DBMS Assignment-1

Title: Smart Farming systematic approach data management system.

1602-18-737-108

A.SUSHMITHA.

Smart Farming systematic approach data management system

ABSTRACT:

This project " Smart Farming systematic approach data management system" where it reduces the ecological footprint of farming. Minimized or site-specific application of inputs, such as fertilizers and pesticides, in precision agriculture systems will mitigate leaching problems as well as the emission of greenhouse gases. With current ICT, it is possible to create a sensor network allowing almost continuous monitoring of the farm.

Smart farming can make agriculture more profitable for the farmer. Decreasing resources input will save the farmer money and lobour, and increased reliability of spatially explicit data.

REQUIREMENTS ANALYSIS

List of tables:

- Farmer
- Uses
- Auto_robotic
- Soil_sensor
- Weather
- Govt_off
- Monitor
- Supp_team
- Search
- Gives

List of attributes with their domain types:

Farmer:

Farmer id: fid-Number()

Farmer name: fname-varchar()

Govt_off:

Govt id: gid – Number()

Govt name: gname-varchar()

Supp_team:

Supp id: sid –Number()

Supp name: sname varchar()

Search:

Search insects: type_inst – varchar()

Search problem: problem – varchar()

Auto_robotic:

Auto seeding: seeding-varchar()

Auto watering: auto_water –varchar()

Auto tractor: tractor-varchar()

Auto seeding: seeds-varchar()

Soil_sensor:

Soil report: soil_report-varchar()

Soil seeds: seed_result-varchar()

Weather:

Weather temperature: temp-varchar()

Uses:

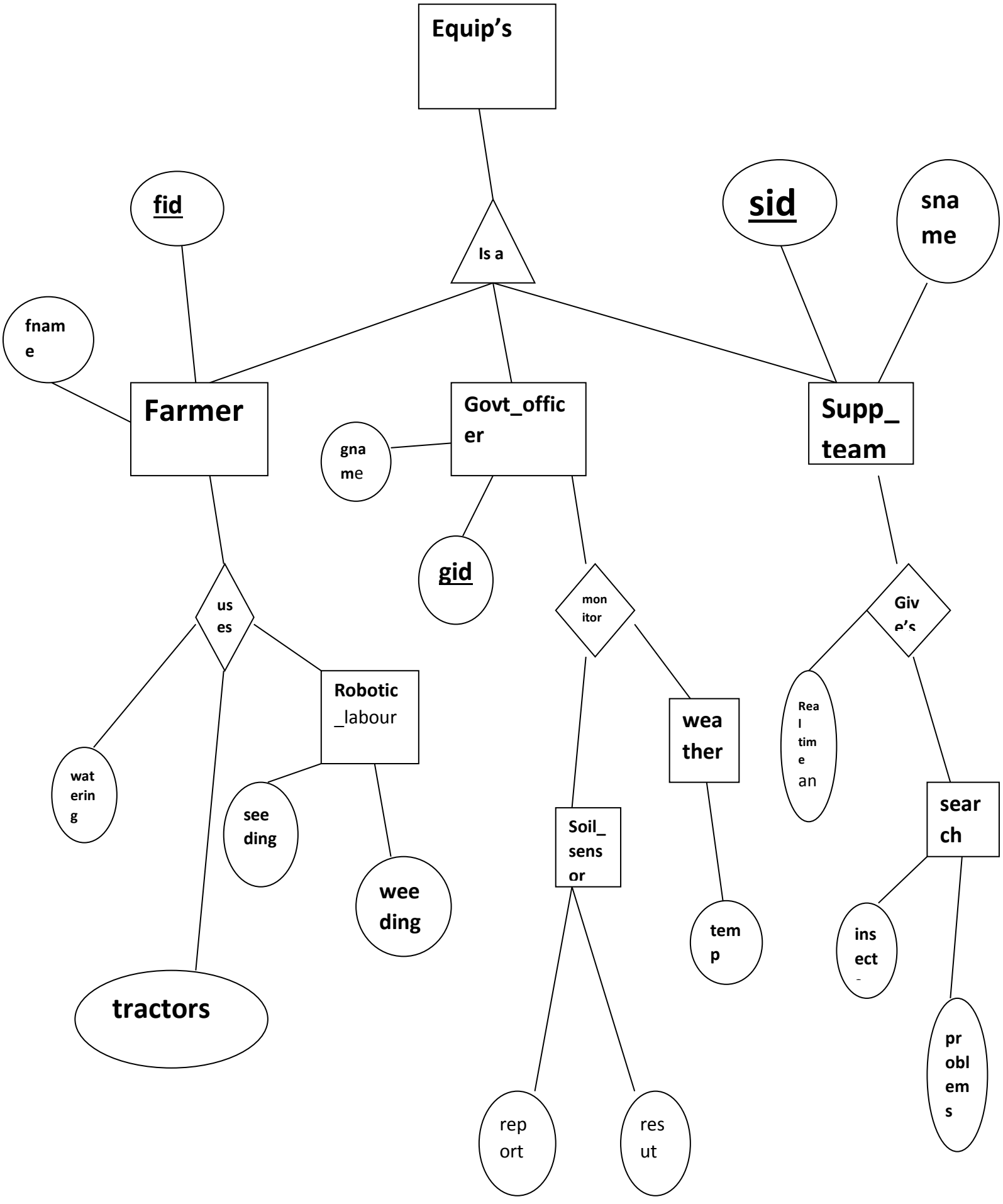
Tractor

Watering &Irrigation

Give's:

Real time analysis

ER- DIAGRAM:


Equip's
fid
Is a
sid
sna
me
fnam
e
Farmer
Govt_offic
er
Supp_
team
gna
me
gid
us
es
mon
itor
Giv
e's
Robotic
_labour
wea
ther
Rea
l
tim
e
an
wat
erin
g
see
ding
wee
ding
Soil_
sens
or
sear
ch
tem
p
ins
ect
-
tractors
rep
ort
res
ut
pr
obl
em
s

Mapping Cardinalities and Participation Constraints:

In the smart farming there are many types of users and there are uses and monitors to many sensors and reports so many to many mapping cardinalities between uses and farmer.

A farmer will uses the tractors, watering, auto seeding ,weeding etc by smart equipments. It has many to many constraints.

A government officer will monitors the soils sensors, weather like temperature. An support team will checks the day to day real time analysis and gives the

report of the soil and crops. It has many to many constraints.

DDL COMMANDS:

SQL>Create table **farmer(**

fid number(10) primary key, fname varchar(20));

Table created.

SQL>create table **uses**(

fid number(10) primary key, auto_water varchar(20), tractor varchar(20), seeds varchar(30));

Table created.

SQL>create table **auto_robotic**(seeding varchar(30) primary key, weeding varchar(50));

Table created.

SQL>create table **soil_sensor**(soil_report varchar(30), seed_result varchar(30) primary key);

Table created.

SQL>create table **weather**(temp varchar(30)primary key);

Table created.

SQL>create table **govt_off**(gid number(10) primary key, sname varchar(20));

Table created.

SQL>create table **monitor**(gid number(10), seed_result varchar(30), temp varchar(30));

Table created.

SQL>create table **supp_team**(sid number(10)primary key,sname varchar(20));

Table created.

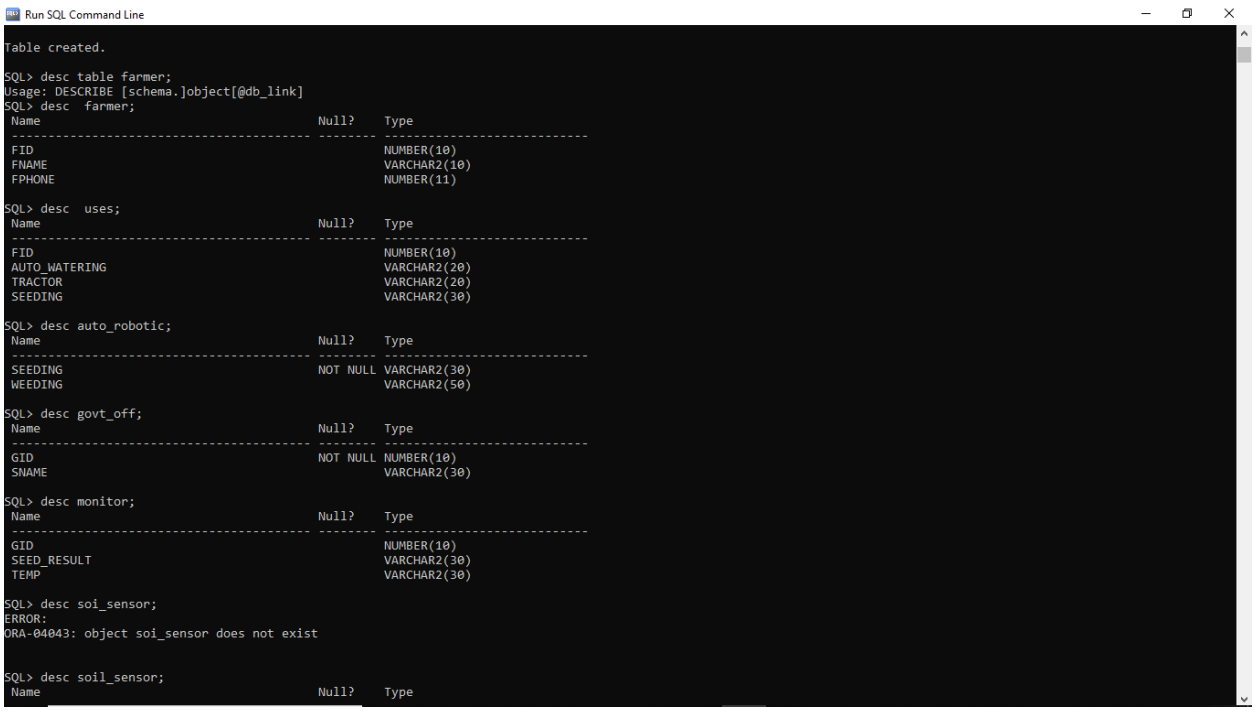
SQL>create table **search**(type_inst varchar(50) primary key, problem varchar(50));

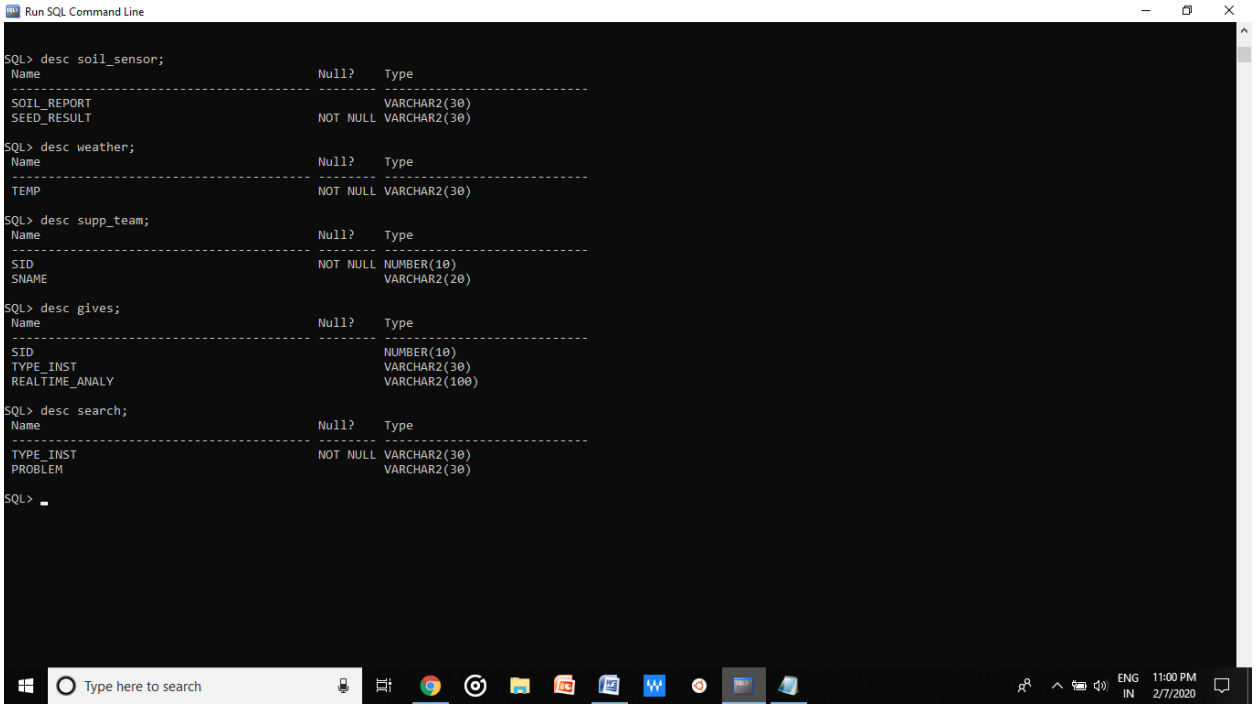
Table created.

SQL>create table **gives**(sid number(10), type_inst varchar(50), realtime_analy varchar(100));

Table created.

DML COMMANDS:


Run SQL Command Line
Table created.
SQL> desc table farmer;
Usage: DESCRIBE [schema.]object[@db_link]
SQL> desc farmer;
Name Null? Type
FID NUMBER(10)
FNAME VARCHAR2(10)
FPHONE NUMBER(11)
SQL> desc uses;
Name Null? Type
FID NUMBER(10)
AUTO_WATERING VARCHAR2(20)
TRACTOR VARCHAR2(20)
SEEDING VARCHAR2(30)
SQL> desc auto_robotic;
Name Null? Type
SEEDING NOT NULL VARCHAR2(30)
WEEDING VARCHAR2(50)
SQL> desc govt_off;
Name Null? Type
GID NOT NULL NUMBER(10)
SNAME VARCHAR2(30)
SQL> desc monitor;
Name Null? Type
GID NUMBER(10)
SEED_RESULT VARCHAR2(30)
TEMP VARCHAR2(30)
SQL> desc soi_sensor;
ERROR:
ORA-04043: object soi_sensor does not exist
SQL> desc soil_sensor;
Name Null? Type

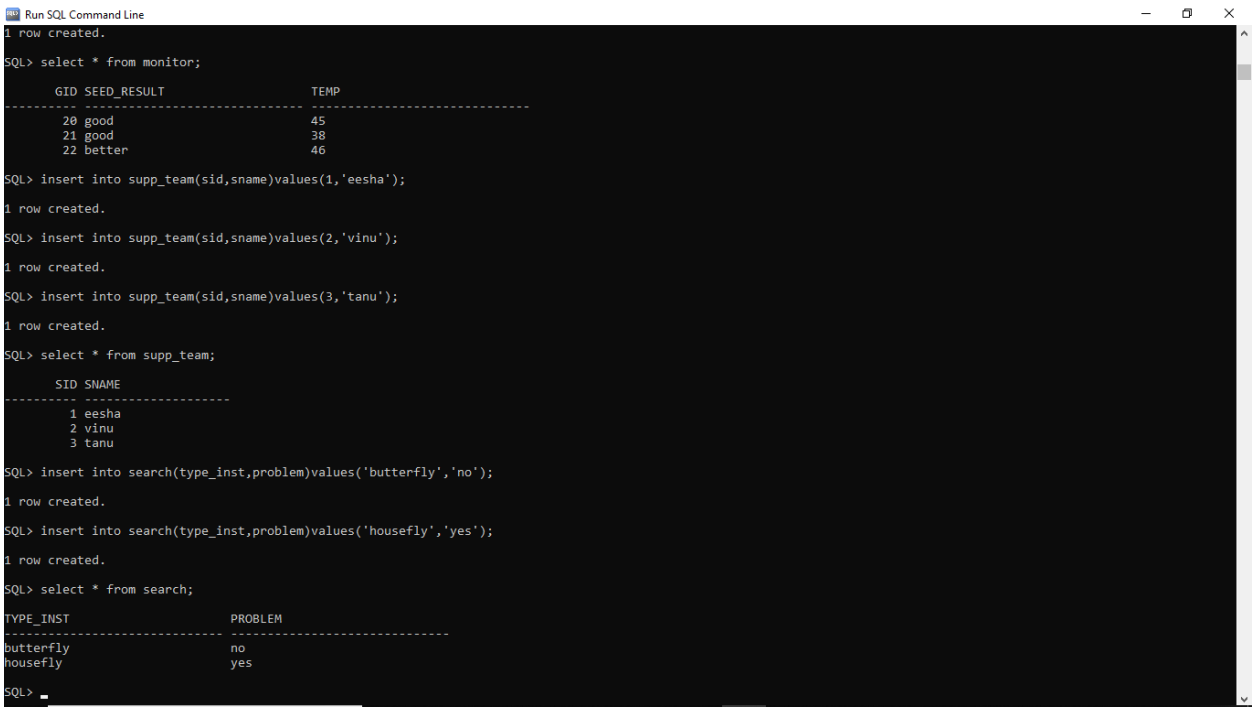

Run SQL Command Line
SQL> desc soil_sensor;
Name Null? Type
SOIL_REPORT VARCHAR2(30)
SEED_RESULT NOT NULL VARCHAR2(30)
SQL> desc weather;
Name Null? Type
TEMP NOT NULL VARCHAR2(30)
SQL> desc supp_team;
Name Null? Type
SID NOT NULL NUMBER(10)
SNAME VARCHAR2(20)
SQL> desc gives;
Name Null? Type
SID NUMBER(10)
TYPE_INST VARCHAR2(30)
REALTIME_ANALY VARCHAR2(100)
SQL> desc search;
Name Null? Type
TYPE_INST NOT NULL VARCHAR2(30)
PROBLEM VARCHAR2(30)
SQL>
Type here to search
ENG
IN
11:00 PM
2/7/2020

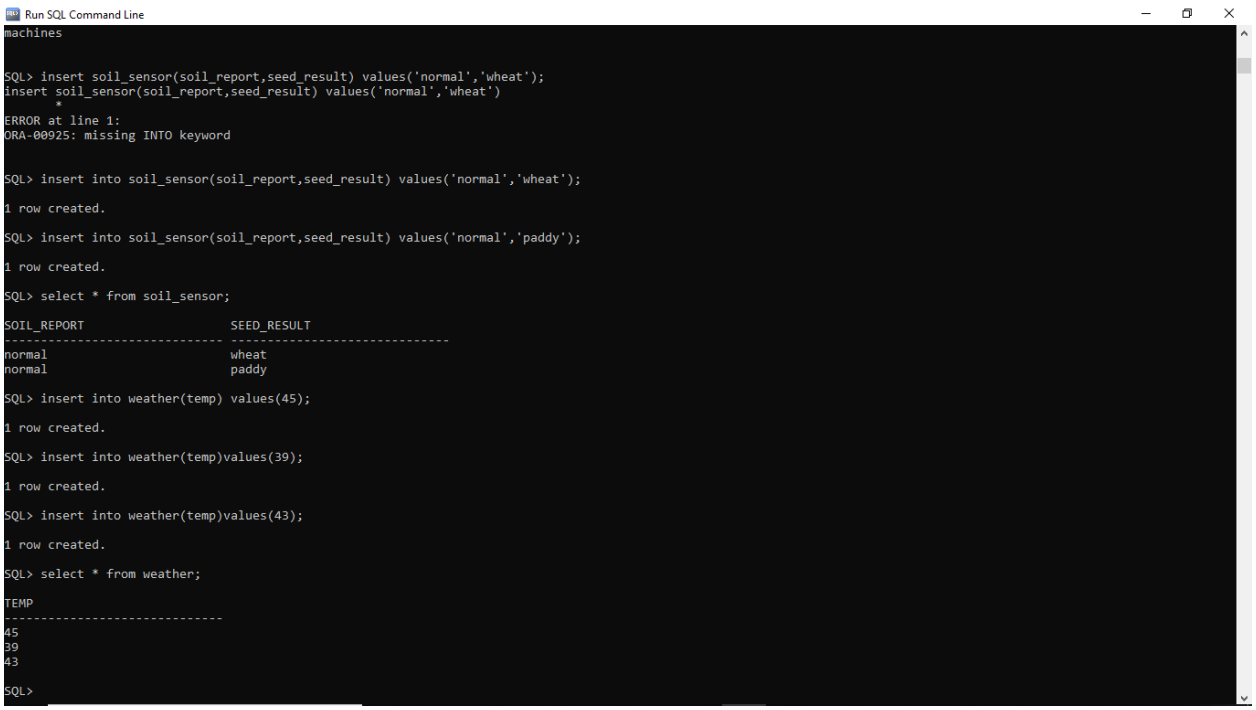
Run SQL Command Line

```
 PROBLEM                                           VARCHAR2(30)

SQL> insert into farmer(fid,fname,fphone) values(101,'Ramulu',78337478374);

1 row created.

SQL> insert into farmer(fid,fname,fphone) values(102,'sailu',90343545213);

1 row created.

SQL> insert into farmer(fid,fname,fphone) values(102,'venkat',95732486152);

1 row created.

SQL> select * from farmer;

       FID FNAME          FPHONE
---------- ---------- ----------
       101 Ramulu     7.8337E+10
       102 sailu      9.0344E+10
       102 venkat     9.5732E+10

SQL> insert into uses(fid,auto_watering,tractor,seeds) values(121,'automatic watering','self drives','wheat');
insert into uses(fid,auto_watering,tractor,seeds) values(121,'automatic watering','self drives','wheat')
                                                  *
ERROR at line 1:
ORA-00904: "SEEDS": invalid identifier


SQL> insert into uses(fid,auto_watering,tractor,seeding)values(121,'automatic watering','self drives','rice');

1 row created.

SQL> insert into uses(fid,auto_watering,tractor,seeding) values(121,'automatic watering','self drives','wheat');

1 row created.

SQL> insert into uses(fid,auto_watering,tractor,seeding) values(123,'automatic watering','self drives','ground nuts');

1 row created.

SQL> select * from uses;

       FID AUTO_WATERING        TRACTOR
---------- -------------------- --------------------
SEEDING
```

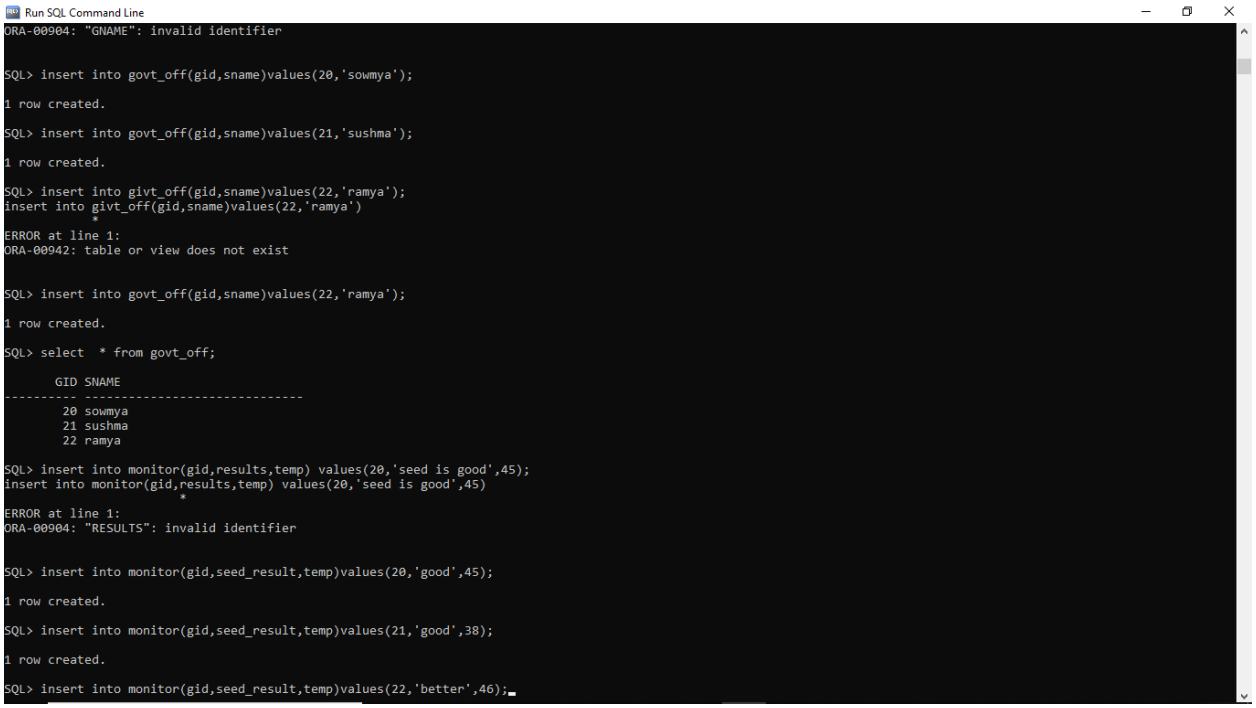
Run SQL Command Line

```
SQL> select * from uses;

       FID AUTO_WATERING        TRACTOR
---------- -------------------- --------------------
SEEDING
------------------------------
       121 automatic watering   self drives
rice

       121 automatic watering   self drives
wheat

       123 automatic watering   self drives
ground nuts


SQL> insert into auto_robotic(seeding,weeding) values('wheat','machines');

1 row created.

SQL> insert into auto_robotic(seeding,weeding) values('rice','machines');

1 row created.

SQL> insert into auto_robotic(seeding,weeding) values('jowar','machines');

1 row created.

SQL> select * from auto_robotic;

SEEDING
------------------------------
WEEDING
--------------------------------------------------
wheat
machines

rice
machines

jowar
machines


SQL>
```


Run SQL Command Line
1 row created.
SQL> select * from monitor;
GID SEED_RESULT TEMP
20 good 45
21 good 38
22 better 46
SQL> insert into supp_team(sid,sname)values(1,'eesha');
1 row created.
SQL> insert into supp_team(sid,sname)values(2,'vinu');
1 row created.
SQL> insert into supp_team(sid,sname)values(3,'tanu');
1 row created.
SQL> select * from supp_team;
SID SNAME
1 eesha
2 vinu
3 tanu
SQL> insert into search(type_inst,problem)values('butterfly','no');
1 row created.
SQL> insert into search(type_inst,problem)values('housefly','yes');
1 row created.
SQL> select * from search;
TYPE_INST PROBLEM
butterfly no
housefly yes
SQL>


Run SQL Command Line
machines
SQL> insert soil_sensor(soil_report,seed_result) values('normal','wheat');
insert soil_sensor(soil_report,seed_result) values('normal','wheat')
*
ERROR at line 1:
ORA-00925: missing INTO keyword
SQL> insert into soil_sensor(soil_report,seed_result) values('normal','wheat');
1 row created.
SQL> insert into soil_sensor(soil_report,seed_result) values('normal','paddy');
1 row created.
SQL> select * from soil_sensor;
SOIL_REPORT SEED_RESULT
normal wheat
normal paddy
SQL> insert into weather(temp) values(45);
1 row created.
SQL> insert into weather(temp)values(39);
1 row created.
SQL> insert into weather(temp)values(43);
1 row created.
SQL> select * from weather;
TEMP
45
39
43
SQL>


Run SQL Command Line
1 row created.
SQL> select * from search;
TYPE_INST PROBLEM
butterfly no
housefly yes
SQL> insert into gives(sid type_inst,realtime_analy)values(101,'butterfly','good');
insert into gives(sid type_inst,realtime_analy)values(101,'butterfly','good')
*
ERROR at line 1:
ORA-00917: missing comma
SQL> insert into gives(sid,type_inst,realtime_analy)values(101,'butterfly','good');
1 row created.
SQL> insert into gives(sid,type_inst,realtime_analy)values(101,'housefly','not good');
1 row created.
SQL> select * fromgives;
select * fromgives
*
ERROR at line 1:
ORA-00923: FROM keyword not found where expected
SQL> select * from gives;
SID TYPE_INST
REALTIME_ANALY
101 butterfly
good
101 housefly
not good
SQL>


Run SQL Command Line
ORA-00904: "GNAME": invalid identifier
SQL> insert into govt_off(gid,sname)values(20,'sowmya');
1 row created.
SQL> insert into govt_off(gid,sname)values(21,'sushma');
1 row created.
SQL> insert into givt_off(gid,sname)values(22,'ramya');
insert into givt_off(gid,sname)values(22,'ramya')
*
ERROR at line 1:
ORA-00942: table or view does not exist
SQL> insert into govt_off(gid,sname)values(22,'ramya');
1 row created.
SQL> select * from govt_off;
GID SNAME
20 sowmya
21 sushma
22 ramya
SQL> insert into monitor(gid,results,temp) values(20,'seed is good',45);
insert into monitor(gid,results,temp) values(20,'seed is good',45)
*
ERROR at line 1:
ORA-00904: "RESULTS": invalid identifier
SQL> insert into monitor(gid,seed_result,temp)values(20,'good',45);
1 row created.
SQL> insert into monitor(gid,seed_result,temp)values(21,'good',38);
1 row created.
SQL> insert into monitor(gid,seed_result,temp)values(22,'better',46);