



Project subject: Baby Care Database System.
(Phase #2)

STUDENTS NAME :

Leader. Ruba Alhudyani
Remaz Alsuhibanie
Linah Almofeez
Leena Almatar
Razan Alsunaidi
Maram Almousa

ID :

442001026
442004122
442002821
442003539
442001828
442000723

SECTION : 4C1

SUPERVISED BY: T.Shabad Alshehah



Database (IS 220T) Project Report Submitted to the College of Computer Sciences and Information

About Baby Care Database System :

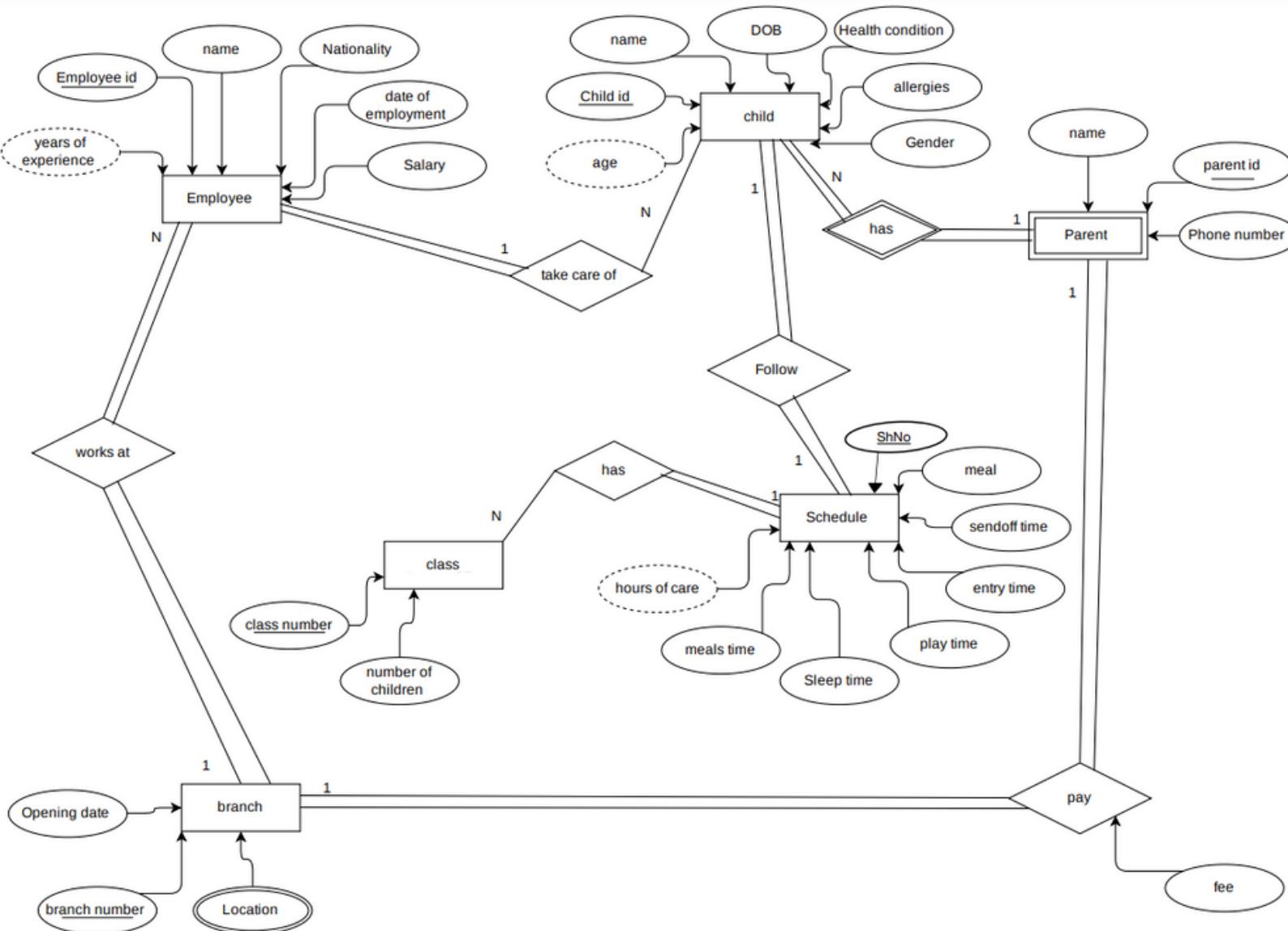
Baby care is a place where parents or guardians can take their children in a safe environment to care for them while they aren't able to due to work or any other obligations. They take care of them, feeds them, puts them to sleep, and makes them play. They don't focus on educating children, and children won't be engaged in learning activities. Their age varies from infants, toddlers, preschoolers, and school-aged children.

We will create a database for a baby care system "my second home" which has many branches, and each branch has many employees, they all work at only one branch. Each employee has a unique ID, name, nationality, salary, and their years of experience, each branch with its location, branch number, and its opening date is stored.

My second home registers each child with their id, name, gender, date of birth, Schedule number, along with health conditions and allergies. Each child must have a parent denoted with their id, name, phone number, a parent can have many children, and they must pay fees to the branch.

An employee must take care of many children by following their schedule, which includes their meal type and time, sleep time, play time, hours of care, The class is denoted by a unique class number, the number of children, and each class has a schedule.

Entity Relationship Diagram (ERD):



Relational Schema :

Child (child_id, name, DOB, health_condition, allergies, gender, Em_id, ShNo)

Fk1: Em_id references Employee(employee_id)

FK2: ShNo reference to Schedule(ShNo)

Schedule (ShNo, meal, sendoff_time, entry_time, play_time, sleep_time, meals_time)

Class (class_number, number_of_children, ShNo)

FK: ShNo reference to schedule(ShNo)

Branch (branch number, opening date)

branch_location(branch_number, location)

Fk1: branch_number references Branch(branch_number)

Employee (employee_id, name, nationality, date_of_employment, salary, branch_number)

Fk1: branch_number references Branch(branch_number)

Parent (parent_id, child_id, phone_number, name, branch_num, fee)

Fk1: child_id references Child(Child_id)

FK2: branch_num references branch(branch_number)

DDL:

Create table branch(
branch_number number (6),
opening_date date ,
constraint BR_PK primary key(branch_number));

```
SQL> Create table branch(  
2 branch_number number (6),  
3 opening_date date ,  
4 constraint BR_PK primary key(branch_number));
```

Table created.

Create table branch_location(
branch_number number (6) ,
location varchar2(30) ,
constraint BL_fK foreign key (branch_number) references
branch(branch_number),
constraint BL_PK primary key(branch_number, location));

```
SQL> Create table branch_location (  
2 branch_number number (6) ,  
3 location varchar2(30) ,  
4 constraint BL_fK foreign key (branch_number) references branch(branch_number),  
5 constraint BL_PK primary key(branch_number, location));
```

Table created.

Create table employee(
employee_id varchar2(10) primary key ,
name varchar2(15),
nationality varchar2(20) ,
date_of_employment date ,
salary number (8),
branch_number number (6),
constraint EM_fK foreign key (branch_number) references
branch(branch_number));

```
SQL> Create table employee (  
2 employee_id varchar2(10) primary key ,  
3 name varchar2(15),  
4 nationality varchar2(20) ,  
5 date_of_employment date ,  
6 salary number (8),  
7 branch_number number (6),  
8 constraint EM_fK foreign key (branch_number) references branch(branch_number));
```

Table created.

DDL:

```
Create table schedule (
shNo VARCHAR2(11) CONSTRAINTS sh_PK PRIMARY key,
meal VARCHAR2(15),
sendoff_time VARCHAR2(15),
entry_time VARCHAR2(15),
play_time VARCHAR2(15),
sleep_time VARCHAR2(15),
meals_time VARCHAR2(15));
```

```
SQL> CREATE TABLE schedule (
 2  shNo VARCHAR2(11) CONSTRAINTS sh_PK PRIMARY key,
 3  meal VARCHAR2(15),
 4  sendoff_time VARCHAR2(15),
 5  entry_time VARCHAR2(15),
 6  play_time VARCHAR2(15),
 7  sleep_time VARCHAR2(15),
 8  meals_time VARCHAR2(15));
```

Table created.

```
Create table child(
child_id varchar2 (10) ,
name varchar2(15),
DOB date ,
health_condition VARCHAR2(20),
allergies varchar2(20) ,
gender char (1) CHECK(gender in('M','F')),
EM_id varchar2(10) ,
ShNo VARCHAR2(11),
CONSTRAINTS ch_PK PRIMARY key (child_id) ,
CONSTRAINTS ch_FK foreign key (EM_id) REFERENCES employee
(employee_id),
CONSTRAINTS ch_FK1 foreign key(ShNo) REFERENCES schedule(ShNo);
```

```
SQL> CREATE table child(
 2  child_id varchar2 (10) ,
 3  name varchar2(15),
 4  DOB date ,
 5  health_condition VARCHAR2(20),
 6  allergies varchar2(20) ,
 7  gender char (1) CHECK(gender in('M','F')),
 8  EM_id varchar2(10) ,
 9  ShNo VARCHAR2(11),
10  CONSTRAINTS ch_PK PRIMARY key (child_id) ,
11  CONSTRAINTS ch_FK foreign key (EM_id) REFERENCES employee (employee_id),
12  CONSTRAINTS ch_FK1 foreign key(ShNo) REFERENCES schedule(ShNo));
```

Table created.

DDL:

```
Create table parent(
parent_id varchar2(10),
child_id varchar2 (10) ,
phone_number number (10),
name varchar2(15),
branch_number number (6),
fee number (7),
constraint PA1_fk foreign key (child_id) references child(child_id),
constraint PA2_fk foreign key (branch_number) references branch(branch_number),
constraint PA_PK primary key(parent_id , child_id));
```

```
SQL> Create table parent(
 2 parent_id varchar2(10),
 3 child_id varchar2 (10) ,
 4 phone_number number (10),
 5 name varchar2(15),
 6 branch_number number(6),
 7 fee number (7),
 8 constraint PA1_fk foreign key (child_id) references child(child_id),
 9 constraint PA2_fk foreign key (branch_number) references branch(branch_number),
10 constraint PA_PK primary key(parent_id , child_id));

Table created.
```

```
Create table Class(
class_number number(5) CONSTRAINTS cl_PK PRIMARY key,
number_of_children number(15),
ShNo VARCHAR2(11),
CONSTRAINTS cl_FK FOREIGN KEY (ShNo) REFERENCES schedule(shNo));
```

```
SQL> CREATE TABLE Class(
 2 class_number number(5) CONSTRAINTS cl_PK PRIMARY key,
 3 number_of_children number(15),
 4 ShNo VARCHAR2(11),
 5 CONSTRAINTS cl_FK FOREIGN KEY (ShNo) REFERENCES schedule(shNo));

Table created.
```

DDL:

Insert into branch
values(11,'12-feb-2018');
Insert into branch
values(22,'21-nov-2019');
Insert into branch
values(33,'30-jan-2020');
Insert into branch
values(44,'14-aug-2021');

```
SQL> Insert into branch
  2  values(11,'12-feb-2018');

1 row created.

SQL> Insert into branch
  2  values(22,'21-nov-2019');

1 row created.

SQL> Insert into branch
  2  values(33,'30-jan-2020');

1 row created.

SQL> Insert into branch
  2  values(44,'14-aug-2021');

1 row created.
```

Insert into employee
values(42464,'Nora Ahmad','Saudi','13-dec-2019','6000','22');
Insert into employee
values(40094,'Reema Saleh','Saudi','30-may-2018','5000','11');
Insert into employee
values(45633,'Fatima Ameer','Pakistani','20-oct-2021','4000','44');
Insert into employee
values(43786,'Emma Alex','American','30-july-2020','3000','33');

```
SQL> Insert into employee
  2  values(42464,'Nora Ahmad','Saudi','13-dec-2019','6000','22');

1 row created.

SQL> Insert into employee
  2  values(40094,'Reema Saleh','Saudi','30-may-2018','5000','11');

1 row created.

SQL> Insert into employee
  2  values(45633,'Fatima Ameer','Pakistani','20-oct-2021','4000','44');

1 row created.

SQL> Insert into employee
  2  values(43786,'Emma Alex','American','30-july-2020','3000','33');

1 row created.
```

DDL:

```
Insert into schedule values  
('Sh1','Vegan','3:00','8:00','9:00','11:00','1:00');
```

```
Insert into schedule  
values('Sh2', 'Vegetarian', '5:00', '10:00', '11:00', '1:00','3:00');
```

```
Insert into schedule  
values('Sh3','Pescatarian','6:00','12:00','1:00','3:00','4:00');
```

```
Insert into schedule  
values('Sh4','Normal','6:00','12:00','1:00','3:00','4:00');
```

```
SQL> Insert into schedule values('Sh1','Vegan','3:00','8:00','9:00','11:00','1:00');  
1 row created.  
  
SQL> Insert into schedule values('Sh2', 'Vegetarian', '5:00', '10:00', '11:00', '1:00','3:00');  
1 row created.  
  
SQL> Insert into schedule values('Sh3','Pescatarian','6:00','12:00','1:00','3:00','4:00');  
1 row created.  
  
SQL> Insert into schedule values('Sh4','Normal','6:00','12:00','1:00','3:00','4:00');  
1 row created.
```

```
Insert into Class values('1','22','Sh1');
```

```
Insert into Class values('2','15','Sh3');
```

```
Insert into Class values('3','20','Sh2');
```

```
Insert into Class values(4,22,'Sh1');
```

```
SQL> Insert into Class  
  2  values('1','22','Sh1');  
1 row created.  
  
SQL> Insert into Class  
  2  values('2','15','Sh3');  
1 row created.  
  
SQL> Insert into Class  
  2  values('3','20','Sh2');  
1 row created.  
  
SQL> Insert into Class  
  2  values(4,22,'Sh1');  
1 row created.
```

DDL:

```
insert into child values (1110001,'Leila khaled','23-aug-2019','diabetes','meat','F',42464, 'Sh1' );
```

```
insert into child values (1110002,'Rasha Mohammed','14-sep-2019','asthma','nuts','F',40094, 'Sh3');
```

```
insert into child values(1110003,'Tala turki','09-feb-2020','do not have','berry','F',45633, 'Sh4');
```

```
insert into child values(1110004,'Yazeed Ali','17-dec-2020','eczema','seafood','M',43786, 'Sh2');
```

```
insert into child values (1110005,'sara Ahmad','28-jan-2019','asthma','fish','F',40094, 'Sh3');
```

```
insert into child values(1110006,'fahad faisal','22-mar-2019','do not have','do not have','M',40094, 'Sh4');
```

```
insert into child values(1110007,'lama sultan','15-oct-2020','do not have','banana','F',40094, 'Sh3');
```

```
insert into child values (1110001,'Leila khaled','23-aug-2019','diabetes','meat','F',42464, 'Sh1' );
created.

insert into child values (1110002,'Rasha Mohammed','14-sep-2019','asthma','nuts','F',40094, 'Sh3');
created.

insert into child values(1110003,'Tala turki','09-feb-2020','do not have','berry','F',45633, 'Sh4');
created.

insert into child values(1110004,'Yazeed Ali','17-dec-2020','eczema','seaFood','M',43786, 'Sh2');
created.

insert into child values (1110005,'sara Ahmad','28-jan-2019','asthma','fish','F',40094, 'Sh3');
created.

insert into child values(1110006,'fahad faisal','22-mar-2019','do not have','do not have','M',40094, 'Sh4');
created.

insert into child values(1110007,'lama sultan','15-oct-2020','do not have','banana','F',40094, 'Sh3');
created.
```

DDL:

```
Insert into branch_location values(11,'KSA-riyadh-alrayaan');
```

```
Insert into branch_location values(22,' KSA-riyadh- aleaqiq');
```

```
Insert into branch_location values(33,' KSA-riyadh-almalqaa');
```

```
Insert into branch_location values(44,' KSA-riyadh-alfalah');
```

```
SQL>
SQL> Insert into branch_location values(11,'KSA-riyadh-alrayaan');

1 row created.

SQL> Insert into branch_location values(22,' KSA-riyadh- aleaqiq');

1 row created.

SQL> Insert into branch_location values(33,' KSA-riyadh-almalqaa');

1 row created.

SQL> Insert into branch_location values(44,' KSA-riyadh-alfalah');

1 row created.
```

DML:

```
select name  
from child  
where name Like 'L%';
```

```
SQL> select name  
  2  from child  
  3  where name Like 'L%';  
  
NAME  
-----  
Leila khaled
```

```
select *  
from child  
where allergies='seafood' or allergies='meat';
```

```
SQL> select *  
  2  from child  
  3  where allergies='seafood' or allergies='meat';  
  
CHILD_ID      NAME          DOB      HEALTH_CONDITION    ALLERGIES      G  
-----  
EM_ID  
-----  
1110001      Leila khaled   23-AUG-19 diabetes        meat          F  
42464  
1110004      Yazeed Ali     17-DEC-20 eczema         seafood        M  
43786
```

```
select EM_id, count(gender)  
from child  
where gender='F'  
group by EM_id  
having count(gender)>2;
```

```
SQL> select EM_id, count(gender)  
  2  from child  
  3  where gender='F'  
  4  group by EM_id  
  5  having count(gender)>2;  
  
EM_ID      COUNT(GENDER)  
-----  
40094                  3
```

DML:

```
select child_id  
from child  
where DOB >'01-jan-2020'  
group by child_id;
```

```
SQL> select child_id  
  2  from child  
  3  where DOB >'01-jan-2020'  
  4  group by child_id;
```

```
CHILD_ID  
-----  
1110003  
1110007  
1110004
```

Select class_number, number_of_children
From Class
Where number_of_children>20;

```
SQL>  
SQL> Select class_number, number_of_children  
  2  From Class  
  3  Where number_of_children>20;  
  
CLASS_NUMBER NUMBER_OF_CHILDREN  
-----  
          1           22  
          4           22
```

Select count(class_number), SHNO
From Class
Group by SHNO;

```
SQL> Select count(class_number), SHNO  
  2  From Class  
  3  Group by SHNO;  
  
COUNT(CLASS_NUMBER) SHNO  
-----  
          2 Sh1  
          1 Sh3  
          1 Sh2
```

DML:

Select SHNO, ENTRY_TIME
From schedule
Where ENTRY_TIME= '12:00';

```
SQL> Select SHNO, ENTRY_TIME  
  2  From schedule  
  3  Where ENTRY_TIME= '12:00';
```

SHNO	ENTRY_TIME
Sh3	12:00

select branch_number , opening_date
from branch
where opening_date < '19-jan-2020';

```
SQL> select branch_number , opening_date  
  2  from branch  
  3  where opening_date < '19-jan-2020';
```

BRANCH_NUMBER	OPENING_D
11	12-FEB-18
22	21-NOV-19

select *
from branch
where opening_date between '10-feb-2018' and '30-jan-2020';

```
SQL> select *  
  2  from branch  
  3  where opening_date between '10-feb-2018' and '30-jan-2020';
```

BRANCH_NUMBER	OPENING_D
11	12-FEB-18
22	21-NOV-19
33	30-JAN-20

DML:

```
select branch_number , opening_date  
from branch  
where branch_number > 33 and opening_date = '14-aug-2021';
```

```
SQL> select branch_number , opening_date  
  2  from branch  
  3  where branch_number > 33 and opening_date = '14-aug-2021';  
  
BRANCH_NUMBER OPENING_D  
-----  
        44 14-AUG-21
```

```
SELECT branch_number , count(opening_date)  
FROM branch  
WHERE opening_date >='01-jan-2003' OR opening_date<'01-Feb-  
2003'  
GROUP BY branch_number;
```

```
SQL> SELECT branch_number , count(opening_date)  
  2  FROM branch  
  3  WHERE opening_date >='01-jan-2003' OR opening_date<'01-Feb-2003'  
  4  GROUP BY branch_number;  
  
BRANCH_NUMBER COUNT(OPENING_DATE)  
-----  
        22          1  
        11          1  
        44          1  
        33          1
```

```
SELECT avg(salary)  
FROM employee  
where salary>4000;
```

```
SQL> SELECT avg(salary)  
  2  FROM employee  
  3  where salary>4000;  
  
AVG(SALARY)  
-----  
      5500
```

DML:

```
select parent_id, branch_number  
from parent  
where branch_number = 22;
```

```
SQL> select parent_id, branch_number  
  2  from parent  
  3  where branch_number = 22;  
  
PARENT_ID  BRANCH_NUMBER  
-----  
1102342      22  
1102345      22  
1102346      22  
1102347      22
```

```
select max(FEE)  
from parent;
```

```
SQL> select max(FEE)  
  2  from parent;  
  
  MAX(FEE)  
-----  
     20000
```

```
select parent_id, child_id, phone_number  
from parent  
where phone_number = 0545678901;
```

```
SQL> select parent_id, child_id, phone_number  
  2  from parent  
  3  where phone_number = 0545678901;  
  
PARENT_ID  CHILD_ID  PHONE_NUMBER  
-----  
1102344    1110004   545678901
```

DML:

```
SELECT COUNT(nationality)
FROM employee
where nationality = 'Saudi';
```

```
SQL> SELECT COUNT(nationality)
  2  FROM employee
  3 where nationality = 'Saudi';

COUNT(NATIONALITY)
-----
2
```

```
SELECT sum(salary)
FROM employee
where salary>=4000
having sum(salary)>2000;
```

```
SQL> SELECT sum(salary)
  2  FROM employee
  3 where salary>=4000
  4 having sum(salary)>2000;

SUM(SALARY)
-----
15000
```

Work Distribution:

STUDENTS NAME :	ID :	PERCENTAGE:	WORK:
Leader. Ruba Alhudyan	442001026	100%	
Remaz Alsuhibanie	442004122	100%	
Linah Almofeez	442002821	100%	Team work
Leena Almatar	442003539	100%	
Razan Alsunaidi	442001828	100%	
Maram Almousa	442000723	100%	