Sri Lanka Institute of Information Technology

# <<Assignment 1>>

Database System and Data Driven Application (IT3031)
2020

Submitted by:

| | |
|---|---|
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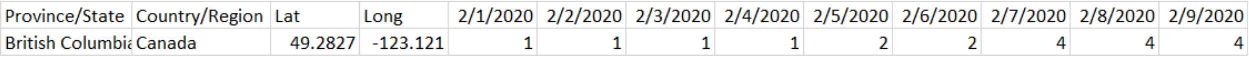
# Assignment 1

1.

- Province wise hospitalized cases report- in this report focusing on the count of patients who are still in hospitals in each province in relevant date. For that, we can deduct death cases from confirmed cases in the relevant date and province.

eg:



| Province/State | Country/Region | Lat | Long | 2/1/2020 | 2/2/2020 | 2/3/2020 | 2/4/2020 | 2/5/2020 | 2/6/2020 | 2/7/2020 | 2/8/2020 | 2/9/2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | Canada | 49.2827 | -123.121 | 1 | 1 | 1 | 1 | 2 | 2 | 4 | 4 | 4 |

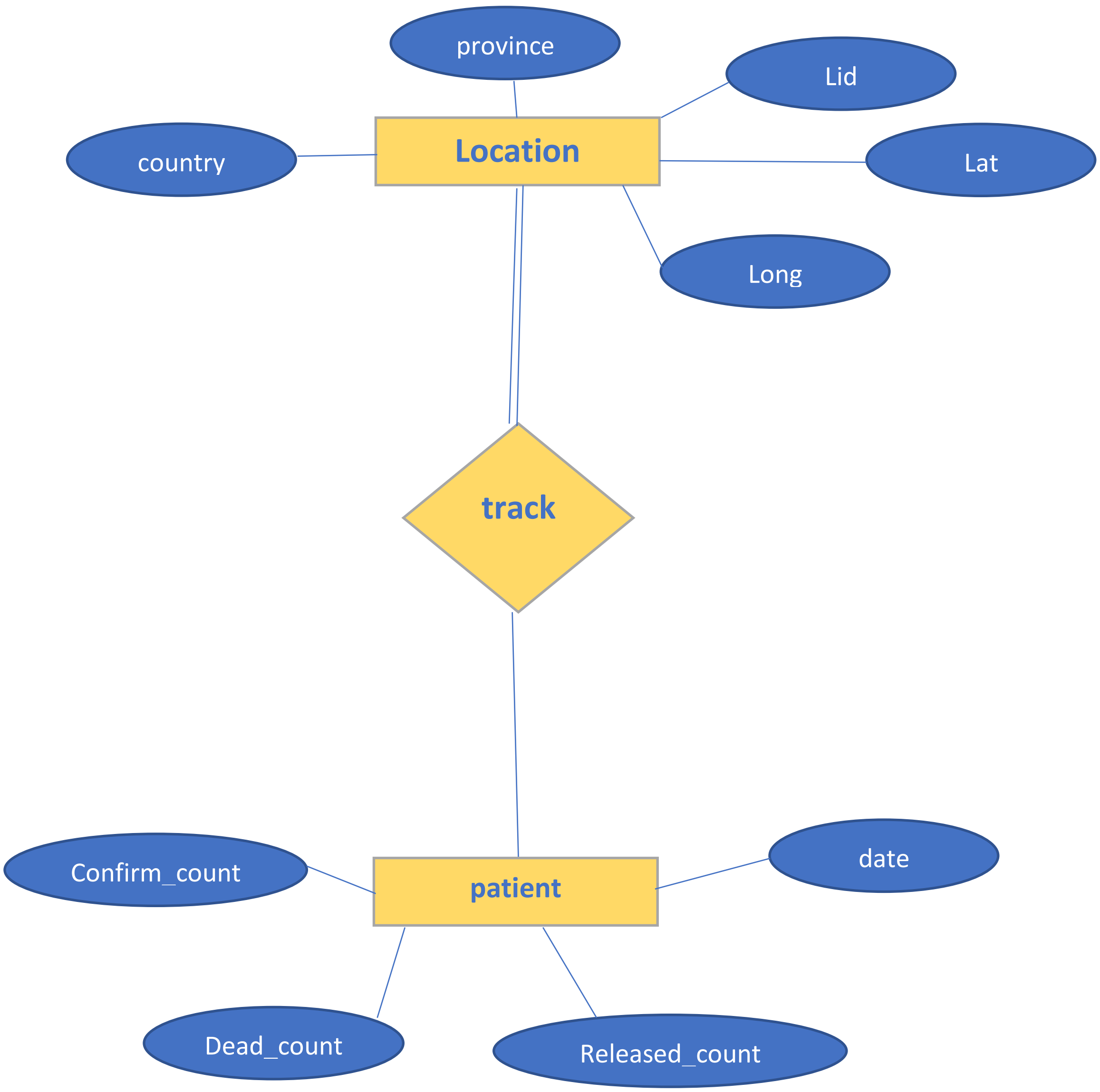
- Country wise death people count per day- (this is useful when the decision makers who predict about how much we can lost in next days)

- Country wise confirm cases per day –(this is useful when predicting how many people can infected per day)

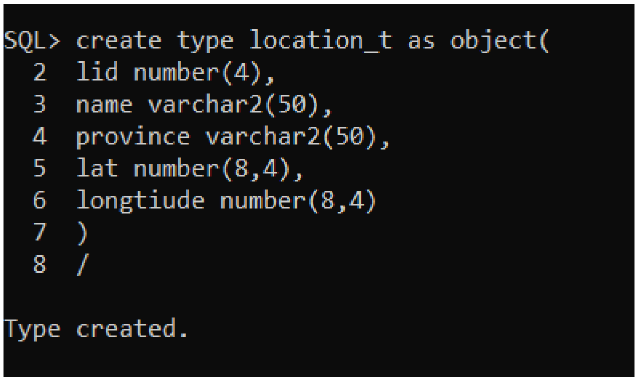
- Country wise recovered cases per day

- Country name and their death counts which having more than 100 deaths.

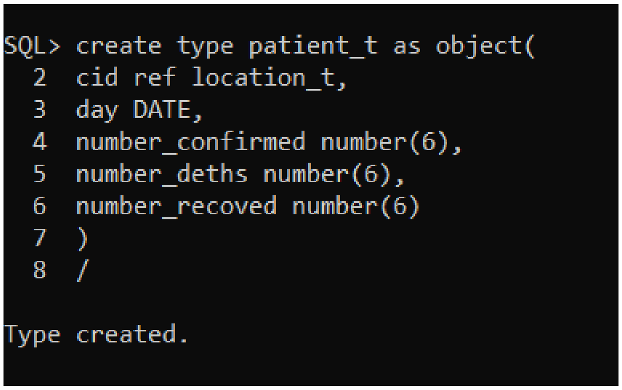
2.



3.firstly I create all tables and types as login by system.



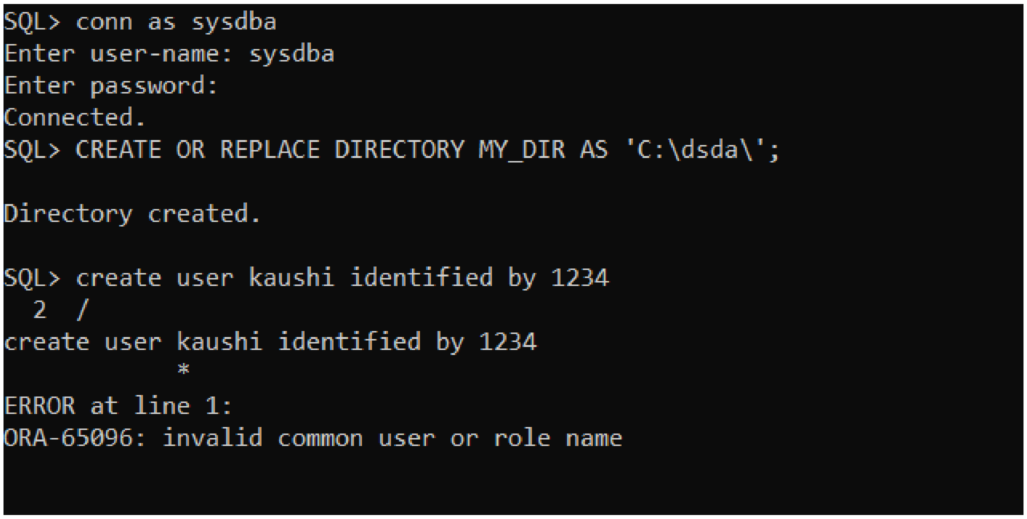
```
SQL> create type location_t as object(
  2  lid number(4),
  3  name varchar2(50),
  4  province varchar2(50),
  5  lat number(8,4),
  6  longtiude number(8,4)
  7  )
  8  /

Type created.
```



```
SQL> create type patient_t as object(
  2  cid ref location_t,
  3  day DATE,
  4  number_confirmed number(6),
  5  number_deths number(6),
  6  number_recoved number(6)
  7  )
  8  /

Type created.
```

But it gives some errors in creating further procedures.

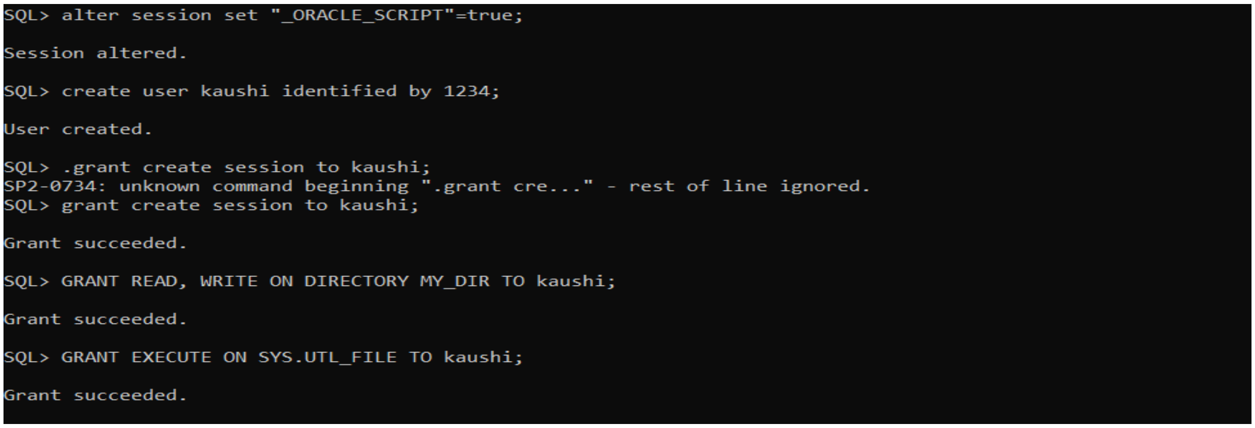
So I login as sysdba and create a user with my name and give the privileges to that account.



```
SQL> conn as sysdba
Enter user-name: sysdba
Enter password:
Connected.
SQL> CREATE OR REPLACE DIRECTORY MY_DIR AS 'C:\dsda\';

Directory created.

SQL> create user kaushi identified by 1234
  2  /
create user kaushi identified by 1234
            *
ERROR at line 1:
ORA-65096: invalid common user or role name
```

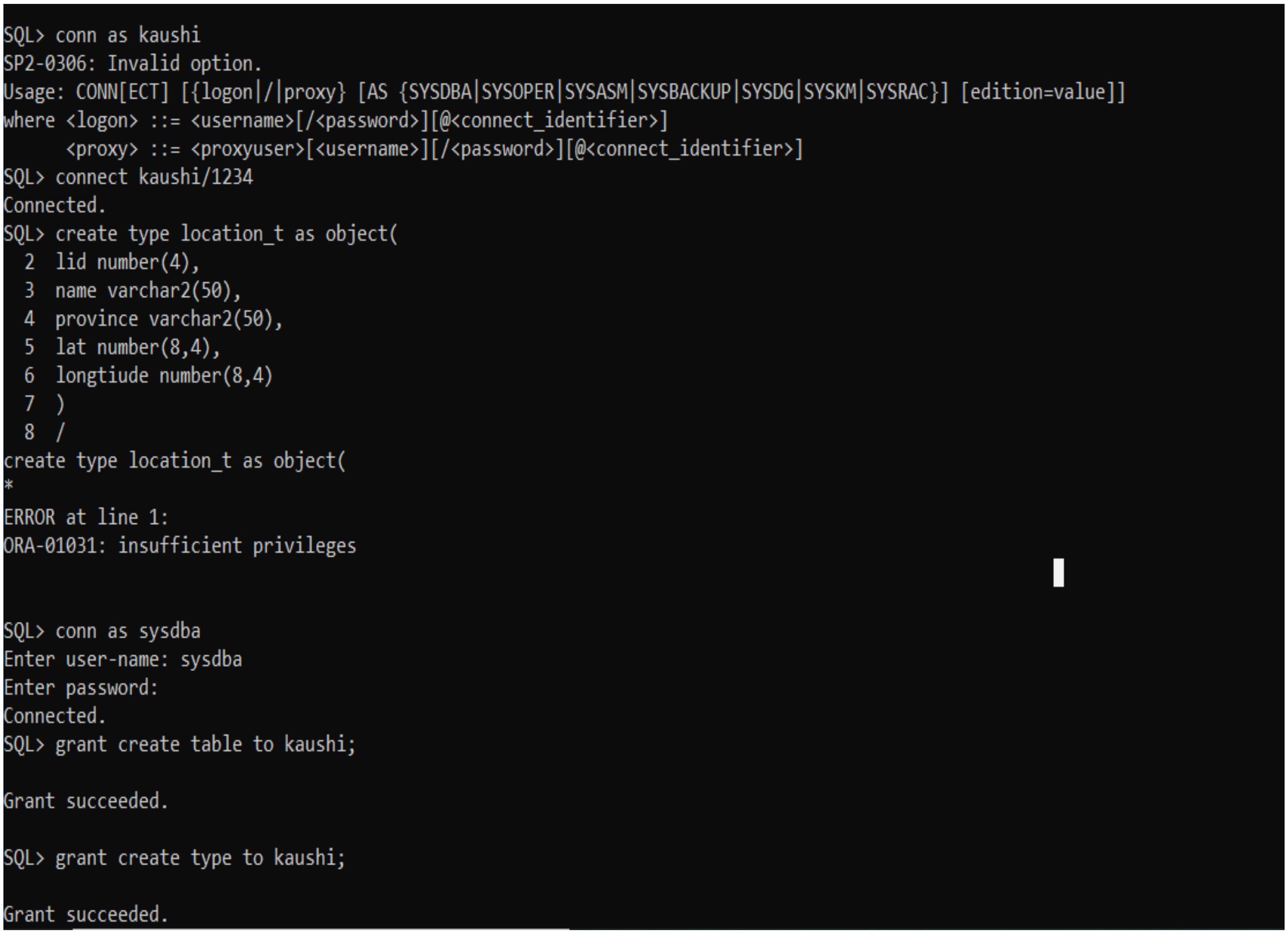
Error 1 -  the compiler didn't give permission to create user

Solution 1-

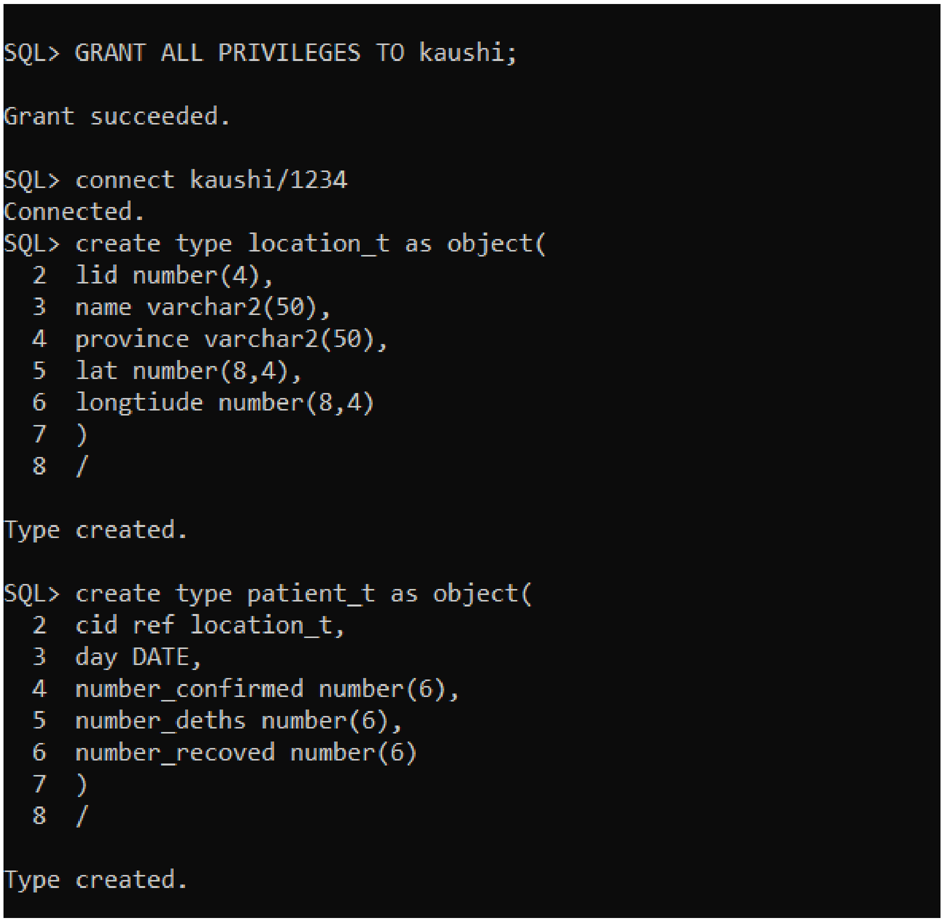


```
SQL> alter session set "_ORACLE_SCRIPT"=true;

Session altered.

SQL> create user kaushi identified by 1234;

User created.

SQL> .grant create session to kaushi;
SP2-0734: unknown command beginning ".grant cre..." - rest of line ignored.
SQL> grant create session to kaushi;

Grant succeeded.

SQL> GRANT READ, WRITE ON DIRECTORY MY_DIR TO kaushi;

Grant succeeded.

SQL> GRANT EXECUTE ON SYS.UTL_FILE TO kaushi;

Grant succeeded.
```

Error 2 and solution-( after creating a user kaushi, I try to create table types but I couldn’t do it. Because it doesn’t give access. So I goto sysdba again and grant permission to kaushi account)

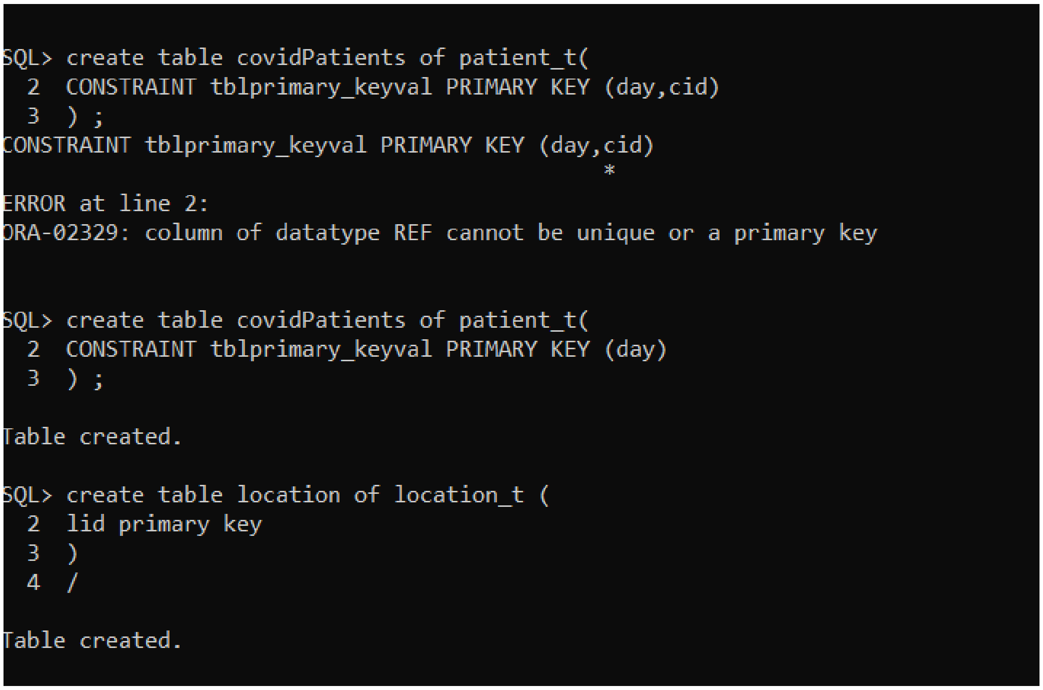


```
SQL> conn as kaushi
SP2-0306: Invalid option.
Usage: CONN[ECT] [{logon|/|proxy} [AS {SYSDBA|SYSOPER|SYSASM|SYSBACKUP|SYSDG|SYSKM|SYSRAC}] [edition=value]]
where <logon> ::= <username>[/<password>][@<connect_identifier>]
      <proxy> ::= <proxyuser>[<username>][/<password>][@<connect_identifier>]
SQL> connect kaushi/1234
Connected.
SQL> create type location_t as object(
  2  lid number(4),
  3  name varchar2(50),
  4  province varchar2(50),
  5  lat number(8,4),
  6  longtiude number(8,4)
  7  )
  8  /
create type location_t as object(
*
ERROR at line 1:
ORA-01031: insufficient privileges


SQL> conn as sysdba
Enter user-name: sysdba
Enter password:
Connected.
SQL> grant create table to kaushi;

Grant succeeded.

SQL> grant create type to kaushi;

Grant succeeded.
```



```
SQL> GRANT ALL PRIVILEGES TO kaushi;

Grant succeeded.

SQL> connect kaushi/1234
Connected.
SQL> create type location_t as object(
  2  lid number(4),
  3  name varchar2(50),
  4  province varchar2(50),
  5  lat number(8,4),
  6  longtiude number(8,4)
  7  )
  8  /

Type created.

SQL> create type patient_t as object(
  2  cid ref location_t,
  3  day DATE,
  4  number_confirmed number(6),
  5  number_deths number(6),
  6  number_recoved number(6)
  7  )
  8  /

Type created.
```

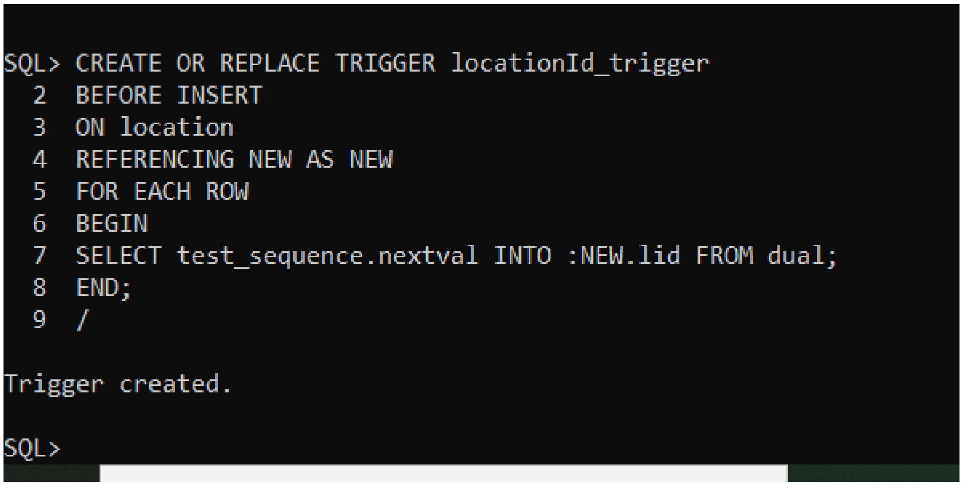
Then I want to add some constraint to my tables.



```
SQL> create table covidPatients of patient_t(
  2  CONSTRAINT tblprimary_keyval PRIMARY KEY (day,cid)
  3  ) ;
CONSTRAINT tblprimary_keyval PRIMARY KEY (day,cid)
                                              *
ERROR at line 2:
ORA-02329: column of datatype REF cannot be unique or a primary key


SQL> create table covidPatients of patient_t(
  2  CONSTRAINT tblprimary_keyval PRIMARY KEY (day)
  3  ) ;

Table created.

SQL> create table location of location_t (
  2  lid primary key
  3  )
  4  /

Table created.
```

Then I want auto increment id in my location table.so I create a trigger for that.

```
___________AUTOINCREAMENT__________
CREATE SEQUENCE test_sequence
START WITH 1
INCREMENT BY 1;
```

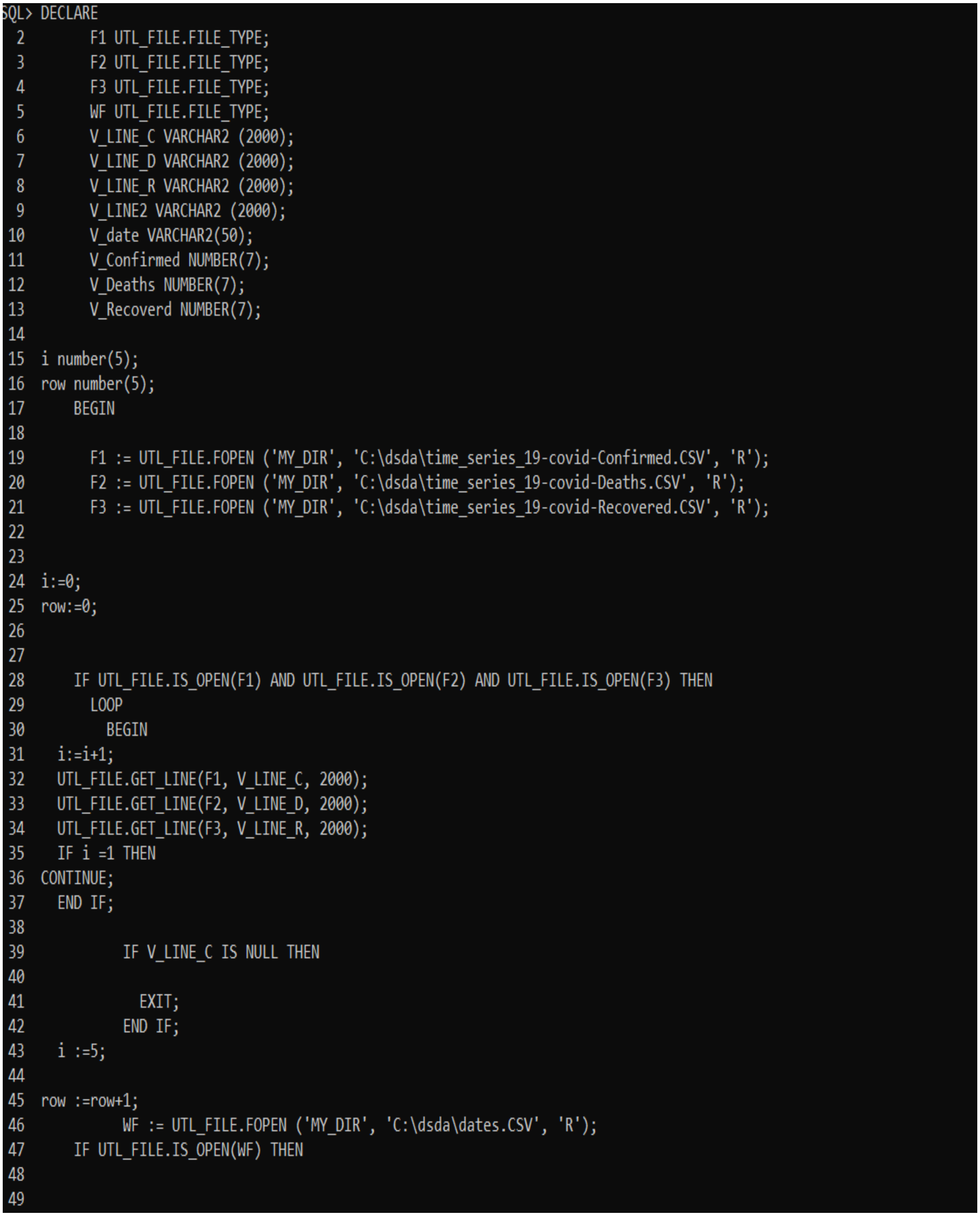


```
SQL> CREATE OR REPLACE TRIGGER locationId_trigger
     BEFORE INSERT
     ON location
     REFERENCING NEW AS NEW
     FOR EACH ROW
     BEGIN
     SELECT test_sequence.nextval INTO :NEW.lid FROM dual;
     END;
     /

Trigger created.

SQL>
```

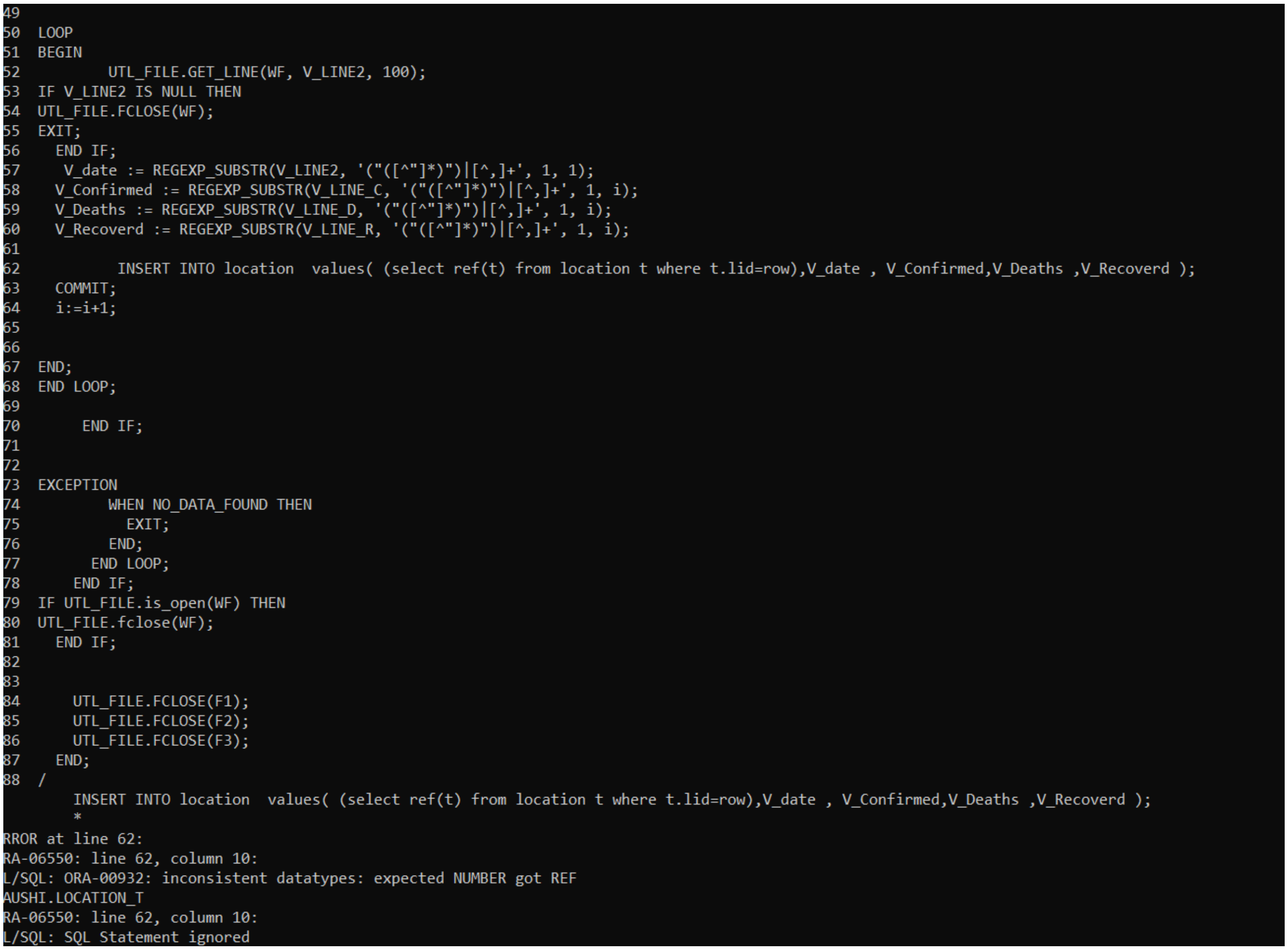
5.Then I create procedures to read date from the csv file and load the data to relevant table. And also read the dates and store in the database.

```
SQL> DECLARE
           F UTL_FILE.FILE_TYPE;
           WF UTL_FILE.FILE_TYPE;
           V_LINE VARCHAR2 (1000);
           V_date VARCHAR2(50);


     i number(5);
         BEGIN
           F := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\time_series_19-covid-Confirmed.CSV', 'R');
           WF := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\dates.CSV', 'W');

         IF UTL_FILE.IS_OPEN(F) THEN
           LOOP
             BEGIN

       UTL_FILE.GET_LINE(F, V_LINE, 1000);
               IF V_LINE IS NULL THEN
                 EXIT;
               END IF;
       i :=5;
     LOOP
     BEGIN

        V_date := replace(REGEXP_SUBSTR(V_LINE, '("([^"]*)")|[^,]+', 1, i),'"','');
       UTL_FILE.PUT_LINE(WF,V_date);

       COMMIT;
       i:=i+1;
       IF V_date IS NULL THEN
     EXIT;
       END IF;
     END;
     END LOOP;
     EXIT;

             EXCEPTION
             WHEN NO_DATA_FOUND THEN
               EXIT;
             END;
           END LOOP;
         END IF;
         UTL_FILE.FCLOSE(WF);
         UTL_FILE.FCLOSE(F);
       END;
     /

PL/SQL procedure successfully completed.
```

When load the data it comes few errors and I have to find solution them too.

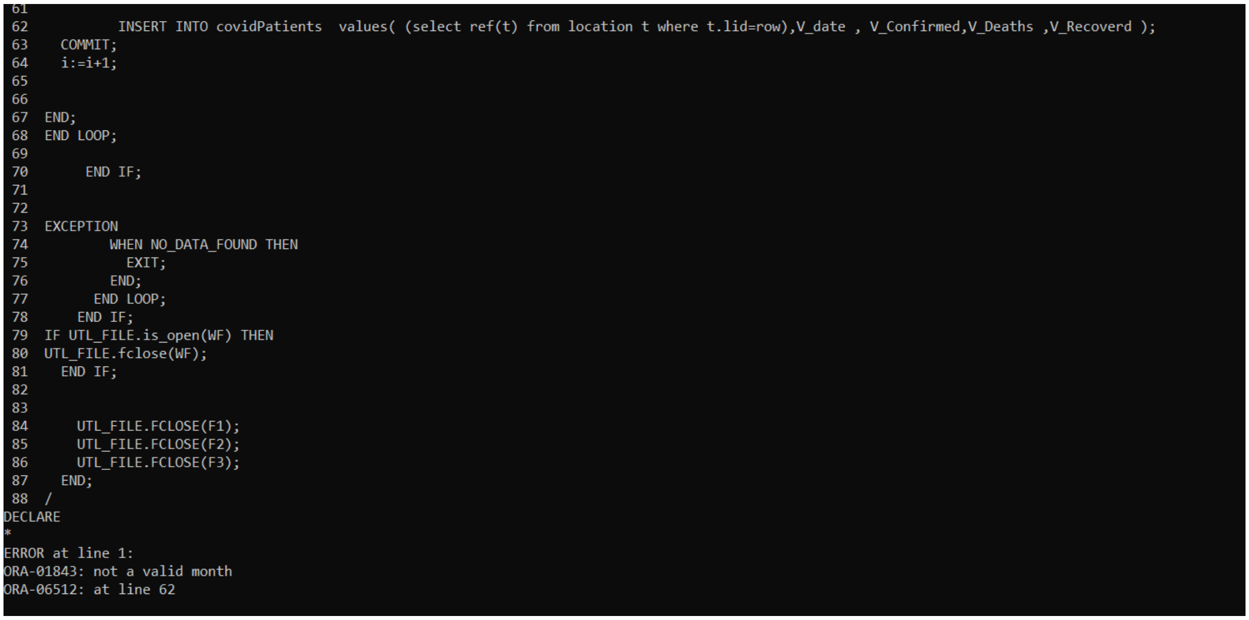


```
SQL> DECLARE
           F1 UTL_FILE.FILE_TYPE;
           F2 UTL_FILE.FILE_TYPE;
           F3 UTL_FILE.FILE_TYPE;
           WF UTL_FILE.FILE_TYPE;
           V_LINE_C VARCHAR2 (2000);
           V_LINE_D VARCHAR2 (2000);
           V_LINE_R VARCHAR2 (2000);
           V_LINE2 VARCHAR2 (2000);
           V_date VARCHAR2(50);
           V_Confirmed NUMBER(7);
           V_Deaths NUMBER(7);
           V_Recoverd NUMBER(7);

     i number(5);
     row number(5);
         BEGIN

           F1 := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\time_series_19-covid-Confirmed.CSV', 'R');
           F2 := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\time_series_19-covid-Deaths.CSV', 'R');
           F3 := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\time_series_19-covid-Recovered.CSV', 'R');


     i:=0;
     row:=0;


         IF UTL_FILE.IS_OPEN(F1) AND UTL_FILE.IS_OPEN(F2) AND UTL_FILE.IS_OPEN(F3) THEN
           LOOP
             BEGIN
       i:=i+1;
       UTL_FILE.GET_LINE(F1, V_LINE_C, 2000);
       UTL_FILE.GET_LINE(F2, V_LINE_D, 2000);
       UTL_FILE.GET_LINE(F3, V_LINE_R, 2000);
       IF i =1 THEN
     CONTINUE;
       END IF;

               IF V_LINE_C IS NULL THEN

                 EXIT;
               END IF;
       i :=5;

     row :=row+1;
               WF := UTL_FILE.FOPEN ('MY_DIR', 'C:\dsda\dates.CSV', 'R');
         IF UTL_FILE.IS_OPEN(WF) THEN


```



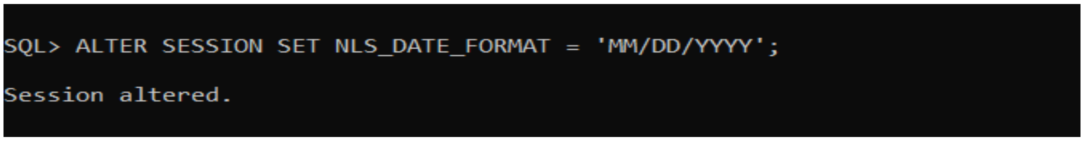
```
49
50  LOOP
51  BEGIN
52          UTL_FILE.GET_LINE(WF, V_LINE2, 100);
53  IF V_LINE2 IS NULL THEN
54  UTL_FILE.FCLOSE(WF);
55  EXIT;
56    END IF;
57     V_date := REGEXP_SUBSTR(V_LINE2, '("([^"]*)")|[^,]+', 1, 1);
58    V_Confirmed := REGEXP_SUBSTR(V_LINE_C, '("([^"]*)")|[^,]+', 1, i);
59    V_Deaths := REGEXP_SUBSTR(V_LINE_D, '("([^"]*)")|[^,]+', 1, i);
60    V_Recoverd := REGEXP_SUBSTR(V_LINE_R, '("([^"]*)")|[^,]+', 1, i);
61
62           INSERT INTO location  values( (select ref(t) from location t where t.lid=row),V_date , V_Confirmed,V_Deaths ,V_Recoverd );
63    COMMIT;
64    i:=i+1;
65
66
67  END;
68  END LOOP;
69
70       END IF;
71
72
73  EXCEPTION
74          WHEN NO_DATA_FOUND THEN
75            EXIT;
76          END;
77        END LOOP;
78      END IF;
79  IF UTL_FILE.is_open(WF) THEN
80  UTL_FILE.fclose(WF);
81    END IF;
82
83
84      UTL_FILE.FCLOSE(F1);
85      UTL_FILE.FCLOSE(F2);
86      UTL_FILE.FCLOSE(F3);
87    END;
88  /
        INSERT INTO location  values( (select ref(t) from location t where t.lid=row),V_date , V_Confirmed,V_Deaths ,V_Recoverd );
        *
RROR at line 62:
RA-06550: line 62, column 10:
L/SQL: ORA-00932: inconsistent datatypes: expected NUMBER got REF
AUSHI.LOCATION_T
RA-06550: line 62, column 10:
L/SQL: SQL Statement ignored
```

Error 1- I choose wrong table. So I correct it.

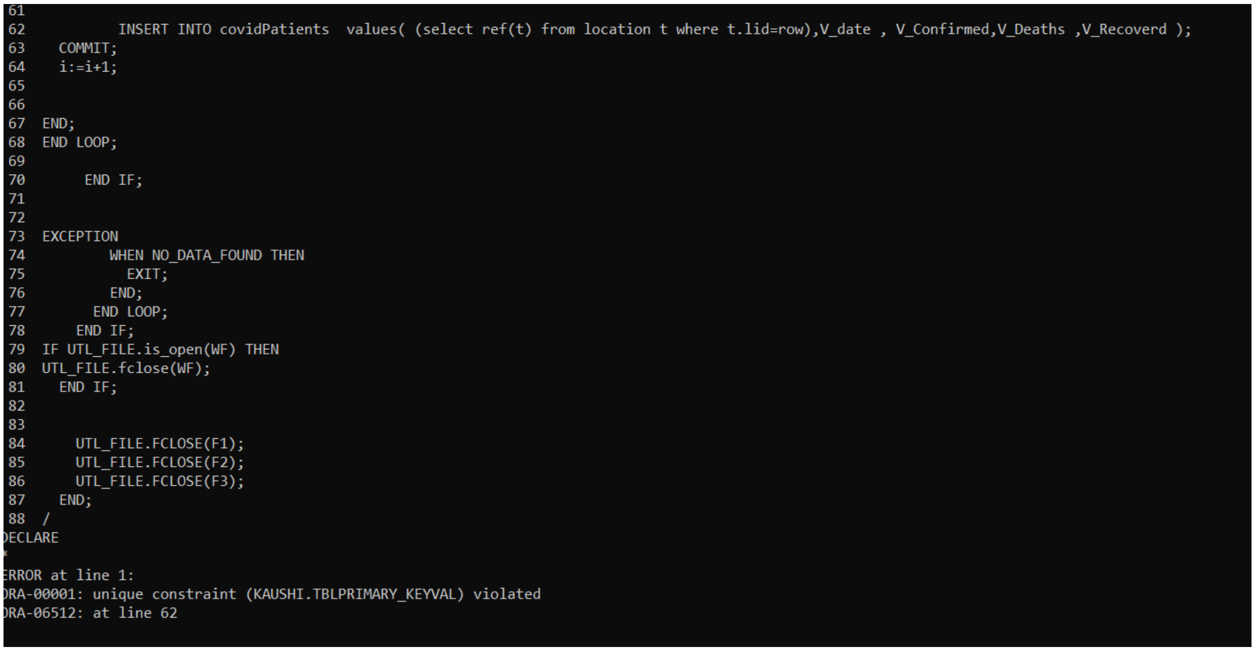


```
 61
 62          INSERT INTO covidPatients  values( (select ref(t) from location t where t.lid=row),V_date , V_Confirmed,V_Deaths ,V_Recoverd );
 63    COMMIT;
 64    i:=i+1;
 65
 66
 67  END;
 68  END LOOP;
 69
 70       END IF;
 71
 72
 73  EXCEPTION
 74          WHEN NO_DATA_FOUND THEN
 75            EXIT;
 76          END;
 77        END LOOP;
 78      END IF;
 79  IF UTL_FILE.is_open(WF) THEN
 80  UTL_FILE.fclose(WF);
 81    END IF;
 82
 83
 84      UTL_FILE.FCLOSE(F1);
 85      UTL_FILE.FCLOSE(F2);
 86      UTL_FILE.FCLOSE(F3);
 87    END;
 88  /
DECLARE
*
ERROR at line 1:
ORA-01843: not a valid month
ORA-06512: at line 62
```

Error 2- it gives  the error regarding to date

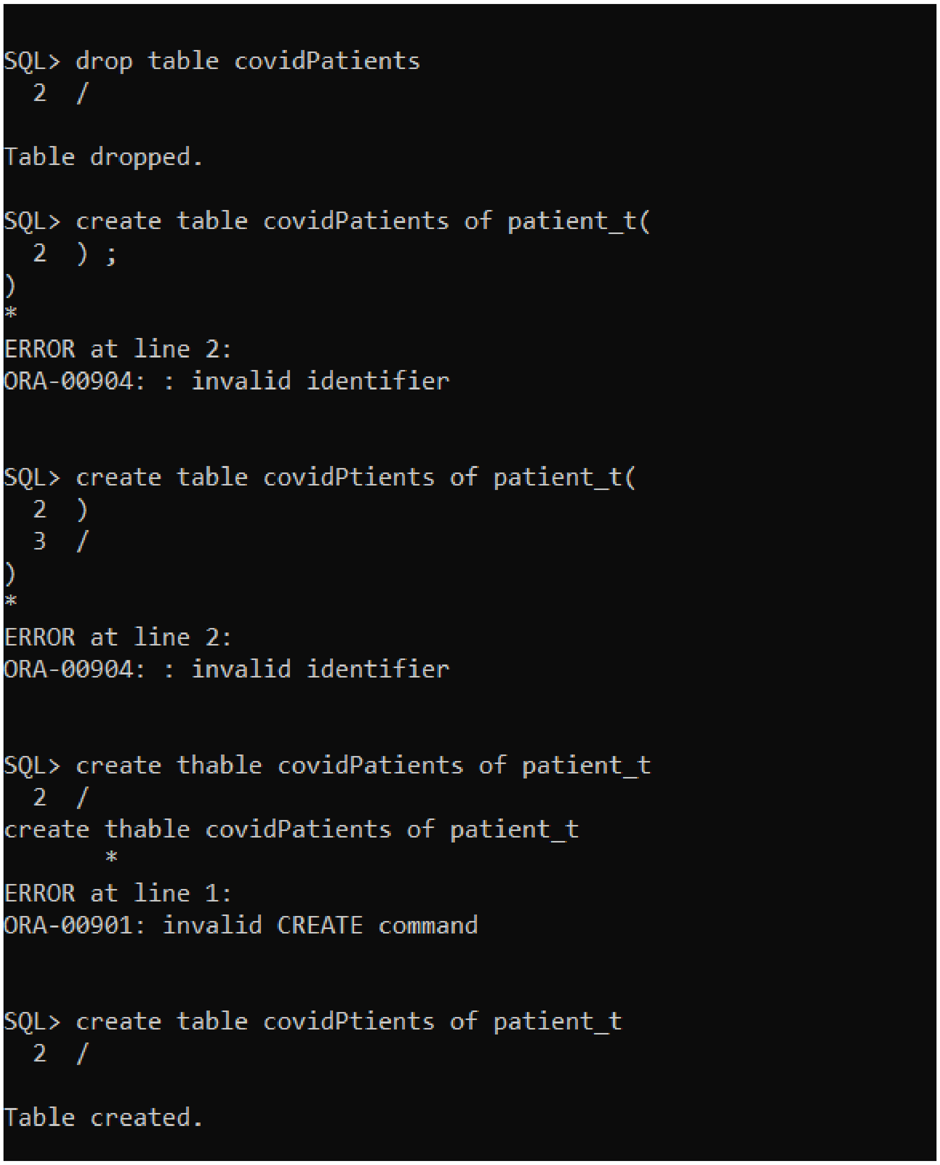


```
SQL> ALTER SESSION SET NLS_DATE_FORMAT = 'MM/DD/YYYY';

Session altered.
```



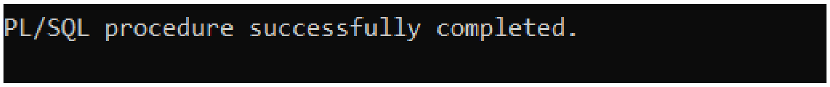
```
 61
 62          INSERT INTO covidPatients  values( (select ref(t) from location t where t.lid=row),V_date , V_Confirmed,V_Deaths ,V_Recoverd );
 63    COMMIT;
 64    i:=i+1;
 65
 66
 67  END;
 68  END LOOP;
 69
 70       END IF;
 71
 72
 73  EXCEPTION
 74          WHEN NO_DATA_FOUND THEN
 75            EXIT;
 76          END;
 77        END LOOP;
 78      END IF;
 79  IF UTL_FILE.is_open(WF) THEN
 80  UTL_FILE.fclose(WF);
 81    END IF;
 82
 83
 84      UTL_FILE.FCLOSE(F1);
 85      UTL_FILE.FCLOSE(F2);
 86      UTL_FILE.FCLOSE(F3);
 87    END;
 88  /
DECLARE
*
ERROR at line 1:
ORA-00001: unique constraint (KAUSHI.TBLPRIMARY_KEYVAL) violated
ORA-06512: at line 62
```

Error 3- it gives the error regarding constraints. So I drop the table and remove the constraints. So It works great.



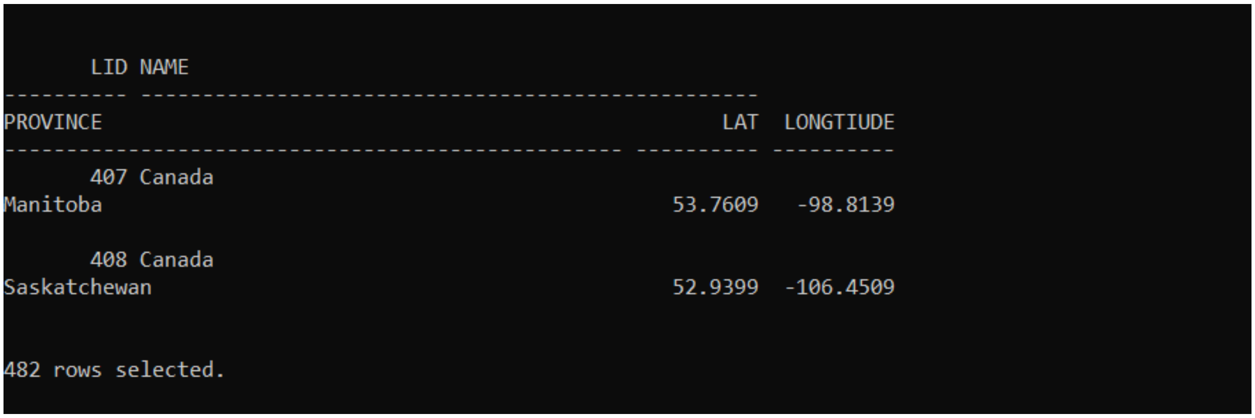
```
SQL> drop table covidPatients
  2  /

Table dropped.

SQL> create table covidPatients of patient_t(
  2  ) ;
)
*
ERROR at line 2:
ORA-00904: : invalid identifier


SQL> create table covidPtients of patient_t(
  2  )
  3  /
)
*
ERROR at line 2:
ORA-00904: : invalid identifier


SQL> create thable covidPatients of patient_t
  2  /
create thable covidPatients of patient_t
       *
ERROR at line 1:
ORA-00901: invalid CREATE command


SQL> create table covidPtients of patient_t
  2  /

Table created.
```

Procedure run successfully.

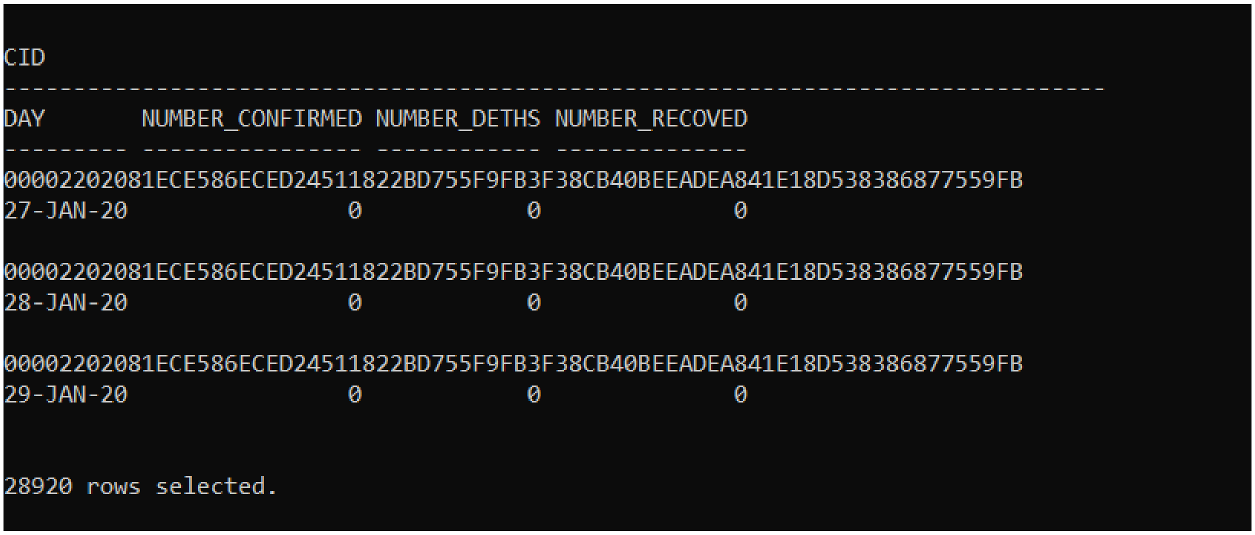


```
PL/SQL procedure successfully completed.
```

Then I check whether the data is loaded, from select * statement from both tables.



```
       LID NAME
---------- --------------------------------------------------
PROVINCE                                                  LAT  LONGTIUDE
-------------------------------------------------- ---------- ----------
       407 Canada
Manitoba                                              53.7609   -98.8139

       408 Canada
Saskatchewan                                          52.9399  -106.4509


482 rows selected.
```

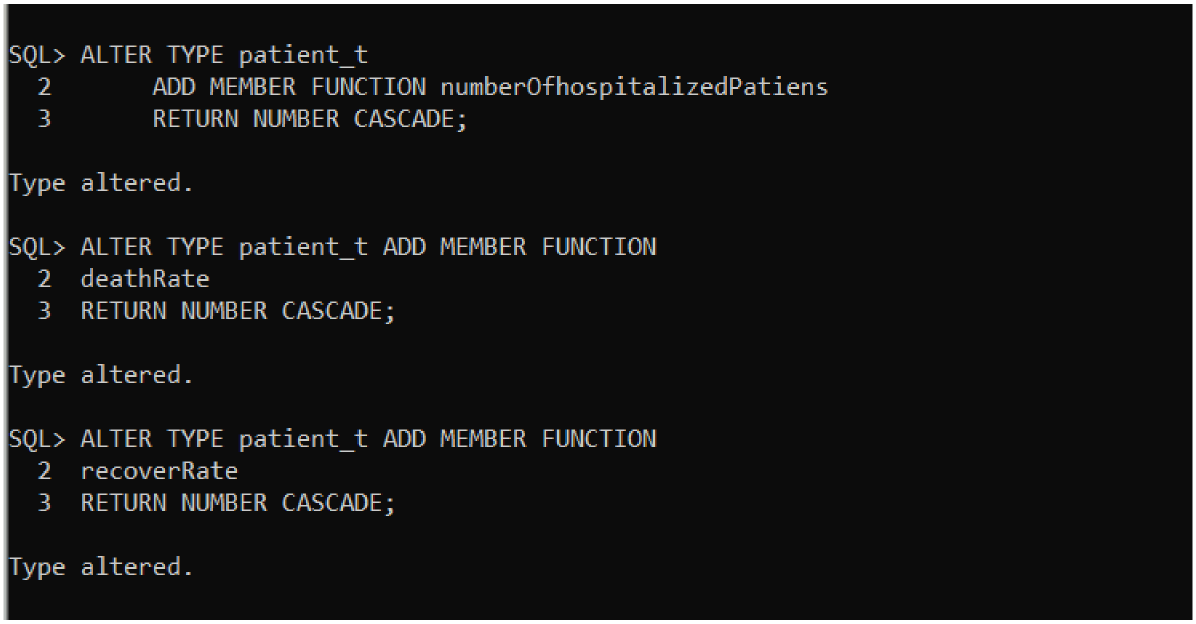


```
CID
-----------------------------------------------------------------------------------------
DAY       NUMBER_CONFIRMED NUMBER_DETHS NUMBER_RECOVED
--------- ---------------- ------------ --------------
00002202081ECE586ECED24511822BD755F9FB3F38CB40BEEADEA841E18D538386877559FB
27-JAN-20                0            0              0

00002202081ECE586ECED24511822BD755F9FB3F38CB40BEEADEA841E18D538386877559FB
28-JAN-20                0            0              0

00002202081ECE586ECED24511822BD755F9FB3F38CB40BEEADEA841E18D538386877559FB
29-JAN-20                0            0              0


28920 rows selected.
```

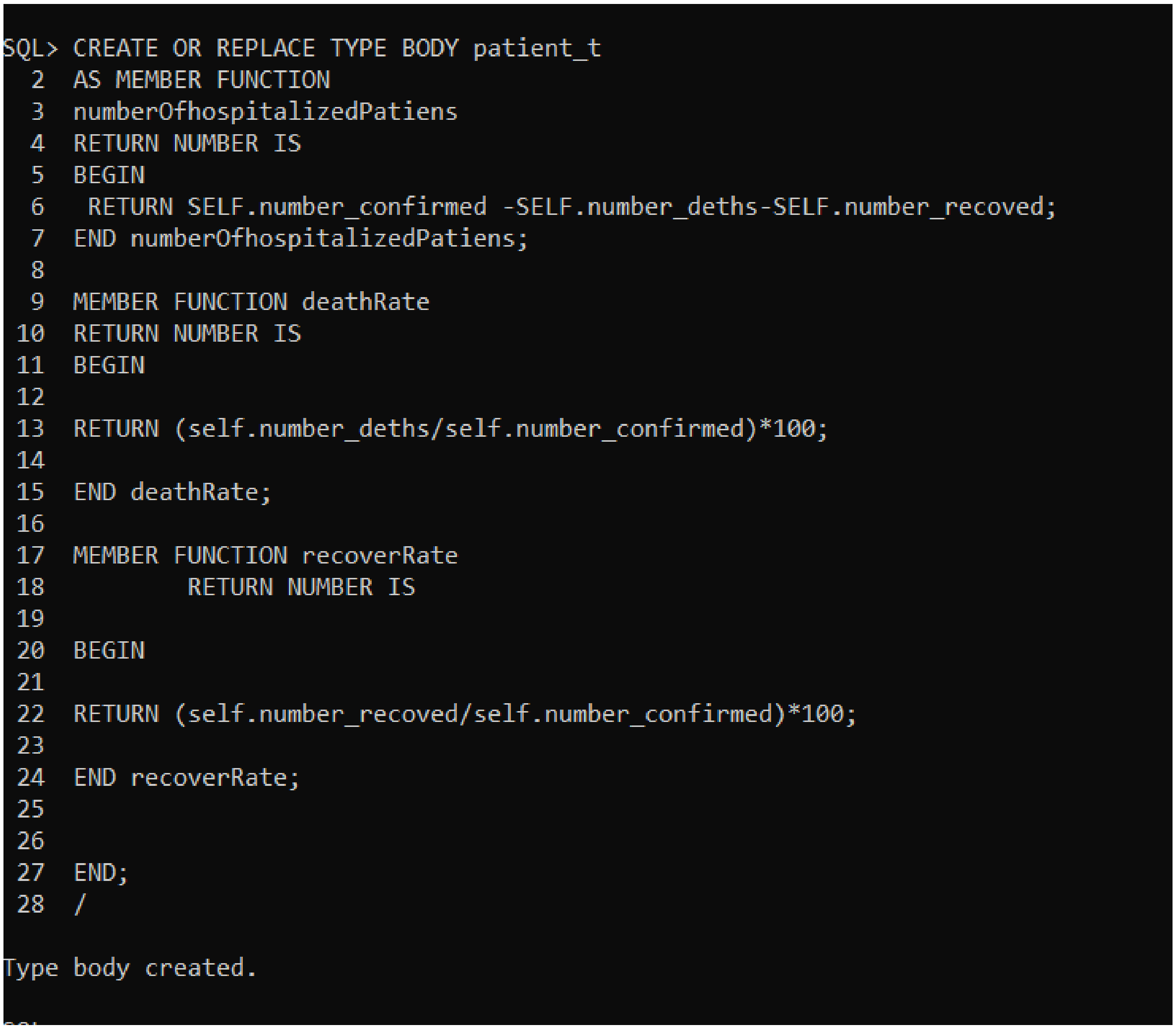
Important -:

Before I load the data, I put my all raw files into C:\dsda path and also the empty records of province field I replace as null otherwise it gives errors in the procedures. And also, I insert records to the table by procedure. All the scripts are attached with the document.

6. there are 3 member methods that I created first is for view the number of hospitalized patients, view the percentage of death cases, view the percentage of recovered cases.



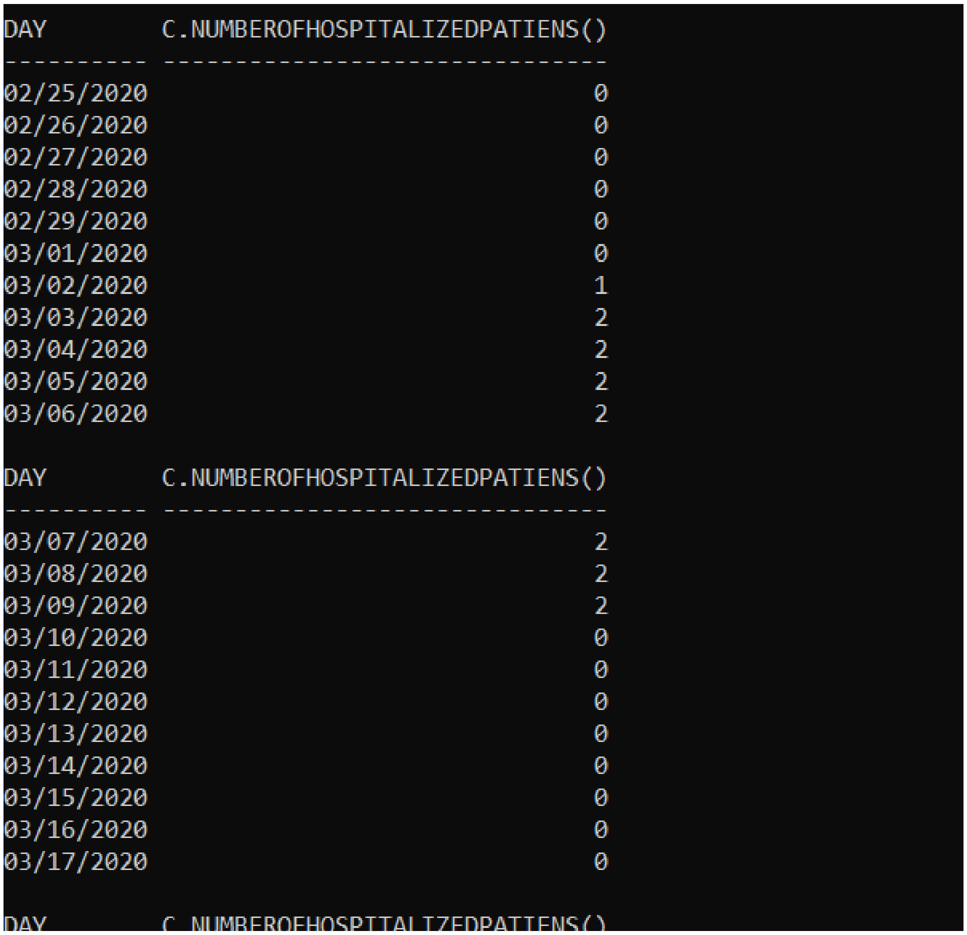
```
SQL> ALTER TYPE patient_t
  2       ADD MEMBER FUNCTION numberOfhospitalizedPatiens
  3       RETURN NUMBER CASCADE;

Type altered.

SQL> ALTER TYPE patient_t ADD MEMBER FUNCTION
  2  deathRate
  3  RETURN NUMBER CASCADE;

Type altered.

SQL> ALTER TYPE patient_t ADD MEMBER FUNCTION
  2  recoverRate
  3  RETURN NUMBER CASCADE;

Type altered.
```



```
SQL> CREATE OR REPLACE TYPE BODY patient_t
  2  AS MEMBER FUNCTION
  3  numberOfhospitalizedPatiens
  4  RETURN NUMBER IS
  5  BEGIN
  6   RETURN SELF.number_confirmed -SELF.number_deths-SELF.number_recoved;
  7  END numberOfhospitalizedPatiens;
  8
  9  MEMBER FUNCTION deathRate
 10  RETURN NUMBER IS
 11  BEGIN
 12
 13  RETURN (self.number_deths/self.number_confirmed)*100;
 14
 15  END deathRate;
 16
 17  MEMBER FUNCTION recoverRate
 18          RETURN NUMBER IS
 19
 20  BEGIN
 21
 22  RETURN (self.number_recoved/self.number_confirmed)*100;
 23
 24  END recoverRate;
 25
 26
 27  END;
 28  /

Type body created.
```

7.

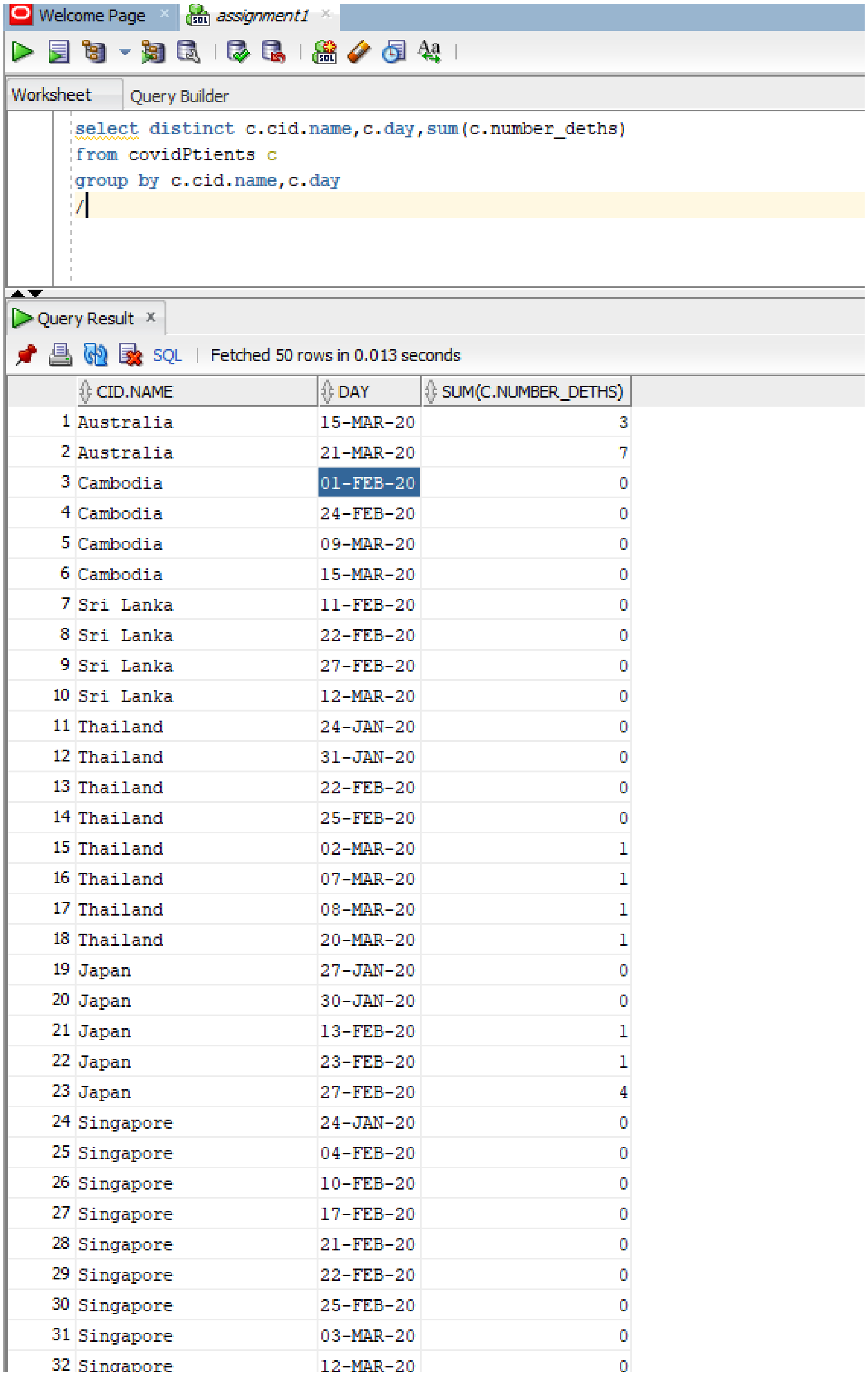
Report of hospitalized people count



```
DAY        C.NUMBEROFHOSPITALIZEDPATIENS()
---------- -------------------------------
02/25/2020                               0
02/26/2020                               0
02/27/2020                               0
02/28/2020                               0
02/29/2020                               0
03/01/2020                               0
03/02/2020                               1
03/03/2020                               2
03/04/2020                               2
03/05/2020                               2
03/06/2020                               2

DAY        C.NUMBEROFHOSPITALIZEDPATIENS()
---------- -------------------------------
03/07/2020                               2
03/08/2020                               2
03/09/2020                               2
03/10/2020                               0
03/11/2020                               0
03/12/2020                               0
03/13/2020                               0
03/14/2020                               0
03/15/2020                               0
03/16/2020                               0
03/17/2020                               0

DAY        C.NUMBEROFHOSPITALIZEDPATIENS()
```

- For the easiness, I use SQL DEVOLOPER to make the reports further.

Report of country wise dead count per day

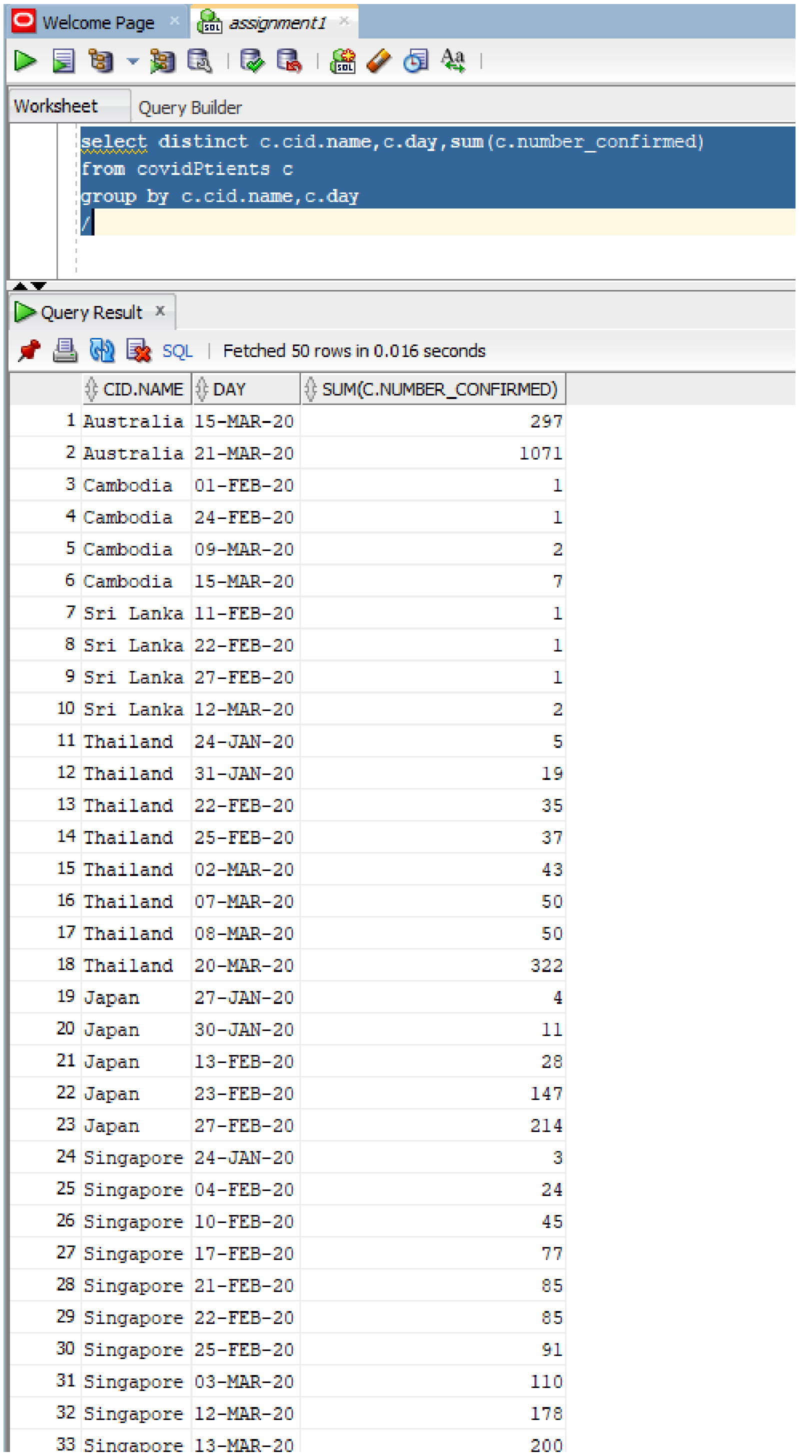


```
select distinct c.cid.name,c.day,sum(c.number_deths)
from covidPtients c
group by c.cid.name,c.day
/
```

Fetched 50 rows in 0.013 seconds

|  | CID.NAME | DAY | SUM(C.NUMBER_DETHS) |
|---|---|---|---|
| 1 | Australia | 15-MAR-20 | 3 |
| 2 | Australia | 21-MAR-20 | 7 |
| 3 | Cambodia | 01-FEB-20 | 0 |
| 4 | Cambodia | 24-FEB-20 | 0 |
| 5 | Cambodia | 09-MAR-20 | 0 |
| 6 | Cambodia | 15-MAR-20 | 0 |
| 7 | Sri Lanka | 11-FEB-20 | 0 |
| 8 | Sri Lanka | 22-FEB-20 | 0 |
| 9 | Sri Lanka | 27-FEB-20 | 0 |
| 10 | Sri Lanka | 12-MAR-20 | 0 |
| 11 | Thailand | 24-JAN-20 | 0 |
| 12 | Thailand | 31-JAN-20 | 0 |
| 13 | Thailand | 22-FEB-20 | 0 |
| 14 | Thailand | 25-FEB-20 | 0 |
| 15 | Thailand | 02-MAR-20 | 1 |
| 16 | Thailand | 07-MAR-20 | 1 |
| 17 | Thailand | 08-MAR-20 | 1 |
| 18 | Thailand | 20-MAR-20 | 1 |
| 19 | Japan | 27-JAN-20 | 0 |
| 20 | Japan | 30-JAN-20 | 0 |
| 21 | Japan | 13-FEB-20 | 1 |
| 22 | Japan | 23-FEB-20 | 1 |
| 23 | Japan | 27-FEB-20 | 4 |
| 24 | Singapore | 24-JAN-20 | 0 |
| 25 | Singapore | 04-FEB-20 | 0 |
| 26 | Singapore | 10-FEB-20 | 0 |
| 27 | Singapore | 17-FEB-20 | 0 |
| 28 | Singapore | 21-FEB-20 | 0 |
| 29 | Singapore | 22-FEB-20 | 0 |
| 30 | Singapore | 25-FEB-20 | 0 |
| 31 | Singapore | 03-MAR-20 | 0 |
| 32 | Singapore | 12-MAR-20 | 0 |

Report of country wise confirmed Cases count per day

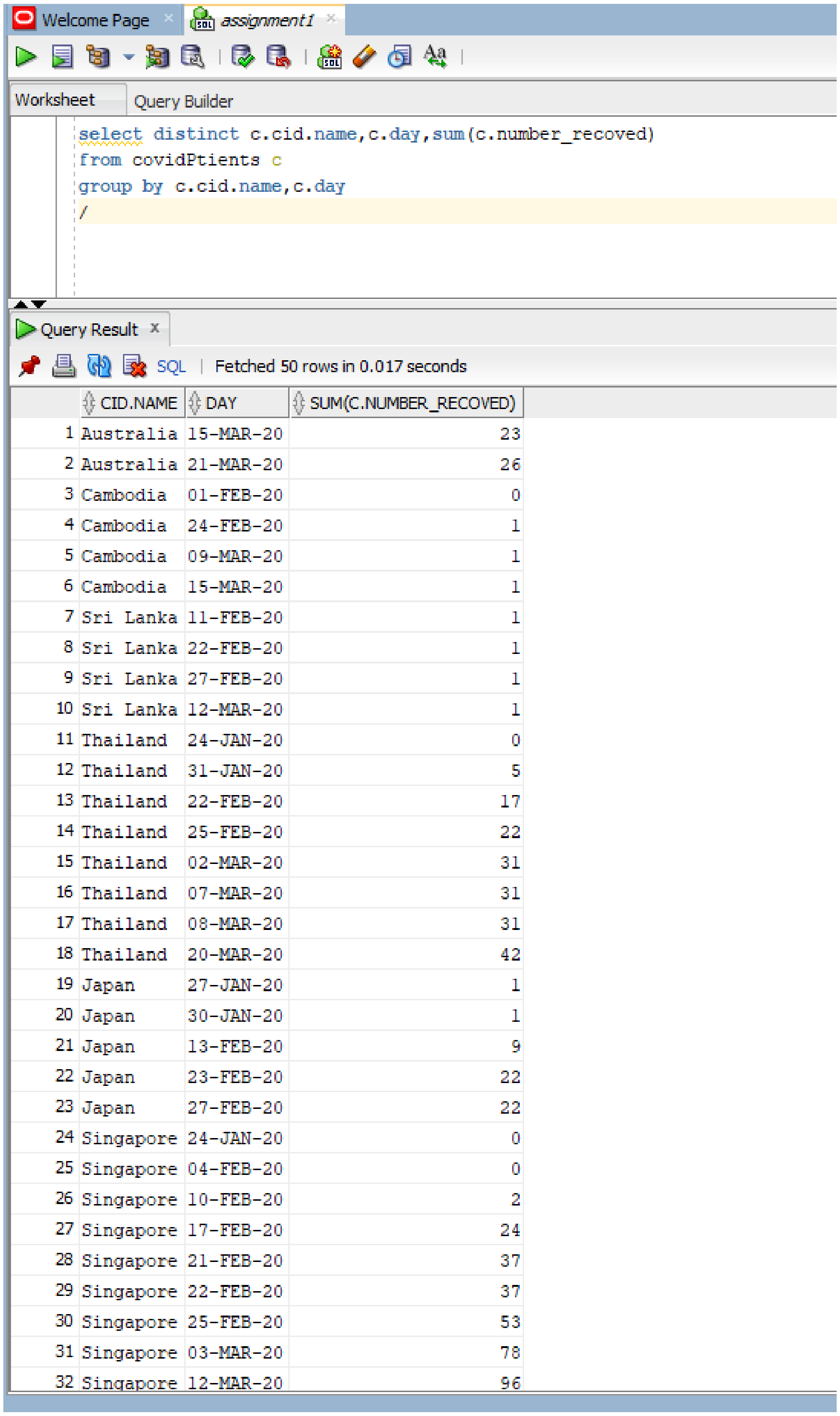


```
select distinct c.cid.name,c.day,sum(c.number_confirmed)
from covidPtients c
group by c.cid.name,c.day
/
```

Fetched 50 rows in 0.016 seconds

|  | CID.NAME | DAY | SUM(C.NUMBER_CONFIRMED) |
|---|---|---|---|
| 1 | Australia | 15-MAR-20 | 297 |
| 2 | Australia | 21-MAR-20 | 1071 |
| 3 | Cambodia | 01-FEB-20 | 1 |
| 4 | Cambodia | 24-FEB-20 | 1 |
| 5 | Cambodia | 09-MAR-20 | 2 |
| 6 | Cambodia | 15-MAR-20 | 7 |
| 7 | Sri Lanka | 11-FEB-20 | 1 |
| 8 | Sri Lanka | 22-FEB-20 | 1 |
| 9 | Sri Lanka | 27-FEB-20 | 1 |
| 10 | Sri Lanka | 12-MAR-20 | 2 |
| 11 | Thailand | 24-JAN-20 | 5 |
| 12 | Thailand | 31-JAN-20 | 19 |
| 13 | Thailand | 22-FEB-20 | 35 |
| 14 | Thailand | 25-FEB-20 | 37 |
| 15 | Thailand | 02-MAR-20 | 43 |
| 16 | Thailand | 07-MAR-20 | 50 |
| 17 | Thailand | 08-MAR-20 | 50 |
| 18 | Thailand | 20-MAR-20 | 322 |
| 19 | Japan | 27-JAN-20 | 4 |
| 20 | Japan | 30-JAN-20 | 11 |
| 21 | Japan | 13-FEB-20 | 28 |
| 22 | Japan | 23-FEB-20 | 147 |
| 23 | Japan | 27-FEB-20 | 214 |
| 24 | Singapore | 24-JAN-20 | 3 |
| 25 | Singapore | 04-FEB-20 | 24 |
| 26 | Singapore | 10-FEB-20 | 45 |
| 27 | Singapore | 17-FEB-20 | 77 |
| 28 | Singapore | 21-FEB-20 | 85 |
| 29 | Singapore | 22-FEB-20 | 85 |
| 30 | Singapore | 25-FEB-20 | 91 |
| 31 | Singapore | 03-MAR-20 | 110 |
| 32 | Singapore | 12-MAR-20 | 178 |
| 33 | Singapore | 13-MAR-20 | 200 |

Report of country wise recovered cases count per day

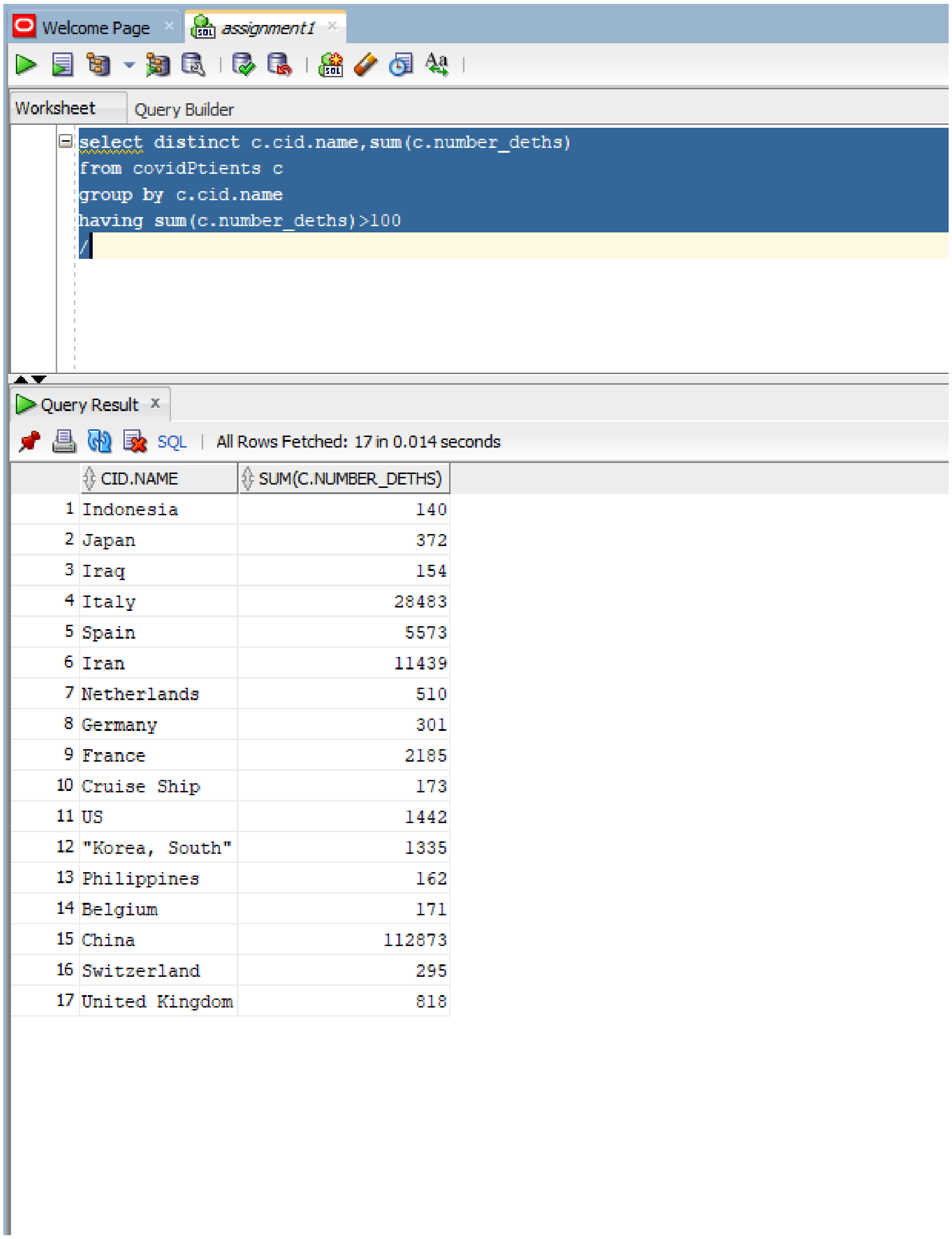


```
select distinct c.cid.name,c.day,sum(c.number_recoved)
from covidPtients c
group by c.cid.name,c.day
/
```

Fetched 50 rows in 0.017 seconds

| | CID.NAME | DAY | SUM(C.NUMBER_RECOVED) |
|---|---|---|---|
| 1 | Australia | 15-MAR-20 | 23 |
| 2 | Australia | 21-MAR-20 | 26 |
| 3 | Cambodia | 01-FEB-20 | 0 |
| 4 | Cambodia | 24-FEB-20 | 1 |
| 5 | Cambodia | 09-MAR-20 | 1 |
| 6 | Cambodia | 15-MAR-20 | 1 |
| 7 | Sri Lanka | 11-FEB-20 | 1 |
| 8 | Sri Lanka | 22-FEB-20 | 1 |
| 9 | Sri Lanka | 27-FEB-20 | 1 |
| 10 | Sri Lanka | 12-MAR-20 | 1 |
| 11 | Thailand | 24-JAN-20 | 0 |
| 12 | Thailand | 31-JAN-20 | 5 |
| 13 | Thailand | 22-FEB-20 | 17 |
| 14 | Thailand | 25-FEB-20 | 22 |
| 15 | Thailand | 02-MAR-20 | 31 |
| 16 | Thailand | 07-MAR-20 | 31 |
| 17 | Thailand | 08-MAR-20 | 31 |
| 18 | Thailand | 20-MAR-20 | 42 |
| 19 | Japan | 27-JAN-20 | 1 |
| 20 | Japan | 30-JAN-20 | 1 |
| 21 | Japan | 13-FEB-20 | 9 |
| 22 | Japan | 23-FEB-20 | 22 |
| 23 | Japan | 27-FEB-20 | 22 |
| 24 | Singapore | 24-JAN-20 | 0 |
| 25 | Singapore | 04-FEB-20 | 0 |
| 26 | Singapore | 10-FEB-20 | 2 |
| 27 | Singapore | 17-FEB-20 | 24 |
| 28 | Singapore | 21-FEB-20 | 37 |
| 29 | Singapore | 22-FEB-20 | 37 |
| 30 | Singapore | 25-FEB-20 | 53 |
| 31 | Singapore | 03-MAR-20 | 78 |
| 32 | Singapore | 12-MAR-20 | 96 |

Country names which having more than 100 deaths



```
select distinct c.cid.name,sum(c.number_deths)
from covidPtients c
group by c.cid.name
having sum(c.number_deths)>100
/
```

All Rows Fetched: 17 in 0.014 seconds

| | CID.NAME | SUM(C.NUMBER_DETHS) |
|---|---|---|
| 1 | Indonesia | 140 |
| 2 | Japan | 372 |
| 3 | Iraq | 154 |
| 4 | Italy | 28483 |
| 5 | Spain | 5573 |
| 6 | Iran | 11439 |
| 7 | Netherlands | 510 |
| 8 | Germany | 301 |
| 9 | France | 2185 |
| 10 | Cruise Ship | 173 |
| 11 | US | 1442 |
| 12 | "Korea, South" | 1335 |
| 13 | Philippines | 162 |
| 14 | Belgium | 171 |
| 15 | China | 112873 |
| 16 | Switzerland | 295 |
| 17 | United Kingdom | 818 |