Database Systems (IT3020)

3rd Year, 1st Semester

Assignment 1

Submitted to

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Table of Contents

Function Description

1. Adolescent details management

Each and every adolescent referred to a doctor to his treatments. Adolescent has a special schedule that has to strictly follow. All adolescents have a guardian. To some adolescents can be having more than one guardian. guardian should pay the payments for adolescent. Guardians who do not have receive “Samurdhi” fund are entitled to a discount on payments and other guardians pay the full amount.

2. Doctor management

The database contains the details of all doctors. Every doctor has a patient for treatments. There can be many Adolescents assigned to a doctor. However, at least there should be a one patient. the doctor should prepare a medical report after examining the patient. there is a prescribed fee for each visit to the doctor. The fee is based on channeling hours. As the hours increase, the doctor will receive an additional fee. If doctor provide extra service time, the fee increases at a prescribed OT rate.

3. Medical record management

Doctors are created medical records according to the patient. medical records are contained the Adolescents details, report issuing date and name of the issuing doctor.

4. Schedule management

Adolescent patients have to follow schedule. The schedule is provided by doctor. There are three main parts of schedule. Those are leisure schedule, study schedule and social schedule. Schedule has activities.

5. Activity management

Adolescents can manage their leisure, study and social time activities according to the schedule. Doctors are able to add new activities for adolescents. Guardians and doctors are able to see adolescents’ activity completion progress. Application will suggest most preferred activities when adolescent get bored. Adolescent are able to select their preferred activities. Each and every activity has a measurement rate. The rate goes up depending on the adolescent performance.

Document data requirements

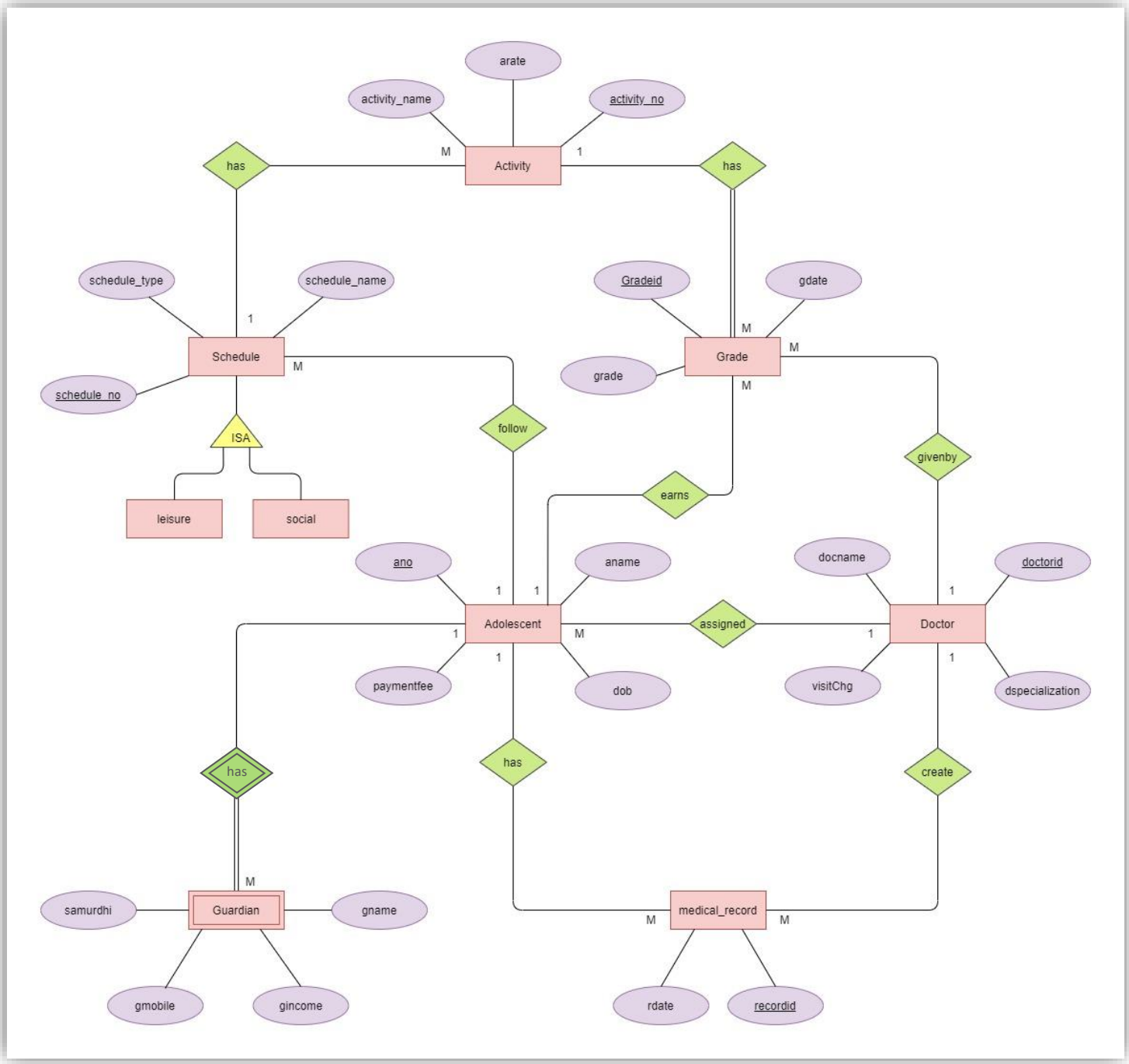
This system will bring the Adolescents, Guardians and Doctors together. So that the adolescents' in need of attention are monitored effectively.

The doctors, in this system has special treating methods for adolescents, with different types of mental disorders varying from mild to severe. One of the main non medicinal method, doctors use to help these adolescents is making sure that they perform day to day activities of an adolescent under the supervision of their guardians or doctors. Day to day activities means social activities and leisure time activities.

Consider on ADOLESCENT_PSYCHIATRIST database system in which actors (Adolescents, Doctors and Guardians) participate in the treatments system. The data requirements for this system are summarized as follows:

- The system has adolescents, each of whom is identified by a unique adolescent number (ano) and is described by a name, date of birth and his/her payment free.
- An adolescent has a guardian. Some times it can be more guardians. Guardian has name. income, mobile and mention whether he has or not Samurdhi.
- Every adolescent assigned to a doctor. Doctor identify by a doctor ID (doctorid), doctor name, description and also, he/she has a charge per visit.
- Adolescent has medical record which create doctor. Information about medical records include record ID (recordid) and recorded date.
- Every adolescent has to follow schedule. The schedule can be categorized into leisure and social. (ISA relationship). Information about schedule includes schedule number (schedule_no), schedule type and schedule type.
- Schedule has many activities. Activity number (activity_no), activity name and rate for the activity (arate) are recorded under Activity.
- Activity has grades and also adolescent has to earn those grades. Grade contains grade id (gradeid), grade that adolescent earn and the date that grade has earnt.

EER Diagram


arate
activity_name
activity_no
M
Activity
1
has
has
schedule_type
schedule_name
1
Schedule
M
schedule_no
ISA
leisure
social
follow
Gradeid
gdate
M
Grade
M
grade
M
earns
givenby
ano
aname
1
1
Adolescent
1
M
1
paymentfee
dob
assigned
docname
doctorid
1
Doctor
1
1
visitChg
dspecialization
has
has
create
M
samurdhi
Guardian
gname
gmobile
gincome
M
medical_record
M
rdate
recordid

Object Relational Model

Object types

```
Guardian_T(gname:VARCHAR2(30),gmobile:VARCHAR2(30),gincome:number(8,2),
samurdhi:char(1), RELATIONSHIP:VARCHAR2(30))

Guardian_T_TABLE AS TABLE OF Guardian_T

Doctor_t(doctorid:int , docname:varchar2(50),
dspecialization:varchar2(30),visitChg:float)

Adolescents_T(ano:number(4), aname:varchar2(15), dob:date ,
adoctor:ref  Doctor_t,paymentfee:number(8,2),Guardian Guardian_T_TABLE)

schedule_T(schedule_no:number(2),schedule_name:varchar2(12),
schedule_type:varchar2(12),scheduled_adolescent:ref Adolescents_T) not final

Activity_t(activity_no:number(4),activity_name:varchar2(15),
aschedule:ref schedule_T,arate:number(2))

medicalRecord_T(Recordid:number(3),rAdolescent:ref Adolescents_T ,rdoctor:ref
Doctor_t, rdate:date)


social_schedule under schedule_T

leisure_schedule under schedule_T

Grades_T( Gradeid:number(4),gAdolescent:ref Adolescents_T ,
 gactivity:ref Activity_t, gdoctor:ref Doctor_t,grade:number(3))
```

Table types

```
schedule OF schedule_T(schedule_no PRIMARY KEY)

Adolescents of Adolescents_T(ano primary key)nested table Guardian store as
Guardian_tb;

Activity OF Activity_t(activity_no primary key)

Doctor of doctor_t(doctorid primary key)

Grades of Grades_T(Gradeid primary key)

medicalRecord of medicalRecord_T(recordid primary key)
```

Develop a Database in Oracle and Insert Sample data

Type creation queries

```
----------------------------types--------------------

CREATE TYPE Guardian_T AS OBJECT(
gname VARCHAR2(30),
gmobile VARCHAR2(30),
gincome number(8,2),
samurdhi char(1),
RELATIONSHIP VARCHAR2(30)
)
/

CREATE TYPE Guardian_T_TABLE AS TABLE OF Guardian_T
/

CREATE OR REPLACE TYPE schedule_T
/


CREATE OR REPLACE TYPE Doctor_t AS OBJECT(
doctorid int ,
docname varchar2(50),
dspecialization varchar2(30),
visitChg float
)
/


CREATE OR REPLACE TYPE Adolescents_T AS OBJECT (
ano number(4),
aname varchar2(15),
dob date,
adoctor ref Doctor_t,
paymentfee number(8,2),
Guardian Guardian_T_TABLE
)
/


CREATE OR REPLACE TYPE schedule_T AS OBJECT(
schedule_no number(2),
schedule_name varchar2(12),
schedule_type varchar2(12),
scheduled_adolescent ref Adolescents_T
)not final
/
```

```
CREATE OR REPLACE TYPE Activity_t AS OBJECT (
activity_no number(4),
activity_name varchar2(15),
aschedule ref schedule_T,
arate number(2)
)
/
```

```
CREATE OR REPLACE TYPE medicalRecord_T AS OBJECT(
Recordid number(3),
rAdolescent ref Adolescents_T ,
rdoctor ref Doctor_t,
rdate date
)
/
```

```
Create type social_schedule under schedule_T()
/

Create type leisure_schedule under schedule_T()
/
```

```
CREATE OR REPLACE TYPE Grades_T AS OBJECT(
Gradeid number(4),
gAdolescent ref Adolescents_T ,
gactivity ref Activity_t,
gdoctor ref Doctor_t,
grade number(3)
)
```

Table creation queries

```
----------------------tables--------------------

CREATE TABLE schedule OF schedule_T(
schedule_no PRIMARY KEY
)
/

CREATE TABLE Adolescents of Adolescents_T(
ano primary key)
nested table Guardian store as Guardian_tb
/

ALTER TABLE schedule
MODIFY scheduled_adolescent REFERENCES Adolescents;



CREATE TABLE Activity OF Activity_t(
activity_no primary key,
aschedule references schedule
)
/


CREATE TABLE Doctor of Doctor_t(
doctorid primary key
)
/

CREATE TABLE medicalRecord of medicalRecord_T(
Recordid primary key,
rAdolescent references Adolescents,
rdoctor references Doctor
)
/


CREATE TABLE Grades of Grades_T(
Gradeid primary key,
gAdolescent references Adolescents,
gactivity references Activity,
gdoctor references Doctor
)
/
```

Insertion queries

```
----------------------------------insert in to doctor--------------------


INSERT INTO Doctor VALUES(Doctor_t(10,'Dr.K.Alvis','Psychologist','1500.00'))
/
INSERT INTO Doctor VALUES(Doctor_t(11,'Dr.L.Dasun','Psychiatrist','2500.00'))
/
INSERT INTO Doctor VALUES(Doctor_t(12,'Dr.N.Saduni','therapist','1000.00'))
/
INSERT INTO Doctor VALUES(Doctor_t(13,'Dr.J.Sudath','Psychologist','1700.00'))
/
INSERT INTO Doctor VALUES(Doctor_t(14,'Dr.K.Avishka','counselor','1200.00'))
/



------------------------insert into Adolescents table-----------------

INSERT INTO Adolescents VALUES(1112,'JACK','21-JAN-97',(select ref(d) from
Doctor d where d.doctorid = 10),10000.00,
Guardian_T_TABLE(Guardian_T('piyal','0717036280',20000.00 ,'Y' ,'FATHER' ),
Guardian_T('martha','0717936281',0.00,'N','MOTHER')))
/

INSERT INTO Adolescents VALUES(1113,'dureksha','07-FEB-20',(select ref(d)
from Doctor d where d.doctorid = 11),20000.00,
Guardian_T_TABLE(Guardian_T('saman','0717045280',30000.00,'N','FATHER'),
Guardian_T('sunil','0727966281',25000.00,'N','UNCLE'),
Guardian_T('kanthi','0768836280' ,0.00 , 'N' ,'MOTHER')))
/

INSERT INTO Adolescents VALUES(1114,'thilini','21-AUG-97',(select ref(d) from
Doctor d where d.doctorid = 12),30000.00,
Guardian_T_TABLE(Guardian_T('nimal' , '0777816280' , 50000.00 , 'N' ,
'FATHER' ),
Guardian_T('nilani','0717936000',0.00,'N','MOTHER')))
/

INSERT INTO Adolescents VALUES(1115,'sonal','26-JAN-98',(select ref(d) from
Doctor d where d.doctorid = 10),20000.00,
Guardian_T_TABLE(Guardian_T('asela' , '0722816280' , 40000.00 , 'Y' , 'UNCLE'
)))
/

INSERT INTO Adolescents VALUES(1116,'Chamal','10-NOV-98', (select ref(d) from
Doctor d where d.doctorid = 14),120000.00,
Guardian_T_TABLE(Guardian_T('sumana' , '0712216280' , 46000.00 , 'N' ,
'AUNTY' )))
/
```

```
--------------------------insert into schedule ----------------------

INSERT INTO schedule  VALUES(schedule_T(01,'schedule1','morning',(select
ref(a) from Adolescents a where a.ano= 1112)))
/
INSERT INTO schedule  VALUES(schedule_T(02,'schedule2','evening',(select
ref(a) from Adolescents a where a.ano= 1113)))
/
INSERT INTO schedule  VALUES(schedule_T(03,'schedule3','affternoon',(select
ref(a) from Adolescents a where a.ano= 1113)))
/
INSERT INTO schedule  VALUES(schedule_T(04,'schedule5','night',(select ref(a)
from Adolescents a where a.ano= 1112)))
/
INSERT INTO schedule  VALUES(schedule_T(05,'schedule3','affternoon',(select
ref(a) from Adolescents a where a.ano= 1114)))
/
INSERT INTO schedule  VALUES(schedule_T(06,'schedule1','morning',(select
ref(a) from Adolescents a where a.ano= 1115)))
/
INSERT INTO schedule  VALUES(schedule_T(07,'schedule1','morning',(select
ref(a) from Adolescents a where a.ano= 1116)))
/
INSERT INTO schedule  VALUES(schedule_T(08,'schedule3','affternoon',(select
ref(a) from Adolescents a where a.ano= 1112)))
/
INSERT INTO schedule  VALUES(schedule_T(09,'schedule1','morning',(select
ref(a) from Adolescents a where a.ano= 1115)))
/
INSERT INTO schedule  VALUES(schedule_T(10,'schedule1','morning',(select
ref(a) from Adolescents a where a.ano= 1116)))
/



---------------------------insert in to Activity table----------------

INSERT INTO Activity VALUEs(Activity_t(0001,'speaking',(select ref (s) from
schedule  s where s.schedule_no=01),07))
/
INSERT INTO Activity VALUEs(Activity_t(0002,'reading',(select ref (s) from
schedule  s where s.schedule_no=02),05))
/
INSERT INTO Activity VALUEs(Activity_t(0003,'writing',(select ref (s) from
schedule  s where s.schedule_no=04),05))
/
INSERT INTO Activity VALUEs(Activity_t(0004,'listeing',(select ref (s) from
schedule  s where s.schedule_no=05),10))
/
INSERT INTO Activity VALUEs(Activity_t(0005,'speach',(select ref (s) from
schedule  s where s.schedule_no=06),05))
/
```

```
--------------------------insert in to medicalRecord-------------------


INSERT INTO medicalRecord VALUEs(medicalRecord_T(0001,(select ref(a) from
Adolescents a where a.ano= 1113),(select ref (d) from Doctor d where
d.doctorid=11),'27-JAN-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0002,(select ref(a) from
Adolescents a where a.ano= 1114),(select ref (d) from Doctor d where
d.doctorid=12),'01-FEB-20'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0003,(select ref(a) from
Adolescents a where a.ano= 1112),(select ref (d) from Doctor d where
d.doctorid=10),'20-MAR-20'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0004,(select ref(a) from
Adolescents a where a.ano= 1115),(select ref (d) from Doctor d where
d.doctorid=10),'21-NOV-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0005,(select ref(a) from
Adolescents a where a.ano= 1116),(select ref (d) from Doctor d where
d.doctorid=14),'03-DCE-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0006,(select ref(a) from
Adolescents a where a.ano= 1112),(select ref (d) from Doctor d where
d.doctorid=10),'03-DEC-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0007,(select ref(a) from
Adolescents a where a.ano= 1113),(select ref (d) from Doctor d where
d.doctorid=11),'03-DEC-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0008,(select ref(a) from
Adolescents a where a.ano= 1114),(select ref (d) from Doctor d where
d.doctorid=12),'16-FEB-20'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0009,(select ref(a) from
Adolescents a where a.ano= 1112),(select ref (d) from Doctor d where
d.doctorid=10),'27-OCT-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0010,(select ref(a) from
Adolescents a where a.ano= 1115),(select ref (d) from Doctor d where
d.doctorid=10),'06-NOV-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0011,(select ref(a) from
Adolescents a where a.ano= 1116),(select ref (d) from Doctor d where
d.doctorid=14),'02-AUG-19'))
/
INSERT INTO medicalRecord VALUEs(medicalRecord_T(0012,(select ref(a) from
Adolescents a where a.ano= 1112),(select ref (d) from Doctor d where
d.doctorid=10),'25-JAN-20'))
/
```

```
------------------------insert into grades insert-----------------------


INSERT INTO Grades VALUES (Grades_T(01,(select ref(a) from Adolescents a
where a.ano= 1116),(select ref(a) from Activity a where a.activity_no =
0001),(select ref(d) from Doctor d where d.doctorid = 10),74))
/
INSERT INTO Grades VALUES (Grades_T(02,(select ref(a) from Adolescents a
where a.ano= 1112),(select ref(a) from Activity a where a.activity_no =
0002),(select ref(d) from Doctor d where d.doctorid = 11),81))
/

INSERT INTO Grades VALUES (Grades_T(03,(select ref(a) from Adolescents a
where a.ano= 1113),(select ref(a) from Activity a where a.activity_no =
0003),(select ref(d) from Doctor d where d.doctorid = 12),60))
/

INSERT INTO Grades VALUES (Grades_T(04,(select ref(a) from Adolescents a
where a.ano= 1115),(select ref(a) from Activity a where a.activity_no =
0004),(select ref(d) from Doctor d where d.doctorid = 10),34))
/

INSERT INTO Grades VALUES (Grades_T(05,(select ref(a) from Adolescents a
where a.ano= 1115),(select ref(a) from Activity a where a.activity_no =
0005),(select ref(d) from Doctor d where d.doctorid = 10),23))
/

INSERT INTO Grades VALUES (Grades_T(06,(select ref(a) from Adolescents a
where a.ano= 1113),(select ref(a) from Activity a where a.activity_no =
0001),(select ref(d) from Doctor d where d.doctorid = 11),95))
/

INSERT INTO Grades VALUES (Grades_T(07,(select ref(a) from Adolescents a
where a.ano= 1112),(select ref(a) from Activity a where a.activity_no =
0002),(select ref(d) from Doctor d where d.doctorid = 11),85))
/

INSERT INTO Grades VALUES (Grades_T(08,(select ref(a) from Adolescents a
where a.ano= 1114),(select ref(a) from Activity a where a.activity_no =
0003),(select ref(d) from Doctor d where d.doctorid = 10),68))
/

INSERT INTO Grades VALUES (Grades_T(09,(select ref(a) from Adolescents a
where a.ano= 1114),(select ref(a) from Activity a where a.activity_no =
0004),(select ref(d) from Doctor d where d.doctorid = 10),63))
/

INSERT INTO Grades VALUES (Grades_T(10,(select ref(a) from Adolescents a
where a.ano= 1113),(select ref(a) from Activity a where a.activity_no =
0001),(select ref(d) from Doctor d where d.doctorid = 11),83))
```

Member methods

- This function is to find out the adolescents grades belongs to which type , which mean adolescents who is earn less than 45 marks will return poor , between 45 – 64 will return average ,between 65-74 will return good , between 75 -84 will return very good and between 85-100 will return excellent as a results

```
ALTER TYPE Grades_T
ADD MEMBER FUNCTION
GradeValue1 return CHAR
CASCADE;
/


CREATE OR REPLACE TYPE BODY Grades_T AS
 MEMBER FUNCTION GradeValue1
      RETURN CHAR IS
      BEGIN
      IF ( self.grade < 45 ) THEN
            RETURN 'poor';
      ELSIF (  self.grade >= 45 AND 65 > self.grade ) THEN
            RETURN 'avarge';
        ELSIF (  self.grade >= 65 AND 75 > self.grade ) THEN
            RETURN 'good';
        ELSIF (  self.grade >= 75 AND 85 > self.grade ) THEN
            RETURN 'very good';
        ELSIF (  self.grade >= 85 AND 100 >= self.grade ) THEN
            RETURN 'excellent';
        ELSE
             RETURN 'invalid GRADE';
            END IF;
      END;
END;


select
g.gAdolescent.aname,g.gactivity.activity_name,g.gdoctor.docname,g.grade,
g.GradeValue1()
from Grades g;
```

```
SQL> set linesize 100
SQL> set pagesize 30
SQL> select  g.gAdolescent.aname,g.gactivity.activity_name,g.gdoctor.docname,g.grade,
  2  g.GradeValue1()
  3  from Grades g;

GADOLESCENT.ANA GACTIVITY.ACTIV GDOCTOR.DOCNAME                                      GRADE
--------------- --------------- -------------------------------------------------- ----------
G.GRADEVALUE1()
-----------------------------------------------------------------------------------------------
JACK            reading         Dr.L.Dasun                                             81
very good

JACK            reading         Dr.L.Dasun                                             85
excellent

dureksha        speaking        Dr.L.Dasun                                             95
excellent

dureksha        speaking        Dr.L.Dasun                                             83
very good

dureksha        writing         Dr.N.Saduni                                            60
avarge

thilini         writing         Dr.K.Alvis                                             68
good

thilini         listeing        Dr.K.Alvis                                             63
avarge

sonal           listeing        Dr.K.Alvis                                             34
poor
```

I tried so many times forget a better view by changing the line size and page size, but it doesn't work
Then I move to Oracle sql developer

```
select  g.gAdolescent.aname,g.gactivity.activity_name,g.gdoctor.docname,g.grade,g.GradeValue1()
from Grades g;
```

Script Output | Query Result | SQL | All Rows Fetched: 10 in 0.008 seconds

	GADOLESCENT.ANAME	GACTIVITY.ACTIVITY_NAME	GDOCTOR.DOCNAME	GRADE	G.GRADEVALUE1()
1	JACK	reading	Dr.L.Dasun	81	very good
2	JACK	reading	Dr.L.Dasun	85	excellent
3	dureksha	speaking	Dr.L.Dasun	95	excellent
4	dureksha	speaking	Dr.L.Dasun	83	very good
5	dureksha	writing	Dr.N.Saduni	60	avarge
6	thilini	writing	Dr.K.Alvis	68	good
7	thilini	listeing	Dr.K.Alvis	63	avarge
8	sonal	listeing	Dr.K.Alvis	34	poor
9	sonal	speach	Dr.K.Alvis	23	poor
10	Chamal	speaking	Dr.K.Alvis	74	good

```
select  g.gAdolescent.aname,g.GradeValue1()
from Grades g
where g.gAdolescent.aname='dureksha';
```

Worksheet | Query Builder

```
select  g.gAdolescent.aname,g.gactivity.activity_name,g.GradeValue1()
from Grades g
where g.gAdolescent.aname='dureksha';
```

Script Output | Query Result | SQL | All Rows Fetched: 3 in 0.086 seconds

	GADOLESCENT.ANAME	GACTIVITY.ACTIVITY_NAME	G.GRADEVALUE1()
1	dureksha	writing	avarge
2	dureksha	speaking	excellent
3	dureksha	speaking	very good

- This member method to compute the Adolescents payment fee discount with his/her Guardian. The discount is calculated at the 2% of payment fee for each Guardian which does not have 'samurdhi'. And this will compute the TAX amount of Adolescents, TAX will be calculated by multiplying the payment fee with a rate percentage given as a parameter

```
ALTER TYPE Adolescents_T
ADD MEMBER FUNCTION
calclDiscount RETURN FLOAT
CASCADE;
/

ALTER TYPE Adolescents_T
ADD MEMBER FUNCTION
taxPayment(RATE FLOAT) RETURN FLOAT
CASCADE;
/

ALTER TYPE Adolescents_T
ADD MEMBER FUNCTION
TotalPayment_withTAX(RATE FLOAT) RETURN FLOAT
CASCADE;
/
```

```
CREATE OR REPLACE TYPE BODY Adolescents_T AS
      MEMBER FUNCTION calclDiscount RETURN FLOAT IS
      discount FLOAT;
    BEGIN
                  SELECT SUM(0.02 * SELF.paymentfee) INTO discount
                  FROM TABLE(SELF.Guardian) d
                  WHERE d.samurdhi = 'N';
                  RETURN SELF.paymentfee - discount;

      END;

      MEMBER FUNCTION taxPayment(RATE FLOAT) RETURN FLOAT IS
      BEGIN
            RETURN SELF.paymentfee * RATE*0.01;

      END;
```

```
    MEMBER FUNCTION TotalPayment_withTAX(RATE FLOAT) RETURN FLOAT IS
    tax float;
    BEGIN
         tax:= SELF.paymentfee * RATE*0.01;
        return SELF.+tax;
      END;

END;
/
```

```
SELECT a.aname,a.paymentfee,a.calclDiscount()
FROM adolescents a;
```

```
SQL> SELECT a.aname,a.paymentfee,a.calclDiscount()
  2  FROM adolescents a;

ANAME           PAYMENTFEE A.CALCLDISCOUNT()
--------------- ---------- ------------------
JACK                 10000               9800
dureksha             20000              18800
thilini              30000              28800
sonal                20000
Chamal              120000             117600

SQL>
```

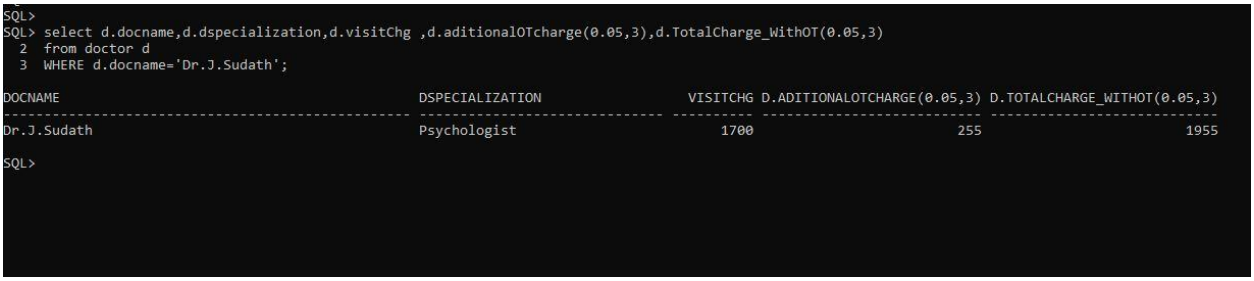
```
SELECT a.aname,a.paymentfee,a.taxPayment(5),a.TotalPayment_withTAX(5)
FROM adolescents a;
```

```
SQL> SELECT a.aname,a.paymentfee,a.taxPayment(5),a.TotalPayment_withTAX(5)
  2  FROM adolescents a;

ANAME           PAYMENTFEE A.TAXPAYMENT(5) A.TOTALPAYMENT_WITHTAX(5)
--------------- ---------- --------------- ------------------------
JACK                 10000             500                    10500
dureksha             20000            1000                    21000
thilini              30000            1500                    31500
sonal                20000            1000                    21000
Chamal              120000            6000                   126000

SQL>
```

- Below method to compute the extra hour charges of doctor, additional OT charge will be calculated by multiplying the doctor's visiting Charge with extra hours and a rate percentage given as a parameter.

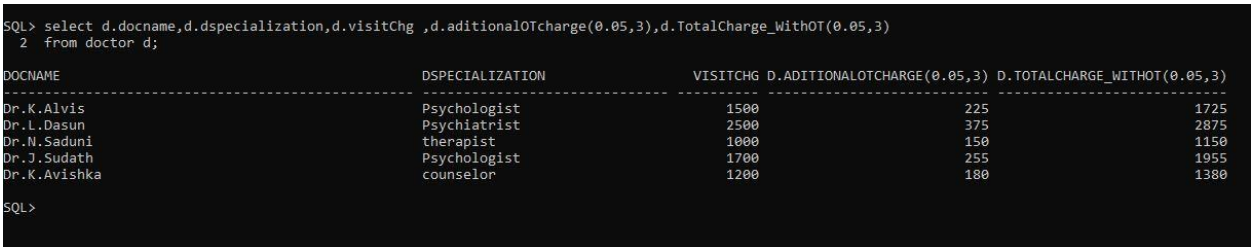
```
ALTER TYPE Doctor_t
ADD MEMBER FUNCTION aditionalOTcharge(rate FLOAT,othours FLOAT)
RETURN FLOAT CASCADE;
/

ALTER TYPE Doctor_t
ADD MEMBER FUNCTION TotalCharge_WithOT(rate FLOAT,othours FLOAT)
RETURN FLOAT CASCADE;
/


CREATE OR REPLACE TYPE BODY Doctor_t AS
MEMBER FUNCTION
aditionalOTcharge(rate FLOAT, othours FLOAT)
      RETURN FLOAT IS
            BEGIN
                  return rate* othours * SELF.visitChg;

            END aditionalOTcharge;

MEMBER FUNCTION
TotalCharge_WithOT(rate FLOAT,othours FLOAT)
      RETURN FLOAT IS
    x float;
            BEGIN
                  x := rate * othours *SELF.visitChg;
            RETURN x+SELF.visitChg;

            END TotalCharge_WithOT;

END;
/
```

```
select d.docname,d.dspecialization,d.visitChg,d.aditionalOTcharge(0.05,3),
d.TotalCharge_WithOT(0.05,3)
from doctor d
WHERE d.docname='Dr.J.Sudath';
```



```
SQL>
SQL> select d.docname,d.dspecialization,d.visitChg ,d.aditionalOTcharge(0.05,3),d.TotalCharge_WithOT(0.05,3)
  2  from doctor d
  3  WHERE d.docname='Dr.J.Sudath';

DOCNAME                                            DSPECIALIZATION                VISITCHG D.ADITIONALOTCHARGE(0.05,3) D.TOTALCHARGE_WITHOT(0.05,3)
-------------------------------------------------- ------------------------------ ---------- -------------------------- --------------------------
Dr.J.Sudath                                        Psychologist                         1700                        255                       1955

SQL>
```

```
select d.docname,d.dspecialization,d.visitChg,d.aditionalOTcharge(0.05,3),
d.TotalCharge_WithOT(0.05,3)
from doctor d;
```



```
SQL> select d.docname,d.dspecialization,d.visitChg ,d.aditionalOTcharge(0.05,3),d.TotalCharge_WithOT(0.05,3)
  2  from doctor d;

DOCNAME                                            DSPECIALIZATION                VISITCHG D.ADITIONALOTCHARGE(0.05,3) D.TOTALCHARGE_WITHOT(0.05,3)
-------------------------------------------------- ------------------------------ ---------- -------------------------- --------------------------
Dr.K.Alvis                                         Psychologist                         1500                        225                       1725
Dr.L.Dasun                                         Psychiatrist                         2500                        375                       2875
Dr.N.Saduni                                        therapist                            1000                        150                       1150
Dr.J.Sudath                                        Psychologist                         1700                        255                       1955
Dr.K.Avishka                                       counselor                            1200                        180                       1380

SQL>
```

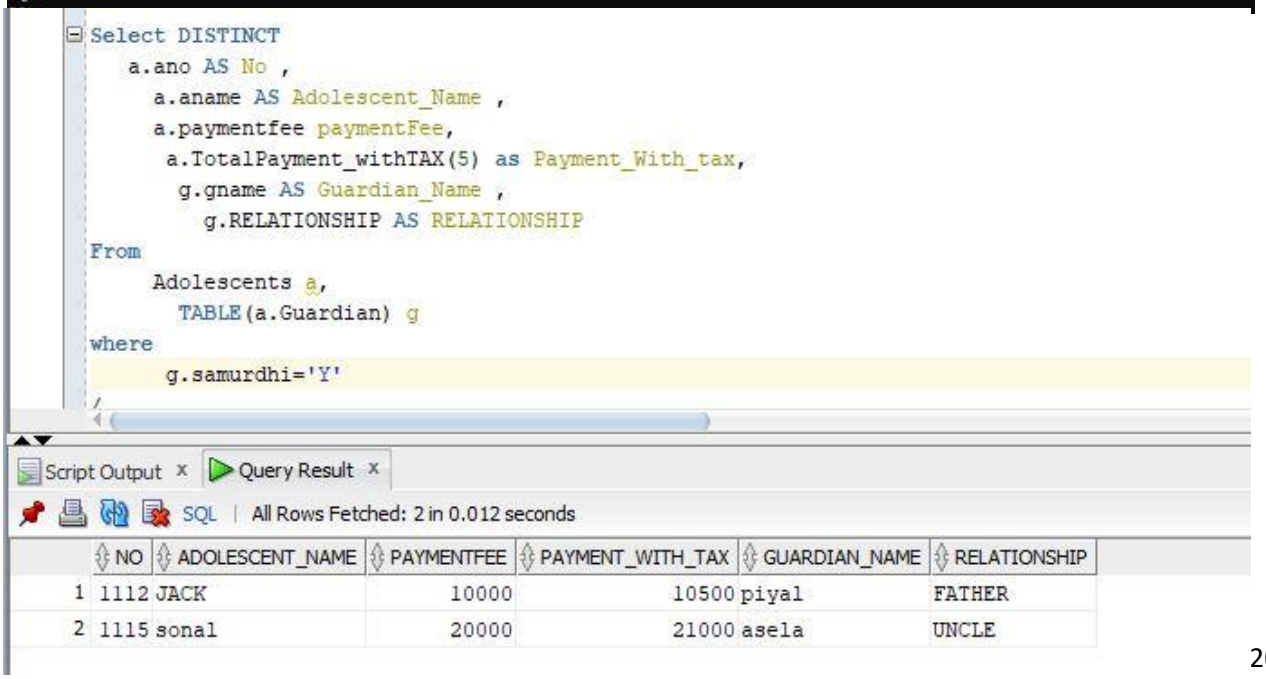
SQL queries that are useful for end users of the System

Report 1

Report that contain adolescents' detail with payment fee which his/her guardian is a Co-operate grants (samurdhi)

```
Select
   a.ano AS No ,
     a.aname AS Adolescent_Name ,
     a.paymentfee paymentFee,
      a.TotalPayment_withTAX(5) as Payment_With_tax,
       g.gname AS Guardian_Name ,
         g.RELATIONSHIP AS RELATIONSHIP
From
     Adolescents a,
       TABLE(a.Guardian) g
where
      g.samurdhi='Y'
/
```

```
SQL>
SQL> Select DISTINCT
  2     a.ano AS No ,
  3       a.aname AS Adolescent_Name ,
  4       a.paymentfee paymentFee,
  5        a.TotalPayment_withTAX(5) as Payment_With_tax,
  6         g.gname AS Guardian_Name ,
  7           g.RELATIONSHIP AS RELATIONSHIP
  8  From
  9       Adolescents a,
 10         TABLE(a.Guardian) g
 11  where
 12        g.samurdhi='Y'
 13  /

       NO ADOLESCENT_NAME PAYMENTFEE PAYMENT_WITH_TAX GUARDIAN_NAME                RELATIONSHIP
---------- --------------- ---------- --------------- ------------------------------ ------------------------------
     1112 JACK                 10000           10500 piyal                          FATHER
     1115 sonal                20000           21000 asela                          UNCLE

SQL>
```



Report 2

report that contain Adolescents details who is (age >21) with their grades

```
SELECT a.aname, TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) -
TO_NUMBER(TO_CHAR(a.dob,'YYYY')) AS AGE
from Adolescents a
group by a.aname ,  TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) -
TO_NUMBER(TO_CHAR(a.dob,'YYYY'))
having TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) -
TO_NUMBER(TO_CHAR(a.dob,'YYYY'))>21
order by  a.aname;
```

```
SQL>
SQL> SELECT a.aname, TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY')) AS AGE
  2  from Adolescents a
  3  group by a.aname ,  TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY'))
  4  having TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY'))>21
  5  order by  a.aname;

ANAME                AGE
--------------- ----------
Chamal                22
JACK                  23
sonal                 22
thilini               23
```

```
SELECT a.aname, TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY')) AS AGE
from Adolescents a
group by a.aname ,  TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY'))
having TO_NUMBER(TO_CHAR(SYSDATE,'YYYY')) - TO_NUMBER(TO_CHAR(a.dob,'YYYY'))>21
order by  a.aname;
```

ript Output | Query Result

SQL | All Rows Fetched: 4 in 0.004 seconds

	ANAME	AGE
1	Chamal	22
2	JACK	23
3	sonal	22
4	thilini	23

Report 3

this report contains doctors who have assigned for more than one patient

```
SELECT
   a.adoctor.doctorid AS Doctor_ID,
      a.adoctor.docname AS Doctor_Name,
         count(a.adoctor.doctorid) AS No_of_patient
FROM
    adolescents a
group by
   a.adoctor.doctorid,a.adoctor.docname
HAVING
    count(a.adoctor.doctorid) > 1;
```

```
SQL> SELECT
  2     a.adoctor.doctorid AS Doctor_ID,
  3        a.adoctor.docname AS Doctor_Name,
  4           count(a.adoctor.doctorid) AS No_of_patient
  5  FROM
  6      adolescents a
  7  group by
  8     a.adoctor.doctorid,a.adoctor.docname
  9  HAVING
 10      count(a.adoctor.doctorid) > 1;

 DOCTOR_ID DOCTOR_NAME                                        NO_OF_PATIENT
---------- -------------------------------------------------- -------------
        10 Dr.K.Alvis                                                    2

SQL>
```

Report 4

this report contains doctor details with their created report count

```
select DISTINCT
  r.rdoctor.docname AS Doctor_name  ,
        count(r.rdoctor.doctorid) Report_COUNT

From
    medicalRecord r
GROUP by  r.rdoctor.docname ;
```

```
SQL>
SQL> select DISTINCT r.rdoctor.docname AS Doctor_name  ,count(r.rdoctor.doctorid) Report_COUNT
  2  From  medicalRecord r
  3  GROUP by r.rdoctor.docname ;

DOCTOR_NAME                                        REPORT_COUNT
-------------------------------------------------- ------------
Dr.K.Alvis                                                    6
Dr.N.Saduni                                                   2
Dr.L.Dasun                                                    2
Dr.K.Avishka                                                  1
```

Report 5

this report contains doctor details, who is created more medical reports

```
select DISTINCT r.rdoctor.docname AS Doctor_name , count(r.rdoctor.doctorid)
AS Report_COUNT
From  medicalRecord r
  GROUP by  r.rdoctor.docname
     Having count(r.rdoctor.doctorid) >=
                                          All( SELECT count(r.rdoctor.doctorid)
                                             From medicalRecord r
                                               GROUP by  r.rdoctor.docname );
```

```
SQL>
SQL> select DISTINCT r.rdoctor.docname AS Doctor_name , count(r.rdoctor.doctorid) AS Report_COUNT
  2  From  medicalRecord r
  3    GROUP by  r.rdoctor.docname
  4       Having count(r.rdoctor.doctorid) >=
  5                                       All( SELECT count(r.rdoctor.doctorid)
  6                                          From medicalRecord r
  7                                            GROUP by  r.rdoctor.docname );

DOCTOR_NAME                                        REPORT_COUNT
-------------------------------------------------- ------------
Dr.K.Alvis                                                    6

SQL>
```

All Tables details

Adolescents – Nested table

```
Select a.ano , g.*
From Adolescents a, TABLE( a.Guardian) g
/
```

```
SQL>
SQL> Select a.ano,a.aname,a.dob,a.paymentfee,g.*
  2  From Adolescents a, TABLE(a.Guardian) g
  3  /

       ANO ANAME           DOB       PAYMENTFEE GNAME                          GMOBILE                         GINCOME S RELATIONSHIP
---------- --------------- --------- ---------- ------------------------------ ------------------------------ ---------- - ----------
      1112 JACK            21-JAN-97      10000 piyal                          0717036280                          20000 Y FATHER
      1112 JACK            21-JAN-97      10000 martha                         0717936281                              0 N MOTHER
      1113 dureksha        07-FEB-20      20000 saman                          0717045280                          30000 N FATHER
      1113 dureksha        07-FEB-20      20000 sunil                          0727966281                          25000 N UNCLE
      1113 dureksha        07-FEB-20      20000 kanthi                         0768836280                              0 N MOTHER
      1114 thilini         21-AUG-97      30000 nimal                          0777816280                          50000 N FATHER
      1114 thilini         21-AUG-97      30000 nilani                         0717936000                              0 N MOTHER
      1115 sonal           26-JAN-98      20000 asela                          0722816280                          40000 Y UNCLE
      1116 Chamal          10-NOV-98     120000 sumana                         0712216280                          46000 N AUNTY

9 rows selected.

SQL>
```

Doctor-table

```
select *
from doctor;
/
```

SQL Plus

```
SQL> select *
  2  from doctor;

  DOCTORID DOCNAME                                            DSPECIALIZATION                VISITCHG
---------- -------------------------------------------------- ------------------------------ ----------
        10 Dr.K.Alvis                                         Psychologist                         1500
        11 Dr.L.Dasun                                         Psychiatrist                         2500
        12 Dr.N.Saduni                                        therapist                            1000
        13 Dr.J.Sudath                                        Psychologist                         1700
        14 Dr.K.Alvis                                         counselor                            1200

SQL>
```

Schedule - table

select s.schedule_no,s.schedule_name,s.schedule_type,s.scheduled_adolescent.aname

from schedule s;

```
SQL> select s.schedule_no,s.schedule_name,s.schedule_type,s.scheduled_adolescent.aname
  2  from schedule s;

SCHEDULE_NO SCHEDULE_NAM SCHEDULE_TYP SCHEDULED_ADOLE
----------- ------------ ------------ ---------------
          1 schedule1    morning      JACK
          4 schedule5    night        JACK
          8 schedule3    affternoon   JACK
          2 schedule2    evening      dureksha
          3 schedule3    affternoon   dureksha
          5 schedule3    affternoon   thilini
          6 schedule1    morning      sonal
          9 schedule1    morning      sonal
          7 schedule1    morning      Chamal
         10 schedule1    morning      Chamal

10 rows selected.
```

Activity - table

select a.activity_no,a.activity_name,a.aschedule.schedule_name,a.arate

from Activity a;

```
SQL> select a.activity_no,a.activity_name,a.aschedule.schedule_name,a.arate
  2  from Activity a;

ACTIVITY_NO ACTIVITY_NAME   ASCHEDULE.SC      ARATE
----------- --------------- ------------ ----------
          1 speaking        schedule1             7
          2 reading         schedule2             5
          3 writing         schedule5             5
          4 listeing        schedule3            10
          5 speach          schedule1             5

SQL>
```

medicalRecord-table

select r.rdate,r.rAdolescent.aname,r.rdoctor.docname

from medicalRecord r;

```
SQL> set linesize 200
SQL> select r.rdate,r.rAdolescent.aname,r.rdoctor.docname
  2  from medicalRecord r;

RDATE     RADOLESCENT.ANA RDOCTOR.DOCNAME
--------- --------------- ------------------------------------
20-MAR-20 JACK            Dr.K.Alvis
03-DEC-19 JACK            Dr.K.Alvis
27-OCT-19 JACK            Dr.K.Alvis
25-JAN-20 JACK            Dr.K.Alvis
27-JAN-19 dureksha        Dr.L.Dasun
03-DEC-19 dureksha        Dr.L.Dasun
01-FEB-20 thilini         Dr.N.Saduni
16-FEB-20 thilini         Dr.N.Saduni
21-NOV-19 sonal           Dr.K.Alvis
06-NOV-19 sonal           Dr.K.Alvis
02-AUG-19 Chamal          Dr.K.Avishka

11 rows selected.
```

Screen prints

Types

```
SQL>
SQL> CREATE TYPE Guardian_T AS OBJECT(
  2  gname VARCHAR2(30),
  3  gmobile VARCHAR2(30),
  4  gincome number(8,2),
  5  samurdhi char(1),
  6  RELATIONSHIP VARCHAR2(30)
  7  )
  8  /

Type created.

SQL> CREATE TYPE Guardian_T_TABLE AS TABLE OF Guardian_T
  2  /

Type created.

SQL>
SQL> CREATE OR REPLACE TYPE schedule_T
  2  /

Type created.

SQL> CREATE OR REPLACE TYPE Doctor_t AS OBJECT(
  2  doctorid int ,
  3  docname varchar2(50),
  4  dspecialization varchar2(30),
  5  visitChg float
  6  )
  7  /

Type created.

SQL> CREATE OR REPLACE TYPE Adolescents_T AS OBJECT (
  2  ano number(4),
  3  aname varchar2(15),
  4  dob date,
  5  adoctor ref Doctor_t,
  6  paymentfee number(8,2),
  7  Guardian Guardian_T_TABLE
  8  )
  9  /
```

SQL Plus

```
SQL> CREATE OR REPLACE TYPE schedule_T AS OBJECT(
  2  schedule_no number(2),
  3  schedule_name varchar2(12),
  4  schedule_type varchar2(12),
  5  scheduled_adolescent ref Adolescents_T
  6  )not final
  7  /

Type created.

SQL> CREATE OR REPLACE TYPE Activity_t AS OBJECT (
  2  activity_no number(4),
  3  activity_name varchar2(15),
  4  aschedule ref schedule_T,
  5  arate number(2)
  6  )
  7  /

Type created.
```

SQL Plus

```
SQL> CREATE OR REPLACE TYPE medicalRecord_T AS OBJECT(
  2  Recordid number(3),
  3  rAdolescent ref Adolescents_T ,
  4  rdoctor ref Doctor_t,
  5  rdate date
  6  )
  7  /

Type created.

SQL> Create type social_schedule under schedule_T()
  2  /

Type created.

SQL>
SQL> Create type leisure_schedule under schedule_T()
  2  /

Type created.

SQL>
SQL> CREATE OR REPLACE TYPE Grades_T AS OBJECT(
  2  Gradeid number(4),
  3  gAdolescent ref Adolescents_T ,
  4  gactivity ref Activity_t,
  5  gdoctor ref Doctor_t,
  6  grade number(3)
  7  )
  8  /

Type created.

SQL>
```

Table

```
SQL> CREATE TABLE schedule OF schedule_T(
  2  schedule_no PRIMARY KEY
  3  )
  4  /

Table created.

SQL>
SQL> CREATE TABLE Adolescents of Adolescents_T(
  2  ano primary key)
  3  nested table Guardian store as Guardian_tb
  4  /

Table created.

SQL>
SQL> ALTER TABLE schedule
  2  MODIFY scheduled_adolescent REFERENCES Adolescents
  3  /

Table altered.

SQL>
SQL> CREATE TABLE Activity OF Activity_t(
  2  activity_no primary key,
  3  aschedule references schedule
  4  )
  5  /

Table created.

SQL>
SQL>
SQL> CREATE TABLE Doctor of Doctor_t(
  2  doctorid primary key
  3  )
  4  /

Table created.
```

```
SQL>
SQL> CREATE TABLE medicalRecord of medicalRecord_T(
  2  Recordid primary key,
  3  rAdolescent references Adolescents,
  4  rdoctor references Doctor
  5  )
  6  /

Table created.

SQL>
SQL>
SQL>
SQL>
SQL> CREATE TABLE Grades of Grades_T(
  2  Gradeid primary key,
  3  gAdolescent references Adolescents,
  4  gactivity references Activity,
  5  gdoctor references Doctor
  6  )
  7  /

Table created.
```

Insert Queries

activity

```
SQL>
SQL> INSERT INTO Activity VALUEs(Activity_t(0001,'speaking',(select ref (s) from schedule  s where s.schedule_no=01),07))
  2  /

1 row created.

SQL> INSERT INTO Activity VALUEs(Activity_t(0002,'reading',(select ref (s) from schedule  s where s.schedule_no=02),05))
  2  /

1 row created.

SQL> INSERT INTO Activity VALUEs(Activity_t(0003,'writing',(select ref (s) from schedule  s where s.schedule_no=04),05))
  2  /

1 row created.

SQL> INSERT INTO Activity VALUEs(Activity_t(0004,'listeing',(select ref (s) from schedule  s where s.schedule_no=05),10))
  2  /

1 row created.

SQL> INSERT INTO Activity VALUEs(Activity_t(0005,'speach',(select ref (s) from schedule  s where s.schedule_no=06),05))
  2  /

1 row created.
```

adolescent

```
SQL Plus
SQL>
SQL>
SQL> INSERT INTO Adolescents VALUES(1112,'JACK','21-JAN-97',(select ref(d) from Doctor d where d.doctorid = 10),10000.00,
  2  Guardian_T_TABLE(Guardian_T('piyal','0717036280',20000.00 ,'Y' ,'FATHER' ),
  3  Guardian_T('martha','0717936281',0.00,'N','MOTHER')))
  4  /

1 row created.

SQL>
SQL> INSERT INTO Adolescents VALUES(1113,'dureksha','07-FEB-20',(select ref(d) from Doctor d where d.doctorid = 11),20000.00,
  2  Guardian_T_TABLE(Guardian_T('saman','0717045280',30000.00,'N','FATHER'),
  3  Guardian_T('sunil','0727966281',25000.00,'N','UNCLE'),
  4  Guardian_T('kanthi','0768836280' ,0.00 , 'N' ,'MOTHER')))
  5  /

1 row created.

SQL>
SQL> INSERT INTO Adolescents VALUES(1114,'thilini','21-AUG-97',(select ref(d) from Doctor d where d.doctorid = 12),30000.00,
  2  Guardian_T_TABLE(Guardian_T('nimal' , '0777816280' , 50000.00 , 'N' , 'FATHER' ),
  3  Guardian_T('nilani','0717936000',0.00,'N','MOTHER')))
  4  /

1 row created.

SQL>
SQL> INSERT INTO Adolescents VALUES(1115,'sonal','26-JAN-98',(select ref(d) from Doctor d where d.doctorid = 10),20000.00,
  2  Guardian_T_TABLE(Guardian_T('asela' , '0722816280' , 40000.00 , 'Y' , 'UNCLE' )))
  3  /

1 row created.

SQL>
SQL> INSERT INTO Adolescents VALUES(1116,'Chamal','10-NOV-98', (select ref(d) from Doctor d where d.doctorid = 14),120000.00,
  2  Guardian_T_TABLE(Guardian_T('sumana' , '0712216280' , 46000.00 , 'N' , 'AUNTY' )))
  3  /

1 row created.

SQL>
```

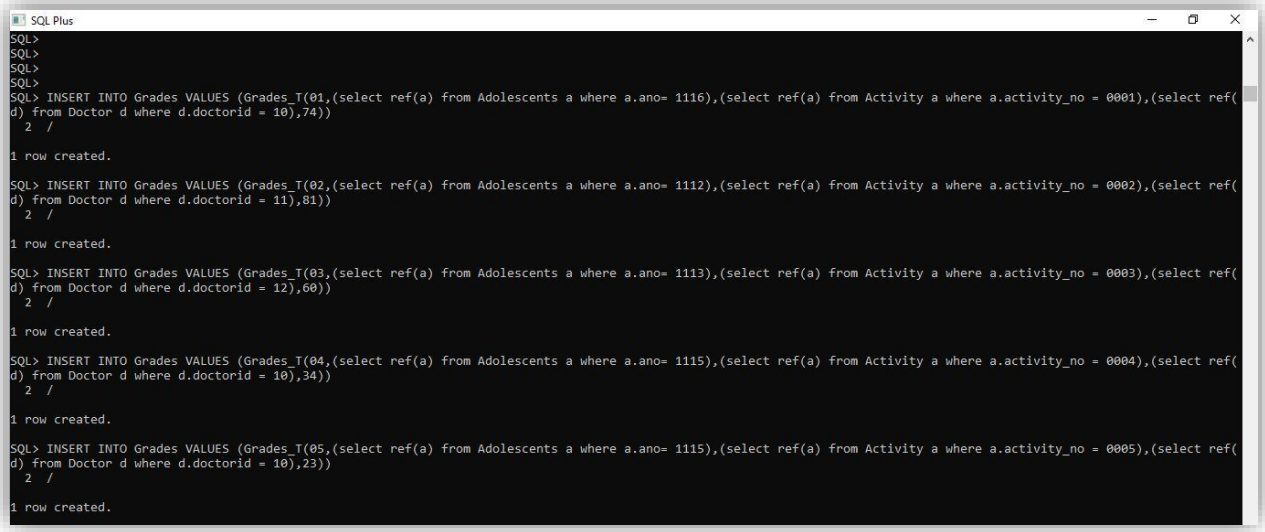
doctor

```
SQL>
SQL> INSERT INTO Doctor VALUES(Doctor_t(10,'Dr.K.Alvis','Psychologist','1500.00'))
  2  /

1 row created.

SQL> INSERT INTO Doctor VALUES(Doctor_t(11,'Dr.L.Dasun','Psychiatrist','2500.00'))
  2  /

1 row created.

SQL> INSERT INTO Doctor VALUES(Doctor_t(12,'Dr.N.Saduni','therapist','1000.00'))
  2  /

1 row created.

SQL> INSERT INTO Doctor VALUES(Doctor_t(13,'Dr.J.Sudath','Psychologist','1700.00'))
  2  /

1 row created.

SQL> INSERT INTO Doctor VALUES(Doctor_t(14,'Dr.K.Avishka','counselor','1200.00'))
  2  /

1 row created.
```

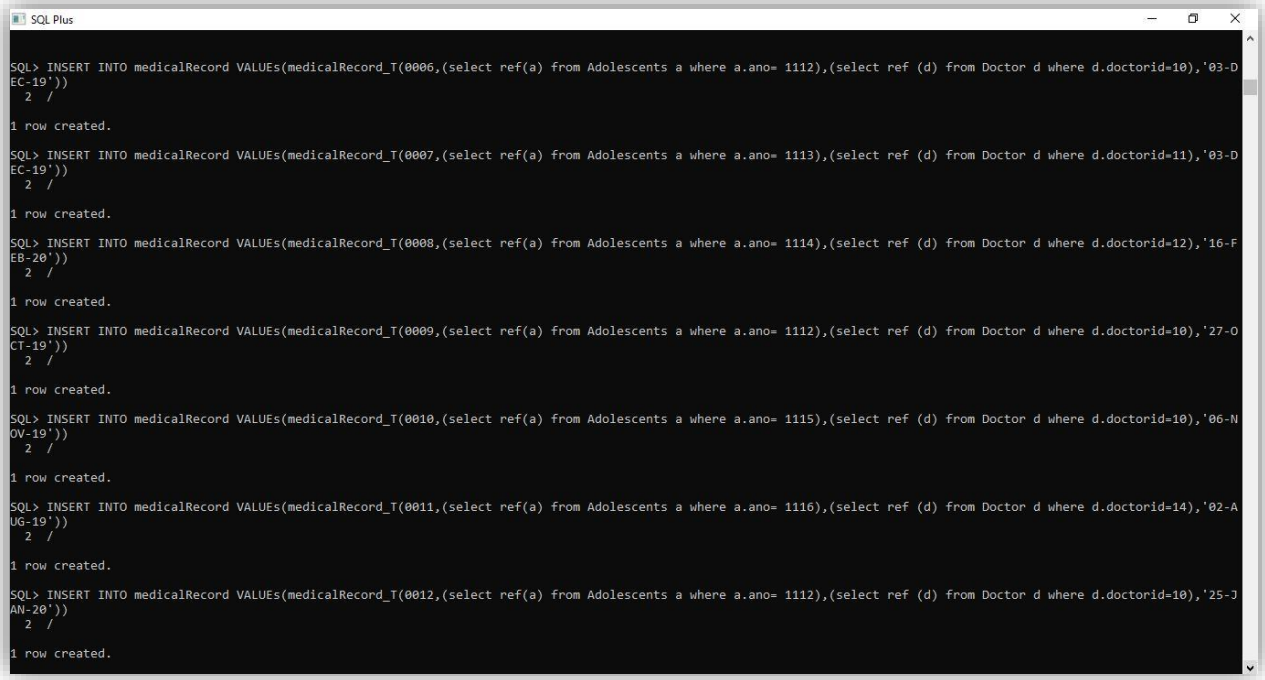
grade table

```
SQL> select g.Gradeid,g.gAdolescent.aname,g.gactivity.activity_name,g.gdoctor.docname,g.grade
  2  from Grades g;

   GRADEID GADOLESCENT.ANA GACTIVITY.ACTIV GDOCTOR.DOCNAME                                        GRADE
---------- --------------- --------------- -------------------------------------------------- ----------
         2 JACK            reading         Dr.L.Dasun                                             81
         7 JACK            reading         Dr.L.Dasun                                             85
         6 dureksha        speaking        Dr.L.Dasun                                             95
        10 dureksha        speaking        Dr.L.Dasun                                             83
         3 dureksha        writing         Dr.N.Saduni                                            60
         8 thilini         writing         Dr.K.Alvis                                             68
         9 thilini         listeing        Dr.K.Alvis                                             63
         4 sonal           listeing        Dr.K.Alvis                                             34
         5 sonal           speach          Dr.K.Alvis                                             23
         1 Chamal          speaking        Dr.K.Alvis                                             74

10 rows selected.
```

grades



medical records 1



medical records 2

```
SQL>
SQL>
SQL> INSERT INTO medicalRecord VALUEs(medicalRecord_T(0001,(select ref(a) from Adolescents a where a.ano= 1113),(select ref (d) from Doctor d where d.doctorid=11),'27-J
AN-19'))
  2  /

1 row created.

SQL> INSERT INTO medicalRecord VALUEs(medicalRecord_T(0002,(select ref(a) from Adolescents a where a.ano= 1114),(select ref (d) from Doctor d where d.doctorid=12),'01-F
EB-20'))
  2  /

1 row created.

SQL> INSERT INTO medicalRecord VALUEs(medicalRecord_T(0003,(select ref(a) from Adolescents a where a.ano= 1112),(select ref (d) from Doctor d where d.doctorid=10),'20-M
AR-20'))
  2  /

1 row created.

SQL> INSERT INTO medicalRecord VALUEs(medicalRecord_T(0004,(select ref(a) from Adolescents a where a.ano= 1115),(select ref (d) from Doctor d where d.doctorid=10),'21-N
OV-19'))
  2  /

1 row created.
```

schedule

```
SQL Plus
SQL>
SQL> INSERT INTO schedule  VALUES(schedule_T(01,'schedule1','morning',(select ref(a) from Adolescents a where a.ano= 1112)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(02,'schedule2','evening',(select ref(a) from Adolescents a where a.ano= 1113)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(03,'schedule3','affternoon',(select ref(a) from Adolescents a where a.ano= 1113)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(04,'schedule5','night',(select ref(a) from Adolescents a where a.ano= 1112)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(05,'schedule3','affternoon',(select ref(a) from Adolescents a where a.ano= 1114)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(06,'schedule1','morning',(select ref(a) from Adolescents a where a.ano= 1115)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(07,'schedule1','morning',(select ref(a) from Adolescents a where a.ano= 1116)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(08,'schedule3','affternoon',(select ref(a) from Adolescents a where a.ano= 1112)))
  2  /

1 row created.

SQL> INSERT INTO schedule  VALUES(schedule_T(09,'schedule1','morning',(select ref(a) from Adolescents a where a.ano= 1115)))
  2  /
```

other

```
SQL> select a.activity_no,a.activity_name,a.aschedule.schedule_name,a.arate
  2  from Activity a;

ACTIVITY_NO ACTIVITY_NAME   ASCHEDULE.SC      ARATE
----------- --------------- ------------ ----------
          1 speaking        schedule1             7
          2 reading         schedule2             5
          3 writing         schedule5             5
          4 listeing        schedule3            10
          5 speach          schedule1             5

SQL>
```

SQL Plus

```
SQL> select *
  2  from doctor;

  DOCTORID DOCNAME                                            DSPECIALIZATION                VISITCHG
---------- -------------------------------------------------- ------------------------------ ----------
        10 Dr.K.Alvis                                         Psychologist                         1500
        11 Dr.L.Dasun                                         Psychiatrist                         2500
        12 Dr.N.Saduni                                        therapist                            1000
        13 Dr.J.Sudath                                        Psychologist                         1700
        14 Dr.K.Alvis                                         counselor                            1200

SQL>
```

```
SQL> select r.rdate,r.rAdolescent.aname,r.rdoctor.docname
  2  from medicalRecord r;

RDATE     RADOLESCENT.ANA RDOCTOR.DOCNAME
--------- --------------- ----------------------------------------
20-MAR-20 JACK            Dr.K.Alvis
03-DEC-19 JACK            Dr.K.Alvis
27-OCT-19 JACK            Dr.K.Alvis
25-JAN-20 JACK            Dr.K.Alvis
27-JAN-19 dureksha        Dr.L.Dasun
03-DEC-19 dureksha        Dr.L.Dasun
01-FEB-20 thilini         Dr.N.Saduni
16-FEB-20 thilini         Dr.N.Saduni
21-NOV-19 sonal           Dr.K.Alvis
06-NOV-19 sonal           Dr.K.Alvis
02-AUG-19 Chamal          Dr.K.Alvis

11 rows selected.

SQL>
```

```
SQL>
SQL> Select a.ano,a.aname,a.dob,a.paymentfee,g.*
  2  From Adolescents a, TABLE(a.Guardian) g
  3  /

       ANO ANAME           DOB       PAYMENTFEE GNAME                          GMOBILE                        GINCOME S RELATIONSHIP
---------- --------------- --------- ---------- ------------------------------ ------------------------------ ---------- - ------------------
      1112 JACK            21-JAN-97      10000 piyal                          0717036280                      20000 Y FATHER
      1112 JACK            21-JAN-97      10000 martha                         0717936281                          0 N MOTHER
      1113 dureksha        07-FEB-20      20000 saman                          0717045280                      30000 N FATHER
      1113 dureksha        07-FEB-20      20000 sunil                          0727966281                      25000 N UNCLE
      1113 dureksha        07-FEB-20      20000 kanthi                         0768836280                          0 N MOTHER
      1114 thilini         21-AUG-97      30000 nimal                          0777816280                      50000 N FATHER
      1114 thilini         21-AUG-97      30000 nilani                         0717936000                          0 N MOTHER
      1115 sonal           26-JAN-98      20000 asela                          0722816280                      40000 Y UNCLE
      1116 Chamal          10-NOV-98     120000 sumana                         0712216280                      46000 N AUNTY

9 rows selected.

SQL>
```

```
SQL> select s.schedule_no,s.schedule_name,s.schedule_type,s.scheduled_adolescent.aname
  2  from schedule s;

SCHEDULE_NO SCHEDULE_NAM SCHEDULE_TYP SCHEDULED_ADOLE
----------- ------------ ------------ ---------------
          1 schedule1    morning      JACK
          4 schedule5    night        JACK
          8 schedule3    affternoon   JACK
          2 schedule2    evening      dureksha
          3 schedule3    affternoon   dureksha
          5 schedule3    affternoon   thilini
          6 schedule1    morning      sonal
          9 schedule1    morning      sonal
          7 schedule1    morning      Chamal
         10 schedule1    morning      Chamal

10 rows selected.
```