABLE Phone_Sta (
  2    Staff_no INT PRIMARY KEY,
  3    phone VARCHAR(15)
  4  );

Table created.

SQL>
```

```
CREATE TABLE Phone_Sup (
 sup_no INT PRIMARY KEY,
  phone VARCHAR(15)
);
```

```
SQL> CREATE TABLE Phone_Sup (
  2   sup_no INT PRIMARY KEY,
  3    phone VARCHAR(15)
  4  );

Table created.

SQL>
```

INSERT DATA AND TUPLES IN ALL TABLES:

```
INSERT INTO Branch (bra_no, location, branch_name)
VALUES (10, ' King Abdulaziz Rd',' alhthem');
INSERT INTO Branch (bra_no, location, branch_name)
VALUES (20,  ' Najran Royal Center ',' HyperPanda');
INSERT INTO Branch (bra_no, location, branch_name)
VALUES (30, ' King Abdullah Rd',' Remas ');
INSERT INTO Branch (bra_no, location, branch_name)
VALUES (40, ' King Abdul Aziz Rd ', ' Najran Central');
INSERT INTO Branch (bra_no, location, branch_name)
VALUES (50, ' Prince Sultan Rd', ' alhthem ');
Select * from Branch;
```

```
SQL> Select * from Branch;

    BRA_NO LOCATION                  BRANCH_NAME
---------- ------------------------- --------------------
        10  King Abdulaziz Rd        alhthem1
        20  Najran Royal Center       HyperPanda
        30  King Abdullah Rd          Remas
        40  King Abdul Aziz Rd        Najran Central
        50  Prince Sultan Rd         alhthem1

SQL>
```

INSERT INTO Staff (staff_no, fname, lname, email, phones, salary, start_date, bra_no)
VALUES (1, 'Abdulelah', 'Sharrif', 'a.d@ASC.com', '0505522322', 50000.00, to_date ('2022-01-01', 'YYYY-MM-DD'), 20);
INSERT INTO Staff (staff_no, fname, lname, email, phones, salary, start_date, bra_no)
VALUES (2, 'Jamal', 'Salem', 'jane.s@ASD.com', '050511422', 6ss000.00, to_date ('2022-10-01', 'YYYY-MM-DD'), 20);
INSERT INTO Staff (staff_no, fname, lname, email, phones, salary, start_date, bra_no)
VALUES (3, 'Malak', 'Jasim', 'm.ja@mm.com', '050511112', 55000.00 ,to_date ('2023-12-11', 'YYYY-MM-DD'), 30);
INSERT INTO Staff (staff_no, fname, lname, email, phones, salary, start_date, bra_no)
VALUES (4, 'Esmail', 'Basha', 'emi.br10@ASD.com', '050501222', 8500.00, to_date ('2022-05-20', 'YYYY-MM-DD'), 40);
INSERT INTO Staff (staff_no, fname, lname, email, phones, salary, start_date, bra_no)
VALUES (5, 'Fahed', 'Wala', 'f.w20@ASD.com', '050550012', 52000.00, to_date ('2023-09-08', 'YYYY-MM-DD'), 50);

Select * from Staff;

```
SQL> Select * from Staff;

  STAFF_NO FNAME           LNAME           EMAIL
---------- --------------- --------------- --------------------
PHONES                   SALARY START_DAT     BRA_NO
-------------------- ---------- --------- ----------
         1 Abdulelah       Sharrif         a.d@ASC.com
0505522322                50000 01-JAN-22         20

         2 Jamal           Salem           jane.s@ASD.com
050511422                 60000 01-OCT-22         20

         3 Malak           Jasim           m.ja@mm.com
050511112                 55000 11-DEC-23         30


  STAFF_NO FNAME           LNAME           EMAIL
---------- --------------- --------------- --------------------
PHONES                   SALARY START_DAT     BRA_NO
-------------------- ---------- --------- ----------
         4 Esmail          Basha           emi.br10@ASD.com
050501222                 48000 20-MAY-22         40

         5 Fahed           Wala            f.w20@ASD.com
050550012                 52000 08-SEP-23         50


SQL>
```

INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)

VALUES (1, 'Al-Panada Group','Panada@Panada.com', 'King Abdulaziz Road','0502221154');

INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
VALUES (2, 'Sony Group', ' Sony@Sony.com', 'King Abdullah Road', '0503311154');

INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
VALUES (3, 'Dallah', 'Dallah@Dallah.com', 'Gaza Road', '05020121254');

INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
VALUES (4, 'Mossary', 'Massar10D@ms.com', 'Jeddah Road', '0502200154');

INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
VALUES (5, 'Donoop', 'Danoop@Danoop.com', 'Makkah Road', '050552154');

Select * from Supplier;

```
SQL> INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
  2  VALUES (1, 'Al-Panada Group','Panada@Panada.com', 'King Abdulaziz Road','0502221154');

1 row created.

SQL>
SQL> INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
  2  VALUES (2, 'Sony Group', ' Sony@Sony.com', 'King Abdullah Road', '0503311154');

1 row created.

SQL>
SQL> INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
  2  VALUES (3, 'Dallah', 'Dallah@Dallah.com', 'Gaza Road', '05020121254');

1 row created.

SQL>
SQL> INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
  2  VALUES (4, 'Mossary', 'Massar10D@ms.com', 'Jeddah Road', '0502200154');

1 row created.

SQL>
SQL> INSERT INTO Supplier (sup_no, sup_name, email, sup_address, phones)
  2  VALUES (5, 'Donoop', 'Danoop@Danoop.com', 'Makkah Road', '050552154');

1 row created.
SQL> Select * from Supplier;

    SUP_NO SUP_NAME             EMAIL                SUP_ADDRESS
---------- -------------------- -------------------- --------------------
PHONES
--------------------
         1 Al-Panada Group      Panada@Panada.com    King Abdulaziz Road
0502221154

         2 Sony Group            Sony@Sony.com       King Abdullah Road
0503311154

         3 Dallah               Dallah@Dallah.com    Gaza Road
05020121254


    SUP_NO SUP_NAME             EMAIL                SUP_ADDRESS
---------- -------------------- -------------------- --------------------
PHONES
--------------------
         4 Mossary              Massar10D@ms.com     Jeddah Road
0502200154

         5 Donoop               Danoop@Danoop.com    Makkah Road
050552154


SQL>
```

INSERT INTO Customer (cust_no, cust_name, phone)

VALUES (1, 'Ahmed', '050-222-1111');
INSERT INTO Customer (cust_no, cust_name, phone)
VALUES (2, 'Yasmine', '050-444-1111');
INSERT INTO Customer (cust_no, cust_name, phone)
VALUES (3, 'Haneen', '050-222-1234');
INSERT INTO Customer (cust_no, cust_name, phone)
VALUES (4, 'Zidane', '050-000-8881');
INSERT INTO Customer (cust_no, cust_name, phone)
VALUES (5, 'Zaine', '050-145-6565');

Select * from Customer;

```
SQL> INSERT INTO Customer (cust_no, cust_name, phone)
  2  VALUES (1, 'Ahmed', '050-222-1111');

1 row created.

SQL>
SQL> INSERT INTO Customer (cust_no, cust_name, phone)
  2  VALUES (2, 'Yasmine', '050-444-1111');

1 row created.

SQL>
SQL> INSERT INTO Customer (cust_no, cust_name, phone)
  2  VALUES (3, 'Haneen', '050-222-1234');

1 row created.

SQL>
SQL> INSERT INTO Customer (cust_no, cust_name, phone)
  2  VALUES (4, 'Zidane', '050-000-8881');

1 row created.

SQL>
SQL> INSERT INTO Customer (cust_no, cust_name, phone)
  2  VALUES (5, 'Zaine', '050-145-6565');

1 row created.

SQL>
SQL> Select * from Customer;

   CUST_NO CUST_NAME                 PHONE
---------- ------------------------- --------------------
         1 Ahmed                     050-222-1111
         2 Yasmine                   050-444-1111
         3 Haneen                    050-222-1234
         4 Zidane                    050-000-8881
         5 Zaine                     050-145-6565

SQL>
```

```
INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
VALUES (1, 'Milk', 10.99, 50, 10, 1, 1);
INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
VALUES (2, 'Bread', 5.99, 100, 20, 2, 2);
INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
VALUES (3, 'Juice', 8.99, 75, 30, 3, 3);
INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
VALUES (4, 'Meat', 12.99, 25, 20, 4, 4);
INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
VALUES (5, 'Dates', 6.99, 60, 50, 5, 5);

Select * from Product;
```

```
SQL> INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
  2  VALUES (2, 'Bread', 5.99, 100, 20, 2, 2);

1 row created.

SQL> INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
  2  VALUES (3, 'Juice', 8.99, 75, 30, 3, 3);

1 row created.

SQL> INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
  2  VALUES (4, 'Meat', 12.99, 25, 20, 4, 4);

1 row created.

SQL> INSERT INTO Product (pro_no, pro_name, price, quantity, bra_no, sup_no, cust_no)
  2  VALUES (5, 'Dates', 6.99, 60, 50, 5, 5);

1 row created.

SQL>
SQL> Select * from Product;

    PRO_NO PRO_NAME                  PRICE   QUANTITY     BRA_NO     SUP_NO
---------- -------------------- ---------- ---------- ---------- ----------
   CUST_NO
----------
         1 Milk                      10.99         50         10          1
         1

         2 Bread                      5.99        100         20          2
         2

         3 Juice                      8.99         75         30          3
         3


    PRO_NO PRO_NAME                  PRICE   QUANTITY     BRA_NO     SUP_NO
---------- -------------------- ---------- ---------- ---------- ----------
   CUST_NO
----------
         4 Meat                      12.99         25         20          4
         4

         5 Dates                      6.99         60         50          5
         5


SQL>
```

```
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('Shahad Ali', TO_DATE('2022-06-15','YYYY-MM-DD'), 'Female', 1);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('ARYAM Ali', TO_DATE('2022-06-17','YYYY-MM-DD'), 'Female', 2);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('Hani Fahed', TO_DATE('2022-06-20','YYYY-MM-DD'), 'Male', 3);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('AMIR Mohammed', TO_DATE('2022-06-22','YYYY-MM-DD'), 'Male', 4);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('HURIYYAH Jamil', TO_DATE('2022-07-15','YYYY-MM-DD'), 'Female', 5);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('Ryan AHMED', TO_DATE('2022-06-18','YYYY-MM-DD'), 'Male', 5);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('Labeeb Sam', TO_DATE('2022-07-18','YYYY- MM-DD'), 'Male', 4);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('Ali Haseen', TO_DATE('2022-07-20','YYYY-MM-DD'), 'Male', 3);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('Rania Haseen', TO_DATE('2022-07-23','YYYY-MM-DD'), 'Female', 2);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('Areeg Nasim', TO_DATE('2022-08-01','YYYY-MM-DD'), 'Female', 1);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('Daham Ebrahim', TO_DATE('2022-08-02','YYYY-MM-DD'), 'Male', 1);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('AHMED ALI', TO_DATE('2022-08-05','YYYY-MM-DD'), 'Male', 5);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
VALUES ('RWAN Jamal', TO_DATE('2022-08-15','YYYY-MM-DD'), 'Female', 4);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
 VALUES ('Lara Sami', TO_DATE('2022-08-20','YYYY-MM-DD'), 'Female', 3);
INSERT INTO Dependent (dep_name, birthdate, sex, staff_no)
  VALUES ('ASEEL', TO_DATE('2022-08-25','YYYY-MM-DD'), 'Male', 2);
```

```
SQL> Select * from Dependent;

DEP_NAME                   SEX        BIRTHDATE   STAFF_NO
-------------------------- ---------- --------- ----------
Shahad Ali                 Female     15-JUN-22          1
ARYAM Ali                  Female     17-JUN-22          2
Hani Fahed                 Male       20-JUN-22          3
AMIR Mohammed              Male       22-JUN-22          4
HURIYYAH Jamil             Female     15-JUL-22          5
Ryan AHMED                 Male       18-JUN-22          5
Labeeb Sam                 Male       18-JUL-22          4
Ali Haseen                 Male       20-JUL-22          3
Rania Haseen               Female     23-JUL-22          2
Areeg Nasim                Female     01-AUG-22          1
Daham Ebrahim              Male       02-AUG-22          1

DEP_NAME                   SEX        BIRTHDATE   STAFF_NO
-------------------------- ---------- --------- ----------
AHMED ALI                  Male       05-AUG-22          5
RWAN Jamal                 Female     15-AUG-22          4
Lara Sami                  Female     20-AUG-22          3
ASEEL                      Male       25-AUG-22          2

15 rows selected.

SQL>
```

```
INSERT INTO Phone_Sta  (staff_no, phone) VALUES (1, '0522222222');
INSERT INTO Phone_Sta  (staff_no, phone) VALUES (2, '05033333333');
INSERT INTO Phone_Sta  (staff_no, phone) VALUES (3, '0514444444');
INSERT INTO Phone_Sta  (staff_no, phone) VALUES (4, '0515555555');
INSERT INTO Phone_Sta  (staff_no, phone) VALUES (5, '0566666666');
Select * from Phone_Sta;
```

```
SQL> INSERT INTO Phone_Sta (staff_no, phone) VALUES (1, '0522222222');

1 row created.

SQL> INSERT INTO Phone_Sta (staff_no, phone) VALUES (2, '05033333333');

1 row created.

SQL> INSERT INTO Phone_Sta (staff_no, phone) VALUES (3, '0514444444');

1 row created.

SQL> INSERT INTO Phone_Sta (staff_no, phone) VALUES (4, '0515555555');

1 row created.

SQL> INSERT INTO Phone_Sta (staff_no, phone) VALUES (5, '0566666666');

1 row created.

SQL> Select * from Phone_Sta;

  STAFF_NO PHONE
---------- ---------------
         1 0522222222
         2 05033333333
         3 0514444444
         4 0515555555
         5 0566666666

SQL>
```

INSERT INTO Phone_Sup (sup_no, phone) VALUES (1, '0534567890');
INSERT INTO Phone_Sup (sup_no, phone) VALUES (2, '0576543210');
INSERT INTO Phone_Sup (sup_no, phone) VALUES (3, '0555555555');
INSERT INTO Phone_Sup (sup_no, phone) VALUES (4, '05099999999');
INSERT INTO Phone_Sup (sup_no, phone) VALUES (5, '0511111111');

Select * from Phone_Sup**;**

```
SQL> INSERT INTO Phone_Sup (sup_no, phone) VALUES (1, '0534567890');

1 row created.

SQL> INSERT INTO Phone_Sup (sup_no, phone) VALUES (2, '0576543210');

1 row created.

SQL> INSERT INTO Phone_Sup (sup_no, phone) VALUES (3, '0555555555');

1 row created.

SQL> INSERT INTO Phone_Sup (sup_no, phone) VALUES (4, '05099999999');

1 row created.

SQL> INSERT INTO Phone_Sup (sup_no, phone) VALUES (5, '0511111111');

1 row created.

SQL>
SQL> Select * from Phone_Sup;

    SUP_NO PHONE
---------- ---------------
         1 0534567890
         2 0576543210
         3 0555555555
         4 05099999999
         5 0511111111

SQL>
```

IMPLEMENT THE FOLLOWING QUERIES IN SQL:

Finally, implement the following queries in SQL.The queries are as follows.

1- Display all information from supplier .

```
SELECT * FROM Supplier;
```

```
SQL> SELECT * FROM Supplier;

    SUP_NO SUP_NAME             EMAIL                SUP_ADDRESS
---------- -------------------- -------------------- --------------------
PHONES
--------------------
         1 Al-Panada Group      Panada@Panada.com    King Abdulaziz Road
0502221154

         2 Sony Group            Sony@Sony.com       King Abdullah Road
0503311154

         3 Dallah               Dallah@Dallah.com    Gaza Road
05020121254


    SUP_NO SUP_NAME             EMAIL                SUP_ADDRESS
---------- -------------------- -------------------- --------------------
PHONES
--------------------
         4 Mossary              Massar10D@ms.com     Jeddah Road
0502200154

         5 Donoop               Danoop@Danoop.com    Makkah Road
050552154


SQL>
```

2- For each branch find the count number of staff .

```
SELECT bra_no, COUNT(*) AS staff_count
FROM Staff
GROUP BY bra_no;
```

```
SQL> SELECT bra_no, COUNT(*) AS staff_count
  2  FROM Staff
  3  GROUP BY bra_no;

    BRA_NO STAFF_COUNT
---------- -----------
        30           1
        20           2
        40           1
        50           1

SQL>
```

3- For each branch find the minimum salary, bra_no for all staff who work In branch 10,20,30 and when the minimum salary greeter than5000 sort the result in deciding order by minimum salary .

```
SELECT bra_no, MIN(salary) AS min_salary
FROM Staff
WHERE bra_no IN (10, 20, 30)
GROUP BY bra_no
HAVING MIN(salary) > 5000
ORDER BY min_salary DESC;
```

```
SQL> SELECT bra_no, MIN(salary) AS min_salary
  2  FROM Staff
  3  WHERE bra_no IN (10, 20, 30)
  4  GROUP BY bra_no
  5  HAVING MIN(salary) > 5000
  6  ORDER BY min_salary DESC;

    BRA_NO MIN_SALARY
---------- ----------
        30      55000
        20      50000

SQL> _
```

4- Find the cust_name for all customer how the cust_name ended by e.

```
SELECT cust_name
FROM Customer
WHERE cust_name LIKE '%e';
```

```
SQL> SELECT cust_name
  2  FROM Customer
  3  WHERE cust_name LIKE '%e';

CUST_NAME
-------------------------
Yasmine
Zidane
Zaine

SQL> _
```

5- Find the sup_name whose the sup_name the second letter is o.

```
SELECT sup_name
FROM Supplier
WHERE sup_name LIKE '_o%';
```

```
SQL> SELECT sup_name
  2  FROM Supplier
  3  WHERE sup_name LIKE '_o%';

SUP_NAME
--------------------
Sony Group
Mossary
Donoop

SQL>
```

6- Find staff_no, lname and salary whose salary in the range of 5000 to 10000

```
SELECT staff_no, lname, salary
FROM Staff
WHERE salary BETWEEN 5000 AND 10000;
```

```
SQL> SELECT staff_no, lname, salary
  2  FROM Staff
  3  WHERE salary BETWEEN 5000 AND 10000;

  STAFF_NO LNAME                SALARY
---------- --------------- ----------
         2 Salem                 6000
         4 Basha                 8500

SQL>
```

7- Find the lname of staff and branch_ name

```
SELECT s.lname, b.branch_name
FROM Staff s
JOIN Branch b ON s.bra_no = b.bra_no;
```

```
SQL> SELECT s.lname, b.branch_name
  2  FROM Staff s
  3  JOIN Branch b ON s.bra_no = b.bra_no;

LNAME           BRANCH_NAME
--------------- --------------------
Salem            HyperPanda
Sharrif          HyperPanda
Jasim            Remas
Basha            Najran Central
Wala            alhthem1
```

8- Find the bra_no, lnam, and salary for every librarian how work in branch of alhthem1

```
SELECT b.bra_no, s.lname, s.salary
FROM Staff s
JOIN Branch b ON s.bra_no = b.bra_no
WHERE b.branch_name = 'alhthem1';
```

```
SQL> SELECT b.bra_no, s.lname, s.salary
  2  FROM Staff s
  3  JOIN Branch b ON s.bra_no = b.bra_no
  4  WHERE b.branch_name = 'alhthem1';

    BRA_NO LNAME               SALARY
---------- --------------- ----------
        50 Wala                 52000
```

9- Find the staff_no, email and salary of all staff who the salary equal the greater than minimum salary more than the average salary. Sort the results in order of descending salary

```
SELECT staff_no, email, salary
FROM Staff
WHERE salary >= (SELECT MIN(salary) FROM Staff) AND salary > (SELECT
AVG(salary) FROM Staff)
ORDER BY salary DESC;
```

```
SQL> SELECT staff_no, email, salary
  2  FROM Staff
  3  WHERE salary >= (SELECT MIN(salary) FROM Staff) AND salary > (SELECT AVG(salary) FROM Staff)
  4  ORDER BY salary DESC;

  STAFF_NO EMAIL                    SALARY
---------- -------------------- ----------
         3 m.ja@mm.com               55000
         5 f.w20@ASD.com             52000
         1 a.d@ASC.com               50000

SQL>
```