CASSANDRA – LAB 2

Q1. In the keyspace named hospital in Cassandra database do the following.

a) Create a user defined datatype named patientinfo with fields height, weight, symptoms.

```
qlsh:hospital> create type patient_info(height int,weight double,symptoms text);
```

b) Add a new column named info in patient table which has the user defined type patientinfo.

```
qlsh:hospital> alter table patient add p_info frozen<patient_info>;
```

c) Update the rows in patient table by adding data to info.

```
qlsh:hospital> update patient set p_info={height:160,weight:50,symptoms:'cold'} where ptid=1;
```

d) Update user defined type patientinfo by adding a field named oxylevel.

```
cqlsh:hospital> alter type patient_info add oxygenlevel double;
```

```
cqlsh:hospital> select * from patient;

 ptid | address                                                       | p_info
                                               | phone      | ptname
------+---------------------------------------------------------------+------------------
--------------------------------------------------------+-----------+--------
    1 |                                  {'city': 'pune', 'street': 'sb road'} | {height: 160, we
ight: 50, symptoms: 'cold', oxygenlevel: null} |    null |   rama
    2 | {'city': 'nagpur', 'house': '123 house', 'street': 'koradi road'} |
                                                  null | [3256236] |   ruhi
```

e) Create an index for ptname of table patient.

```
qlsh:hospital>  create index ptname_index on patient(ptname);
```

f) Find the details of a particular patient where ptname is given.
```
qlsh:hospital> select * from patient where ptname='ruhi';

ptid | address                                                            | p_info | phone      | ptname
-----+--------------------------------------------------------------------+--------+-----------+--------
   2 | {'city': 'nagpur', 'house': '123 house', 'street': 'koradi road'} |   null | [3256236] |   ruhi

1 rows)
```

g) Drop the index for ptname.

```
cqlsh:hospital> drop index ptname_index;
```

h) Create a columnfamily named staff with columns sid, sname, dept and salary where sname is a userdefined type with fields fname and lname.

```
cqlsh:hospital> create type sname(fname text,lname text);
```

```
cqlsh:hospital> create table staff(sid int primary key,s_name frozen<sname>,dept text,salary int);
```

i) Insert some rows into staff table.

```
cqlsh:hospital> begin batch
           ... insert into staff(sid,dept,s_name,salary) values (1,'admin',{fname:'RAVI',lname:'RANA'},50000);
           ... insert into staff(sid,dept,s_name,salary) values (2,'MP',{fname:'NAVNIT',lname:'RANA'},55000);
           ... insert into staff(sid,dept,s_name,salary) values (3,'MLA',{fname:'RAHUL',lname:'RAO'},65000);
           ... apply batch;
cqlsh:hospital> select * from staff;

 sid | dept  | s_name                          | salary
-----+-------+---------------------------------+--------
   1 | admin |    {fname: 'RAVI', lname: 'RANA'} |  50000
   2 |    MP | {fname: 'NAVNIT', lname: 'RANA'} |  55000
   3 |   MLA |    {fname: 'RAHUL', lname: 'RAO'} |  65000
```

j) Find the details of a particular staff whose fname and lname is given using allow filtering option.

```
cqlsh:hospital> select * from staff WHERE s_name = {fname:'RAVI',lname:'RANA'} ALLOW FILTERING;

 sid | dept  | s_name                       | salary
-----+-------+------------------------------+--------
   1 | admin | {fname: 'RAVI', lname: 'RANA'} |  50000
```

k) Rename the fields fname and lname as firstname and lastname.

Alter type sname rename fname to firstname and lname to lastname;

```
cqlsh:hospital> alter type sname rename fname to firstname and lname to lastname;
cqlsh:hospital> select * from staff;

 sid | dept  | s_name                                   | salary
-----+-------+------------------------------------------+--------
   1 | admin |    {firstname: 'RAVI', lastname: 'RANA'} |  50000
   2 |    MP | {firstname: 'NAVNIT', lastname: 'RANA'} |  55000
   3 |   MLA |    {firstname: 'RAHUL', lastname: 'RAO'} |  65000
```

l) Find the maximum salary available in the staff table.

```
cqlsh:hospital> select max(salary) from staff;

 system.max(salary)
--------------------
              65000
```