Introduction to Database(CCCS215 Project)

Kindergarten Management System

FINAL REPORT

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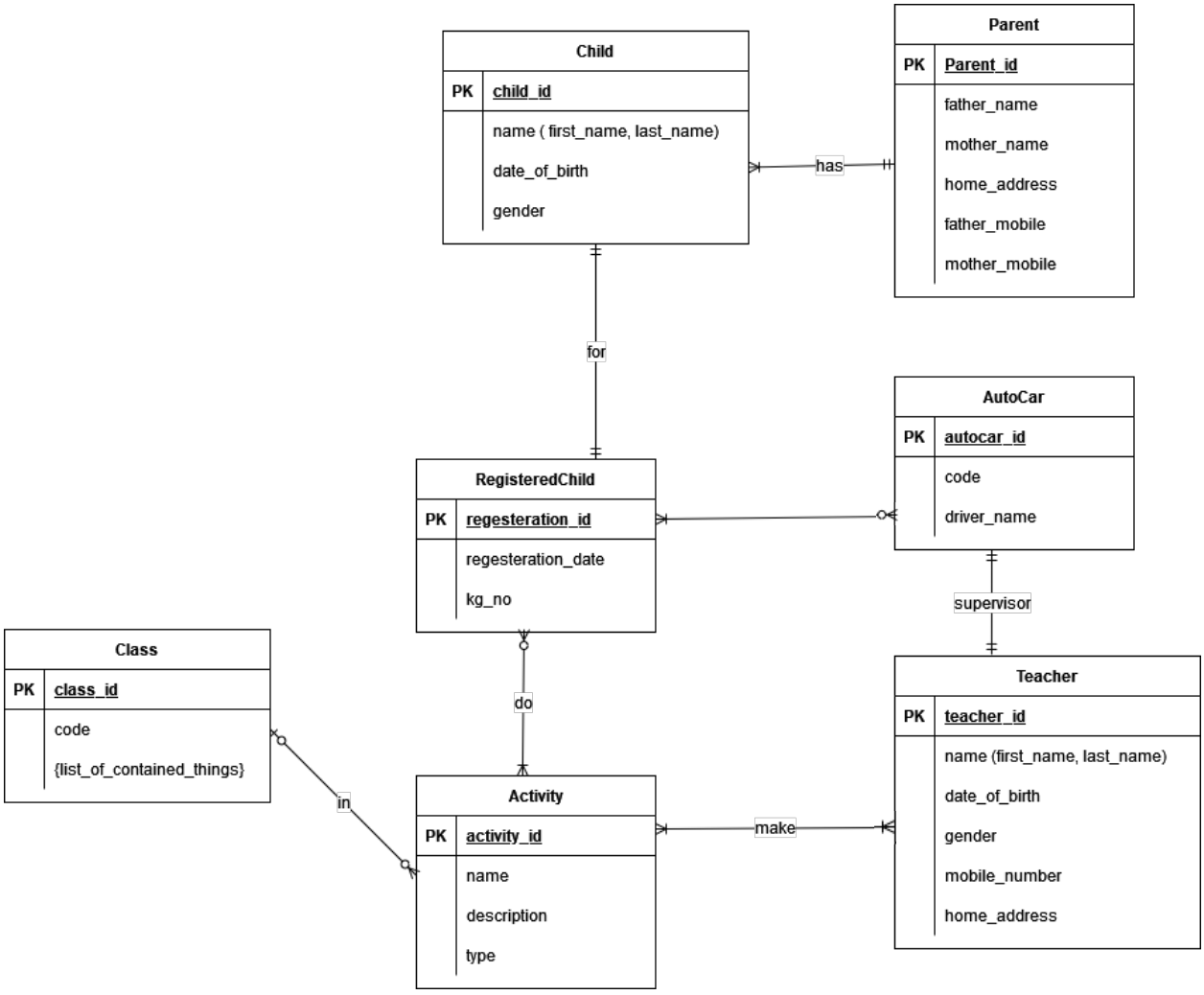
Problem description

Our project talks about nursery and kindergarten and the main target group are children under six years old, providing entertainment and education at the same time, developing children's abilities, and setting up various activities such as adding special places for games, classrooms and music learning, as well as a gym, and finally adding places for rest.

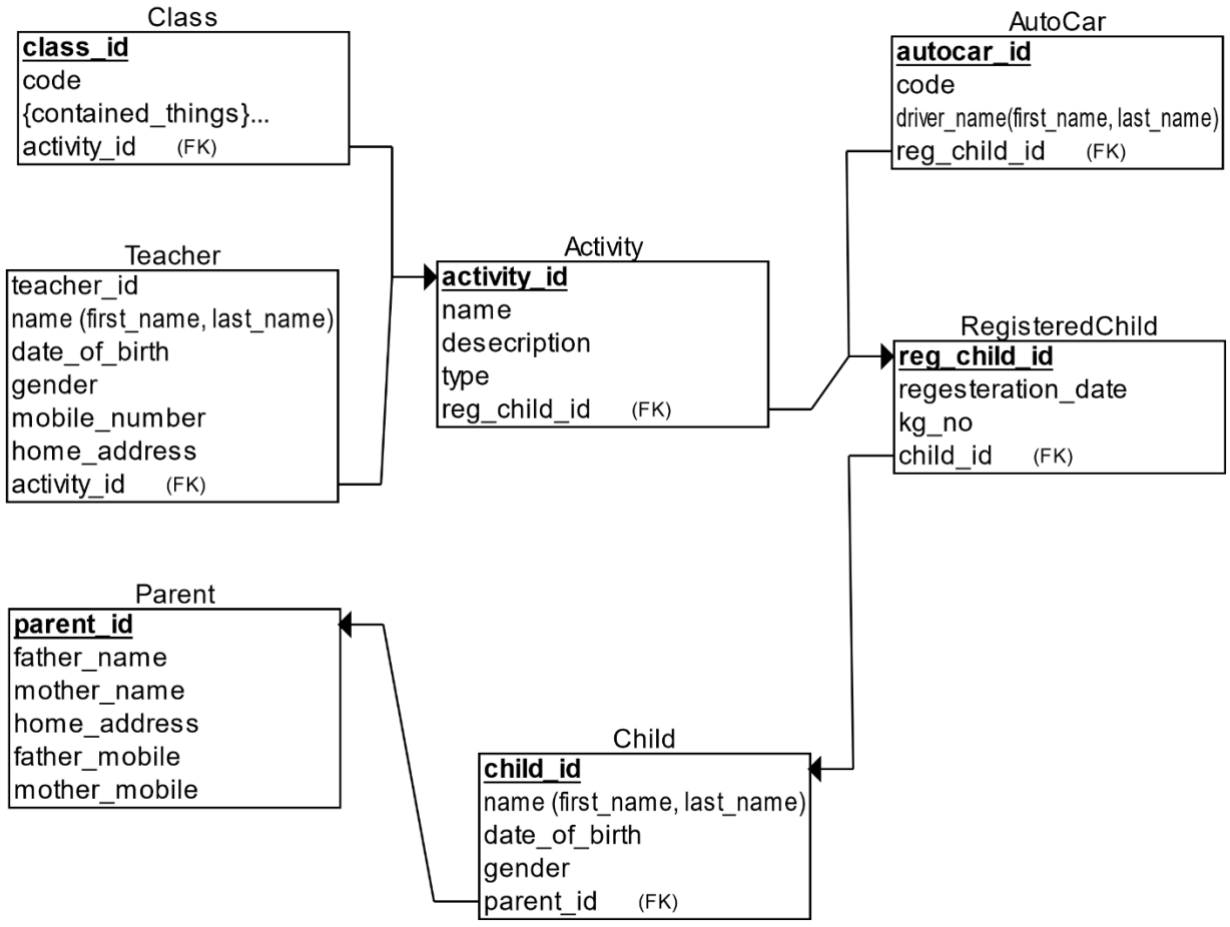
Business rule

- A kindergarten has many enrolled children
- A kindergarten provides many activities
- Kindergarten has many teachers
- A teacher maybe makes many activities when one activity is made by one teacher
- An activity is for one class where one class has many activity
- Children make many activities
- There is one autocar for a child where autocar holds many children
- There is one supervisor teacher for one autocar

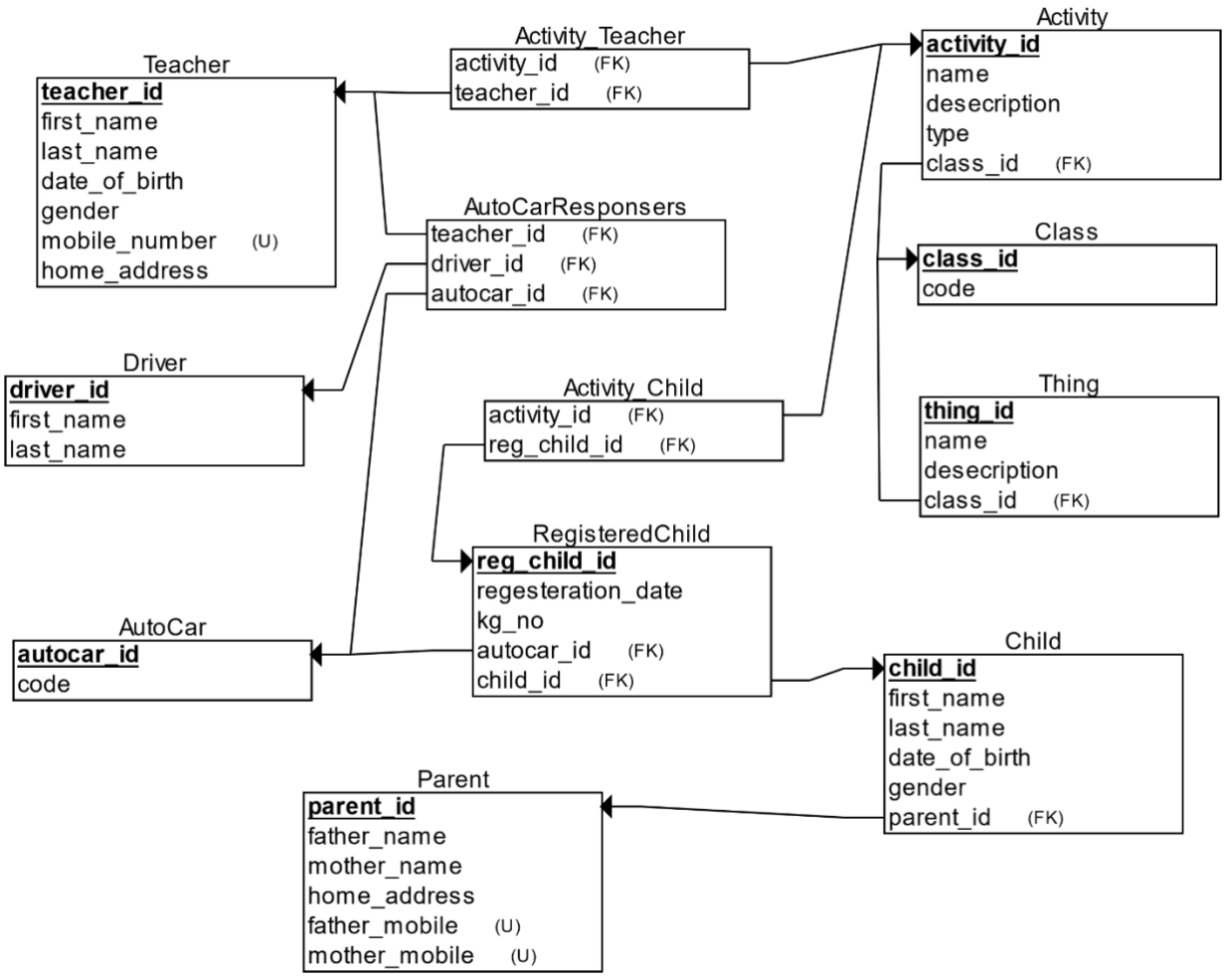
ER diagram


Child
PK
child_id
name (first_name, last_name)
date_of_birth
gender
has
Parent
PK
Parent_id
father_name
mother_name
home_address
father_mobile
mother_mobile
for
AutoCar
PK
autocar_id
code
driver_name
RegisteredChild
PK
regesteration_id
regesteration_date
kg_no
supervisor
Class
PK
class_id
code
{list_of_contained_things}
do
Teacher
PK
teacher_id
name (first_name, last_name)
date_of_birth
gender
mobile_number
home_address
in
Activity
PK
activity_id
name
description
type
make

Relations


Class
class_id
code
{contained_things}...
activity_id (FK)
AutoCar
autocar_id
code
driver_name(first_name, last_name)
reg_child_id (FK)
Teacher
teacher_id
name (first_name, last_name)
date_of_birth
gender
mobile_number
home_address
activity_id (FK)
Activity
activity_id
name
desecription
type
reg_child_id (FK)
RegisteredChild
reg_child_id
regesteration_date
kg_no
child_id (FK)
Parent
parent_id
father_name
mother_name
home_address
father_mobile
mother_mobile
Child
child_id
name (first_name, last_name)
date_of_birth
gender
parent_id (FK)

Normalization



Now we have relations that are in the **3NF** as you can see:

- there is *no repeating group*
- all of them are *full dependency*
- no *transitive*

Normalized Tables

Parent

Column name	Data type Size	Constraints
Parent_id	Int	Primary key
Father_name	Varchar(25)	Not null
Mother_name	Varchar(25)	Not null
Home_address	Varchar(256)	Not null
Mother_mobile	Varchar(12)	Unique
Father_mobile	Varchar(12)	Unique

Child

Column name	Data type Size	Constraints
Child_id	Int	Primary key
First_name	Varchar(25)	Not null
Last_name	Varchar(25)	Not null
Date_of-birth	Date	Not null
Gender	Varchar(6)	Not null
Parent_id	Int	Foreign key on Parent

Driver

Column name	Data type Size	Constraints
Driver_id	Int	Primary key
First_name	Varchar(25)	Not null
Last_name	Varchar(25)	Not null

Teacher

Column name	Data type Size	Constraints
Teacher_id	Int	Primary key
First_name	Varchar(25)	Not null
Last_name	Varchar(25)	Not null
Date_of-birth	Date	Not null

Gender	Varchar(6)	Not null
Mobile_number	Varchar(12)	unique
Home_address	Varchar(256)	Not null

Autocar

Column name	Data type Size	Constraints
Autocar_id	Int	Primary key
Code	Varchar(10)	unique

AutocarResponsers

Column name	Data type Size	Constraints
Autocar_id	Int	Foreign key on Autocar
Driver_id	Int	Foreign key on Driver
Teacher_id	Int	Foreign key on Teacher

RegisteredChild

Column name	Data type Size	Constraints
reg_child_id	Int	Primary key
Regesteration_date	Date	Not null
Kg_no	Int	Not null
Autocar_id	Int	Foreign key on Autocar
Child_id	Int	Foreign key on Child

Class

Column name	Data type Size	Constraints
class_id	Int	Primary key
code	Varchar(10)	Not null

Thing		
COLUMN NAME	DATA TYPE SIZE	CONSTRAINTS
thing_id	Int	Primary key
name	Varchar(25)	Not null
Description	Varchar(256)	Not null
class_id	Int	Foreign key on Class

Activity		
COLUMN NAME	DATA TYPE SIZE	CONSTRAINTS
activity_id	Int	Primary key
name	Varchar(25)	Not null
Description	Varchar(256)	Not null
Type	Varchar(50)	Not null
Class_id	Int	Foreign key on Class

Activity_Child		
COLUMN NAME	DATA TYPE SIZE	CONSTRAINTS
Child_id	Int	Foreign key on Child
Activity_id	Int	Foreign key on Activity

Activity_Teacher		
COLUMN NAME	DATA TYPE SIZE	CONSTRAINTS
Teacher_id	Int	Foreign key on Teacher
Activity_id	Int	Foreign key on Activity

Functional Dependencies

- *Parent_id* → Father_name, Mother_name, Home_address, Mother_mobile, Father_mobile

- *Child_id* → First_name, Last_name, Date_of_birth, Gender, Parent_id
- *Driver_id* → First_name, Last_name
- *Teacher_id* → First_name, Last_name, Date_of_birth, Gender, mobile_address, Home_address
- *Autocar_id* → Code
- *Autocar_responsiple* → (Autocar_id, Driver_id, Teacher_id)
- *reg_child_id* → Regesteration_date, Kg_no, Autocar_id, Child_id
- *class_id* → code
- *thing_id* → name, Description, class_id
- *activity_id* → name, Description, Type, Class_id
- *Activity_Child* → (Child_id , Activity_id)
- *Activity_Teacher* → (Teacher_id , Activity_id)

Creating tables

Creating table of parent

Syntax of query:

```
CREATE TABLE Parent(
    Parent_id Int Primary key,
    Father_name Varchar(25) Not null,
    Mother_name Varchar(25) Not null,
    Home_address Varchar(256) Not null,
    Mother_mobile Varchar(12) Unique,
    Father_mobile Varchar(12) Unique
)
```

Implementation

```
1  CREATE TABLE Parent(
2      Parent_id Int Primary key,
3      Father_name Varchar(25) Not null,
4      Mother_name Varchar(25) Not null,
5      Home_address Varchar(256) Not null,
6      Mother_mobile Varchar(12) Unique,
7      Father_mobile Varchar(12) Unique
8  )
```

```
Table created.
```

Creating table of Child

Syntax of query:

```
CREATE TABLE Child(
    Child_id Int Primary key,
    First_name Varchar(25) Not null,
    Last_name Varchar(25) Not null,
    Date_of_birth Date Not null,
    Gender Varchar(6) Not null,
    Parent_id Int ,
    CONSTRAINT FK_Parent FOREIGN KEY (Parent_id)
    REFERENCES Parent(Parent_id)
)
```

Implementation

```
CREATE TABLE Child(
    Child_id Int Primary key,
    First_name Varchar(25) Not null,
    Last_name Varchar(25) Not null,
    Date_of_birth Date Not null,
    Gender Varchar(6) Not null,
    Parent_id Int ,
    CONSTRAINT FK_Parent FOREIGN KEY (Parent_id)
    REFERENCES Parent(Parent_id)
)
```

```
Table created.
```

Creating table of Driver

Syntax of query:

CREATE TABLE Driver(

Driver_id Int Primary key,

First_name Varchar(25) Not null,

Last_name Varchar(25) Not null

)

Implementation

```
CREATE TABLE Driver(
    Driver_id Int Primary key,
    First_name Varchar(25) Not null,
    Last_name Varchar(25) Not null
)
```

```
Table created.
```

Creating table of Teacher

Syntax of query:

CREATE TABLE Teacher(
Teacher_id Int Primary key,
First_name Varchar(25) Not null,
Last_name Varchar(25) Not null,
Date_of_birth Date Not null,
Gender Varchar(6) Not null,
Mobile_number Varchar(12) unique,
Home_address Varchar(256) Not null
)

Implementation

```
CREATE TABLE Teacher(
    Teacher_id Int Primary key,
    First_name Varchar(25) Not null,
    Last_name Varchar(25) Not null,
    Date_of_birth Date Not null,
    Gender Varchar(6) Not null,
    Mobile_number Varchar(12) unique,
    Home_address Varchar(256) Not null
)
```

```
Table created.
```

Creating table of Autocar

Syntax of query:

CREATE TABLE Autocar(

Autocar_id Int Primary key,

Code Varchar(10) unique

)

Implementation

```
CREATE TABLE Autocar(
    Autocar_id Int Primary key,
    Code Varchar(10) unique

)
```

```
Table created.
```

Creating table of AutocarResponsers

Syntax of query:

CREATE TABLE AutocarResponsers(

Autocar_id Int ,

Driver_id int,

Teacher_id int,

CONSTRAINT FK_AutoCar_ac FOREIGN KEY (Autocar_id)

REFERENCES Autocar(Autocar_id),

CONSTRAINT FK_AutoCar_d FOREIGN KEY (Driver_id)

REFERENCES Driver(Driver_id),

CONSTRAINT FK_AutoCar_t FOREIGN KEY (Teacher_id)

REFERENCES Teacher(Teacher_id)

)

Implementation

```
CREATE TABLE AutocarResponsers(
    Autocar_id Int ,
    Driver_id int,
    Teacher_id int,
    CONSTRAINT FK_AutoCar_ac FOREIGN KEY (Autocar_id)
    REFERENCES Autocar(Autocar_id),
    CONSTRAINT FK_AutoCar_d FOREIGN KEY (Driver_id)
    REFERENCES Driver(Driver_id),
    CONSTRAINT FK_AutoCar_t FOREIGN KEY (Teacher_id)
    REFERENCES Teacher(Teacher_id)
)
```

```
Table created.
```

Creating table of RegisteredChild

Syntax of query:

```
CREATE TABLE RegisteredChild(
   reg_child_id Int Primary key,
   Regesteration_date Date Not null,
   Kg_no Int Not null,
   Autocar_id Int,
   Child_id Int ,
   CONSTRAINT FK_RegisteredChild_c FOREIGN KEY (Child_id)
   REFERENCES Child(Child_id),
   CONSTRAINT FK_RegisteredChild_ac FOREIGN KEY (Autocar_id)
   REFERENCES Autocar(Autocar_id)
)
```

Implementation

```
CREATE TABLE RegisteredChild(
    reg_child_id Int Primary key,
    Regesteration_date Date Not null,
    Kg_no Int Not null,
    Autocar_id Int,
    Child_id Int ,
    CONSTRAINT FK_RegisteredChild_c FOREIGN KEY (Child_id)
    REFERENCES Child(Child_id),
    CONSTRAINT FK_RegisteredChild_ac FOREIGN KEY (Autocar_id)
    REFERENCES Autocar(Autocar_id)
)
```

```
Table created.
```

Creating table of Class

Syntax of query:

CREATE TABLE Class(

class_id Int Primary key,

code Varchar(10) Not null

)

Implementation

```
CREATE TABLE Class(
    class_id Int Primary key,
    code Varchar(10) Not null
)
```

```
Table created.
```

Creating table of Thing

Syntax of query:

CREATE TABLE Thing(
thing_id Int Primary key,
name Varchar(25) Not null,
Description Varchar(256) Not null,
class_id Int,
CONSTRAINT FK_ClassThing FOREIGN KEY (class_id)
REFERENCES class(class_id)
)

Implementation

```
CREATE TABLE Thing(
    thing_id Int Primary key,
    name Varchar(25) Not null,
    Description Varchar(256) Not null,
    class_id Int,
    CONSTRAINT FK_ClassThing FOREIGN KEY (class_id)
    REFERENCES class(class_id)
)
```

```
Table created.
```

Creating table of Activity

Syntax of query:

CREATE TABLE Activity(

activity_id Int Primary key,

name Varchar(25) Not null,

Description Varchar(256) Not null,

Type Varchar(50) Not null,

Class_id Int,

CONSTRAINT FK_ClassActivity FOREIGN KEY (class_id)

REFERENCES class(class_id)

)

Implementation

```
CREATE TABLE Activity(
    activity_id Int Primary key,
    name Varchar(25) Not null,
    Description Varchar(256) Not null,
    Type Varchar(50) Not null,
    Class_id Int,
    CONSTRAINT FK_ClassActivity FOREIGN KEY (class_id)
    REFERENCES class(class_id)
)
```

```
Table created.
```

Creating table of Activity_Child

Syntax of query:

CREATE TABLE Activity_Child(
activity_id Int,
child_id Int,
CONSTRAINT FK_ActivityChild_A FOREIGN KEY (activity_id)
REFERENCES activity(activity_id),

CONSTRAINT FK_ActivityChild_C FOREIGN KEY (child_id)
REFERENCES child(child_id)
)

Implementation

```
CREATE TABLE Activity_Child(
    activity_id Int,
    child_id Int,
    CONSTRAINT FK_ActivityChild_A FOREIGN KEY (activity_id)
    REFERENCES activity(activity_id),
    CONSTRAINT FK_ActivityChild_C FOREIGN KEY (child_id)
    REFERENCES child(child_id)
)
```

```
Table created.
```

Creating table of Activity_Teacher

Syntax of query:

CREATE TABLE Activity_Teacher(

activity_id Int,

teacher_id Int,

CONSTRAINT FK_ActivityTeacher_A FOREIGN KEY (activity_id)

REFERENCES activity(activity_id),

CONSTRAINT FK_ActivityTeacher_t FOREIGN KEY (teacher_id)

REFERENCES Teacher(teacher_id)

)

Implementation

```
CREATE TABLE Activity_Teacher(
    activity_id Int,
    teacher_id Int,
    CONSTRAINT FK_ActivityTeacher_A FOREIGN KEY (activity_id)
    REFERENCES activity(activity_id),
    CONSTRAINT FK_ActivityTeacher_t FOREIGN KEY (teacher_id)
    REFERENCES Teacher(teacher_id)
)
```

```
Table created.
```

Rows insert

Insert data to parent table

Syntax of query:

insert into Parent values (1,'Ahmed','Mona','address1', '123456789','987654321');

insert into Parent values (2,'Ali','Noha','address1', '987412365','321456987');

insert into Parent values (3,'Saeed','Iman','address2', '963214785','789456123');

insert into Parent values (4,'Mohammed','Nariman','address3', '258741369','987123465');

insert into Parent values (5,'Ghassan','Soad','address4', '963147852','821365479');

Implementation

```
1  insert into Parent values (1,'Ahmed','Mona','address1', '123456789','987654321');
2  insert into Parent values (2,'Ali','Noha','address1', '987412365','321456987');
3  insert into Parent values (3,'Saeed','Iman','address2', '963214785','789456123');
4  insert into Parent values (4,'Mohammed','Nariman','address3', '258741369','987123465');
5  insert into Parent values (5,'Ghassan','Soad','address4', '963147852','821365479');
```

```
1  select * from parent
2
```

PARENT_ID	FATHER_NAME	MOTHER_NAME	HOME_ADDRESS	MOTHER_MOBILE	FATHER_MOBILE
1	Ahmed	Mona	address1	123456789	987654321
2	Ali	Noha	address1	987412365	321456987
3	Saeed	Iman	address2	963214785	789456123
4	Mohammed	Nariman	address3	258741369	987123465
5	Ghassan	Soad	address4	963147852	821365479

Download CSV

5 rows selected.

Insert data to Child table

Syntax of query:

insert into Child values (1,'Mohammed','Khalil',to_date('2018-11-01', 'yyyy-mm-dd'), 'male',1);

insert into Child values (2,'Gamila','Khalil',to_date('2019-12-01', 'yyyy-mm-dd'), 'female',1);

insert into Child values (3,'Ola','Ghassan',to_date('2017-04-01', 'yyyy-mm-dd'), 'female',2);

insert into Child values (4,'Ahmed','Ghazi',to_date('2020-01-01', 'yyyy-mm-dd'), 'male',3);

insert into Child values (5,'Mohammed','Nezhat',to_date('2018-1-01', 'yyyy-mm-dd'), 'male',4);

insert into Child values (6,'Soha','Maka',to_date('2019-1-01', 'yyyy-mm-dd'), 'female',4);

insert into Child values (7,'Lina','Barghash',to_date('2021-5-01', 'yyyy-mm-dd'), 'female',5);

Implementation

```
insert into Child values (1,'Mohammed','Khalil',to_date('2018-11-01', 'yyyy-mm-dd'),  'male',1);
insert into Child values (2,'Gamila','Khalil',to_date('2019-12-01', 'yyyy-mm-dd'),  'female',1);
insert into Child values (3,'Ola','Ghassan',to_date('2017-04-01', 'yyyy-mm-dd'),  'female',2);
insert into Child values (4,'Ahmed','Ghazi',to_date('2020-01-01', 'yyyy-mm-dd'),  'male',3);
insert into Child values (5,'Mohammed','Nezhat',to_date('2018-1-01', 'yyyy-mm-dd'),  'male',4);
insert into Child values (6,'Soha','Maka',to_date('2019-1-01', 'yyyy-mm-dd'),  'female',4);
insert into Child values (7,'Lina','Barghash',to_date('2021-5-01', 'yyyy-mm-dd'),  'female',5);
```

```
select * from child
```

CHILD_ID	FIRST_NAME	LAST_NAME	DATE_OF_BIRTH	GENDER	PARENT_ID
1	Mohammed	Khalil	01-NOV-18	male	1
2	Gamila	Khalil	01-DEC-19	female	1
3	Ola	Ghassan	01-APR-17	female	2
4	Ahmed	Ghazi	01-JAN-20	male	3
5	Mohammed	Nezhat	01-JAN-18	male	4
6	Soha	Maka	01-JAN-19	female	4
7	Lina	Barghash	01-MAY-21	female	5

Insert data to Driver table

Syntax of query:

insert into Driver values (1,'Mohammed','Tahseen');
insert into Driver values (2,'Ahmed','Araj');
insert into Driver values (3,'Hasan','Ameen');
insert into Driver values (4,'Abdullah','Gherah');
insert into Driver values (5,'Maher','Gafar');

Implementation

```
insert into Driver values (1,'Mohammed','Tahseen');
insert into Driver values (2,'Ahmed','Araj');
insert into Driver values (3,'Hasan','Ameen');
insert into Driver values (4,'Abdullah','Gherah');
insert into Driver values (5,'Maher','Gafar');
```

```
1  select * from driver
```

DRIVER_ID	FIRST_NAME	LAST_NAME
1	Mohammed	Tahseen
2	Ahmed	Araj
3	Hasan	Ameen
4	Abdullah	Gherah
5	Maher	Gafar

Download CSV

5 rows selected.

Insert data to Teacher table

Syntax of query:

insert into Teacher values (1,'Ola','Nabbout',to_date('1995-05-16','yyyy-mm-dd'),'female','985321647','address1');

insert into Teacher values (2,'Marah','Nabbout',to_date('1998-2-10','yyyy-mm-dd'),'female','147936582','address2');

insert into Teacher values (3,'Lilas','Ghazi',to_date('1999-04-29','yyyy-mm-dd'),'female','213546879','address3');

insert into Teacher values (4,'Iman','Masri',to_date('1994-07-1','yyyy-mm-dd'),'female','659832714','address4');

insert into Teacher values (5,'Sabah','Sabah',to_date('1997-03-21','yyyy-mm-dd'),'female','134679285','address5');

Implementation

```
insert into Teacher values (1,'Ola','Nabbout',to_date('1995-05-16','yyyy-mm-dd'),'female','985321647','address1');
insert into Teacher values (2,'Marah','Nabbout',to_date('1998-2-10','yyyy-mm-dd'),'female','147936582','address2');
insert into Teacher values (3,'Lilas','Ghazi',to_date('1999-04-29','yyyy-mm-dd'),'female','213546879','address3');
insert into Teacher values (4,'Iman','Masri',to_date('1994-07-1','yyyy-mm-dd'),'female','659832714','address4');
insert into Teacher values (5,'Sabah','Sabah',to_date('1997-03-21','yyyy-mm-dd'),'female','134679285','address5');
```

```
1  select * from teacher
```

TEACHER_ID	FIRST_NAME	LAST_NAME	DATE_OF_BIRTH	GENDER	MOBILE_NUMBER	HOME_ADDRESS
1	Ola	Nabbout	16-MAY-95	female	985321647	address1
2	Marah	Nabbout	10-FEB-98	female	147936582	address2
3	Lilas	Ghazi	29-APR-99	female	213546879	address3
4	Iman	Masri	01-JUL-94	female	659832714	address4
5	Sabah	Sabah	21-MAR-97	female	134679285	address5

Download CSV

5 rows selected.

Insert data to Autocar table

Syntax of query:

insert into Autocar values (1,'code-01');

insert into Autocar values (2,'code-02');

insert into Autocar values (3,'code-03');

insert into Autocar values (4,'code-04');

insert into Autocar values (5,'code-05');

Implementation

```
insert into Autocar values (1,'code-01');
insert into Autocar values (2,'code-02');
insert into Autocar values (3,'code-03');
insert into Autocar values (4,'code-04');
insert into Autocar values (5,'code-05');
```

```
1  select * from autocar
```

AUTOCAR_ID	CODE
1	code-01
2	code-02
3	code-03
4	code-04
5	code-05

Download CSV

5 rows selected

Insert data to AutocarResponsers table

Syntax of query:

insert into AutocarResponsers values (1,1,1);

insert into AutocarResponsers values (2,2,2);

Implementation

```
1  insert into AutocarResponsers values (1,1,1);
2  insert into AutocarResponsers values (2,2,2);
3  select * from AutocarResponsers
4
```

AUTOCAR_ID	DRIVER_ID	TEACHER_ID
1	1	1
2	2	2

Download CSV

2 rows selected

Insert data to RegisteredChild table

Syntax of query:

insert into RegisteredChild values (1,to_date('2022-11-02','yyyy-mm-dd'),3,1,1);

insert into RegisteredChild values (2,to_date('2022-11-01','yyyy-mm-dd'),2,2,2);

insert into RegisteredChild values (3,to_date('2022-11-01','yyyy-mm-dd'),1,1,3);

insert into RegisteredChild values (4,to_date('2022-10-31','yyyy-mm-dd'),1,2,4);

insert into RegisteredChild values (5,to_date('2022-10-30','yyyy-mm-dd'),2,1,5);

insert into RegisteredChild values (6,to_date('2022-10-29','yyyy-mm-dd'),3,2,6);

insert into RegisteredChild values (7,to_date('2022-10-29','yyyy-mm-dd'),3,1,7);

Implementation

```
1  insert into RegisteredChild values (1,to_date('2022-11-02','yyyy-mm-dd'),3,1,1);
2  insert into RegisteredChild values (2,to_date('2022-11-01','yyyy-mm-dd'),2,2,2);
3  insert into RegisteredChild values (3,to_date('2022-11-01','yyyy-mm-dd'),1,1,3);
4  insert into RegisteredChild values (4,to_date('2022-10-31','yyyy-mm-dd'),1,2,4);
5  insert into RegisteredChild values (5,to_date('2022-10-30','yyyy-mm-dd'),2,1,5);
6  insert into RegisteredChild values (6,to_date('2022-10-29','yyyy-mm-dd'),3,2,6);
7  insert into RegisteredChild values (7,to_date('2022-10-29','yyyy-mm-dd'),3,1,7);
8  select * from RegisteredChild
9
```

REG_CHILD_ID	REGESTERATION_DATE	KG_NO	AUTOCAR_ID	CHILD_ID
1	02-NOV-22	3	1	1
2	01-NOV-22	2	2	2
3	01-NOV-22	1	1	3
4	31-OCT-22	1	2	4
5	30-OCT-22	2	1	5
6	29-OCT-22	3	2	6
7	29-OCT-22	3	1	7

Insert data to Class table

Syntax of query:

insert into class values (1,'code-01');

insert into class values (2,'code-02');

insert into class values (3,'code-03');

insert into class values (4,'code-04');

insert into class values (5,'code-05');

Implementation

```
1  insert into class values (1,'code-01');
2  insert into class values (2,'code-02');
3  insert into class values (3,'code-03');
4  insert into class values (4,'code-04');
5  insert into class values (5,'code-05');
6  select * from class
```

CLASS_ID	CODE
1	code-01
2	code-02
3	code-03
4	code-04
5	code-05

Download CSV

5 rows selected.

Insert data to Thing table

Syntax of query:

insert into thing values(1,'thing 1', 'desc 1 ', 1);

insert into thing values(2,'thing 2', 'desc 2 ', 1);

insert into thing values(3,'thing 3', 'desc 3 ', 1);

insert into thing values(4,'thing 4', 'desc 4 ', 1);

insert into thing values(5,'thing 5', 'desc 5 ', 2);

insert into thing values(6,'thing 6', 'desc 6 ', 2);

insert into thing values(7,'thing 7', 'desc 7 ', 3);

insert into thing values(8,'thing 8', 'desc 8 ', 3);

insert into thing values(9,'thing 9', 'desc 9 ', 3);

insert into thing values(10,'thing 10', 'desc 10 ',4);

insert into thing values(11,'thing 11', 'desc 11 ', 5);

Implementation

```
insert into thing values(1,'thing 1', 'desc 1 ', 1);
insert into thing values(2,'thing 2', 'desc 2 ', 1);
insert into thing values(3,'thing 3', 'desc 3 ', 1);
insert into thing values(4,'thing 4', 'desc 4 ', 1);
insert into thing values(5,'thing 5', 'desc 5 ', 2);
insert into thing values(6,'thing 6', 'desc 6 ', 2);
insert into thing values(7,'thing 7', 'desc 7 ', 3);
insert into thing values(8,'thing 8', 'desc 8 ', 3);
insert into thing values(9,'thing 9', 'desc 9 ', 3);
insert into thing values(10,'thing 10', 'desc 10 ',4);
insert into thing values(11,'thing 11', 'desc 11 ', 5);
select * from thing
```

THING_ID	NAME	DESCRIPTION	CLASS_ID
1	thing 1	desc 1	1
2	thing 2	desc 2	1
3	thing 3	desc 3	1
4	thing 4	desc 4	1
5	thing 5	desc 5	2
6	thing 6	desc 6	2
7	thing 7	desc 7	3
8	thing 8	desc 8	3
9	thing 9	desc 9	3
10	thing 10	desc 10	4
11	thing 11	desc 11	5

Insert data to Activity table

Syntax of query:

insert into activity values(1,'activity 1', 'desc 1 ', 'type 1' ,1);

insert into activity values(2,'activity 2', 'desc 2 ', 'type 1' ,2);

insert into activity values(3,'activity 3', 'desc 3 ', 'type 2' ,3);

insert into activity values(4,'activity 4', 'desc 4 ', 'type 3' ,4);

insert into activity values(5,'activity 5', 'desc 5 ', 'type 4' ,4);

insert into activity values(6,'activity 6', 'desc 6 ', 'type 5' ,5);

Implementation

```
1  insert into activity values(1,'activity 1', 'desc 1 ', 'type 1' ,1);
2  insert into activity values(2,'activity 2', 'desc 2 ', 'type 1' ,2);
3  insert into activity values(3,'activity 3', 'desc 3 ', 'type 2' ,3);
4  insert into activity values(4,'activity 4', 'desc 4 ', 'type 3' ,4);
5  insert into activity values(5,'activity 5', 'desc 5 ', 'type 4' ,4);
6  insert into activity values(6,'activity 6', 'desc 6 ', 'type 5' ,5);
7  select * from activity
```

ACTIVITY_ID	NAME	DESCRIPTION	TYPE	CLASS_ID
1	activity 1	desc 1	type 1	1
2	activity 2	desc 2	type 1	2
3	activity 3	desc 3	type 2	3
4	activity 4	desc 4	type 3	4
5	activity 5	desc 5	type 4	4
6	activity 6	desc 6	type 5	5

Download CSV

Insert data to Activity_ Teacher table

Syntax of query:

insert into Activity_Teacher values(1,1);

insert into Activity_Teacher values(2,2);

insert into Activity_Teacher values(3,3);

insert into Activity_Teacher values(4,4);

insert into Activity_Teacher values(5,5);

insert into Activity_Teacher values(6,5);

Implementation

```
1  insert into Activity_Teacher values(1,1);
2  insert into Activity_Teacher values(2,2);
3  insert into Activity_Teacher values(3,3);
4  insert into Activity_Teacher values(4,4);
5  insert into Activity_Teacher values(5,5);
6  insert into Activity_Teacher values(6,5);
7  select * from Activity_Teacher
```

ACTIVITY_ID	TEACHER_ID
1	1
2	2
3	3
4	4
5	5
6	5

Download CSV

6 rows selected.

Insert data to Activity_ Child table

Syntax of query:

insert into Activity_Child values(1,1);

insert into Activity_Child values(2,1);

insert into Activity_Child values(3,1);

insert into Activity_Child values(4,1);

insert into Activity_Child values(5,1);

insert into Activity_Child values(6,1);

insert into Activity_Child values(1,2);

insert into Activity_Child values(2,2);

insert into Activity_Child values(3,2);

insert into Activity_Child values(4,2);

insert into Activity_Child values(5,2);

insert into Activity_Child values(6,2);

```
insert into Activity_Child values(1,3);
insert into Activity_Child values(2,3);
insert into Activity_Child values(3,3);
insert into Activity_Child values(4,3);
insert into Activity_Child values(5,3);
insert into Activity_Child values(6,3);

insert into Activity_Child values(1,4);
insert into Activity_Child values(2,4);
insert into Activity_Child values(3,4);
insert into Activity_Child values(4,4);
insert into Activity_Child values(5,4);
insert into Activity_Child values(6,4);

insert into Activity_Child values(2,5);
insert into Activity_Child values(3,5);
insert into Activity_Child values(4,5);
insert into Activity_Child values(5,5);
```

Implementation

```
insert into Activity_Child values(1,1);
insert into Activity_Child values(2,1);
insert into Activity_Child values(3,1);
insert into Activity_Child values(4,1);
insert into Activity_Child values(5,1);
insert into Activity_Child values(6,1);
insert into Activity_Child values(1,2);
insert into Activity_Child values(2,2);
insert into Activity_Child values(3,2);
insert into Activity_Child values(4,2);
insert into Activity_Child values(5,2);
insert into Activity_Child values(6,2);
insert into Activity_Child values(1,3);
insert into Activity_Child values(2,3);
insert into Activity_Child values(3,3);
insert into Activity_Child values(4,3);
insert into Activity_Child values(5,3);
insert into Activity_Child values(6,3);
insert into Activity_Child values(1,4);
insert into Activity_Child values(2,4);
insert into Activity_Child values(3,4);
insert into Activity_Child values(4,4);
insert into Activity_Child values(5,4);
insert into Activity_Child values(6,4);
insert into Activity_Child values(2,5);
insert into Activity_Child values(3,5);
insert into Activity_Child values(4,5);
insert into Activity_Child values(5,5);
```

ACTIVITY_ID	CHILD_ID
1	1
2	1
3	1
4	1
5	1
6	1
1	2
2	2
3	2
4	2
5	2
6	2
1	3
2	3
3	3
4	3
5	3
6	3
1	4
2	4
3	4
4	4
5	4
6	4
2	5
3	5
4	5
5	5

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Data Retrieval Queries

Get number of children in each kg ordered desc

Syntax of query:

select count(*) as children_number , kg_no

from RegisteredChild

group by(kg_no)

order by children_number desc;

Implementation

```
1  select count(*) as children_number , kg_no
2  from RegisteredChild
3  group by(kg_no)
4  order by children_number desc;
```

CHILDREN_NUMBER	KG_NO
3	3
2	1
2	2

Download CSV

3 rows selected.

Get name of teacher and driver for autocar

Syntax of query:

select

concat(teacher.First_name ,Concat(' ',teacher.Last_name)) as teacher,

concat(driver.First_name ,Concat(' ',driver.Last_name)) as driver,

Autocar.code as autocar

from teacher

join AutocarResponsers on teacher.teacher_id = AutocarResponsers.teacher_id

join driver on driver.driver_id = AutocarResponsers.driver_id

join Autocar on Autocar.Autocar_id = AutocarResponsers.Autocar_id;

Implementation

```
1  select
2  concat(teacher.First_name ,Concat(' ',teacher.Last_name)) as teacher,
3  concat(driver.First_name ,Concat(' ',driver.Last_name)) as driver,
4  Autocar.code as autocar
5  from teacher
6  join AutocarResponsers on teacher.teacher_id = AutocarResponsers.teacher_id
7  join driver on driver.driver_id = AutocarResponsers.driver_id
8  join Autocar  on Autocar.Autocar_id = AutocarResponsers.Autocar_id;
9
10
```

TEACHER	DRIVER	AUTOCAR
Ola Nabbout	Mohammed Tahseen	code-01
Marah Nabbout	Ahmed Araj	code-02

Download CSV

2 rows selected

Get name of activity and number of its enrolled children

Syntax of query:

select activity.name , count(*) as number_of_children

from activity, activity_child

where

activity.activity_id = activity_child.activity_id

group by activity.name

order by activity.name

Implementation

```
1  select activity.name , count(*) as number_of_children
2  from activity, activity_child
3  where
4  activity.activity_id = activity_child.activity_id
5  group by activity.name
6  order by activity.name
```

NAME	NUMBER_OF_CHILDREN
activity 1	4
activity 2	5
activity 3	5
activity 4	5
activity 5	5
activity 6	4

Download CSV

6 rows selected.

Get code of autocar that is not in use.

Syntax of query:

select autocar.code

from autocar

where autocar.autocar_id not in

(

select autocar.autocar_id

from autocar, autocarresponsers

where

autocar.autocar_id = autocarresponsers.autocar_id

)

order by autocar.code

Implementation

```
1  select autocar.code
2  from autocar
3  where autocar.autocar_id not in
4  (
5  select autocar.autocar_id
6  from autocar, autocarresponsers
7  where
8  autocar.autocar_id = autocarresponsers.autocar_id
9  )
10 order by autocar.code
11
```

CODE
code-03
code-04
code-05

Download CSV

3 rows selected

Get name of mother and its mobile number for a specific child

Syntax of query:

select parent.mother_name , parent.Mother_mobile

from parent, child

where parent.parent_id = child.parent_id

and child.child_id = 1

Implementation

```
1  select parent.mother_name , parent.Mother_mobile
2  from parent, child
3  where parent.parent_id = child.parent_id
4  and child.child_id = 1
```

MOTHER_NAME	MOTHER_MOBILE
Mona	123456789

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