



Babysitter Management System

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Section: A

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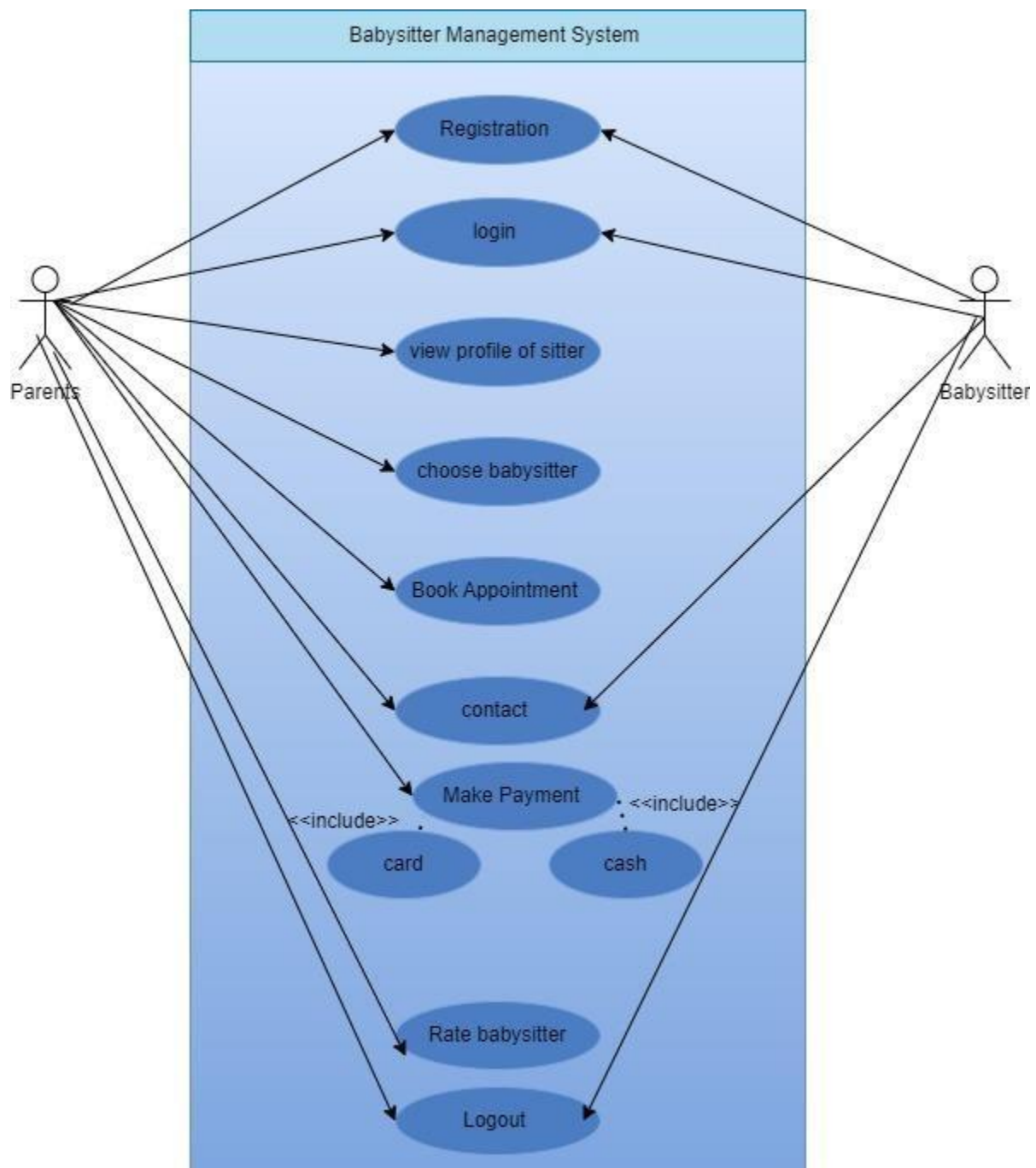
Introduction:

The Babysitter Management System is a revolutionary technology that is changing the way modern families and childcare companies handle their babysitting requirements. Our solution is intended to simplify and improve the process of easily discovering, scheduling, and managing babysitters. With our Babysitter Management System, you can say goodbye to the hassles of last-minute babysitter searches and stressful scheduling disputes. Parents can quickly search through a pool of reputable and qualified babysitters, examine their profiles, availability, and ratings, and effortlessly plan appointments that meet their needs using our revolutionary platform. Meanwhile, babysitters may take use of an easy-to-use interface to manage their schedules, contact with parents, and enhance their reputation in the childcare community. The Babysitter Management System is set to change the way parents and babysitters communicate and interact, by offering for busy families, a dependable and effective daycare option. Join us as we begin on this exciting adventure together to simplify babysitter management!"

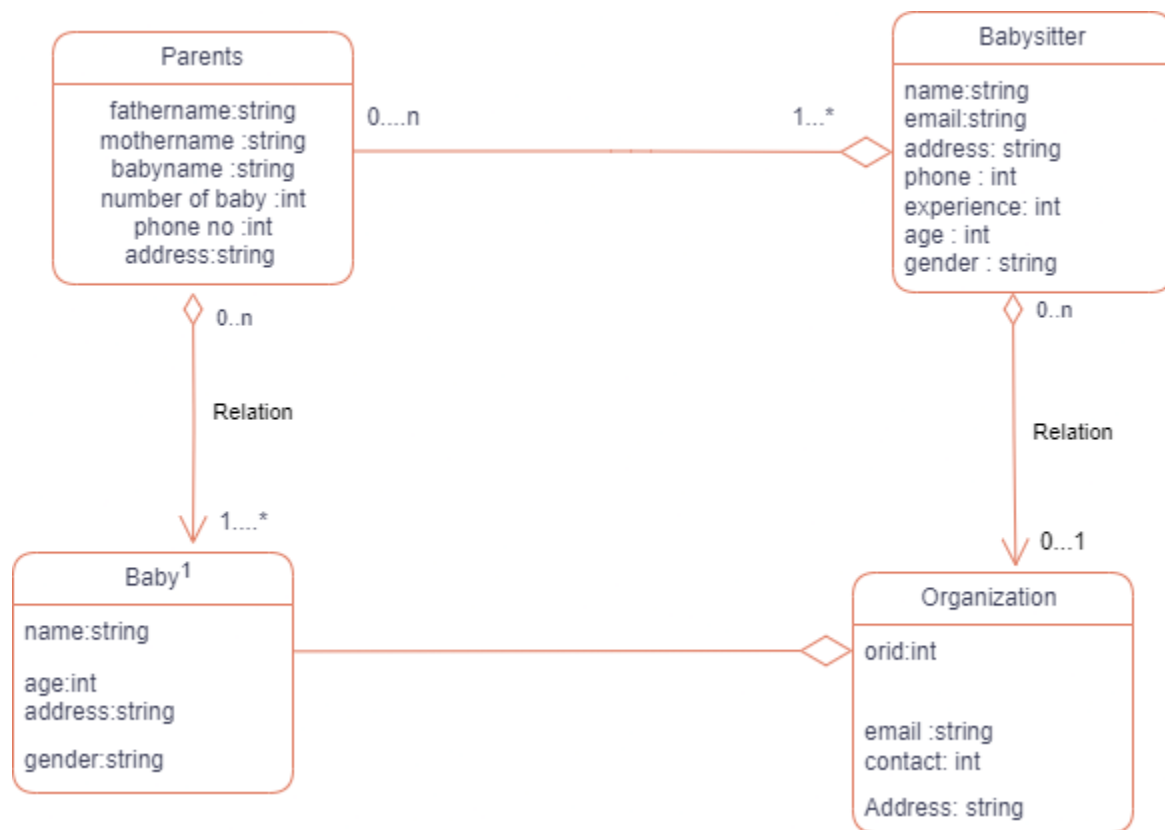
Project Proposal:

The objective of this organization is to handle the requirement of babysitting for the new modern families . We aim to promote this revolutionary technology to the parents' day to day life and make their life a lot more easier. Join us as we embark on this exciting journey to simplify babysitter management. User Registration and Login: Parents and babysitters will create individual accounts to access the system. Babysitter Profile Management: Babysitters can create and update their profiles, including information about their skills, experience, availability, and rates. Parent Interface: Parents can search for babysitters based on various criteria such as location, availability, and ratings. They can view detailed profiles, reviews, and ratings before making a selection. Appointment Scheduling: Parents can schedule appointments with selected babysitters based on their availability and specific requirements. Communication Platform: The system will provide a secure messaging platform for parents and babysitters to communicate and discuss appointment details. Review and Rating System: Parents can leave reviews and ratings for babysitters based on their experience, which helps build a reliable reputation system. Notifications and Reminders: The system will send automated notifications and reminders to parents and babysitters regarding upcoming appointments.

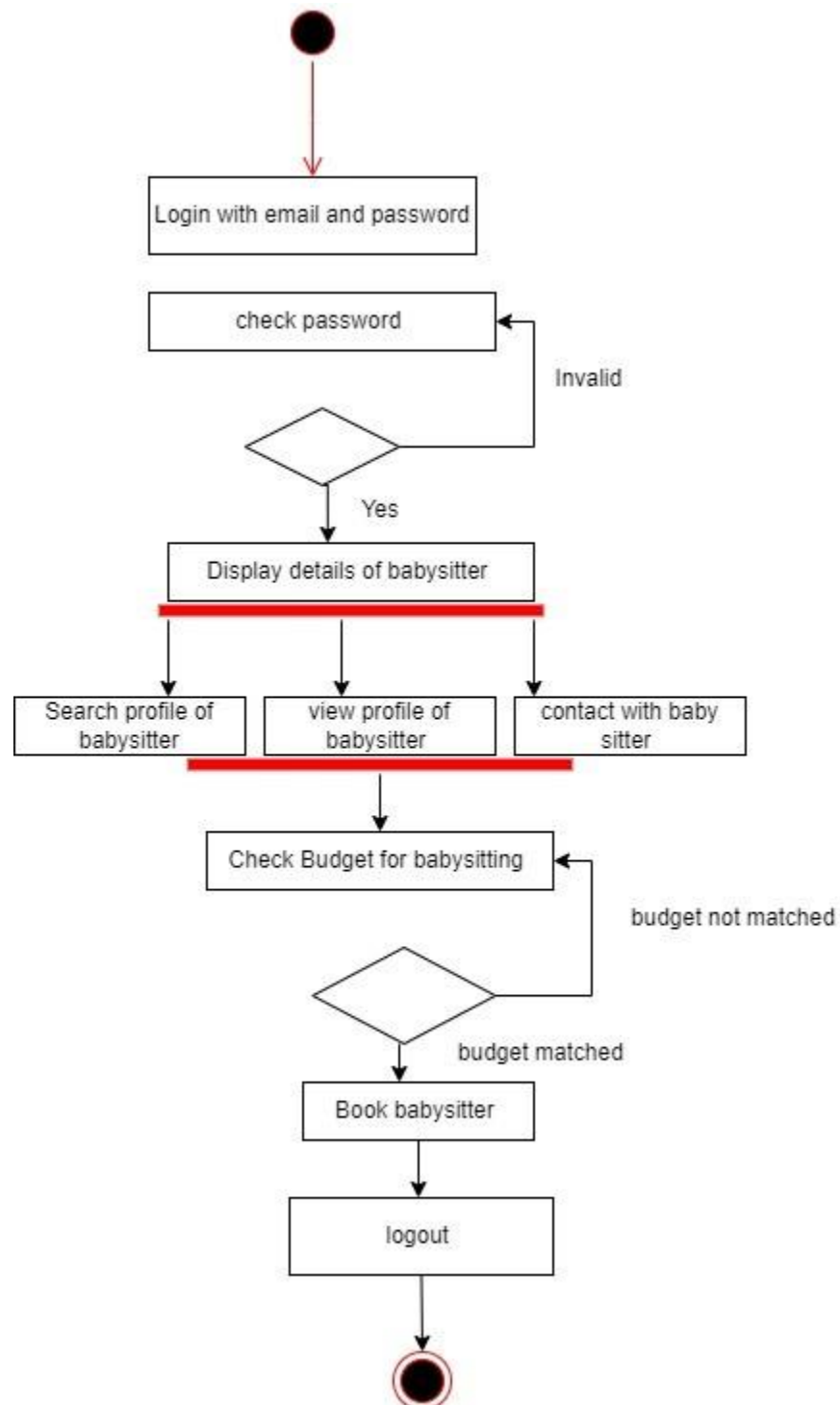
Use case diagram :



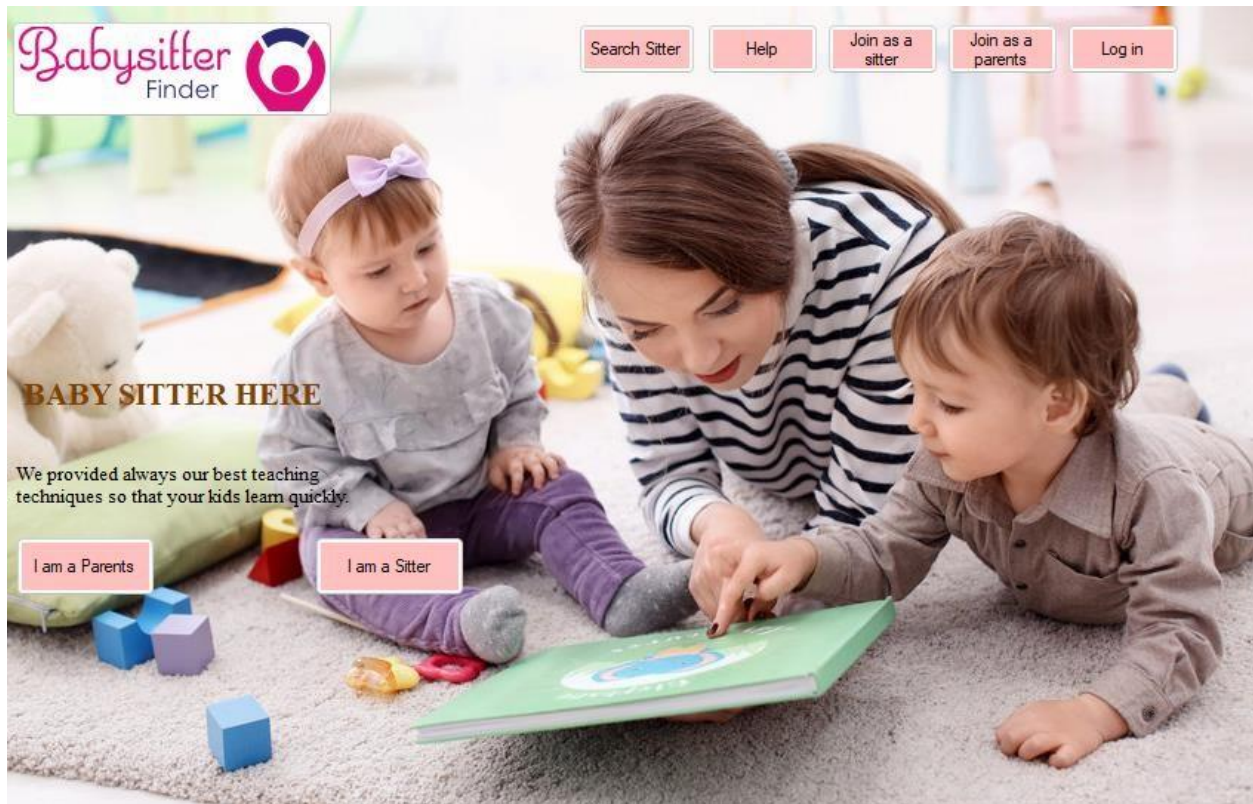
Class diagram :



Activity Diagram :



User Interface



Home Page

The image shows the 'Home Page' of the 'Babysitter Finder' website. The background is a photograph of a woman in a plaid shirt holding a young child up in the air. On the left side, there is a 'Parents Registration' form. The form includes the following fields: 'Fathers Name', 'Mothers Name', 'Babys Name', 'Babys Gender', 'Number of Baby' (with a dropdown menu showing '0'), 'Email', and 'Phone'. Each field has a yellow placeholder text. Above the form, there is a 'Log In' button. Below the form, there is a 'Submit' button. In the top right corner, there are four navigation buttons: 'Home', 'Search Sitter', 'Help', 'Join as a sitter', and 'Join as a Parents'.



Babysitter Finder

Home Help

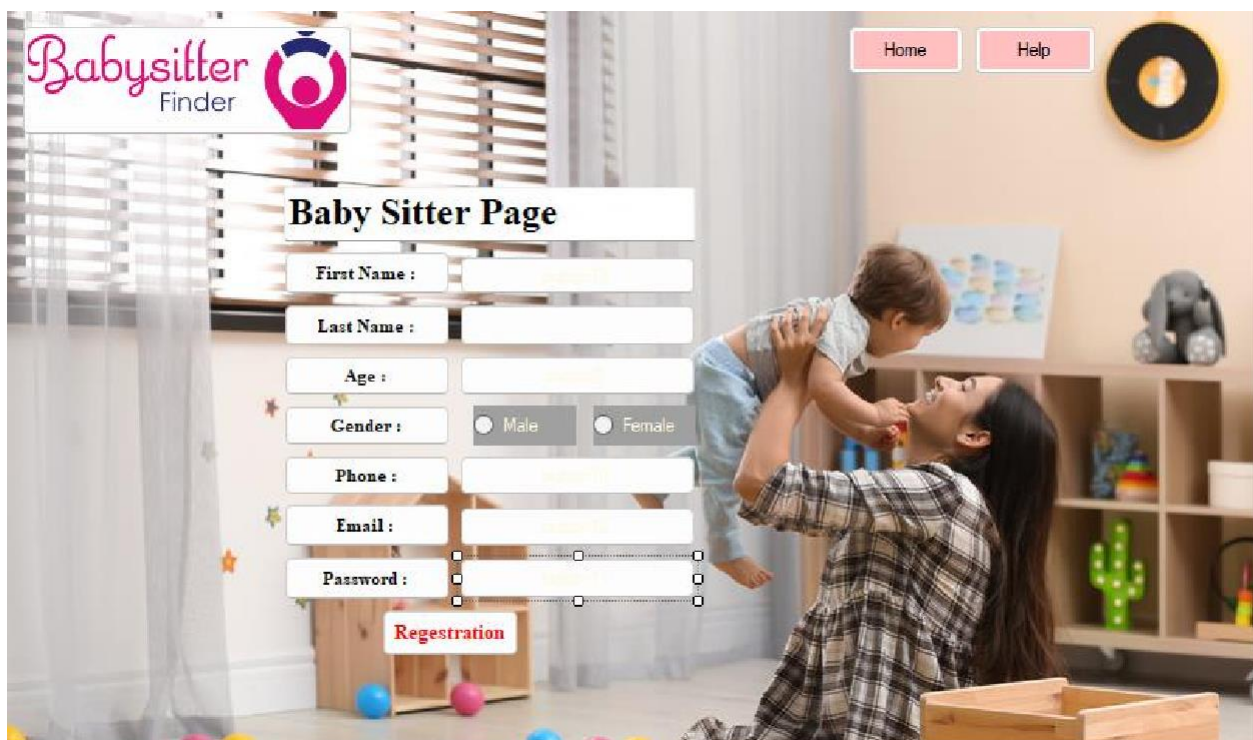
Parents Log in

Email :

Password :

Log In

Parents Login



Babysitter Finder

Home Help

Baby Sitter Page

First Name :

Last Name :

Age :

Gender : ☒ Male ☐ Female

Phone :

Email :

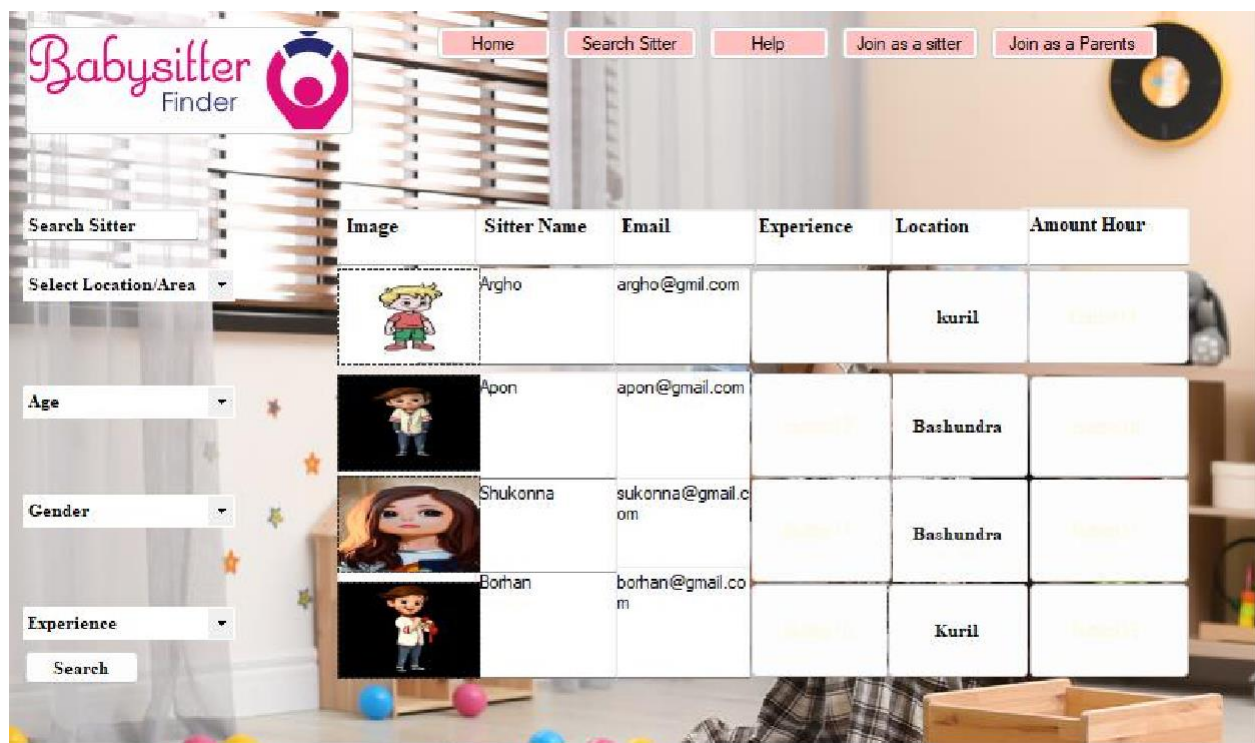
Password :

Registration

Babysitter Page



Babysitter Login

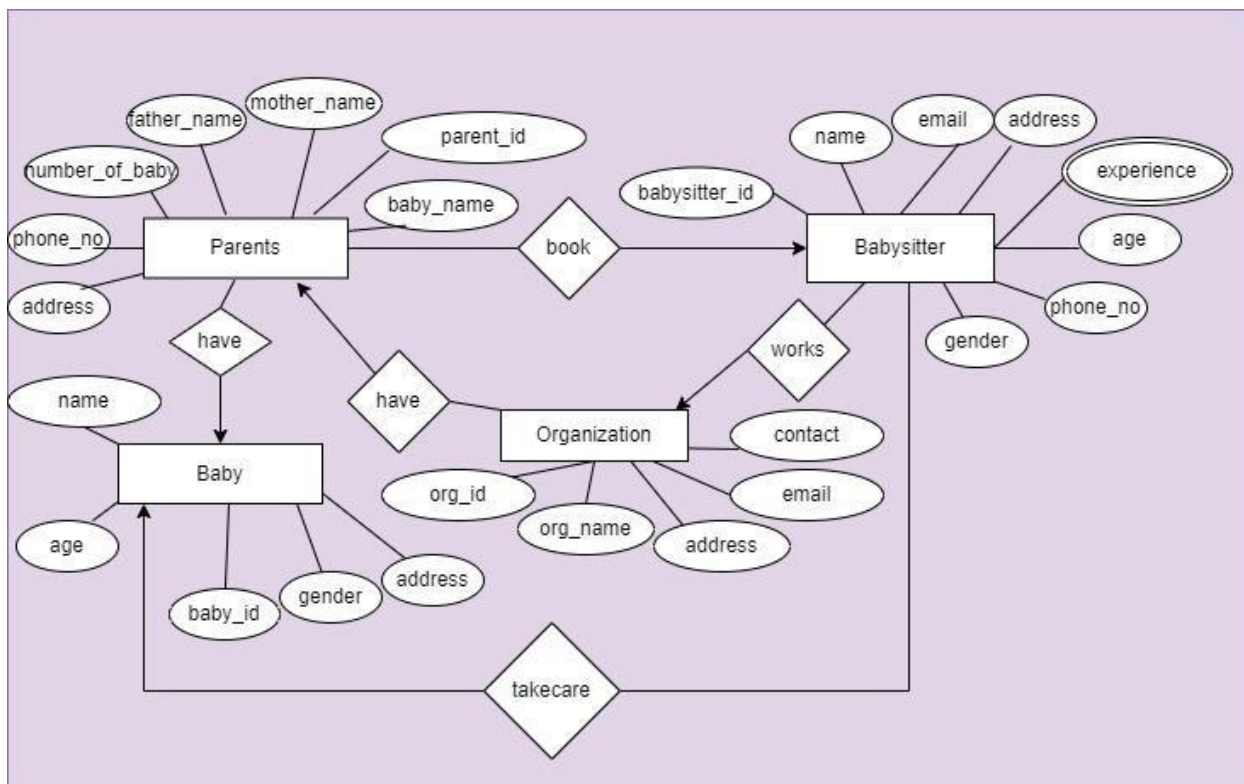


Searching Babysitter

Project Scenario Description :

In the Babysitter Management System parents and babysitters connect and manage childcare needs. The parent has to register into the system for receiving its offerings. Parents interested in utilizing the Babysitter Management System must first register. During the registration process, parents provide essential information that uniquely identifies them within the system. This information includes a ParentId, a distinct identifier assigned to each parent. Additionally, parents furnish details such as the father's name, mother's name, baby's name, and the total number of babies in the family. This information helps create personalized profiles within the system. Parents have the ability to browse through a list of available babysitters within the system and book them based on their preferences and requirements. Each babysitter has a unique profile associated with them. The babysitter has their own profile with unique id ,name , email, phone no , age , gender , experience etc. The babysitter takecare of the baby according to their appointment from the parents. The babysitters works under the name of the Organization .The organization is identified with organization id . The system also stores organizations' name ,address contact and email .

ER Diagram :



Normalization :

Normalization:

Have

UNF

have(P_i'd, baby-name, mother_name, father_name, phone_no, address, B_i'd, name, email, address, phone_no, age, experience, gender).

1NF

There is no multivalued attribute.

1. Parents (P_i'd, baby-name, mother_name, father_name, phone_no, B_i'd, name, email, address, phone_no, age, experience, gender).

2NF

1. P_i'd, baby-name, mother_name, father_name, phone_no, address.

2. B_i'd, name, email, phone_no, age, experience, gender.

3NF

1. P_i'd, baby-name, mother_name, father_name.

2. phone_no, address.

3. B_i'd, name.

4. email, phone_no, age, experience, gender

Table creation

1. P_i'd, baby-name, mother_name, father_name.

2. phone_no, address, a_i'd.

3. B_i'd, name, a_id.

4. email, phone_no, age, experience, gender, P_i'd.

5. B_i'd, P_i'd.

BOOK

UNF

Book(P_i'd, baby-name, mother_name, father_name, phone_no, address, babysitter_id, name, email, address, phone_no, age, experience, gender)

1NF

Experience is a multi valued attribute.

1. P_i'd, baby-name, mother_name, father_name, phone_no, address, babysitter_id, name, email, address, phone_no, age, experience, gender.

2NF

1. P_i'd, baby-name, mother_name, father_name, phone_no, address.

2. babysitter_id, name, email, address, phone_no, age, experience, gender.

3NF

1. P_i'd, baby-name, mother_name, father_name.

2. phone_no, address.

3. babysitter_id, name.

4. name, email, address, phone_no, age, experience, gender.

Table Creation

1. P_i'd, baby-name, mother_name, father_name.
2. phone_no, address, a_i'd.
3. babysitter_id, name, **P_i'd**.
4. name, email, address, phone_no, age, experience, gender, **a_i'd, babysitter_id**.

Works

UNF

Works (babysitter_id, name, email, address, phone_no, age, experience, gender, org_id, org_name, contact, email, address)

1NF

Experience is a multi valued attribute.

1. babysitter_id, name, email, address, phone_no, age, experience, gender, org_id, org_name, contact, email, address.

2NF

1. babysitter_id, name, email, address, phone_no, age, experience, gender.
2. org_i'd, org_name, contact, email, address.

3NF

1. babysitter_id, name.
2. email, address, phone_no, age, experience, gender.
3. org_i'd, org_name,
4. contact, email, address.

Table creation

1. babysitter_id, name.
2. email, address, phone_no, age, experience, gender, a_i'd.
3. org_i'd, org_name,
4. contact, email, address, **babysitter_id**.
5. **a_i'd, org_id**.

Have(organization)

UNF

Have(org_i'd, org_neme ,contact, email, address, P_i'd, baby_name, mother_name, father_name, phone_no, address).

1NF

There is no multi valued attribute.

1. org_i'd, org_name, contact, email, address, P_i'd, baby_name, mother_name, father_name, phone_no.

2NF

1. org_i'd, org_name, contact, email, address.

2. P_i'd, baby_name, mother_name, father_name, number_of_baby, phone_no.

3NF

1. org_i'd, org_name.

2. contact, email, address.

3. P_i'd, baby_name, mother_name, father_name.

Table creation

1. org_i'd, org_name.

2. contact, email, address, a_i'd.

3. P_i'd, baby_name, mother_name, father_name, **org_id**.

4. **a_i'd, org_i'd**.

Take Care

UNF

Take care (babysitter_id, name, email, address, phone_no, age, experience, gender, B_i'd, name, age, gender, address)

1NF

Experience is a multi valued attribute.

1. babysitter_id, name, email, address, phone_no, age, experience, gender, B_i'd, name, age, gender, address.

2NF

1. babysitter_id, name, email, address, phone_no, age, experience, gender.

2. B_i'd, name, age, gender, address.

3NF

1. babysitter_id, name.

2. email, address, phone_no, age, experience, gender.

3. B_i'd, name.

4. age, gender, address.

Table Creation

1. babysitter_id, name.

2. email, address, phone_no, age, experience, gender, a_i'd.

3. B_i'd, name.

4. age, gender, address, **a_i'd**.

5. **babysitter_id, B_i'd**.

Temporary Table

1. ~~P_i'd, baby_name, mother_name, father_name.~~
2. ~~phone_no, address, a_i'd.~~
3. B_i'd, name, **a_id.**
4. ~~email, phone_no, age, experience, gender, P_i'd.~~
5. **B_i'd, P_i'd.**
6. P_i'd, baby_name, mother_name, father_name.
7. phone_no, address, a_i'd.
8. babysitter_id, name, **P_i'd.**
9. name, email, address, phone_no, age, experience, gender, **a_i'd, babysitter_id.**
10. ~~babysitter_id, name.~~
11. ~~email, address, phone_no, age, experience, gender, a_i'd.~~
12. ~~org_i'd, org_name,~~
13. contact, email, address, **babysitter_id.**
14. **a_i'd, org_id.**
15. org_i'd, org_name.
16. ~~contact, email, address, a_i'd.~~
17. ~~P_i'd, baby_name, mother_name, father_name, org_id.~~
18. **a_i'd, org_i'd.**
19. babysitter_id, name.
20. email, address, phone_no, age, experience, gender, a_i'd.
21. ~~B_i'd, name.~~
22. age, gender, address, **a_i'd.**
23. ~~babysitter_id, B_i'd.~~

Final Table

1. B_i'd, name, **a_id.**
2. **B_i'd, P_i'd.**
3. P_i'd, baby_name, mother_name, father_name.
4. phone_no, address, a_i'd.
5. babysitter_id, name, **P_i'd.**
6. name, email, address, phone_no, age, experience, gender, **a_i'd, babysitter_id.**
7. contact, email, address, **babysitter_id.**
8. **a_i'd, org_id.**
9. org_i'd, org_name.
10. babysitter_id, name.
11. email, address, phone_no, age, experience, gender, a_i'd.
12. age, gender, address, **a_i'd.**

Schema Diagram :

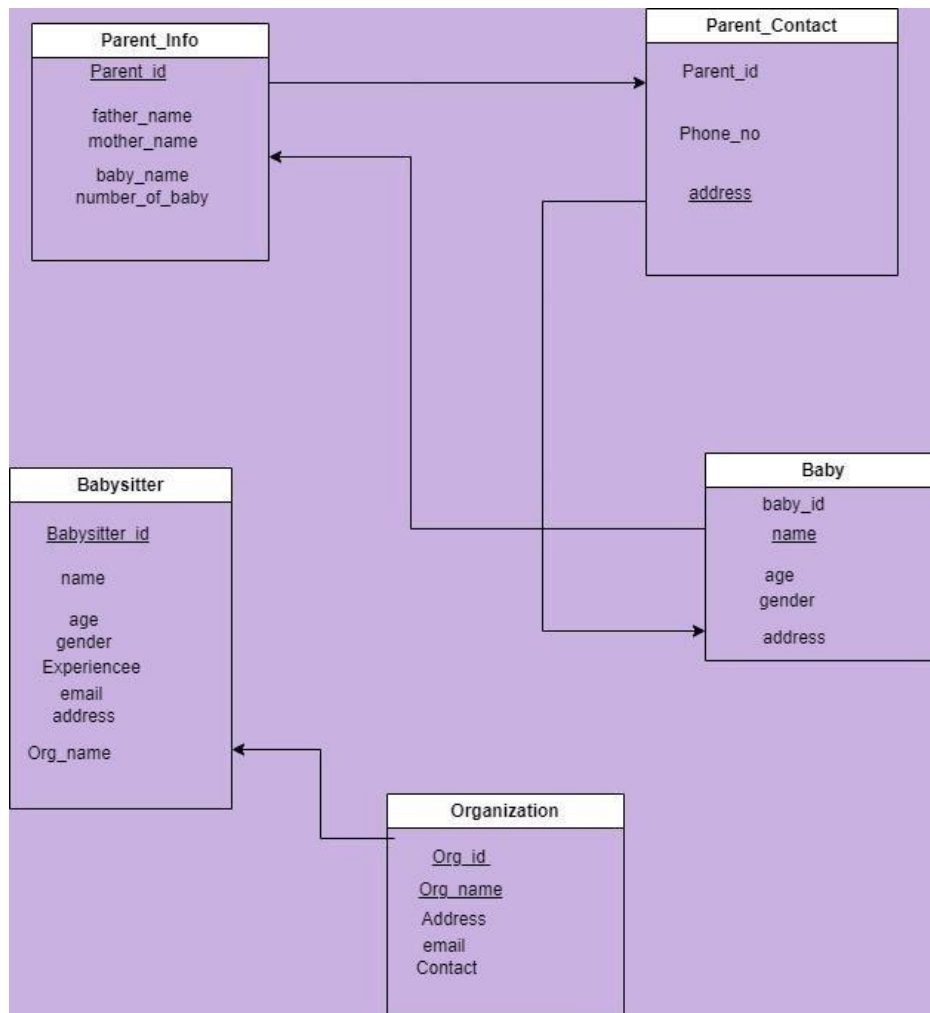


Table Creation :

#####

```
CREATE TABLE Baby (  
    Name VARCHAR(50) Primary key,  
  
    Baby_id VARCHAR(10) Primary Key,  
    Age INT,  
    Gender VARCHAR(10),  
    Address VARCHAR(100)  
);  
#####
```

```
CREATE TABLE Parent_Info (  
    Parent_id VARCHAR(50) Primary key,  
  
    Father_name VARCHAR(50),  
    Mother_name VARCHAR(50),  
    Number_of_baby INT,  
    Baby_name VARCHAR(50),  
  
    FOREIGN KEY (Baby_name) REFERENCES Baby(Name)  
);  
#####
```

```
CREATE TABLE Parent_Contact(  
    Parent_id VARCHAR (50),  
  
    Phone_no VARCHAR(15),  
    Address VARCHAR(100),  
  
    FOREIGN KEY (Parent_id) REFERENCES Parent_info(Parent_id)  
);  
#####
```

```
CREATE TABLE Organization (  
    Org_name VARCHAR(20) PRIMARY KEY,
```

```

    Org_id INT PRIMARY KEY,
    Email VARCHAR(255),
    Address VARCHAR(255),
    Contact VARCHAR(20)
);

#####

CREATE TABLE babysitter (
    Babysitter_id VARCHAR(20) PRIMARY KEY,
    Name VARCHAR(50),
    Age INT,
    Gender VARCHAR(10),
    Email VARCHAR(100),
    Address VARCHAR(200),
    PhoneNo VARCHAR(20),
    Experience INT
FOREIGN KEY (Email) REFERENCES Organization(Email)
);

```

Data Insertion :

```

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1000, 'Partha', 7, 'Male', 'Kuril');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1001, 'Argho', 6, 'Male', 'Kuril');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1002, 'Sukonna', 5, 'Female', 'Bashundhora');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1003, 'Apon', 4, 'Male', 'Bisshoroad');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1004, 'Anita', 7, 'Female', 'Dhanmondi');

```

```

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1005, 'Madhobi', 4, 'Female', 'Kuril');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1006, 'Ahana', 4, 'Female', 'Sadarghat');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1007, 'Rafi', 3, 'Male', 'Cantonment');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1008, 'Tamim', 5, 'Male', 'Dhanmondi');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1009, 'Akil', 5, 'Male', 'Gulsan RA/A');

INSERT INTO Baby (Baby_id, Name, Age, Gender, Address)
VALUES (1010, 'Aklima', 2, 'Female', 'Nikunjo -2');

SELECT * FROM Baby;

DESCRIBE Baby;

```

NAME	BABY_ID	AGE	GENDER	ADDRESS
Partha	1000	7	Male	Kuril
Argho	1001	6	Male	Kuril
Sukonna	1002	5	Female	Bashundhora
Apon	1003	4	Male	Bisshoroad
Anita	1004	7	Female	Dhanmondi
Madhobi	1005	4	Female	Kuril
Ahana	1006	4	Female	Sadarghat
Rafi	1007	3	Male	Cantonment
Tamim	1008	5	Male	Dhanmondi
Akil	1009	5	Male	Gulsan RA/A
Aklima	1010	2	Female	Nikunjo -2

11 rows returned in 0.00 seconds

[CSV Export](#)

Object Type **TABLE** Object **BABY**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>BABY</u>	<u>NAME</u>	Varchar2	50	-	-	1	-	-	-
	<u>BABY_ID</u>	Varchar2	10	-	-	-	✓	-	-
	<u>AGE</u>	Number	-	-	0	-	✓	-	-
	<u>GENDER</u>	Varchar2	10	-	-	-	✓	-	-
	<u>ADDRESS</u>	Varchar2	100	-	-	-	✓	-	-
1 - 5									

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2010,'Romesh', 'Ahana', 2, 'Partha');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2011,'Tomesh', 'Himi Roy', 2,'Argho');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2012,'Shohorab', 'Rehena', 2,'Sukonna');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2013,'Abdul Malek', 'Rehena', 2, 'Apon');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2014,'Ali', 'Shokhina', 2, 'Anita');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2015,'Siam hauq', 'Khusi begum', 3, 'Madhobi');

INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby, Baby_name)

VALUES (2016,'Pomesh', 'Gita Rani', 2, 'Ahana');

```
INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby,
Baby_name)
```

```
VALUES (2017,'Karim', 'Purnima', 2, 'Rafi');
```

```
INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby,
Baby_name)
```

```
VALUES (2018,'Rahim', 'Moushomi', 3, 'Tamim');
```

```
INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby,
Baby_name)
```

```
VALUES (2019,'Lokman', 'Popi', 2, 'Akil');
```

```
INSERT INTO Parent_info (Parent_id , Father_name, Mother_name, Number_of_baby,
Baby_name)
```

```
VALUES (2020,'Rohit', 'Mousi', 1, 'Aklima');
```

```
SELECT * FROM Parent_Info
DESCRIBE Parent_Info;
```

PARENT_ID	FATHER_NAME	MOTHER_NAME	NUMBER_OF_BABY	BABY_NAME
2010	Romesh	Ahana	2	Partha
2011	Tomesh	Himi Roy	2	Argho
2012	Shohorab	Rehena	2	Sukonna
2013	Abdul Malek	Rehena	2	Apon
2014	Ali	Shokhina	2	Anita
2015	Siam hauq	Khusi begum	3	Madhobi
2016	Pomesh	Gita Rani	2	Ahana
2017	Karim	Purnima	2	Rafi
2018	Rahim	Moushomi	3	Tamim
2019	Lokman	Popi	2	Akil
2020	Rohit	Mousi	1	Aklima

11 rows returned in 0.07 seconds

[CSV Export](#)

Object Type **TABLE** Object **PARENT_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>PARENT_INFO</u>	<u>PARENT_ID</u>	Varchar2	50	-	-	1	-	-	-
	<u>FATHER_NAME</u>	Varchar2	50	-	-	-	✓	-	-
	<u>MOTHER_NAME</u>	Varchar2	50	-	-	-	✓	-	-
	<u>NUMBER_OF_BABY</u>	Number	-	-	0	-	✓	-	-
	<u>BABY_NAME</u>	Varchar2	50	-	-	-	✓	-	-
1 - 5									

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2010,01717486552,'Kuril');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2011,01717486352,'Kuril');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2012,01717486550,'Bashundhara');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2013,01717486532,'Bissoroad');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2014,01717496552,'Dhanmondi');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2015,01717455552,'Kuril');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2016,01717486588,'Sadarghat');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2017,01717486662,'Cantonment');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

VALUES (2018,01717422252,'Dhanmondi');

INSERT INTO Parent_contact(Parent_id, Phone_no, Address)

```
VALUES (2019,01727486552,'Gulshan RA/A');
```

```
INSERT INTO Parent_contact(Parent_id, Phone_no, Address)
```

```
VALUES (2020,01774865520,'Nikunja-2');
```

```
SELECT * FROM Parent_contact
```

```
DESCRIBE Parent_contact;
```

PARENT_ID	PHONE_NO	ADDRESS
2010	1717486552	Kuril
2011	1717486352	Kuril
2012	1717486550	Bashundhara
2013	1717486532	Bissoroad
2014	1717496552	Dhanmondi
2014	1717496552	Dhanmondi
2015	1717455552	Kuril
2016	1717486588	Sadarghat
2017	1717486662	Cantonment
2018	1717422252	Dhanmondi
2019	1727486552	Gulshan RA/A
2020	1774865520	Nikunja-2

12 rows returned in 0.02 seconds

[CSV Export](#)

Object Type TABLE Object PARENT_CONTACT

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PARENT_CONTACT	PARENT_ID	Varchar2	50	-	-	-	✓	-	-
	PHONE_NO	Varchar2	15	-	-	-	✓	-	-
	ADDRESS	Varchar2	100	-	-	-	✓	-	-
1 - 3									

```
INSERT INTO babysitter (Babysitter_id,Name, Age, Gender, Email, Address, Phone_no, Experience)
```

```
VALUES (3001,'Alifa', 25, 'Female', 'BabySitfinder@gmail.com', 'Rampura', 0174567890, 3);
```

```
INSERT INTO babysitter (Babysitter_id,Name, Age, Gender, Email, Address, Phone_no, Experience)
```

```
VALUES (3002,'Mimi', 22, 'Female', 'BabySitfinder@gmail.com', 'Mirpur', 0174567879, 3);
```

```
INSERT INTO babysitter (Babysitter_id,Name, Age, Gender, Email, Address, Phone_no, Experience)
```

```
VALUES (3003,'Khalid', 24, 'Male', 'BabySitfinder@gmail.com', 'Gulshan', '01945678790', 3);
```

```
INSERT INTO babysitter (Babysitter_id,Name, Age, Gender, Email, Address, Phone_no, Experience)
```

```
VALUES (3004,'Rubi', 26, 'Female', 'BabySitfinder@gmail.com', 'Bashundhora', 0174567860, 2);
```

```
INSERT INTO babysitter (Babysitter_id,Name, Age, Gender, Email, Address, Phone_no, Experience)
```

```
VALUES (3005,'Momo', 21, 'Female', 'BabySitfinder@gmail.com', 'Mirpur', 0174567279, 3);
```

```
SELECT * FROM babysitter;
```

```
DESCRIBE babysitter;
```

BABYSITTER_ID	NAME	AGE	GENDER	EMAIL	ADDRESS	PHONE_NO	EXPERIENCE
3001	Alifa	25	Female	BabySitfinder@gmail.com	Rampura	174567890	3
3002	Mimi	22	Female	BabySitfinder@gmail.com	Mirpur	174567879	3
3003	Khalid	24	Male	BabySitfinder@gmail.com	Gulshan	01945678790	3
3004	Rubi	26	Female	BabySitfinder@gmail.com	Bashundhora	174567860	2
3005	Momo	21	Female	BabySitfinder@gmail.com	Mirpur	174567279	3

5 rows returned in 0.04 seconds

[CSV Export](#)

Object Type **TABLE** Object **BABYSITTER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BABYSITTER	BABYSITTER_ID	Varchar2	20	-	-	1	-	-	-
	NAME	Varchar2	50	-	-	-	✓	-	-
	AGE	Number	-	-	0	-	✓	-	-
	GENDER	Varchar2	10	-	-	-	✓	-	-
	EMAIL	Varchar2	100	-	-	-	✓	-	-
	ADDRESS	Varchar2	200	-	-	-	✓	-	-
	PHONE_NO	Varchar2	20	-	-	-	✓	-	-
	EXPERIENCE	Number	-	-	0	-	✓	-	-

1 - 8

```
INSERT INTO Organization (Org_name, Org_id, Email, Address, Contact)
```

```
VALUES ('BabySitFinder.Com', 255876, 'BabySitfinder@gmail.com', 'Dhanmondi', '09567896666');
```

```
SELECT * FROM Organization
```

```
DESCRIBE Organization;
```


ORG_NAME	ORG_ID	EMAIL	ADDRESS	CONTACT
BabySitFinder.Com	255876	BabySitfinder@gmail.com	Dhanmondi	09567896666

1 rows returned in 0.03 seconds

[CSV Export](#)

Object Type TABLE Object ORGANIZATION

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ORGANIZATION	ORG_NAME	Varchar2	20	-	-	-	✓	-	-
	ORG_ID	Number	-	-	0	-	✓	-	-
	EMAIL	Varchar2	255	-	-	1	-	-	-
	ADDRESS	Varchar2	255	-	-	-	✓	-	-
	CONTACT	Varchar2	20	-	-	-	✓	-	-
1 - 5									

Query Writing :

Single-Row Functions

Question1: Retrieve the length of each father's name in the "parent_info" table.

SELECT Father_name, LENGTH(Father_name) AS Namelength FROM Parent_info;

FATHER_NAME	NAMELENGTH
Romesh	6
Tomesh	6
Shohorab	8
Abdul Malek	11
Ali	3
Siam hauq	9
Pomesh	6
Karim	5
Rahim	5
Lokman	6
Rohit	5

11 rows returned in 0.04 seconds

[CSV Export](#)

Question2: Convert the ages of babies in the "Baby" table from years to months.

SELECT Name,Baby_id Age, Age * 12 AS AgeInMonths FROM Baby;

NAME	AGE	AGEINMONTHS
Partha	1000	84
Argho	1001	72
Sukonna	1002	60
Apon	1003	48
Anita	1004	84
Madhobi	1005	48
Ahana	1006	48
Rafi	1007	36
Tamim	1008	60
Akil	1009	60
Aklima	1010	24

11 rows returned in 0.04 seconds

[CSV Export](#)

Question3: Retrieve the uppercase version of the Father_name in the "Parent_info " table.

```
SELECT Mother_name, UPPER(Father_name) AS Uppercase_Father_name
FROM Parent_info;
```

MOTHER_NAME	UPPERCASE_FATHER_NAME
Ahana	ROMESH
Himi Roy	TOMESH
Rehena	SHOHORAB
Rehena	ABDUL MALEK
Shokhina	ALI
Khusi begum	SIAM HAUQ
Gita Rani	POMESH
Pumima	KARIM
Moushomi	RAHIM
Popi	LOKMAN
Mousi	ROHIT

11 rows returned in 0.02 seconds

[CSV Export](#)

Group Functions:

Question1: Calculate the average age of babies in the "Baby" table.

```
SELECT AVG(Age) AS Average_Age FROM Baby;
```

AVERAGE_AGE
4.727272727272727272727272727273

1 rows returned in 0.07 seconds

[CSV Export](#)

Question2: Find the minimum and maximum ages among the Babies in the "Baby" table.

```
SELECT MIN(Age) AS Minimum_Age, MAX(Age) AS Maximum_Age FROM Baby;
```

MINIMUM_AGE	MAXIMUM_AGE
2	7

1 rows returned in 0.05 seconds [CSV Export](#)

Question3: Count the number of parents in the "Parent_Info" table.

```
SELECT COUNT(*) AS Total_Parents FROM Parent_info;
```

TOTAL_PARENTS
11

1 rows returned in 0.03 seconds [CSV Export](#)

Subqueries

Question1: Retrieve the details of parents whose babies are younger than 2 years.

```
SELECT Father_name, Mother_name, Number_Of_Baby  
FROM Parent_info  
WHERE Baby_name IN (SELECT Name FROM Baby WHERE Age < 5);
```

FATHER_NAME	MOTHER_NAME	NUMBER_OF_BABY
Abdul Malek	Rehena	2
Siam hauq	Khusi begum	3
Pomesh	Gita Rani	2
Karim	Purnima	2
Rohit	Mousi	1

5 rows returned in 0.04 seconds [CSV Export](#)

Question2: Find the fathers who have more babies than the average number of babies.

```
SELECT Father_name, Number_Of_Baby  
FROM Parent_Info  
WHERE Number_Of_Baby > (SELECT AVG(Number_Of_Baby) FROM Parent_info);
```

FATHER_NAME	NUMBER_OF_BABY
Siam hauq	3
Rahim	3

2 rows returned in 0.06 seconds [CSV Export](#)

Question 03: Retrieve the babysitters' information whose address matches any of the addresses in the "Organization" table.

```
SELECT Name, Age, Address, Phone_no
FROM babysitter
WHERE Address IN (SELECT Address FROM Organization);
```

no data found

Joining

Question1: Retrieve the details of parents along with their corresponding baby details.

```
SELECT p.Father_name, p.Mother_name, p.Number_Of_Baby, b.Age, b.Gender
FROM Parent_info p
INNER JOIN Baby b ON p.Baby_name= b.Name;
```

FATHER_NAME	MOTHER_NAME	NUMBER_OF_BABY	AGE	GENDER
Romesh	Ahana	2	7	Male
Tomesh	Himi Roy	2	6	Male
Shohorab	Rehena	2	5	Female
Abdul Malek	Rehena	2	4	Male
Ali	Shokhina	2	7	Female
Siam hauq	Khusi begum	3	4	Female
Pomesh	Gita Rani	2	4	Female
Karim	Purnima	2	3	Male
Rahim	Moushomi	3	5	Male
Lokman	Popi	2	5	Male
Rohit	Mousi	1	2	Female

11 rows returned in 0.03 seconds

[CSV Export](#)

Question 02: Find the babies who have the same address as the parents.

```
SELECT b.Baby_id, b.Name, b.Age, b.Gender, b.Address
FROM Baby b
INNER JOIN Parent_contact p ON b.Address = p.Address;
```

BABY_ID	NAME	AGE	GENDER	ADDRESS
1005	Madhobi	4	Female	Kuril
1001	Argho	6	Male	Kuril
1000	Partha	7	Male	Kuril
1005	Madhobi	4	Female	Kuril
1001	Argho	6	Male	Kuril
1000	Partha	7	Male	Kuril
1008	Tamim	5	Male	Dhanmondi
1004	Anita	7	Female	Dhanmondi
1008	Tamim	5	Male	Dhanmondi
1004	Anita	7	Female	Dhanmondi
1005	Madhobi	4	Female	Kuril
1001	Argho	6	Male	Kuril
1000	Partha	7	Male	Kuril
1006	Ahana	4	Female	Sadarghat
1007	Rafi	3	Male	Cantonment
More than 15 rows available. Increase rows selector to view more rows.				

15 rows returned in 0.04 seconds

[CSV Export](#)

Question3: Retrieve the details along with the names of the organizations where they work.

```
SELECT p.Address, o.Org_name, o.Email, o.Contact
FROM Parent_contact p
INNER JOIN Organization o ON p.Address = o.Address;
```

ADDRESS	ORG_NAME	EMAIL	CONTACT
Dhanmondi	BabySitFinder.Com	BabySitfinder@gmail.com	09567896666
Dhanmondi	BabySitFinder.Com	BabySitfinder@gmail.com	09567896666
Dhanmondi	BabySitFinder.Com	BabySitfinder@gmail.com	09567896666

3 rows returned in 0.08 seconds

[CSV Export](#)

Views

Question1: Create a view named "ParentsView" that displays the details of parents.

```
CREATE VIEW ParentsView AS
```

```
SELECT Parent_id ,Father_name, Mother_name, Number_Of_Baby, baby_name
```

```
FROM Parent_info;
```


View created.

0.00 seconds

Question2: Retrieve the details of parents using the "ParentsView" view.

```
SELECT * FROM ParentsView;
```

PARENT_ID	FATHER_NAME	MOTHER_NAME	NUMBER_OF_BABY	BABY_NAME
2010	Romesh	Ahana	2	Partha
2011	Tomesh	Himi Roy	2	Argho
2012	Shohorab	Rehena	2	Sukonna
2013	Abdul Malek	Rehena	2	Apon
2014	Ali	Shokhina	2	Anita
2015	Siam hauq	Khusi begum	3	Madhobi
2016	Pomesh	Gita Rani	2	Ahana
2017	Karim	Purnima	2	Rafi
2018	Rahim	Moushomi	3	Tamim
2019	Lokman	Popi	2	Akil
2020	Rohit	Mousi	1	Aklima

11 rows returned in 0.03 seconds

[CSV Export](#)

Question3: Modify the "ParentsView" to include only parents with more than one baby.

```
CREATE OR REPLACE VIEW ParentsView AS
SELECT Parent_id,Father_name, Mother_name, Number_Of_Baby, baby_name
FROM Parent_info
WHERE Number_Of_Baby > 1;
```

View created.

0.03 seconds

Synonyms

Question1: Create a synonym named "Parent_info_Synonym" for the "parents" table.

```
CREATE SYNONYM Parent_info_Synonym FOR Parent_info;
```

Synonym created.

0.00 seconds

Question2: Retrieve the details of parents using the "Parent_info_Synonym" synonym.

```
SELECT * FROM Parent_info_Synonym;
```

PARENT_ID	FATHER_NAME	MOTHER_NAME	NUMBER_OF_BABY	BABY_NAME
2010	Romesh	Ahana	2	Partha
2011	Tomesh	Himi Roy	2	Argho
2012	Shohorab	Rehena	2	Sukonna
2013	Abdul Malek	Rehena	2	Apon
2014	Ali	Shokhina	2	Anita
2015	Siam hauq	Khusi begum	3	Madhobi
2016	Pomesh	Gita Rani	2	Ahana
2017	Karim	Purnima	2	Rafi
2018	Rahim	Moushomi	3	Tamim
2019	Lokman	Popi	2	Akil
2020	Rohit	Mousi	1	Aklima

11 rows returned in 0.09 seconds

[CSV Export](#)

Question3: Drop the synonym "Parent_info_Synonym".

```
DROP SYNONYM Parent_info_Synonym;
```

Synonym dropped.

0.00 seconds

PL/SQL

Procedure:

Question1:

Create a PL/SQL procedure named IncreaseBabyAge that takes in a Baby_id and an AgeIncrease as input parameters and updates the Baby table by increasing the age of the specified baby by the given number of years.

```
CREATE OR REPLACE PROCEDURE IncreaseBabyAge(  
    p_Baby_id IN Baby.Baby_id%TYPE,  
    p_AgeIncrease IN Baby.Age%TYPE  
) AS  
BEGIN  
    UPDATE Baby  
    SET Age = Age + p_AgeIncrease  
    WHERE Baby_id = p_Baby_id;  
  
    COMMIT;  
END;  
/
```

Procedure created.

Question02: Create a procedure to increase the age of babies by 2 years .

```
DECLARE  
    v_Result VARCHAR2(100);  
  
    -- Variable to capture the result  
BEGIN  
    IncreaseBabyAge(p_Baby_id => 123, p_AgeIncrease => 2);  
    v_Result := 'Age increased successfully';  
    DBMS_OUTPUT.PUT_LINE(v_Result);  
EXCEPTION  
    WHEN OTHERS THEN  
        v_Result := 'Error: ' || SQLERRM;  
        DBMS_OUTPUT.PUT_LINE(v_Result);  
END;  
/
```

Age increased successfully

Statement processed.

0.11 seconds

Question03: Create a procedure to update the address of first 2 babies .

```
CREATE OR REPLACE PROCEDURE UpdateBabyAddresses AS
BEGIN
    -- Update the address for Baby 1
    UPDATE Baby
    SET Address = 'Badda'
    WHERE Baby_id = 1;

    DBMS_OUTPUT.PUT_LINE('Address for Baby 1 has been updated to Badda.');
```

-- Update the address for Baby 2

```
    UPDATE Baby
    SET Address = 'Badda'
    WHERE Baby_id = 2;

    DBMS_OUTPUT.PUT_LINE('Address for Baby 2 has been updated to Badda.');
```

COMMIT;

```
END;
/

BEGIN
    UpdateBabyAddresses;
END;
/
```

```
Address for Baby 1 has been updated to Badda.
Address for Baby 2 has been updated to Badda.
Statement processed.
```

Function:

Question 1: Function How can you create a PL/SQL function to retrieve the Email of a babysitter based on their Babysitter_id?

```

CREATE OR REPLACE FUNCTION get_babysitter_email(p_babysitter_id IN NUMBER)
RETURN VARCHAR2 IS
    v_email VARCHAR2(100);
BEGIN
    SELECT email INTO v_email
    FROM babysitter
    WHERE babysitter_id = p_babysitter_id;

    RETURN v_email;
EXCEPTION
    WHEN NO_DATA_FOUND THEN
        RETURN NULL; -- Return NULL if babysitter not found
    WHEN OTHERS THEN
        -- Handle other exceptions here
        RAISE;
END;

```

Function created.

0.06 seconds

/

Question 2: Write a PL/SQL function to update the Address of a babysitter based on their Babysitter_id.

```

CREATE OR REPLACE FUNCTION update_babysitter_address(
    p_babysitter_id IN NUMBER,
    p_new_address IN VARCHAR2
) RETURN BOOLEAN IS
BEGIN
    UPDATE babysitter
    SET address = p_new_address
    WHERE babysitter_id = p_babysitter_id;

    IF SQL%ROWCOUNT > 0 THEN
        dbms_output.put_line('Address updated successfully. ');
        RETURN TRUE; -- Update successful
    ELSE
        dbms_output.put_line('No rows updated. Babysitter not found. ');
        RETURN FALSE; -- No rows updated, babysitter_id not found
    END IF;
EXCEPTION
    WHEN OTHERS THEN
        dbms_output.put_line('An error occurred: ' || SQLERRM);

```

```

        RAISE;
    END;
/

DECLARE
    v_result BOOLEAN;
BEGIN
    v_result := update_babysitter_address(p_babysitter_id => 123, p_new_address => '123 Main St');
    IF v_result THEN
        dbms_output.put_line('Update successful.');
```

```

    ELSE
        dbms_output.put_line('Update failed.');
```

```

    END IF;
END;
/
```

```

No rows updated. Babysitter not found.
Update failed.

Statement processed.

0.10 seconds
```

Question 3: How can you create a PL/SQL function to calculate the average Age of all babysitters of a specific Gender?

```

CREATE OR REPLACE FUNCTION calculate_avg_age_by_gender(p_gender IN VARCHAR2) RETURN
NUMBER IS
    v_avg_age NUMBER;
BEGIN
    SELECT AVG(age) INTO v_avg_age
    FROM babysitter
    WHERE gender = p_gender;

    IF v_avg_age IS NOT NULL THEN
        dbms_output.put_line('Average age for gender ' || p_gender || ': ' || v_avg_age);
    ELSE
        dbms_output.put_line('No babysitters found with gender ' || p_gender);
    END IF;

    RETURN v_avg_age;
EXCEPTION
    WHEN NO_DATA_FOUND THEN
        dbms_output.put_line('No babysitters found with gender ' || p_gender);
```

```

        RETURN NULL; -- Return NULL if no babysitters found with the given gender
    WHEN OTHERS THEN
        dbms_output.put_line('An error occurred: ' || SQLERRM);
        RAISE;
    END;
/

DECLARE
    v_average_age NUMBER;
BEGIN
    v_average_age := calculate_avg_age_by_gender('Female');
END;
/

```

Average age for gender Female: 23.5

Statement processed.

0.05 seconds

Cursor:

Question 1: How can you use a PL/SQL cursor to retrieve the names of all parents along with the number of babies they have?

```

DECLARE
    CURSOR parent_info_cursor IS
        SELECT Father_name, Mother_Name, Number_of_baby
        FROM Parent_info;
BEGIN
    FOR parent_rec IN parent_info_cursor LOOP
        DBMS_OUTPUT.PUT_LINE('Parent: ' || parent_rec.Father_name || ' and ' ||
parent_rec.Mother_Name || ', Babies: ' || parent_rec.Number_of_baby);
    END LOOP;
END;
/

```



```
Parent: Romesh and Ahana, Babies: 2
Parent: Tomesh and Himi Roy, Babies: 2
Parent: Shohorab and Rehena, Babies: 2
Parent: Abdul Malek and Rehena, Babies: 2
Parent: Ali and Shokhina, Babies: 2
Parent: Siam hauq and Khusi begum, Babies: 3
Parent: Pomesb and Gita Rani, Babies: 2
Parent: Karim and Purnima, Babies: 2
Parent: Rahim and Moushomi, Babies: 3
Parent: Lokman and Popi, Babies: 2
Parent: Rohit and Mousi, Babies: 1
```

Statement processed.

0.11 seconds

Question 2: Write a PL/SQL cursor that updates the Father_name of a parent based on their Parent_id.

```
DECLARE
    v_parent_id_to_update NUMBER := 123; -- Replace with the desired Parent_id
    v_new_father_name VARCHAR2(100) := 'New Father Name';
BEGIN
    UPDATE Parent_info
    SET Father_name = v_new_father_name
    WHERE Parent_id = v_parent_id_to_update;

    IF SQL%ROWCOUNT > 0 THEN
        DBMS_OUTPUT.PUT_LINE('Father name updated successfully.');
```

```
    ELSE
```

```
        DBMS_OUTPUT.PUT_LINE('Parent not found.');
```

```
    END IF;
```

```
END;
```

```
/
```

Parent not found.

1 row(s) updated.

0.10 seconds

Question 3: Create a PL/SQL cursor to calculate and display the average number of babies across all parents.

```
DECLARE
    v_total_babies NUMBER := 0;
    v_total_parents NUMBER := 0;
    v_avg_babies NUMBER;
```


No data found for the given Baby_id.

Statement processed.

0.02 seconds

Question 2: Write a PL/SQL block that updates the Age of a baby based on their Baby_id.

```
DECLARE
    v_baby_id_to_update NUMBER := 456; -- Replace with the desired Baby_id
    v_new_age NUMBER := 12; -- Replace with the desired new Age
BEGIN
    UPDATE Baby
    SET Age = v_new_age
    WHERE Baby_id = v_baby_id_to_update;

    IF SQL%ROWCOUNT > 0 THEN
        DBMS_OUTPUT.PUT_LINE('Age updated successfully.');
```

ELSE

```
        DBMS_OUTPUT.PUT_LINE('Baby not found.');
```

END IF;

```
END;
/
```

Baby not found.

1 row(s) updated.

0.08 seconds

Question 3: Create a PL/SQL block that calculates and displays the count of babies for each gender.

```
DECLARE
    TYPE gender_count_rec IS RECORD (
        gender VARCHAR2(10),
        baby_count NUMBER
    );

    v_gender_count gender_count_rec;
BEGIN
    FOR gender_rec IN (SELECT DISTINCT Gender FROM Baby) LOOP
        SELECT gender_rec.Gender, COUNT(*) INTO v_gender_count
        FROM Baby
        WHERE Gender = gender_rec.Gender;
```

```

        DBMS_OUTPUT.PUT_LINE('Gender: ' || v_gender_count.gender || ', Baby Count: ' ||
v_gender_count.baby_count);
    END LOOP;
END;
/

```

```

Gender: Male, Baby Count: 6
Gender: Female, Baby Count: 5

```

```

Statement processed.

```

```

0.13 seconds

```

Trigger:

Question 1: How can you create a PL/SQL trigger that automatically updates the Number_of_baby column when a new baby is added for a parent?

```

CREATE OR REPLACE TRIGGER update_baby_count
AFTER INSERT ON Baby
FOR EACH ROW
BEGIN
    UPDATE Parent_info
    SET Number_of_baby = Number_of_baby + 1
    WHERE Parent_id = Parent_id;
END;
/

```

```

Trigger created.

```

```

0.06 seconds

```

Package :

Question01: Create a PL/SQL package named "BabyManagement" that includes a procedure to insert a new baby's information into the "Baby" table. The "Baby" table has the following columns: Babysitter_id, Name, Age, Gender, Email, Address, Phone_no, and Experience. Write the code to implement this procedure.

```

CREATE OR REPLACE PACKAGE BabyManagement AS
    PROCEDURE Insert Baby(
        p_Babysitter_id IN NUMBER,

```

```

        p_Name IN VARCHAR2,
        p_Age IN NUMBER,
        p_Gender IN VARCHAR2,
        p_Email IN VARCHAR2,
        p_Address IN VARCHAR2,
        p_Phone_no IN VARCHAR2,
        p_Experience IN VARCHAR2
    );
END BabyManagement;

```

Package created.

0.01 seconds

Question02: Create a PL/SQL package named "ParentManagement" that includes a procedure to insert new parent information into the "Parent_info" table. The "Parent_info" table has the following columns: Parent_id, Father_name, Mother_name, Number_of_baby, and Baby_name. Write the code to implement this procedure.

```

CREATE OR REPLACE PACKAGE BODY ParentManagement AS
    PROCEDURE InsertParent(
        p_Parent_id IN NUMBER,
        p_Father_name IN VARCHAR2,
        p_Mother_name IN VARCHAR2,
        p_Number_of_baby IN NUMBER,
        p_Baby_name IN VARCHAR2
    ) IS
    BEGIN
        INSERT INTO Parent_info (
            Parent_id,
            Father_name,
            Mother_name,
            Number_of_baby,
            Baby_name
        ) VALUES (
            p_Parent_id,
            p_Father_name,
            p_Mother_name,
            p_Number_of_baby,
            p_Baby_name
        );
        COMMIT;
    END InsertParent;
END ParentManagement;

```

Package Body created.

0.01 seconds

Relational Algebra :

1. Find the baby's name and associated address for babysitters who work for an organization with `org_name` equal to "Babysit finder.com".

Solution:

$\pi_{(\text{name}, \text{address})} (\text{Baby} \bowtie (\pi_{(\text{babysitter_id})} (\pi_{(\text{org_id})} (\sigma_{(\text{org_name} = \text{"Babysit finder.com"}, \text{Organization})} \bowtie \text{Babysitter}))))$

2. Find the names of babies who have a father with the name "Romesh" and are taken care of by a babysitter named "Momo".

Solution:

$\pi_{(\text{name})} (\text{Baby} \bowtie (\sigma_{(\text{father_name} = \text{"Romesh"}, \text{Parents})} \bowtie (\sigma_{(\text{name} = \text{"Momo"}, \text{Babysitter}))))$

3. Increase the age of all babies by 1 year.

Solution:

$\text{Baby} \leftarrow \pi_{(\text{B_id}, \text{name}, \text{age} + 1, \text{gender}, \text{address})} (\text{Baby})$

4. Retrieve the names and ages of babies along with their babysitter's name, if available.

Solution:

$\pi_{(\text{Baby.name}, \text{Baby.age}, \text{Babysitter.name})} \bowtie (\text{Baby} \bowtie (\text{Parents} \bowtie \text{Babysitter}))$

5. Delete all organizations that have a contact email containing "babysitter.com".

Solution:

$\text{Organization} \leftarrow \text{Organization} - \sigma_{(\text{email LIKE \%babysitter.com\%}, \text{Organization})}$

6. Retrieve the names of parents whose babies are taken care of by babysitters younger than 25 years.

Solution:

$\pi_{(\text{mother_name}, \text{father_name})} (\text{Parents} \bowtie (\text{Baby} \bowtie (\sigma_{(\text{age} < 25, \text{Babysitter}))))$

7. Find the names and ages of babies along with their parents' names who live in the city "Kuril".

Solution:

$\pi_{(\text{Baby.name}, \text{Baby.age}, \text{Parents.mother_name}, \text{Parents.father_name})} \bowtie (\text{Baby} \bowtie (\sigma_{(\text{address} = \text{"Kuril"}, \text{Parents}))))$

Conclusion :

The Babysitter Management System proposal presents an innovative solution to simplify and enhance childcare management for modern families and agencies. By providing a user-friendly platform, comprehensive babysitter pool, and efficient scheduling features, the system aims to revolutionize the way parents and babysitters connect and collaborate. We believe that this project will greatly benefit the childcare community and offer significant convenience to busy families. We look forward to the opportunity to develop and implement the Babysitter Management System. Thank you for considering our proposal, and we are available to discuss any further details or modifications required.