**Slip 10-20**

**S11-**

CREATE TABLE lab340(

lno NUMBER(3) PRIMARY KEY,

lname VARCHAR2(50),

cap NUMBER(5) NOT NULL,

equipment VARCHAR2(100)

);

INSERT ALL

INTO lab340 VALUES (1, 'Chemistry Lab', 30, 'Bunsen burners, Beakers, Test tubes')

INTO lab340 VALUES (2, 'Physics Lab', 25, 'Optical benches, Pulleys, Pendulums')

INTO lab340 VALUES (3, 'Computer Lab', 20, 'Computers, Projectors, Whiteboards')

INTO lab340 VALUES (4, 'Biology Lab', 35, 'Microscopes, Specimens, Petri dishes')

INTO lab340 VALUES (5, 'Math Lab', 15, 'Geometric shapes, Calculators, Graph paper')

SELECT \* FROM dual;

CREATE TABLE stud340(

rno NUMBER(5) PRIMARY KEY,

sname VARCHAR2(50),

class VARCHAR2(20),

timetable VARCHAR2(100),

lno NUMBER(3) REFERENCES lab340(lno) ON DELETE CASCADE

);

INSERT ALL

INTO stud340 VALUES (101, 'Aarav Patel', '10th', 'Monday: Math, Tuesday: Science, Wednesday: English', 1)

INTO stud340 VALUES (102, 'Mira Singh', '11th', 'Monday: History, Tuesday: Physics, Wednesday: Chemistry', 2)

INTO stud340 VALUES (103, 'Arjun Sharma', '12th', 'Monday: Biology, Tuesday: Geography, Wednesday: Computer Science', 3)

INTO stud340 VALUES (104, 'Isha Gupta', '9th', 'Monday: Social Studies, Tuesday: Mathematics, Wednesday: Physical Education', 4)

INTO stud340 VALUES (105, 'Rohan Verma', '10th', 'Monday: English, Tuesday: Chemistry, Wednesday: Physics', 5)

SELECT \* FROM dual;

create or replace function f11(ulno in number)

return number is

nos number;

begin

select count(rno) into nos from stud340,lab340 where lab340.lno=stud340.lno and lab340.lno=ulno;

return nos;

end;

select f11(:ulno) from dual;

**================================================================================**

**S12-**

CREATE TABLE wholesaler34 (

wno NUMBER(3) PRIMARY KEY,

wname VARCHAR2(50) NOT NULL,

address VARCHAR2(50),

city VARCHAR2(50)

);

CREATE TABLE product34 (

pno NUMBER(4) PRIMARY KEY,

pname VARCHAR2(50) NOT NULL,

rate NUMBER(7) CHECK (rate > 0)

);

CREATE TABLE wp (

wno NUMBER(3) REFERENCES wholesaler34(wno) ON DELETE CASCADE,

pno NUMBER(4) REFERENCES product34(pno) ON DELETE CASCADE,

quantity NUMBER(5) CHECK (quantity > 0),

PRIMARY KEY (wno, pno)

);

INSERT INTO wholesaler34 VALUES (1, 'Raj Traders', '123 Street', 'City A');

INSERT INTO wholesaler34 VALUES (2, 'Sharma Distributors', '456 Road', 'City B');

INSERT INTO wholesaler34 VALUES (3, 'Singh Enterprises', '789 Avenue', 'City C');

INSERT INTO wholesaler34 VALUES (4, 'Patel Traders', '101 Boulevard', 'City D');

INSERT INTO wholesaler34 VALUES (5, 'Kumar Suppliers', '202 Lane', 'City E');

INSERT INTO product34 VALUES (101, 'Sugar', 50.00);

INSERT INTO product34 VALUES (102, 'Tea Leaves', 75.00);

INSERT INTO product34 VALUES (103, 'Rice', 40.00);

INSERT INTO product34 VALUES (104, 'Wheat Flour', 30.00);

INSERT INTO product34 VALUES (105, 'Spices', 60.00);

INSERT INTO wp VALUES (1, 101, 200);

INSERT INTO wp VALUES (2, 102, 150);

INSERT INTO wp VALUES (3, 103, 100);

INSERT INTO wp VALUES (4, 104, 250);

INSERT INTO wp VALUES (5, 105, 120);

Q1)

create or replace function f11(uname in varchar2)

return number is

isum number;

begin

select count(product34.pno) into isum from wholesaler34,product34,wp where wholesaler34.wno = wp.wno AND product34.pno=wp.pno and uname = wholesaler34.wname;

return isum;

end;

select f11(:uname) from dual;

q2)

create or replace trigger t12

before insert or update on product34

for each row

begin

if(:new.rate<=0) then

raise\_application\_error(-20012,'Rate Must be greater Than 0');

end if;

end;

INSERT INTO product34 VALUES (106, 'Sugar', 0);

**================================================================================**

**S13**

create table country34(

cid number(3) primary key,

cname varchar2(15),

nos number(8),

area varchar2(15) not null,

loc varchar2(15),

population number(10)

);

create table citizen34(

id number(3) primary key,

name varchar2(15),

mtounge varchar2(15),

state varchar2(15),

cid number(3) references country34(cid) on delete cascade

);

insert into country34 values(1,'India',28,'delhi','dalal stret',9000000);

insert into country34 values(2,'china',38,'bejing','jyuhia kimso',5400000);

insert into country34 values(3,'USA',34,'new york','cabi street',930000);

insert into country34 values(4,'europe',28,'brusel','hedge area ',90000);

insert into country34 values(5,'argentina',28,'beulo arias','mngose stret',900300);

insert into citizen34 values(101,'mangit','hindi','UP',1);

insert into citizen34 values(102,'ragu','hindi','UP',2);

insert into citizen34 values(103,'manisha','marathi','MP',3);

insert into citizen34 values(104,'brusel','english','BR',4);

insert into citizen34 values(105,'alian','english','ST',5);

**q1)**

**create or replace function f11**

**return varchar2 is**

**cn country34.cname%type;**

**begin**

**select cname into cn from country34 where population=(select min(population) from country34);**

**return cn;**

**end;**

**select f11() from dual;**

**================================================================================**

**S14**

create table clg34(

code number(3) primary key,

cname varchar2(20),

addr varchar2(20)

);

create table tech34(

tid number(3) primary key,

tname varchar2(15) not null,

qual varchar2(15),

spec varchar2(15),

sal number(7),

desg varchar2(15),

code number(3) references clg34(code) on delete cascade

);

INSERT INTO clg34 VALUES (1, 'Shamrao college', 'Address A');

INSERT INTO clg34 VALUES (2, 'Vp College ', 'Address B');

INSERT INTO clg34 VALUES (3, 'Tc College ', 'Address C');

INSERT INTO clg34 VALUES (4, 'Target College ', 'Address D');

INSERT INTO clg34 VALUES (5, 'puneassoc college', 'Address E');

INSERT INTO tech34 VALUES (101, 'Shamikharat', 'M.Tech', 'Computer Science', 80000, 'Professor', 1);

INSERT INTO tech34 VALUES (102, 'Jayeshwaghmare', 'Ph.D.', 'Electrical Engineering', 90000, 'Associate Professor', 2);

INSERT INTO tech34 VALUES (103, 'Bob wilson', 'B.Tech', 'Mechanical Engineering', 75000, 'Assistant Professor', 3);

INSERT INTO tech34 VALUES (104, 'manishpatnakar', 'M.Sc.', 'Physics', 70000, 'Lecturer', 4);

INSERT INTO tech34 VALUES (105, 'Chris elvish', 'Ph.D.', 'Chemistry', 85000, 'Professor', 5);

Q1)

create or replace procedure p11(uname in varchar2) is

cursor c11 is

select clg34.code,cname,addr from clg34,tech34 where clg34.code=tech34.code and tech34.tname=uname;

begin

for i in c11

loop

dbms\_output.put\_line(i.code||' '||i.cname);

end loop;

end;

begin

p11(:uname);

end;

q2)

create or replace trigger t14

before insert or update on tech34

for each row

begin

if(:new.sal<=0) then

raise\_application\_error(-20014,'Salary Must Be greater Than Zero');

end if;

end;

INSERT INTO tech34 VALUES (106, 'Shamikharat', 'M.Tech', 'Computer Sci', 0, 'Professor', 1);

**================================================================================**

**S15-**

CREATE TABLE driver34(

did NUMBER(11) PRIMARY KEY,

dname VARCHAR2(50) NOT NULL,

addr VARCHAR2(100)

);

CREATE TABLE car34(

lno NUMBER(11) PRIMARY KEY,

model VARCHAR2(50),

year NUMBER(4)

);

CREATE TABLE dc34(

did NUMBER(11) REFERENCES driver34(did) on delete cascade,

lno NUMBER(11) REFERENCES car34(lno) on delete cascade,

udate DATE,

utime varchar2(20)

);

INSERT ALL

INTO driver34 VALUES (1, 'Aarav Patel', 'Delhi')

INTO driver34 VALUES (2, 'Mira Singh', 'Mumbai')

INTO driver34 VALUES (3, 'Arjun Sharma', 'Bangalore')

INTO driver34 VALUES (4, 'Isha Gupta', 'Kolkata')

INTO driver34 VALUES (5, 'Rohan Verma', 'Chennai')

SELECT \* FROM dual;

INSERT ALL

INTO car34 VALUES (101, 'Swift', 2020)

INTO car34 VALUES (102, 'City', 2022)

INTO car34 VALUES (103, 'Civic', 2021)

INTO car34 VALUES (104, 'Fortuner', 2020)

INTO car34 VALUES (105, 'XUV500', 2023)

SELECT \* FROM dual

INSERT ALL

INTO dc34 VALUES (1, 101,'1-feb-15', '08:30 AM')

INTO dc34 VALUES (2, 102,'2-feb-17', '10:45 AM')

INTO dc34 VALUES (3, 103,'10-feb-15', '02:00 PM')

INTO dc34 VALUES (4, 104,'1-jan-18', '09:15 AM')

INTO dc34 VALUES (5, 105,'1-feb-17', '01:30 PM')

SELECT \* FROM dual;

create or replace function f11(car in varchar2)

return number is

nop number;

begin

select count(driver34.did) into nop from driver34 ,car34,dc34 where dc34.did=driver34.did and car34.lno=dc34.lno and car=car34.model;

return nop;

end;

select f11('Swift') from dual;

q2)

create or replace trigger t15

before insert or update on car34

for each row

begin

if(:new.year>2024) then

raise\_application\_error(-20015,'Year must be Not be greater than current year');

end if;

end;

insert INTO car34 VALUES (101, 'Swift', 2025);

**================================================================================**

**S16**

CREATE TABLE game341 (

gid number(3) primary key,

gname VARCHAR2(50),

nop NUMBER(5) CHECK (nop> 0),

cname VARCHAR2(50)

);

CREATE TABLE player341 (

pid NUMBER PRIMARY KEY,

pname VARCHAR2(50),

addr VARCHAR2(100),

cname VARCHAR2(50)

);

CREATE TABLE gprelation1(

gid number(3) REFERENCES game341(gid) on delete cascade,

pid NUMBER REFERENCES player341(pid) on delete cascade

);

INSERT ALL

INTO game341 VALUES (100,'Cricket', 11, 'John Doe')

INTO game341 VALUES (101,'Football', 22, 'Jane Smith')

INTO game341 VALUES (102,'Badminton', 4, 'David Johnson')

INTO game341 VALUES (103,'Basketball', 8, 'Maria Garcia')

INTO game341 VALUES (104,'Tennis', 2, 'Robert Brown')

SELECT \* FROM dual;

INSERT ALL

INTO player341 (pid, pname, addr, cname) VALUES (1, 'Aarav Patel', 'Delhi', 'ABC Club')

INTO player341 (pid, pname, addr, cname) VALUES (2, 'Mira Singh', 'Mumbai', 'XYZ Club')

INTO player341 (pid, pname, addr, cname) VALUES (3, 'Arjun Sharma', 'Bangalore', 'Tech Club')

INTO player341 (pid, pname, addr, cname) VALUES (4, 'Isha Gupta', 'Kolkata', 'Innovation Club')

INTO player341 (pid, pname, addr, cname) VALUES (5, 'RohanVerma', 'Chennai', 'Info Club')

SELECT \* FROM dual;

INSERT ALL

INTO gprelation1 VALUES (100, 1)

INTO gprelation1 VALUES (101, 2)

INTO gprelation1 VALUES (102, 3)

INTO gprelation1 VALUES (103, 4)

INTO gprelation1 VALUES (104, 5)

SELECT \* FROM dual;

create or replace procedure p4 is

cursor c4 is

select game341.gid,gname,nop from game341 where nop> 5;

begin

for i in c4 loop

dbms\_output.put\_line(i.gid||' '||i.gname||' '||i.nop);

end loop;

end;

begin

p4;

end;

q2)

create or replace trigger t16

before insert or update on game341

for each row

begin

if(:new.nop <=0) then

raise\_application\_error(-20015,'Number of player Should be greater than 0');

end if;

end;

insert INTO game341 VALUES (109,'Cricket', 0, 'John Doe');

**================================================================================**

**S17**

CREATE TABLE person3400 (

pname VARCHAR2(50) PRIMARY KEY,

pcity VARCHAR2(50)

);

CREATE TABLE Compy3400 (

name VARCHAR2(50) PRIMARY KEY,

address VARCHAR2(100),

city VARCHAR2(50),

phone VARCHAR2(15),

svalue NUMBER(7)

);

CREATE TABLE comper3400(

name VARCHAR2(50) REFERENCES Compy3400(name) ON DELETE CASCADE,

pname VARCHAR2(50) REFERENCES Person3400(pname) ON DELETE CASCADE,

Noshares NUMBER(11)

);

INSERT ALL

INTO person3400 VALUES ('Ravi Kumar', 'Delhi')

INTO person3400 VALUES ('Priya Sharma', 'Mumbai')

INTO person3400 VALUES ('Amit Singh', 'Bangalore')

INTO person3400 VALUES ('Sneha Gupta', 'Kolkata')

INTO person3400 VALUES ('Rahul Verma', 'Chennai')

SELECT \* FROM dual;

INSERT ALL

INTO Compy3400 VALUES ('ABC Corporation', '123 Main St', 'Delhi', '123400567890', 1000000)

INTO Compy3400 VALUES ('XYZ Ltd', '456 Park Ave', 'Mumbai', '9876543210', 800000)

INTO Compy3400 VALUES ('Tech Solutions', '789 Tech St', 'Bangalore', '8765432109', 1200000)

INTO Compy3400 VALUES ('Global Innovations', '101 Innovation Blvd', 'Kolkata', '7654321098', 1500000)

INTO Compy3400 VALUES ('Info Systems', '202 Info St', 'Chennai', '6543210987', 900000)

SELECT \* FROM dual;

INSERT ALL

INTO comper3400 VALUES ('ABC Corporation', 'Ravi Kumar', 1000)

INTO comper3400 VALUES ('XYZ Ltd', 'Priya Sharma', 800)

INTO comper3400 VALUES ('Tech Solutions', 'Amit Singh', 1200)

INTO comper3400 VALUES ('Global Innovations', 'Sneha Gupta', 1500)

INTO comper3400 VALUES ('Info Systems', 'Rahul Verma', 900)

SELECT \* FROM dual;

create or replace trigger t17

before insert or update on comper3400

for each row

begin

if(:new.Noshares<=0) then

raise\_application\_error(-20015,'Number of share Should Not be 0');

end if;

end;

insert INTO comper3400 VALUES ('ABC Corporation', 'Ravi Kumar', 0)

**================================================================================**

**S18**

CREATE TABLE std240 (

sno NUMBER(5) PRIMARY KEY,

sname VARCHAR2(50) NOT NULL,

sclass VARCHAR2(10)

);

CREATE TABLE comp240 (

cno NUMBER(5) PRIMARY KEY,

cname VARCHAR2(50) NOT NULL,

ctype VARCHAR2(10) CHECK (ctype IN ('sports', 'academic'))

);

CREATE TABLE stdcomp240(

sno NUMBER(5) REFERENCES std240(sno) on delete cascade,

cno NUMBER(5) REFERENCES comp240(cno) on delete cascade,

year NUMBER(4),

rank NUMBER(3),

);

INSERT ALL

INTO std240 VALUES (1, 'Ravi Kumar', '12A')

INTO std240 VALUES (2, 'Priya Sharma', '11B')

INTO std240 VALUES (3, 'Amit Singh', '10C')

INTO std240 VALUES (4, 'Neha Patel', '12B')

INTO std240 VALUES (5, 'Kunal Sharma', '11A')

SELECT \* FROM dual;

INSERT ALL

INTO comp240 VALUES (101, 'Chess Championship', 'sports')

INTO comp240 VALUES (102, 'Science Fair', 'academic')

INTO comp240 VALUES (103, 'Football Tournament', 'sports')

INTO comp240 VALUES (104, 'Debate Competition', 'academic')

INTO comp240 VALUES (105, 'Math Olympiad', 'academic')

SELECT \* FROM dual;

INSERT ALL

INTO stdcomp240 VALUES (1, 101, 2022, 2)

INTO stdcomp240 VALUES (2, 102, 2022, 1)

INTO stdcomp240 VALUES (3, 103, 2022, 3)

INTO stdcomp240 VALUES (4, 104, 2022, 1)

INTO stdcomp240 VALUES (5, 105, 2022, 2)

SELECT \* FROM dual;

declare

cursor c11(uyear stdcomp340.year%type) is

select DISTINCT stdcomp340.year,ctype,cname from comp340,std340,stdcomp340 where stdcomp340.cno=comp340.cno and std340.sno=std340.sno and uyear = stdcomp340.year;

begin

for s in c11(:uyear)

loop

dbms\_output.put\_line(s.year||' '||s.ctype||' '||s.cname);

end loop;

end;

q1) create or replace function f17(rgno in number)

return number is

cn number;

begin

select count(comp340.cno) into cn from stdcomp340,comp340,std340 where stdcomp340.sno=std340.sno and comp340.cno = stdcomp340.cno

and rgno = std340.sno;

return cn;

end;

select f17(:rgno) from dual;

**================================================================================**

**S19**

CREATE TABLE game341 (

Gid number(3) primary key,

gname VARCHAR2(50) ,

nop NUMBER(5) CHECK (nop> 0),

cname VARCHAR2(50)

);

CREATE TABLE player341 (

pid NUMBER PRIMARY KEY,

pname VARCHAR2(50),

addr VARCHAR2(100),

cname VARCHAR2(50)

);

CREATE TABLE gprelation (

gid number(3) REFERENCES game341(gid) on delete cascade,

pid NUMBER REFERENCES player341(pid) on delete cascade

);

INSERT ALL

INTO game341 VALUES ('Cricket', 11, 'John Doe')

INTO game341 VALUES ('Football', 22, 'Jane Smith')

INTO game341 VALUES ('Badminton', 4, 'David Johnson')

INTO game341 VALUES ('Basketball', 8, 'Maria Garcia')

INTO game341 VALUES ('Tennis', 2, 'Robert Brown')

SELECT \* FROM dual;

INSERT ALL

INTO game341 (gname, nop, cname) VALUES ('Cricket', 11, 'John Doe')

INTO game341 (gname, nop, cname) VALUES ('Football', 22, 'Jane Smith')

INTO game341 (gname, nop, cname) VALUES ('Badminton', 4, 'Yashvantbhide')

INTO game341 (gname, nop, cname) VALUES ('Basketball', 8, 'Maria Garcia')

INTO game341 (gname, nop, cname) VALUES ('Tennis', 2, 'arjityash')

SELECT \* FROM dual;

INSERT ALL

INTO player341 (pid, pname, addr, cname) VALUES (1, 'Aarav Patel', 'Delhi', 'ABC Club')

INTO player341 (pid, pname, addr, cname) VALUES (2, 'Mira Singh', 'Mumbai', 'XYZ Club')

INTO player341 (pid, pname, addr, cname) VALUES (3, 'Arjun Sharma', 'Bangalore', 'Tech Club')

INTO player341 (pid, pname, addr, cname) VALUES (4, 'Isha Gupta', 'Kolkata', 'Innovation Club')

INTO player341 (pid, pname, addr, cname) VALUES (5, 'Rohan Verma', 'Chennai', 'Info Club')

SELECT \* FROM dual;

INSERT ALL

INTO gprelation1 VALUES (100, 1)

INTO gprelation1 VALUES (101, 2)

INTO gprelation1 VALUES (102, 3)

INTO gprelation1 VALUES (103, 4)

INTO gprelation1 VALUES (104, 5)

SELECT \* FROM dual;

**Q1)**

**create or replace function f19**

**return number is**

**nc number;**

**begin**

**select count(player341.pid) into nc from gprelation1,game341,player341 where gprelation1.gid = game341.gid and player341.pid = gprelation1.pid and player341.cname =**

**'ABC Club';**

**return nc;**

**end;**

**select f19() from dual;**

**================================================================================**

**S20**

CREATE TABLE driver34(

did NUMBER(11) PRIMARY KEY,

dname VARCHAR2(50) NOT NULL,

addr VARCHAR2(100)

);

CREATE TABLE car34(

lno NUMBER(11) PRIMARY KEY,

model VARCHAR2(50),

year NUMBER(4)

);

CREATE TABLE dc34(

did NUMBER(11) REFERENCES driver(did) on delete cascade,

lno NUMBER(11) REFERENCES car(lno) on delete cascade,

udate DATE,

utime varchar2(20)

);

INSERT ALL

INTO driver34 VALUES (1, 'Aarav Patel', 'Delhi')

INTO driver34 VALUES (2, 'Mira Singh', 'Mumbai')

INTO driver34 VALUES (3, 'Arjun Sharma', 'Bangalore')

INTO driver34 VALUES (4, 'Isha Gupta', 'Kolkata')

INTO driver34 VALUES (5, 'Rohan Verma', 'Chennai')

SELECT \* FROM dual;

INSERT ALL

INTO car34 VALUES (101, 'Swift', 2020)

INTO car34 VALUES (102, 'City', 2022)

INTO car34 VALUES (103, 'Civic', 2021)

INTO car34 VALUES (104, 'Fortuner', 2020)

INTO car34 VALUES (105, 'XUV500', 2023)

SELECT \* FROM dual

INSERT ALL

INTO dc34 VALUES (1, 101,'1-feb-15', '08:30 AM')

INTO dc34 VALUES (2, 102,'2-feb-17', '10:45 AM')

INTO dc34 VALUES (3, 103,'10-feb-15', '02:00 PM')

INTO dc34 VALUES (4, 104,'1-jan-18', '09:15 AM')

INTO dc34 VALUES (5, 105,'1-feb-17', '01:30 PM')

SELECT \* FROM dual;

create or replace procedure p4(ut in date) is

cursor c4 is

select car3400.lno,model,year from car3400,driver3400,dc3400 where dc3400.did=driver3400.did and car3400.lno=dc3400.lno and ut=dc3400.udate;

begin

for i in c4 loop

dbms\_output.put\_line(i.lno||' '||i.model||' '||i.year );

end loop;

end;

begin

p4(:ut);

end;