

DATABASE MANAGEMENT SYSTEM

COVID MANAGEMENT DATABASE

Team members:

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PROBLEM STATEMENT:

This project aims in building a database management system which analyzes the covid situation in hospitals. The database has information about the hospitals in different cities covid patients, health workers, symptoms, suppliers, supplies and covid variants. With this database, we can determine the covid status across places. We can keep record of the number of people affected, the variant type and number of deaths. Using this database, we can monitor the covid situation in hospitals across India.

This data is quite crucial for analyzing the covid situation in Indian cities. Since the database has details about supply details and demand also, necessary places can be served accordingly. The statistical data from database can give strong base for taking decision on covid situation. Database has details about symptoms and details about variants. This can be very useful to create awareness about covid variants among the people in the country.

In this way, the database can serve multiple requirements. The database can be used efficiently to manage the pandemic situation spread in India.

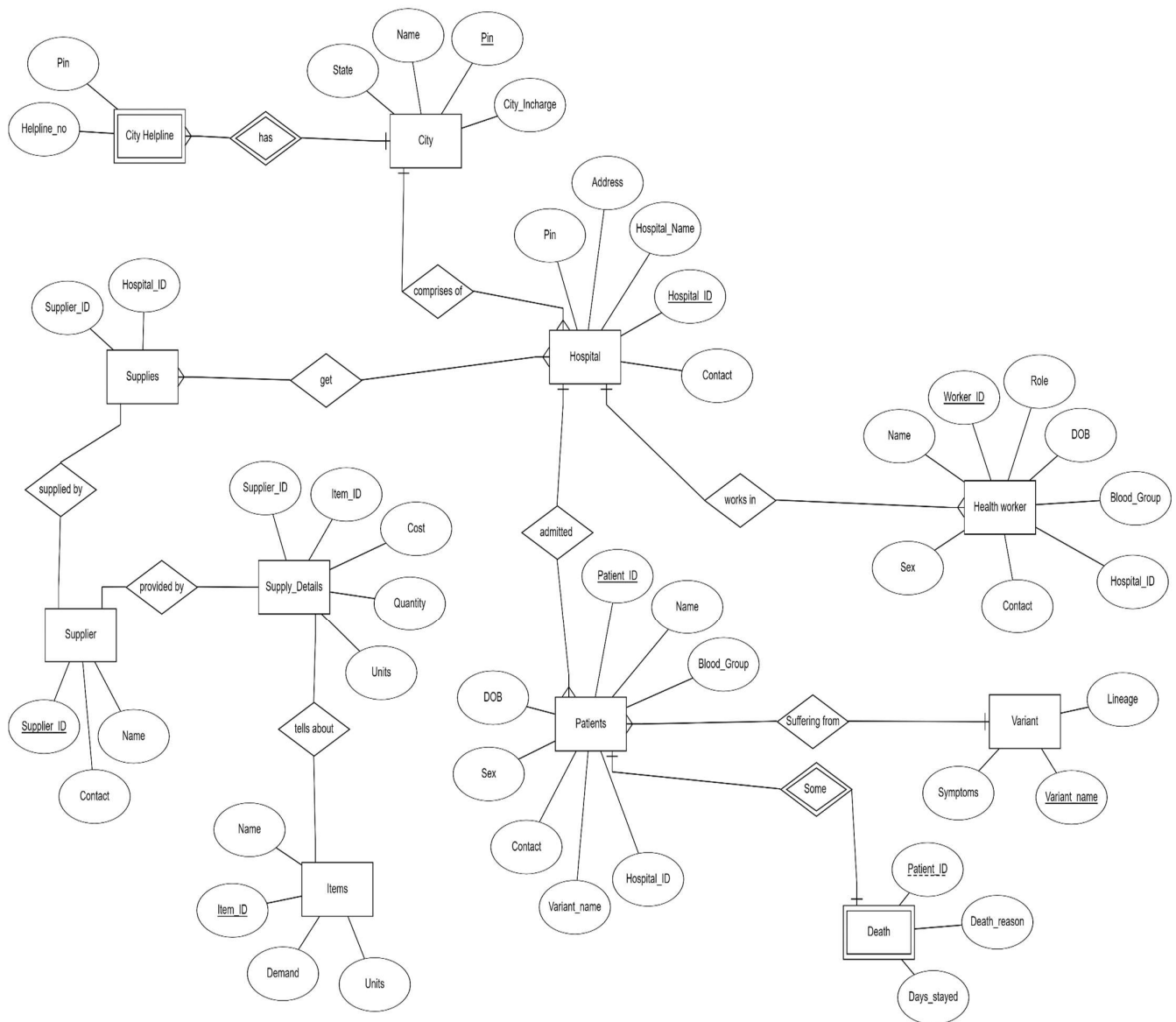
EXPLANATION :

For simplicity purpose the sample of data taken is small. Only some cities are considered to reduce the complexity. Along with this, following assumptions are also made

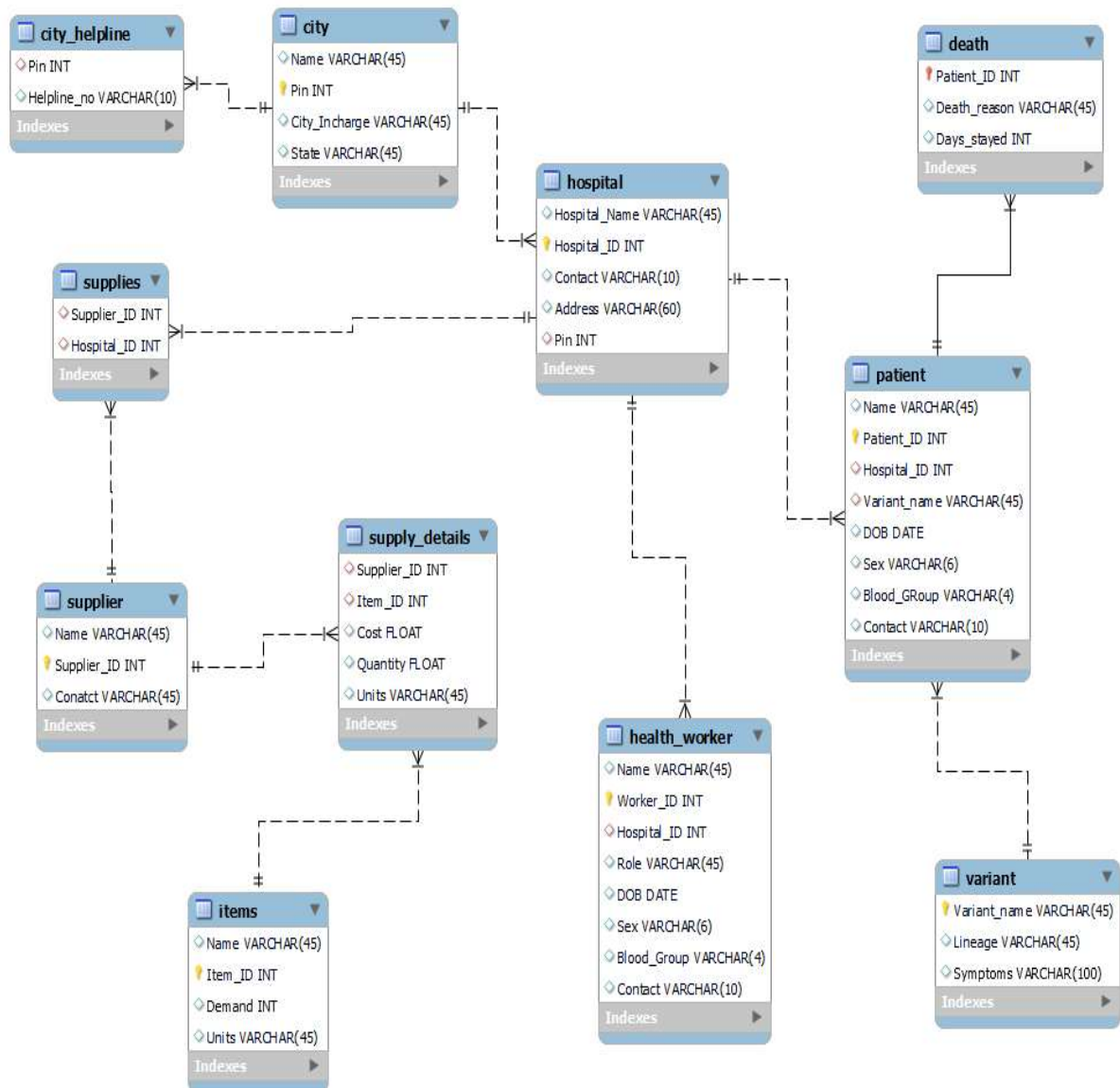
- ➔ City has a city helpline. There may be multiple helplines for a single city.
- ➔ City has hospitals. Hospitals serve patients and health workers work in hospital.
- ➔ Patients are suffering from various types of covid variants. Each variant has certain prescribed symptoms.
- ➔ Deaths are recorded with death reason and number of days that patient stayed in the hospital.
- ➔ Supplier supplies the necessary items to hospital. Quantity of items available and their cost is maintained. Items demand is also maintained

In this way, the database has been modelled with above mentioned details which drive the purpose for which database is needed to be designed.

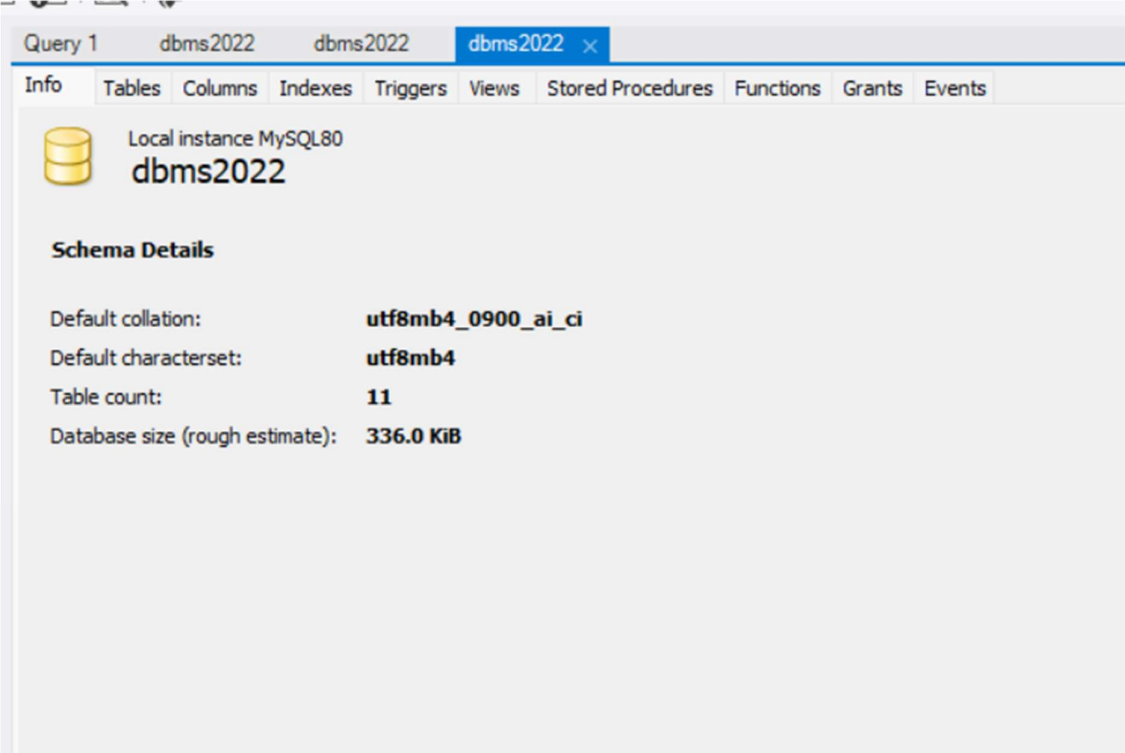
ENTITY RELATIONSHIP DIAGRAM



RELATIONAL SCHEMA:



DATABASE OVERVIEW :



Query 1 dbms2022 dbms2022 dbms2022 x

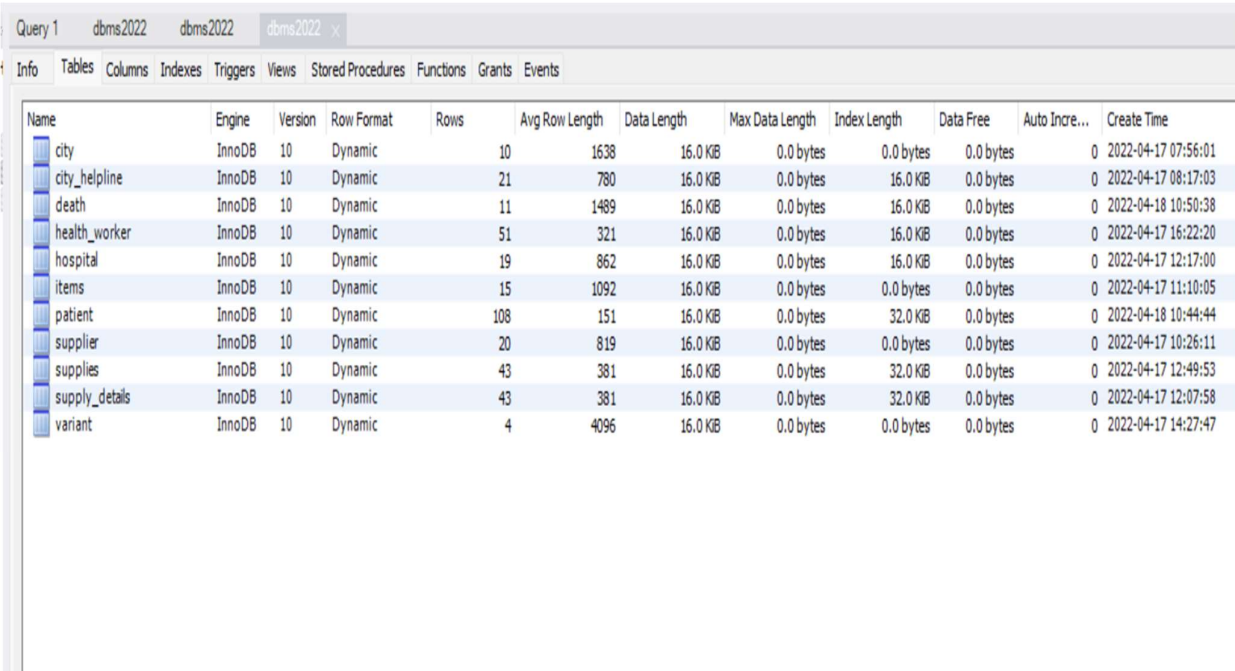
Info Tables Columns Indexes Triggers Views Stored Procedures Functions Grants Events

Local instance MySQL80
dbms2022

Schema Details

Default collation: **utf8mb4_0900_ai_ci**
Default character set: **utf8mb4**
Table count: **11**
Database size (rough estimate): **336.0 KiB**

TABLES IN DATABASE:



Query 1 dbms2022 dbms2022 dbms2022 x

Info Tables Columns Indexes Triggers Views Stored Procedures Functions Grants Events

Name	Engine	Version	Row Format	Rows	Avg Row Length	Data Length	Max Data Length	Index Length	Data Free	Auto Incre...	Create Time
city	InnoDB	10	Dynamic	10	1638	16.0 KiB	0.0 bytes	0.0 bytes	0.0 bytes	0	2022-04-17 07:56:01
city_helpline	InnoDB	10	Dynamic	21	780	16.0 KiB	0.0 bytes	16.0 KiB	0.0 bytes	0	2022-04-17 08:17:03
death	InnoDB	10	Dynamic	11	1489	16.0 KiB	0.0 bytes	16.0 KiB	0.0 bytes	0	2022-04-18 10:50:38
health_worker	InnoDB	10	Dynamic	51	321	16.0 KiB	0.0 bytes	16.0 KiB	0.0 bytes	0	2022-04-17 16:22:20
hospital	InnoDB	10	Dynamic	19	862	16.0 KiB	0.0 bytes	16.0 KiB	0.0 bytes	0	2022-04-17 12:17:00
items	InnoDB	10	Dynamic	15	1092	16.0 KiB	0.0 bytes	0.0 bytes	0.0 bytes	0	2022-04-17 11:10:05
patient	InnoDB	10	Dynamic	108	151	16.0 KiB	0.0 bytes	32.0 KiB	0.0 bytes	0	2022-04-18 10:44:44
supplier	InnoDB	10	Dynamic	20	819	16.0 KiB	0.0 bytes	0.0 bytes	0.0 bytes	0	2022-04-17 10:26:11
supplies	InnoDB	10	Dynamic	43	381	16.0 KiB	0.0 bytes	32.0 KiB	0.0 bytes	0	2022-04-17 12:49:53
supply_details	InnoDB	10	Dynamic	43	381	16.0 KiB	0.0 bytes	32.0 KiB	0.0 bytes	0	2022-04-17 12:07:58
variant	InnoDB	10	Dynamic	4	4096	16.0 KiB	0.0 bytes	0.0 bytes	0.0 bytes	0	2022-04-17 14:27:47

FUNCTIONAL DEPENDENCIES AFTER NORMALIZATION:

1. City : BCNF (Boyce-Codd Normal Form)
Pin \rightarrow Name, State, City_Incharge
2. City_helpline : BCNF (Boyce-Codd Normal Form)
(Pin, Helpline_no) \rightarrow Pin, Helpline_no
3. Hospital : BCNF (Boyce-Codd Normal Form)
Hospital_Id \rightarrow Hospital_Name, Contact, Address, Pin
4. Health_worker : BCNF (Boyce-Codd Normal Form)
Worker_ID \rightarrow Name, Hospital_ID, Role, DOB, Sex,
Blood_Group, Contact
5. Patient : BCNF (Boyce-Codd Normal Form)
Patient_ID \rightarrow Name, Hospital_ID, Variant_Name, DOB,
Sex, Blood_Group, Contact
6. Variant : BCNF (Boyce-Codd Normal Form)
Variant_name \rightarrow **Lineage**, Symptoms
7. Death : BCNF (Boyce-Codd Normal Form)
Patient_ID \rightarrow Death_reason, Days_stayed
8. Supplier : BCNF (Boyce-Codd Normal Form)
Supplier_ID \rightarrow Name, Contact
9. Items: BCNF (Boyce-Codd Normal Form)
Item_ID \rightarrow Name, Demand, Units
10. Supplier_details : BCNF (Boyce-Codd Normal Form)
(Supplier_ID, Item_ID) \rightarrow Cost, Quantity, Units
11. Supplies : BCNF (Boyce-Codd Normal Form)
(Supplier_ID, Hospital_ID) \rightarrow Supplier_ID, Hospital_ID

APPLICATION OF NORMALIZATION IN DATABASE:

The upcoming paragraphs will show how normalization was applied to decompose tables and make the database efficient.

1. City table had attributes name, city_incharge, Pin, State and helpline_no. But helpline_no is multivalued. If we store it in the same table we need to store other attributes also multiple times which will create redundancy in the database. So the table is decomposed into 2 tables namely City and City_Helpline. Now both being in BCNF. We have reduced the data redundancy by just storing Pin, Helpline_no in City_helpline table and referencing as a foreign key.
2. If variant details are also stored in patient table, there would be redundancy. As variant names repeats many times we need to enter variant details again and again making it inefficient. So, we have decomposed the table into Patient and variant table. Both tables in BCNF.
3. Supplier table had attributes name, supplier_ID, Contact, Item name, Demand, Quantity Cost. But a supplier might supply many items. Each and every time we need to enter the values of contact, name. This will create data redundancy. So, Supplier table is decomposed into Supplier and Supply_details tables. Both tables in BCNF.
4. Applying similar logic, Supply details is further decomposed into Items and Supply details. Both tables in BCNF.

TABLES:

City :

```
CREATE SCHEMA `dbms2022` ;
```

```
CREATE TABLE City(  
  Name VARCHAR(45),  
  Pin INT PRIMARY KEY NOT NULL,  
  City_Incharge VARCHAR(45),  
  State VARCHAR(45)  
);  
INSERT INTO City VALUES('Hyderabad', 101, 'Ramulu', 'Telangana');  
INSERT INTO City VALUES('Kolkata', 102, 'Kamlesh', 'West Bengal');  
INSERT INTO City VALUES('Chennai', 103, 'Selvan', 'Tamil Nadu');  
INSERT INTO City VALUES('Gandhinagar', 104, 'Abhishek', 'Gujarat');  
INSERT INTO City VALUES('Patna', 105, 'Jignesh', 'Bihar');  
INSERT INTO City VALUES('Lucknow', 106, 'Fatima', 'Uttar Pradesh');  
INSERT INTO City VALUES('Bengaluru', 107, 'Marudappa', 'Karnataka');  
INSERT INTO City VALUES('Shimla', 108, 'Manish', 'Himachal Pradesh');  
INSERT INTO City VALUES('Jaipur', 109, 'Gajendra', 'Rajasthan');  
INSERT INTO City VALUES('Chandigarh', 110, 'Lal Singh', 'Punjab');
```

Name	Pin	City_Incharge	State
Hyderabad	101	Ramulu	Telangana
Kolokata	102	Kamlesh	West Bengal
Chennai	103	Selvan	Tamil Nadu
Gandhinagar	104	Abhishek	Gujarat
Patna	105	Jignesh	Bihar
Lucknow	106	Fatima	Uttar Pradesh
Bengaluru	107	Marudappa	Karnataka
Shimla	108	Manish	Himachal Pradesh
Jaipur	109	Gajendra	Rajasthan
Chandigarh	110	Lal Singh	Punjab

City_Helpline :

```
CREATE TABLE City_Helpline(  
  Pin INT,  
  Helpline_no VARCHAR(10),
```

```

FOREIGN KEY (Pin) REFERENCES City(Pin)
);
INSERT INTO City_Helpline VALUES( 101 , '7032377216');
INSERT INTO City_Helpline VALUES( 101 , '7032377217');
INSERT INTO City_Helpline VALUES( 102 , '7032377218');
INSERT INTO City_Helpline VALUES( 102 , '7032377219');
INSERT INTO City_Helpline VALUES( 103 , '7032377220');
INSERT INTO City_Helpline VALUES( 103 , '7032377221');
INSERT INTO City_Helpline VALUES( 104 , '7032377222');
INSERT INTO City_Helpline VALUES( 104 , '7032377223');
INSERT INTO City_Helpline VALUES( 105 , '7032377224');
INSERT INTO City_Helpline VALUES( 105 , '7032377225');
INSERT INTO City_Helpline VALUES( 106 , '7032377226');
INSERT INTO City_Helpline VALUES( 106 , '7032377227');
INSERT INTO City_Helpline VALUES( 107 , '7032377228');
INSERT INTO City_Helpline VALUES( 107 , '7032377229');
INSERT INTO City_Helpline VALUES( 108 , '7032377230');
INSERT INTO City_Helpline VALUES( 108 , '7032377231');
INSERT INTO City_Helpline VALUES( 109 , '7032377232');
INSERT INTO City_Helpline VALUES( 109 , '7032377233');
INSERT INTO City_Helpline VALUES( 110 , '7032377234');
INSERT INTO City_Helpline VALUES( 110 , '7032377235');
INSERT INTO City_Helpline VALUES( 110 , '7032377236');

```

Pin	Helpline_no
101	7032377216
101	7032377217
102	7032377218
102	7032377219
103	7032377220
103	7032377221
104	7032377222
104	7032377223
105	7032377224
105	7032377225
106	7032377226
106	7032377227
107	7032377228
107	7032377229
108	7032377230
108	7032377231
109	7032377232
109	7032377233
110	7032377234
110	7032377235
110	7032377236

Hospital:

```
CREATE TABLE Hospital(  
  Hospital_Name VARCHAR(45),  
  Hospital_ID INT PRIMARY KEY NOT NULL,  
  Contact VARCHAR(10),  
  Address VARCHAR(60),  
  Pin INT,  
  FOREIGN KEY (Pin) REFERENCES City (Pin)  
);  
  
INSERT INTO Hospital VALUES ('Apex Hospital', 1011, '8897876172','8-1-  
21,karmanghat,500079', 101);  
INSERT INTO Hospital VALUES ('KIMS Hospital', 1012, '8897876173','5-12-41,LB  
Nagar,500035', 101);  
INSERT INTO Hospital VALUES ('Rainbow Hospital', 1021, '8897876174','6-87,VIP  
Road,700052', 102);  
INSERT INTO Hospital VALUES ('Nightingale Hospital', 1022,'8897876175','7-  
41,Bijoygarh,700032', 102);  
INSERT INTO Hospital VALUES ('Krishna Hospital', 1031,'8897876176', '4-12-  
41,Ethiraj Salai,600008', 103);  
INSERT INTO Hospital VALUES ('Yash Hospital', 1032, '8897876177','5-8-  
17,Flowers Road,600084', 103);  
INSERT INTO Hospital VALUES ('Rudra Hospital', 1041,'8897876178', '5/2,Balipur  
Road,382421', 104);  
INSERT INTO Hospital VALUES ('Shiva Hospital', 1042, '8897876179','8/17,Divine  
Park,380060', 104);  
INSERT INTO Hospital VALUES ('Sagar Hospital', 1052,'8897876181',  
'7/12,Atnama,803213', 105);  
INSERT INTO Hospital VALUES ('Liberty Hospital', 1061,'8897876182',  
'5/7,Aunta,803303', 105);  
INSERT INTO Hospital VALUES ('City Hospital', 1062,'8897876183',  
'7/12,Alamnagar,226017', 106);  
INSERT INTO Hospital VALUES ('Narayan Hospital', 1071,'8897876184',  
'8/16,Alambagh,226005', 106);  
INSERT INTO Hospital VALUES ('Apollo Hospital', 1072,'8897876185',  
'12/41,Brigade Road,560001', 107);  
INSERT INTO Hospital VALUES ('Fortis Hospital', 1081,  
'8897876186','5/41,Bommanahalli,560068', 107);  
INSERT INTO Hospital VALUES ('Apollo Hospital', 1082,'8897876187',  
'8/21,Bychari,171011', 108);  
INSERT INTO Hospital VALUES ('Vedanta Hospital', 1091,'8897876188',  
'5/4,Cpri,171001', 108);  
INSERT INTO Hospital VALUES ('Fortis Hospital', 1092,'8897876189',  
'1/3,Amer,302028', 109);  
INSERT INTO Hospital VALUES ('Amar Hospital', 1101,'8897876190',  
'2/9,Badheri,160036', 110);
```

```
INSERT INTO Hospital VALUES ('Aditya Hospital', 1102, '8897876191',
'5/1,Balongi,140301', 110);
```

Hospital_Name	Hospital_ID	Contact	Address	Pin
Apex Hospital	1011	8897876172	8-1-21,karmanghat,500079	101
KIMS Hospital	1012	8897876173	5-12-41,LB Nagar,500035	101
Rainbow Hospital	1021	8897876174	6-87,VIP Road,700052	102
Nightingale Hospital	1022	8897876175	7-41,Bijoygarh,700032	102
Krishna Hospital	1031	8897876176	4-12-41,Ethiraj Salai,600008	103
Yash Hospital	1032	8897876177	5-8-17,Flowers Road,600084	103
Rudra Hospital	1041	8897876178	5/2,Balipur Road,382421	104
Shiva Hospital	1042	8897876179	8/17,Divine Park,380060	104
Sagar Hospital	1052	8897876181	7/12,Atnama,803213	105
Liberty Hospital	1061	8897876182	5/7,Aunta,803303	105
City Hospital	1062	8897876183	7/12,Alamnagar,226017	106
Narayan Hospital	1071	8897876184	8/16,Alambagh,226005	106
Apollo Hospital	1072	8897876185	12/41,Brigade Road,560001	107
Fortis Hospital	1081	8897876186	5/41,Bommanahalli,560068	107
Apollo Hospital	1082	8897876187	8/21,Bychari,171011	108
Vedanta Hospital	1091	8897876188	5/4,Cpri,171001	108
Fortis Hospital	1092	8897876189	1/3,Amer,302028	109
Amar Hospital	1101	8897876190	2/9,Badheri,160036	110
Aditya Hospital	1102	8897876191	5/1,Balongi,140301	110

Supplier:

```
CREATE TABLE Supplier(
Name VARCHAR(45),
Supplier_ID INT PRIMARY KEY NOT NULL,
Conatct VARCHAR(45)
);
INSERT INTO Supplier VALUES ('Vagdevi pvt ltd',1001,'9440556172');
INSERT INTO Supplier VALUES ('LT pvt ltd',1002,'9440556173');
INSERT INTO Supplier VALUES ('Vijay pvt ltd',1003,'9440556174');
INSERT INTO Supplier VALUES ('Heeralal pvt ltd',1004,'9440556175');
INSERT INTO Supplier VALUES ('Vishaka pvt ltd',1005,'9440556176');
INSERT INTO Supplier VALUES ('radhika pvt ltd',1006,'9440556177');
INSERT INTO Supplier VALUES ('ritesh pvt ltd',1007,'9440556178');
INSERT INTO Supplier VALUES ('Animesh pvt ltd',1008,'9440556179');
INSERT INTO Supplier VALUES ('Prajesh pvt ltd',1009,'9440556180');
INSERT INTO Supplier VALUES ('EK pvt ltd',1010,'9440556181');
INSERT INTO Supplier VALUES ('NMR pvt ltd',1011,'9440556182');
```

```

INSERT INTO Supplier VALUES ('TRK pvt ltd',1012,'9440556183');
INSERT INTO Supplier VALUES ('Swami pvt ltd',1013,'9440556184');
INSERT INTO Supplier VALUES ('RR pvt ltd',1014,'9440556185');
INSERT INTO Supplier VALUES ('Ambika pvt ltd',1015,'9440556186');
INSERT INTO Supplier VALUES ('Rocky pvt ltd',1016,'9440556187');
INSERT INTO Supplier VALUES ('Saraswati pvt ltd',1017,'9440556188');
INSERT INTO Supplier VALUES ('MT pvt ltd',1018,'9440556189');
INSERT INTO Supplier VALUES ('RFIC pvt ltd',1019,'9440556190');
INSERT INTO Supplier VALUES ('Swastik pvt ltd',1020,'9440556191');

```

Name	Supplier_ID	Conatct
Vagdevi pvt ltd	1001	9440556172
LT pvt ltd	1002	9440556173
Vijay pvt ltd	1003	9440556174
Heeralal pvt ltd	1004	9440556175
Vishaka pvt ltd	1005	9440556176
radhika pvt ltd	1006	9440556177
ritesh pvt ltd	1007	9440556178
Animesh pvt ltd	1008	9440556179
Prajesh pvt ltd	1009	9440556180
EK pvt ltd	1010	9440556181
NMR pvt ltd	1011	9440556182
TRK pvt ltd	1012	9440556183
Swami pvt ltd	1013	9440556184
RR pvt ltd	1014	9440556185
Ambika pvt ltd	1015	9440556186
Rocky pvt ltd	1016	9440556187
Saraswati pvt ltd	1017	9440556188
MT pvt ltd	1018	9440556189
RFIC pvt ltd	1019	9440556190
Swastik pvt ltd	1020	9440556191

Items:

```

CREATE TABLE Items(
  Name VARCHAR(45),
  Item_ID INT PRIMARY KEY NOT NULL,
  Demand int,
  Units VARCHAR(45)
);
INSERT INTO Items VALUES('3 Ply Face Mask', 501, 10, 'million');
INSERT INTO Items VALUES('N95 Respiratory Mask', 502, 10, 'million');

```

```

INSERT INTO Items VALUES('Oxygen Cylinder', 503, 2,'lakh');
INSERT INTO Items VALUES('Portable Oxygen Can', 504, 1,'lakh');
INSERT INTO Items VALUES('Oxygen concentrator', 505, 1,'lakh');
INSERT INTO Items VALUES('Oxygen refill', 506, 10, 'cubic metres');
INSERT INTO Items VALUES('Oxygen mask', 507, 10,'million');
INSERT INTO Items VALUES('Surgical gloves', 508, 10,'million');
INSERT INTO Items VALUES('Infrared thermometer', 509, 10,'lakh');
INSERT INTO Items VALUES('Digital thermometer', 510, 10,'lakh');
INSERT INTO Items VALUES('ICU ventilator', 511, 10,'thousand');
INSERT INTO Items VALUES('Coronavirus Test kit', 512, 10,'crore');
INSERT INTO Items VALUES('Blood group Test kit', 513, 10,'million');
INSERT INTO Items VALUES('Covid medicine kit', 514, 10,'crore');
INSERT INTO Items VALUES('Oxy-pulse meter', 515, 10,'lakh');

```

Name	Item_ID	Demand	Units
3 Ply Face Mask	501	10	million
N95 Respiratory Mask	502	10	million
Oxygen Cylinder	503	2	lakh
Portable Oxygen Can	504	1	lakh
Oxygen concentrator	505	1	lakh
Oxygen refill	506	10	cubic metres
Oxygen mask	507	10	million
Surgical gloves	508	10	million
Infrared thermometer	509	10	lakh
Digital thermometer	510	10	lakh
ICU ventilator	511	10	thousand
Coronavirus Test kit	512	10	crore
Blood group Test kit	513	10	million
Covid medicine kit	514	10	crore
Oxy-pulse meter	515	10	lakh

Supply_details:

```

CREATE TABLE Supply_details(
  Supplier_ID INT,
  Item_ID INT,
  Cost Float,
  Quantity Float,
  Units Varchar(45),
  FOREIGN KEY (Supplier_ID) REFERENCES Supplier (Supplier_ID),
  FOREIGN KEY (Item_ID) REFERENCES Items (Item_ID)

```

```

);
INSERT INTO Supply_details VALUES(1001, 501, 5 , 1, 'million');
INSERT INTO Supply_details VALUES(1001, 502, 8 , 1, 'million');
INSERT INTO Supply_details VALUES(1001, 503, 1000 , 1, 'lakh');
INSERT INTO Supply_details VALUES(1001, 504, 5000 , 1.5, 'lakh');
INSERT INTO Supply_details VALUES(1002, 504, 4500 , 1, 'lakh');
INSERT INTO Supply_details VALUES(1002, 505, 10000 , 0.5, 'lakh');
INSERT INTO Supply_details VALUES(1003, 501, 4.5 , 1, 'million');
INSERT INTO Supply_details VALUES(1003, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1004, 506, 199 , 0.25, 'cubic metres');
INSERT INTO Supply_details VALUES(1005, 507, 15 , 1, 'million');
INSERT INTO Supply_details VALUES(1005, 508, 50 , 4.5, 'million');
INSERT INTO Supply_details VALUES(1006, 508, 51 , 9, 'million');
INSERT INTO Supply_details VALUES(1006, 509, 400 , 1.5, 'lakh');
INSERT INTO Supply_details VALUES(1007, 509, 450 , 5, 'lakh');
INSERT INTO Supply_details VALUES(1007, 510, 350 , 8, 'lakh');
INSERT INTO Supply_details VALUES(1008, 510, 359 , 2.5, 'lakh');
INSERT INTO Supply_details VALUES(1008, 511, 100000 , 8, 'thousand');
INSERT INTO Supply_details VALUES(1009, 511, 50000 , 5, 'hundred');
INSERT INTO Supply_details VALUES(1010, 512, 100 , 1.5, 'million');
INSERT INTO Supply_details VALUES(1010, 513, 30 , 1.5, 'lakh');
INSERT INTO Supply_details VALUES(1011, 512, 99 , 5, 'million');
INSERT INTO Supply_details VALUES(1011, 513, 28 , 5, 'lakh');
INSERT INTO Supply_details VALUES(1012, 514, 100 , 1, 'crore');
INSERT INTO Supply_details VALUES(1013, 514, 105 , 5, 'crore');
INSERT INTO Supply_details VALUES(1013, 515, 1000 , 5, 'lakh');
INSERT INTO Supply_details VALUES(1014, 515, 1200 , 5, 'lakh');
INSERT INTO Supply_details VALUES(1015, 501, 6 , 9, 'million');
INSERT INTO Supply_details VALUES(1016, 502, 9 , 5, 'million');
INSERT INTO Supply_details VALUES(1017, 512, 99 , 5, 'million');
INSERT INTO Supply_details VALUES(1018, 512, 99 , 5, 'million');
INSERT INTO Supply_details VALUES(1019, 512, 99 , 5, 'million');
INSERT INTO Supply_details VALUES(1020, 512, 99 , 5, 'million');
INSERT INTO Supply_details VALUES(1016, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1017, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1018, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1010, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1008, 506, 250 , 1, 'cubic metres');
INSERT INTO Supply_details VALUES(1010, 507, 15 , 1, 'million');
INSERT INTO Supply_details VALUES(1015, 507, 15 , 1, 'million');
INSERT INTO Supply_details VALUES(1020, 507, 15 , 1, 'million');
INSERT INTO Supply_details VALUES(1008, 504, 4500 , 1, 'lakh');
INSERT INTO Supply_details VALUES(1010, 504, 4500 , 1, 'lakh');
INSERT INTO Supply_details VALUES(1012, 504, 4500 , 1, 'lakh');

```

Supplier_ID	Item_ID	Cost	Quantity	Units
1001	501	5	1	million
1001	502	8	1	million

1001	503	1000	1	lakh
1001	504	5000	1.5	lakh
1002	504	4500	1	lakh
1002	505	10000	0.5	lakh
1003	501	4.5	1	million
1003	506	250	1	cubic metres
1004	506	199	0.25	cubic metres
1005	507	15	1	million
1005	508	50	4.5	million
1006	508	51	9	million
1006	509	400	1.5	lakh
1007	509	450	5	lakh
1007	510	350	8	lakh
1008	510	359	2.5	lakh
1008	511	100000	8	thousand
1009	511	50000	5	hundred
1010	512	100	1.5	million
1010	513	30	1.5	lakh
1011	512	99	5	million
1011	513	28	5	lakh
1012	514	100	1	crore
1013	514	105	5	crore
1013	515	1000	5	lakh
1014	515	1200	5	lakh
1015	501	6	9	million
1016	502	9	5	million
1017	512	99	5	million
1018	512	99	5	million
1019	512	99	5	million
1020	512	99	5	million
1016	506	250	1	cubic metres
1017	506	250	1	cubic metres
1018	506	250	1	cubic metres
1010	506	250	1	cubic metres
1008	506	250	1	cubic metres
1010	507	15	1	million
1015	507	15	1	million
1020	507	15	1	million
1008	504	4500	1	lakh
1010	504	4500	1	lakh

1012	504	4500	1	lakh
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Supplies:

```

CREATE TABLE SUPPLIES (
  Supplier_ID INT,
  Hospital_ID INT,
  FOREIGN KEY (Supplier_ID) REFERENCES Supplier (Supplier_ID),
  FOREIGN KEY (Hospital_ID) REFERENCES Hospital (Hospital_ID)
);

INSERT INTO SUPPLIES VALUES (1001,1011);
INSERT INTO SUPPLIES VALUES (1002,1012);
INSERT INTO SUPPLIES VALUES (1003,1021);
INSERT INTO SUPPLIES VALUES (1004,1022);
INSERT INTO SUPPLIES VALUES (1005,1031);
INSERT INTO SUPPLIES VALUES (1006,1032);
INSERT INTO SUPPLIES VALUES (1007,1041);
INSERT INTO SUPPLIES VALUES (1008,1042);
INSERT INTO SUPPLIES VALUES (1010,1052);
INSERT INTO SUPPLIES VALUES (1011,1061);
INSERT INTO SUPPLIES VALUES (1012,1062);
INSERT INTO SUPPLIES VALUES (1013,1071);
INSERT INTO SUPPLIES VALUES (1014,1072);
INSERT INTO SUPPLIES VALUES (1015,1081);
INSERT INTO SUPPLIES VALUES (1016,1082);
INSERT INTO SUPPLIES VALUES (1017,1091);
INSERT INTO SUPPLIES VALUES (1018,1092);
INSERT INTO SUPPLIES VALUES (1019,1101);
INSERT INTO SUPPLIES VALUES (1020,1102);
INSERT INTO SUPPLIES VALUES (1002,1011);
INSERT INTO SUPPLIES VALUES (1003,1011);
INSERT INTO SUPPLIES VALUES (1004,1011);
INSERT INTO SUPPLIES VALUES (1005,1011);
INSERT INTO SUPPLIES VALUES (1006,1011);
INSERT INTO SUPPLIES VALUES (1007,1011);
INSERT INTO SUPPLIES VALUES (1008,1011);
INSERT INTO SUPPLIES VALUES (1009,1011);
INSERT INTO SUPPLIES VALUES (1010,1011);
INSERT INTO SUPPLIES VALUES (1001,1012);
INSERT INTO SUPPLIES VALUES (1003,1012);
INSERT INTO SUPPLIES VALUES (1004,1012);
INSERT INTO SUPPLIES VALUES (1005,1012);
INSERT INTO SUPPLIES VALUES (1001,1021);
INSERT INTO SUPPLIES VALUES (1006,1021);
INSERT INTO SUPPLIES VALUES (1007,1021);
INSERT INTO SUPPLIES VALUES (1008,1021);
INSERT INTO SUPPLIES VALUES (1011,1022);

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INSERT INTO SUPPLIES VALUES (1012,1022);
INSERT INTO SUPPLIES VALUES (1013,1022);
INSERT INTO SUPPLIES VALUES (1014,1022);
INSERT INTO SUPPLIES VALUES (1001,1031);
INSERT INTO SUPPLIES VALUES (1002,1031);
INSERT INTO SUPPLIES VALUES (1003,1031);

```

Supplier_ID	Hospital_ID
1001	1011
1002	1012
1003	1021
1004	1022
1005	1031
1006	1032
1007	1041
1008	1042
1010	1052
1011	1061
1012	1062
1013	1071
1014	1072
1015	1081
1016	1082
1017	1091
1018	1092
1019	1101
1020	1102
1002	1011
1003	1011
1004	1011
1005	1011
1006	1011
1007	1011
1008	1011
1009	1011
1010	1011
1001	1012
1003	1012
1004	1012
1005	1012
1001	1021
1006	1021
1007	1021
1008	1021
1011	1022
1012	1022
1013	1022

1014	1022
1001	1031
1002	1031
1003	1031

Variant:

```
CREATE TABLE Variant(
  Variant_name VARCHAR(45) PRIMARY KEY NOT NULL,
  Lineage VARCHAR(45),
  Symptoms VARCHAR(100)
);
INSERT INTO Variant VALUES ('Alpha','B.1.1.7','Fever,cough,shortness of
breath, nausea, muscle pain, dizziness');
INSERT INTO Variant VALUES ('Beta','B.1.351','Fever, headache, sore throat,
sense of smell gone');
INSERT INTO Variant VALUES ('Delta','B.1.617.2','Fever, headache, loss of
appetite, severe flu');
INSERT INTO Variant VALUES ('Omicron','B.1.1529','very mild symptom, no
shortness of breath');
```

Variant_name	Lineage	Symptoms
Alpha	B.1.1.7	Fever,cough,shortness of breath, nausea, muscle pain, dizziness
Beta	B.1.351	Fever, headache, sore throat, sense of smell gone
Delta	B.1.617.2	Fever, headache, loss of appetite, severe flu
Omicron	B.1.1529	very mild symptom, no shortness of breath

Health_Worker:

```
CREATE TABLE Health_Worker(
  Name VARCHAR(45),
  Worker_ID INT PRIMARY KEY NOT NULL,
  Hospital_ID INT,
  Role VARCHAR(45),
  DOB DATE,
  Sex VARCHAR(6),
  Blood_Group VARCHAR(4),
  Contact VARCHAR(10),
  FOREIGN KEY (Hospital_ID) REFERENCES Hospital (Hospital_ID)
);
INSERT INTO Health_Worker VALUES('Ramana', 1, 1011,'Doctor','1980-01-
01','male','A+','9381611371');
```

```

INSERT INTO Health_Worker VALUES('Ananya', 2, 1011, 'Nurse', '1981-01-25', 'Female', 'A-', '9381611372');
INSERT INTO Health_Worker VALUES('Ruchira', 3, 1011, 'Other', '1984-05-01', 'Female', 'B+', '9381611373');
INSERT INTO Health_Worker VALUES('Rithik', 4, 1012, 'Doctor', '1991-10-23', 'male', 'B-', '9381611374');
INSERT INTO Health_Worker VALUES('Satvik', 5, 1012, 'Nurse', '1975-09-27', 'male', 'O+', '9381611375');
INSERT INTO Health_Worker VALUES('Sushith', 6, 1012, 'Other', '1976-08-16', 'male', 'O-', '9381611376');
INSERT INTO Health_Worker VALUES('Radhika', 7, 1021, 'Doctor', '1977-07-08', 'Female', 'AB+', '9381611377');
INSERT INTO Health_Worker VALUES('Arpita', 8, 1021, 'Nurse', '1977-06-13', 'Female', 'AB-', '9381611378');
INSERT INTO Health_Worker VALUES('Sahith', 9, 1021, 'Other', '1978-05-11', 'male', 'A+', '9381611379');
INSERT INTO Health_Worker VALUES('Vishaka', 10, 1022, 'Doctor', '1988-04-14', 'Female', 'A-', '9381611380');
INSERT INTO Health_Worker VALUES('Navin', 11, 1022, 'Nurse', '1987-01-18', 'male', 'B+', '9381611381');
INSERT INTO Health_Worker VALUES('Murali', 12, 1022, 'Other', '1985-12-17', 'male', 'B-', '9381611382');
INSERT INTO Health_Worker VALUES('Sharvary', 13, 1031, 'Doctor', '1990-11-21', 'Female', 'O+', '9381611383');
INSERT INTO Health_Worker VALUES('Amit', 14, 1031, 'Nurse', '1991-01-31', 'male', 'O-', '9381611384');
INSERT INTO Health_Worker VALUES('Aman', 15, 1031, 'Other', '1986-09-17', 'male', 'AB+', '9381611385');
INSERT INTO Health_Worker VALUES('Likitha', 16, 1032, 'Doctor', '1987-08-08', 'Female', 'AB-', '9381611386');
INSERT INTO Health_Worker VALUES('Rishitha', 17, 1032, 'Nurse', '1985-07-06', 'Female', 'A+', '9381611387');
INSERT INTO Health_Worker VALUES('Pratham', 18, 1032, 'Other', '1987-06-05', 'male', 'A-', '9381611388');
INSERT INTO Health_Worker VALUES('Sathvika', 19, 1041, 'Doctor', '1990-05-04', 'Female', 'B+', '9381611389');
INSERT INTO Health_Worker VALUES('Rohit', 20, 1041, 'Nurse', '1988-04-09', 'male', 'A+', '9381611390');
INSERT INTO Health_Worker VALUES('Rohitha', 21, 1041, 'Other', '1989-03-11', 'Female', 'O+', '9381611391');
INSERT INTO Health_Worker VALUES('Roshan', 22, 1041, 'Doctor', '1970-02-13', 'male', 'A-', '9381611392');
INSERT INTO Health_Worker VALUES('Roshitha', 23, 1042, 'Nurse', '1975-02-15', 'Female', 'A-', '9381611393');
INSERT INTO Health_Worker VALUES('Raman', 24, 1042, 'Other', '1978-09-16', 'male', 'AB+', '9381611394');
INSERT INTO Health_Worker VALUES('Kavish', 25, 1042, 'Doctor', '1979-06-19', 'male', 'A-', '9381611395');

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INSERT INTO Health_Worker VALUES('Srinivas', 26, 1052, 'Nurse', '1980-05-21', 'male', 'B+', '9381611396');
INSERT INTO Health_Worker VALUES('Darshan', 27, 1052, 'Other', '1981-12-22', 'male', 'O-', '9381611397');
INSERT INTO Health_Worker VALUES('Lavanya', 28, 1052, 'Doctor', '1982-11-23', 'Female', 'AB+', '9381611398');
INSERT INTO Health_Worker VALUES('Samhitha', 29, 1061, 'Nurse', '1983-10-24', 'Female', 'A+', '9381611399');
INSERT INTO Health_Worker VALUES('Praresh', 30, 1061, 'Other', '1984-09-25', 'male', 'O-', '9381611340');
INSERT INTO Health_Worker VALUES('Ajay', 31, 1061, 'Doctor', '1987-08-26', 'male', 'O+', '9381611341');
INSERT INTO Health_Worker VALUES('Vineeta', 32, 1062, 'Nurse', '1982-08-27', 'Female', 'B+', '9381611342');
INSERT INTO Health_Worker VALUES('Akash', 33, 1062, 'Other', '1986-07-28', 'male', 'O+', '9381611343');
INSERT INTO Health_Worker VALUES('Aman', 34, 1062, 'Doctor', '1981-06-29', 'male', 'A+', '9381611344');
INSERT INTO Health_Worker VALUES('Pratha', 35, 1071, 'Nurse', '1988-05-30', 'Female', 'O-', '9381611345');
INSERT INTO Health_Worker VALUES('Seema', 36, 1071, 'Other', '1989-04-21', 'Female', 'B-', '9381611346');
INSERT INTO Health_Worker VALUES('Adarsh', 37, 1071, 'Doctor', '1981-03-22', 'male', 'A-', '9381611347');
INSERT INTO Health_Worker VALUES('Balaji', 38, 1072, 'Nurse', '1985-02-25', 'male', 'A-', '9381611348');
INSERT INTO Health_Worker VALUES('Risabh', 39, 1072, 'Other', '1988-01-27', 'male', 'B+', '9381611349');
INSERT INTO Health_Worker VALUES('Reema', 40, 1072, 'Doctor', '1989-12-18', 'Female', 'B-', '9381611350');
INSERT INTO Health_Worker VALUES('Simar', 41, 1081, 'Nurse', '1990-11-17', 'Female', 'AB-', '9381611351');
INSERT INTO Health_Worker VALUES('Aditi', 42, 1081, 'Doctor', '1991-10-13', 'Female', 'A-', '9381611352');
INSERT INTO Health_Worker VALUES('Urvashi', 43, 1081, 'Other', '1979-09-11', 'Female', 'A+', '9381611353');
INSERT INTO Health_Worker VALUES('Srujan', 44, 1082, 'Doctor', '1987-08-10', 'male', 'B+', '9381611354');
INSERT INTO Health_Worker VALUES('Sujith', 45, 1082, 'Nurse', '1988-07-08', 'male', 'B-', '9381611355');
INSERT INTO Health_Worker VALUES('Rahul', 46, 1082, 'Other', '1984-06-06', 'male', 'O+', '9381611356');
INSERT INTO Health_Worker VALUES('Rohini', 47, 1091, 'Doctor', '1986-05-04', 'Female', 'O-', '9381611357');
INSERT INTO Health_Worker VALUES('Saraswati', 48, 1092, 'Doctor', '1988-04-02', 'Female', 'O+', '9381611358');
INSERT INTO Health_Worker VALUES('Karthik', 49, 1101, 'Doctor', '1989-03-19', 'male', 'A+', '9381611359');

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INSERT INTO Health_Worker VALUES('Akash', 50, 1102, 'Doctor', '1990-02-25', 'male', 'A+', '9381611360');
INSERT INTO Health_Worker VALUES('Adarsh', 51, 1102, 'Nurse', '1991-01-28', 'male', 'A+', '9381611361');

```

Name	Worker_ID	Hospital_ID	Role	DOB	Sex	Blood_Group	Contact
Ramana	1	1011	Doctor	01-01-1980	male	A+	9381611371
Ananya	2	1011	Nurse	25-01-1981	Female	A-	9381611372
Ruchira	3	1011	Other	01-05-1984	Female	B+	9381611373
Rithik	4	1012	Doctor	23-10-1991	male	B-	9381611374
Satvik	5	1012	Nurse	27-09-1975	male	O+	9381611375
Sushith	6	1012	Other	16-08-1976	male	O-	9381611376
Radhika	7	1021	Doctor	08-07-1977	Female	AB+	9381611377
Arpita	8	1021	Nurse	13-06-1977	Female	AB-	9381611378
Sahith	9	1021	Other	11-05-1978	male	A+	9381611379
Vishaka	10	1022	Doctor	14-04-1988	Female	A-	9381611380
Navin	11	1022	Nurse	18-01-1987	male	B+	9381611381
Murali	12	1022	Other	17-12-1985	male	B-	9381611382
Sharvary	13	1031	Doctor	21-11-1990	Female	O+	9381611383
Amit	14	1031	Nurse	31-01-1991	male	O-	9381611384
Aman	15	1031	Other	17-09-1986	male	AB+	9381611385
Likitha	16	1032	Doctor	08-08-1987	Female	AB-	9381611386
Rishitha	17	1032	Nurse	06-07-1985	Female	A+	9381611387
Pratham	18	1032	Other	05-06-1987	male	A-	9381611388
Sathvika	19	1041	Doctor	04-05-1990	Female	B+	9381611389
Rohit	20	1041	Nurse	09-04-1988	male	A+	9381611390
Rohitha	21	1041	Other	11-03-1989	Female	O+	9381611391
Roshan	22	1041	Doctor	13-02-1970	male	A-	9381611392

Roshitha	23	1042	Nurse	15-02-1975	Female	A-	9381611393
Raman	24	1042	Other	16-09-1978	male	AB+	9381611394
Kavish	25	1042	Doctor	19-06-1979	male	A-	9381611395
Srinivas	26	1052	Nurse	21-05-1980	male	B+	9381611396
Darshan	27	1052	Other	22-12-1981	male	O-	9381611397
Lavanya	28	1052	Doctor	23-11-1982	Female	AB+	9381611398
Samhitha	29	1061	Nurse	24-10-1983	Female	A+	9381611399
Prajesh	30	1061	Other	25-09-1984	male	O-	9381611340
Ajay	31	1061	Doctor	26-08-1987	male	O+	9381611341
Vineeta	32	1062	Nurse	27-08-1982	Female	B+	9381611342
Akash	33	1062	Other	28-07-1986	male	O+	9381611343
Aman	34	1062	Doctor	29-06-1981	male	A+	9381611344
Pratha	35	1071	Nurse	30-05-1988	Female	O-	9381611345
Seema	36	1071	Other	21-04-1989	Female	B-	9381611346
Adarsh	37	1071	Doctor	22-03-1981	male	A-	9381611347
Balaji	38	1072	Nurse	25-02-1985	male	A-	9381611348
Risabh	39	1072	Other	27-01-1988	male	B+	9381611349
Reema	40	1072	Doctor	18-12-1989	Female	B-	9381611350
Simar	41	1081	Nurse	17-11-1990	Female	AB-	9381611351
Aditi	42	1081	Doctor	13-10-1991	Female	A-	9381611352
Urvashi	43	1081	Other	11-09-1979	Female	A+	9381611353
Srujan	44	1082	Doctor	10-08-1987	male	B+	9381611354
Sujith	45	1082	Nurse	08-07-1988	male	B-	9381611355
Rahul	46	1082	Other	06-06-1984	male	O+	9381611356
Rohini	47	1091	Doctor	04-05-1986	Female	O-	9381611357

Saraswati	48	1092	Doctor	02-04-1988	Female	O+	9381611358
Karthik	49	1101	Doctor	19-03-1989	male	A+	9381611359
Akash	50	1102	Doctor	25-02-1990	male	A+	9381611360
Adarsh	51	1102	Nurse	28-01-1991	male	A+	9381611361

PATIENT:

```

CREATE TABLE PATIENT(
  Name VARCHAR(45),
  Patient_ID INT PRIMARY KEY NOT NULL,
  Hospital_ID INT,
  Variant_name VARCHAR(45),
  DOB DATE,
  Sex VARCHAR(6),
  Blood_Group VARCHAR(4),
  Contact VARCHAR(10),
  FOREIGN KEY (Hospital_ID) REFERENCES Hospital (Hospital_ID),
  FOREIGN KEY (Variant_name) REFERENCES Variant (Variant_name)
);
INSERT INTO PATIENT VALUES ('Sharan',1,1011,'Alpha','1990-03-22','Male','A+','8620076123');
INSERT INTO PATIENT VALUES ('Raman',2,1011,'Beta','1992-02-02','Male','B+','8620076124');
INSERT INTO PATIENT VALUES ('Lalita',3,1011,'Delta','1987-04-12','Female','AB+','8620076125');
INSERT INTO PATIENT VALUES ('Seema',4,1012,'Omicron','1986-01-13','Female','A-','8620076126');
INSERT INTO PATIENT VALUES ('Suketh',5,1012,'Alpha','1987-02-14','Male','B-','8620076127');
INSERT INTO PATIENT VALUES ('Suresh',6,1012,'Beta','1988-03-15','Male','O+','8620076128');
INSERT INTO PATIENT VALUES ('Reema',7,1012,'Delta','1988-04-16','Female','O+','8620076129');
INSERT INTO PATIENT VALUES ('Saketh',8,1021,'Omicron','1982-05-17','Male','AB+','8620076130');
INSERT INTO PATIENT VALUES ('Sanket',9,1021,'Alpha','1995-06-18','Male','AB-','8620076131');
INSERT INTO PATIENT VALUES ('Simar',10,1022,'Beta','1996-07-21','Female','A+','8620076132');
INSERT INTO PATIENT VALUES ('Anita',11,1022,'Delta','1985-08-22','Female','B+','8620076133');
INSERT INTO PATIENT VALUES ('Karan',12,1022,'Omicron','1972-09-01','Male','O+','8620076134');

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INSERT INTO PATIENT VALUES ('Rishabh',13,1031,'Alpha','1991-10-02','Male','A-','8620076135');
INSERT INTO PATIENT VALUES ('Ramesh',14,1031,'Beta','1989-02-03','Male','B-','8620076136');
INSERT INTO PATIENT VALUES ('Akash',15,1031,'Delta','1990-02-04','Male','AB-','8620076137');
INSERT INTO PATIENT VALUES ('Pragya',16,1032,'Omicron','1988-03-05','Female','O-','8620076138');
INSERT INTO PATIENT VALUES ('Prachi',17,1032,'Alpha','1987-03-06','Female','O+','8620076139');
INSERT INTO PATIENT VALUES ('Abhishek',18,1032,'Beta','1986-03-07','Male','A+','8620076140');
INSERT INTO PATIENT VALUES ('Karthik',19,1041,'Delta','1985-04-08','Male','B+','8620076141');
INSERT INTO PATIENT VALUES ('Rithik',20,1041,'Omicron','1984-04-09','Male','AB+','8620076142');
INSERT INTO PATIENT VALUES ('Ankur',21,1041,'Alpha','1983-04-10','Male','O+','8620076143');
INSERT INTO PATIENT VALUES ('Shivanya',22,1042,'Beta','1982-02-11','Female','A-','8620076144');
INSERT INTO PATIENT VALUES ('Meher',23,1042,'Delta','1981-02-12','Female','B-','8620076145');
INSERT INTO PATIENT VALUES ('Shourya',24,1042,'Omicron','1980-05-13','Male','AB+','8620076146');
INSERT INTO PATIENT VALUES ('Samar',25,1052,'Alpha','1971-05-14','Male','O+','8620076147');
INSERT INTO PATIENT VALUES ('Arav',26,1052,'Beta','1972-05-15','Male','O-','8620076148');
INSERT INTO PATIENT VALUES ('Vivan',27,1052,'Delta','1973-02-13','Male','B+','8620076149');
INSERT INTO PATIENT VALUES ('Rhea',28,1061,'Omicron','1974-02-14','Female','A+','8620076150');
INSERT INTO PATIENT VALUES ('Srujan',29,1061,'Alpha','1975-02-21','Male','AB+','8620076151');
INSERT INTO PATIENT VALUES ('Sriman',30,1061,'Beta','1976-06-22','Male','O+','8620076152');
INSERT INTO PATIENT VALUES ('Rahul',31,1062,'Delta','1977-06-23','Male','O-','8620076153');
INSERT INTO PATIENT VALUES ('Rishitha',32,1062,'Omicron','1978-06-24','Female','A-','8620076154');
INSERT INTO PATIENT VALUES ('Ishitha',33,1062,'Alpha','1979-02-25','Female','B+','8620076155');
INSERT INTO PATIENT VALUES ('Suresh',34,1071,'Beta','1980-02-26','Male','B-','8620076156');
INSERT INTO PATIENT VALUES ('Sudamsh',35,1071,'Delta','1981-08-27','Male','A+','8620076157');
INSERT INTO PATIENT VALUES ('Suraj',36,1071,'Omicron','1982-08-28','Male','B+','8620076158');

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INSERT INTO PATIENT VALUES ('Ravi',37,1072,'Alpha','1983-08-01','Male','AB+','8620076159');
INSERT INTO PATIENT VALUES ('Hema',38,1072,'Beta','1984-08-02','Female','O+','8620076160');
INSERT INTO PATIENT VALUES ('Raghu',39,1081,'Delta','1985-02-03','Male','A-','8620076161');
INSERT INTO PATIENT VALUES ('Praveen',40,1081,'Omicron','1986-02-04','Male','B-','8620076162');
INSERT INTO PATIENT VALUES ('Vineeta',41,1081,'Alpha','1987-10-05','Female','AB-','8620076163');
INSERT INTO PATIENT VALUES ('Namita',42,1081,'Beta','1988-10-06','Female','O-','8620076164');
INSERT INTO PATIENT VALUES ('Mohsin',43,1081,'Delta','1989-10-07','Male','O+','8620076165');
INSERT INTO PATIENT VALUES ('Hemadri',44,1082,'Omicron','1990-10-08','Male','A+','8620076166');
INSERT INTO PATIENT VALUES ('Vamsi',45,1082,'Alpha','1991-02-09','Male','B+','8620076167');
INSERT INTO PATIENT VALUES ('Satvik',46,1082,'Beta','1992-02-10','Male','AB+','8620076168');
INSERT INTO PATIENT VALUES ('Rajeev',47,1082,'Delta','1993-12-11','Male','A+','8620076169');
INSERT INTO PATIENT VALUES ('Samhitha',48,1091,'Omicron','1972-12-12','Female','B+','8620076170');
INSERT INTO PATIENT VALUES ('Kushal',49,1091,'Alpha','1973-12-13','Male','AB+','8620076171');
INSERT INTO PATIENT VALUES ('Kunal',50,1091,'Beta','1974-12-14','Male','O+','8620076172');
INSERT INTO PATIENT VALUES ('Karan',51,1091,'Delta','1975-02-15','Male','O-','8620076173');
INSERT INTO PATIENT VALUES ('Ganga',52,1091,'Omicron','1976-02-16','Female','A-','8620076174');
INSERT INTO PATIENT VALUES ('Sagar',53,1092,'Alpha','1977-03-17','Male','B-','8620076175');
INSERT INTO PATIENT VALUES ('Shiv',54,1092,'Beta','1978-03-18','Male','AB-','8620076176');
INSERT INTO PATIENT VALUES ('Meghana',55,1092,'Delta','1979-09-22','Female','O-','8620076177');
INSERT INTO PATIENT VALUES ('Sarab',56,1092,'Omicron','1980-09-21','Male','A+','8620076178');
INSERT INTO PATIENT VALUES ('Vivek',57,1092,'Alpha','1981-09-19','Male','B+','8620076179');
INSERT INTO PATIENT VALUES ('Pranita',58,1101,'Beta','1982-02-18','Female','AB+','8620076180');
INSERT INTO PATIENT VALUES ('Pranav',59,1101,'Delta','1983-12-17','Male','O+','8620076181');
INSERT INTO PATIENT VALUES ('Raghav',60,1101,'Omicron','1984-12-16','Male','A+','8620076182');

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INSERT INTO PATIENT VALUES ('Anudeep',61,1101,'Alpha','1985-12-15','Male','B+','8620076183');
INSERT INTO PATIENT VALUES ('Anupriya',62,1102,'Beta','1986-12-14','Female','AB+','8620076184');
INSERT INTO PATIENT VALUES ('Sebhan',63,1102,'Delta','1987-12-13','Male','O+','8620076185');
INSERT INTO PATIENT VALUES ('Malhar',64,1102,'Omicron','1988-12-12','Male','A-','8620076186');
INSERT INTO PATIENT VALUES ('Kalyani',65,1102,'Alpha','1989-02-11','Female','B-','8620076187');
INSERT INTO PATIENT VALUES ('Sathvika',66,1011,'Beta','1990-02-10','Female','AB-','8620076188');
INSERT INTO PATIENT VALUES ('Varun',67,1011,'Delta','1991-04-09','Male','O-','8620076189');
INSERT INTO PATIENT VALUES ('Virat',68,1011,'Omicron','1992-05-08','Male','O+','8620076190');
INSERT INTO PATIENT VALUES ('Deepthi',69,1012,'Alpha','1993-06-07','Female','A+','8620076191');
INSERT INTO PATIENT VALUES ('Sindhu',70,1012,'Beta','1981-07-06','Female','B+','8620076192');
INSERT INTO PATIENT VALUES ('Sruthi',71,1012,'Delta','1982-08-05','Female','AB+','8620076193');
INSERT INTO PATIENT VALUES ('Prjesh',72,1012,'Omicron','1983-02-04','Male','O-','8620076194');
INSERT INTO PATIENT VALUES ('Ajay',73,1021,'Alpha','1984-02-03','Male','A-','8620076195');
INSERT INTO PATIENT VALUES ('Vijay',74,1021,'Beta','1985-05-02','Male','B-','8620076196');
INSERT INTO PATIENT VALUES ('Prajwal',75,1021,'Delta','1986-06-01','Male','AB-','8620076197');
INSERT INTO PATIENT VALUES ('Shresta',76,1021,'Omicron','1987-07-10','Female','A+','8620076198');
INSERT INTO PATIENT VALUES ('Suma',77,1022,'Alpha','1988-08-11','Female','B+','8620076199');
INSERT INTO PATIENT VALUES ('Ram',78,1022,'Beta','1989-09-12','Male','AB+','8620076100');
INSERT INTO PATIENT VALUES ('Rahul',79,1022,'Delta','1990-02-13','Male','A-','8620076101');
INSERT INTO PATIENT VALUES ('Suketh',80,1031,'Omicron','1991-01-14','Male','O+','8620076102');
INSERT INTO PATIENT VALUES ('Priya',81,1031,'Alpha','1992-02-15','Female','A+','8620076103');
INSERT INTO PATIENT VALUES ('Lavanya',82,1031,'Beta','1993-03-16','Female','A+','8620076104');
INSERT INTO PATIENT VALUES ('Piyush',83,1031,'Delta','1994-04-17','Male','B+','8620076105');
INSERT INTO PATIENT VALUES ('Rohit',84,1041,'Omicron','1995-02-18','Male','A+','8620076106');

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INSERT INTO PATIENT VALUES ('Abhinav',85,1041,'Alpha','1996-02-19','Male','AB+','8620076107');
INSERT INTO PATIENT VALUES ('Titas',86,1041,'Beta','1997-05-20','Male','A+','8620076108');
INSERT INTO PATIENT VALUES ('Gautham',87,1041,'Delta','1969-05-21','Male','O+','8620076109');
INSERT INTO PATIENT VALUES ('Laya',88,1061,'Omicron','1975-02-22','Female','A+','8620076110');
INSERT INTO PATIENT VALUES ('Jahnavi',89,1061,'Alpha','1992-06-23','Female','O+','8620076111');
INSERT INTO PATIENT VALUES ('Yash',90,1061,'Beta','1986-06-24','Male','A+','8620076112');
INSERT INTO PATIENT VALUES ('Yashwanth',91,1061,'Delta','1987-02-25','Male','A+','8620076113');
INSERT INTO PATIENT VALUES ('Yuhaan',92,1062,'Omicron','1988-01-26','Male','AB+','8620076114');
INSERT INTO PATIENT VALUES ('Tarun',93,1062,'Alpha','1989-02-27','Male','AB+','8620076115');
INSERT INTO PATIENT VALUES ('Arun',94,1062,'Beta','1990-03-28','Male','A+','8620076116');
INSERT INTO PATIENT VALUES ('Aruna',95,1062,'Delta','1992-04-01','Female','O+','8620076117');
INSERT INTO PATIENT VALUES ('Preeti',96,1062,'Omicron','1971-05-02','Female','O+','8620076118');
INSERT INTO PATIENT VALUES ('Ranveer',97,1071,'Alpha','1972-06-03','Male','A+','8620076119');
INSERT INTO PATIENT VALUES ('Ranvijay',98,1071,'Beta','1973-02-14','Male','A-','8620076120');
INSERT INTO PATIENT VALUES ('Suhani',99,1071,'Delta','1974-02-08','Female','A-','8620076121');
INSERT INTO PATIENT VALUES ('Sushma',100,1071,'Omicron','1975-06-16','Female','B-','8620076122');
INSERT INTO PATIENT VALUES ('Virender',101,1081,'Alpha','1976-06-18','Male','B-','8620076223');
INSERT INTO PATIENT VALUES ('Biral',102,1081,'Beta','1977-06-20','Male','AB-','8620076224');
INSERT INTO PATIENT VALUES ('Bheem',103,1081,'Delta','1978-06-22','Male','AB-','8620076225');
INSERT INTO PATIENT VALUES ('Nagesh',104,1081,'Omicron','1979-02-24','Male','O-','8620076226');
INSERT INTO PATIENT VALUES ('Ananya',105,1091,'Alpha','1980-07-26','Female','O-','8620076227');
INSERT INTO PATIENT VALUES ('Akshay',106,1091,'Beta','1981-07-13','Male','B-','8620076228');
INSERT INTO PATIENT VALUES ('Salman',107,1091,'Delta','1982-08-15','Male','B-','8620076229');
INSERT INTO PATIENT VALUES ('Kareena',108,1091,'Omicron','1983-08-17','Female','AB-','8620076230');

```

Name	Patient_ID	Hospital_ID	Variant_name	DOB	Sex	Blood_Group	Contact
Sharan	1	1011	Alpha	22-03-1990	Male	A+	8620076123
Raman	2	1011	Beta	02-02-1992	Male	B+	8620076124
Lalita	3	1011	Delta	12-04-1987	Female	AB+	8620076125
Seema	4	1012	Omicron	13-01-1986	Female	A-	8620076126
Suketh	5	1012	Alpha	14-02-1987	Male	B-	8620076127
Suresh	6	1012	Beta	15-03-1988	Male	O+	8620076128
Reema	7	1012	Delta	16-04-1988	Female	O+	8620076129
Saketh	8	1021	Omicron	17-05-1982	Male	AB+	8620076130
Sanket	9	1021	Alpha	18-06-1995	Male	AB-	8620076131
Simar	10	1022	Beta	21-07-1996	Female	A+	8620076132
Anita	11	1022	Delta	22-08-1985	Female	B+	8620076133
Karan	12	1022	Omicron	01-09-1972	Male	O+	8620076134
Rishabh	13	1031	Alpha	02-10-1991	Male	A-	8620076135
Ramesh	14	1031	Beta	03-02-1989	Male	B-	8620076136
Akash	15	1031	Delta	04-02-1990	Male	AB-	8620076137
Pragya	16	1032	Omicron	05-03-1988	Female	O-	8620076138
Prachi	17	1032	Alpha	06-03-1987	Female	O+	8620076139
Abhishek	18	1032	Beta	07-03-1986	Male	A+	8620076140
Karthik	19	1041	Delta	08-04-1985	Male	B+	8620076141
Rithik	20	1041	Omicron	09-04-1984	Male	AB+	8620076142
Ankur	21	1041	Alpha	10-04-1983	Male	O+	8620076143
Shivanya	22	1042	Beta	11-02-1982	Female	A-	8620076144
Meher	23	1042	Delta	12-02-1981	Female	B-	8620076145
Shourya	24	1042	Omicron	13-05-1980	Male	AB+	8620076146

Samar	25	1052	Alpha	14-05-1971	Male	O+	8620076147
Arav	26	1052	Beta	15-05-1972	Male	O-	8620076148
Vivan	27	1052	Delta	13-02-1973	Male	B+	8620076149
Rhea	28	1061	Omicron	14-02-1974	Female	A+	8620076150
Srujan	29	1061	Alpha	21-02-1975	Male	AB+	8620076151
Sriman	30	1061	Beta	22-06-1976	Male	O+	8620076152
Rahul	31	1062	Delta	23-06-1977	Male	O-	8620076153
Rishitha	32	1062	Omicron	24-06-1978	Female	A-	8620076154
Ishitha	33	1062	Alpha	25-02-1979	Female	B+	8620076155
Suresh	34	1071	Beta	26-02-1980	Male	B-	8620076156
Sudamsh	35	1071	Delta	27-08-1981	Male	A+	8620076157
Suraj	36	1071	Omicron	28-08-1982	Male	B+	8620076158
Ravi	37	1072	Alpha	01-08-1983	Male	AB+	8620076159
Hema	38	1072	Beta	02-08-1984	Female	O+	8620076160
Raghu	39	1081	Delta	03-02-1985	Male	A-	8620076161
Praveen	40	1081	Omicron	04-02-1986	Male	B-	8620076162
Vineeta	41	1081	Alpha	05-10-1987	Female	AB-	8620076163
Namita	42	1081	Beta	06-10-1988	Female	O-	8620076164
Mohsin	43	1081	Delta	07-10-1989	Male	O+	8620076165
Hemadri	44	1082	Omicron	08-10-1990	Male	A+	8620076166
Vamsi	45	1082	Alpha	09-02-1991	Male	B+	8620076167
Satvik	46	1082	Beta	10-02-1992	Male	AB+	8620076168
Rajeev	47	1082	Delta	11-12-1993	Male	A+	8620076169
Samhitha	48	1091	Omicron	12-12-1972	Female	B+	8620076170
Kushal	49	1091	Alpha	13-12-1973	Male	AB+	8620076171

Kunal	50	1091	Beta	14-12-1974	Male	O+	8620076172
Karan	51	1091	Delta	15-02-1975	Male	O-	8620076173
Ganga	52	1091	Omicron	16-02-1976	Female	A-	8620076174
Sagar	53	1092	Alpha	17-03-1977	Male	B-	8620076175
Shiv	54	1092	Beta	18-03-1978	Male	AB-	8620076176
Meghana	55	1092	Delta	22-09-1979	Female	O-	8620076177
Sarab	56	1092	Omicron	21-09-1980	Male	A+	8620076178
Vivek	57	1092	Alpha	19-09-1981	Male	B+	8620076179
Pranita	58	1101	Beta	18-02-1982	Female	AB+	8620076180
Pranav	59	1101	Delta	17-12-1983	Male	O+	8620076181
Raghav	60	1101	Omicron	16-12-1984	Male	A+	8620076182
Anudeep	61	1101	Alpha	15-12-1985	Male	B+	8620076183
Anupriya	62	1102	Beta	14-12-1986	Female	AB+	8620076184
Sebhan	63	1102	Delta	13-12-1987	Male	O+	8620076185
Malhar	64	1102	Omicron	12-12-1988	Male	A-	8620076186
Kalyani	65	1102	Alpha	11-02-1989	Female	B-	8620076187
Sathvika	66	1011	Beta	10-02-1990	Female	AB-	8620076188
Varun	67	1011	Delta	09-04-1991	Male	O-	8620076189
Virat	68	1011	Omicron	08-05-1992	Male	O+	8620076190
Deepti	69	1012	Alpha	07-06-1993	Female	A+	8620076191
Sindhu	70	1012	Beta	06-07-1981	Female	B+	8620076192
Sruthi	71	1012	Delta	05-08-1982	Female	AB+	8620076193
Prajesh	72	1012	Omicron	04-02-1983	Male	O-	8620076194
Ajay	73	1021	Alpha	03-02-1984	Male	A-	8620076195
Vijay	74	1021	Beta	02-05-1985	Male	B-	8620076196

Prajwal	75	1021	Delta	01-06-1986	Male	AB-	8620076197
Shresta	76	1021	Omicron	10-07-1987	Female	A+	8620076198
Suma	77	1022	Alpha	11-08-1988	Female	B+	8620076199
Ram	78	1022	Beta	12-09-1989	Male	AB+	8620076100
Rahul	79	1022	Delta	13-02-1990	Male	A-	8620076101
Suketh	80	1031	Omicron	14-01-1991	Male	O+	8620076102
Priya	81	1031	Alpha	15-02-1992	Female	A+	8620076103
Lavanya	82	1031	Beta	16-03-1993	Female	A+	8620076104
Piyush	83	1031	Delta	17-04-1994	Male	B+	8620076105
Rohit	84	1041	Omicron	18-02-1995	Male	A+	8620076106
Abhinav	85	1041	Alpha	19-02-1996	Male	AB+	8620076107
Titas	86	1041	Beta	20-05-1997	Male	A+	8620076108
Gautham	87	1041	Delta	21-05-1969	Male	O+	8620076109
Laya	88	1061	Omicron	22-02-1975	Female	A+	8620076110
Jahnvi	89	1061	Alpha	23-06-1992	Female	O+	8620076111
Yash	90	1061	Beta	24-06-1986	Male	A+	8620076112
Yashwanth	91	1061	Delta	25-02-1987	Male	A+	8620076113
Yuhaan	92	1062	Omicron	26-01-1988	Male	AB+	8620076114
Tarun	93	1062	Alpha	27-02-1989	Male	AB+	8620076115
Arun	94	1062	Beta	28-03-1990	Male	A+	8620076116
Aruna	95	1062	Delta	01-04-1992	Female	O+	8620076117
Preeti	96	1062	Omicron	02-05-1971	Female	O+	8620076118
Ranveer	97	1071	Alpha	03-06-1972	Male	A+	8620076119
Ranvijay	98	1071	Beta	14-02-1973	Male	A-	8620076120
Suhani	99	1071	Delta	08-02-1974	Female	A-	8620076121

Sushma	100	1071	Omicron	16-06-1975	Female	B-	8620076122
Virender	101	1081	Alpha	18-06-1976	Male	B-	8620076223
Biral	102	1081	Beta	20-06-1977	Male	AB-	8620076224
Bheem	103	1081	Delta	22-06-1978	Male	AB-	8620076225
Nagesh	104	1081	Omicron	24-02-1979	Male	O-	8620076226
Ananya	105	1091	Alpha	26-07-1980	Female	O-	8620076227
Akshay	106	1091	Beta	13-07-1981	Male	B-	8620076228
Salman	107	1091	Delta	15-08-1982	Male	B-	8620076229
Kareena	108	1091	Omicron	17-08-1983	Female	AB-	8620076230

Death:

```

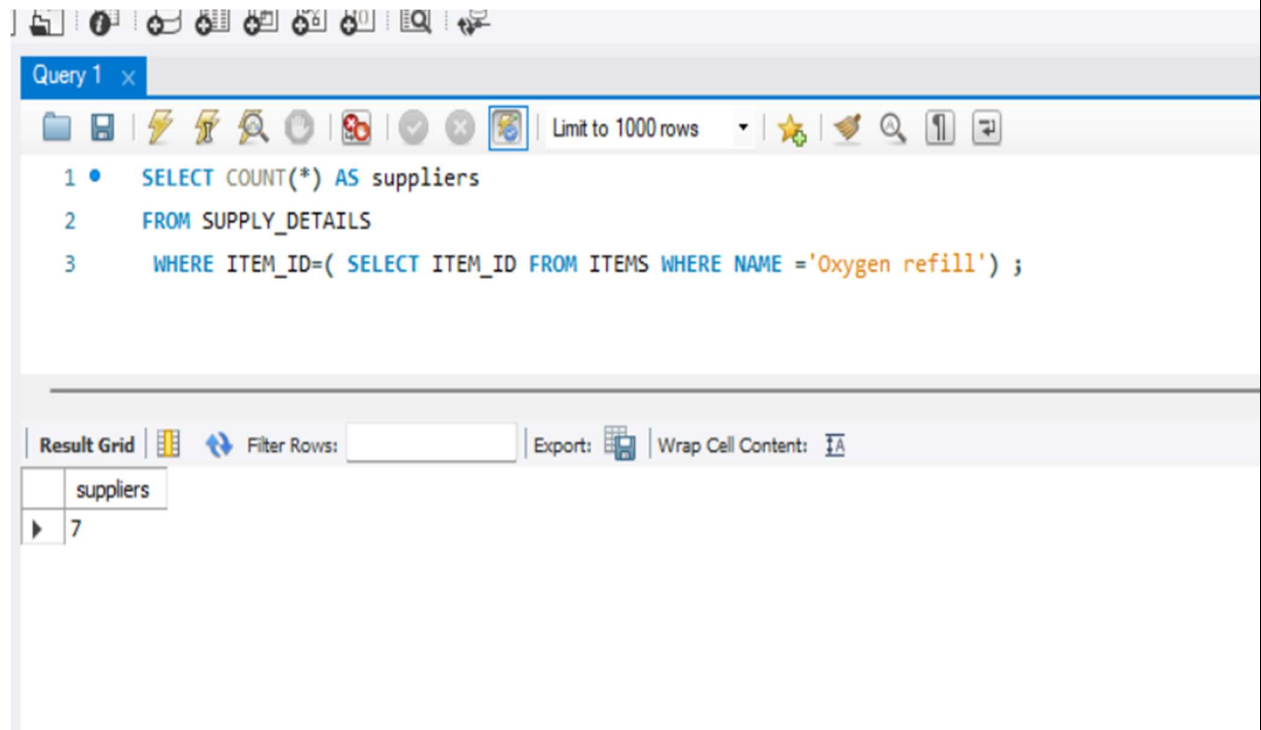
CREATE TABLE Death(
    Patient_ID INT,
    Death_reason VARCHAR(45),
    Days_stayed INT,
    FOREIGN KEY (Patient_ID) REFERENCES Patient (Patient_ID)
);
INSERT INTO Death VALUES(1,'Cardiac arrest',13);
INSERT INTO Death VALUES(8,'Multi-organ failure',21);
INSERT INTO Death VALUES(15,'Respiratory failure',14);
INSERT INTO Death VALUES(18,'Pneumonia',11);
INSERT INTO Death VALUES(45,'gastric peptic ulcer',18);
INSERT INTO Death VALUES(85,'Cardiac arrest',7);
INSERT INTO Death VALUES(93,'Respiratory failure',6);
INSERT INTO Death VALUES(98,'Cardiac arrest',15);
INSERT INTO Death VALUES(101,'Multi-organ failure',19);
INSERT INTO Death VALUES(102,'Respiratory failure',21);
INSERT INTO Death VALUES(104,'gastric peptic ulcer',27);

```

Patient_ID	Death_reason	Days_stayed
1	Cardiac arrest	13
8	Multi-organ failure	21
15	Respiratory failure	14
18	Pneumonia	11
45	gastric peptic ulcer	18
85	Cardiac arrest	7

2.How many suppliers supply oxygen refill ?

```
SELECT COUNT(*) AS suppliers
FROM SUPPLY_DETAILS
WHERE ITEM_ID=( SELECT ITEM_ID FROM ITEMS WHERE NAME
='Oxygen refill');
```



3.Retrieve the details of male patients whose blood group is AB+ and with alpha variant?

```
SELECT * from Patient
where Variant_name='Alpha' and Sex='Male' and
Blood_Group='AB+';
```

Query 1 x

Limit to 1000 rows

```

1 • SELECT * from Patient
2   where Variant_name='Alpha' and Sex='Male' and Blood_Group='AB+';
3

```

Result Grid

	Name	Patient_ID	Hospital_ID	Variant_name	DOB	Sex	Blood_Group	Contact
▶	Srujan	29	1061	Alpha	1975-02-21	Male	AB+	8620076151
	Ravi	37	1072	Alpha	1983-08-01	Male	AB+	8620076159
	Kushal	49	1091	Alpha	1973-12-13	Male	AB+	8620076171
	Abhinav	85	1041	Alpha	1996-02-19	Male	AB+	8620076107
	Tarun	93	1062	Alpha	1989-02-27	Male	AB+	8620076115
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

4.Extract the complete details about workers who are born before 1984 and blood group is A+. Details means all details like hospital name under which worker is working and all details of hospital.

```

SELECT * from Hospital,Health_worker
  where Hospital.hospital_ID= Health_Worker.hospital_ID
and EXTRACT(YEAR FROM Health_worker.DOB) < 1984 and
Blood_Group='A+';

```

Query 1 x

Limit to 1000 rows

```

1 • SELECT * from Hospital,Health_worker
2   where Hospital.hospital_ID = Health_Worker.hospital_ID and EXTRACT(YEAR FROM Health_worker.DOB) < 1984 and Blood_Group='A+';
3

```

Result Grid Filter Rows: Export: Wrap Cell Content: [F](#)

	Hospital_Name	Hospital_ID	Contact	Address	Pin	Name	Worker_ID	Hospital_ID	Role	DOB	Sex	Blood_Group	Contact
▶	Apex Hospital	1011	8897876172	8-1-21,karmanghat,500079	101	Ramana	1	1011	Doctor	1980-01-01	male	A+	9381611371
	Rainbow Hospital	1021	8897876174	6-87,VIP Road,700052	102	Sahith	9	1021	Other	1978-05-11	male	A+	9381611379
	Liberty Hospital	1061	8897876182	5/7,Aunta,803303	105	Samhitha	29	1061	Nurse	1983-10-24	Female	A+	9381611399
	City Hospital	1062	8897876183	7/12,Alaminagar,226017	106	Aman	34	1062	Doctor	1981-06-29	male	A+	9381611344
	Fortis Hospital	1081	8897876186	5/41,Bommanahalli,560068	107	Urvashi	43	1081	Other	1979-09-11	Female	A+	9381611353

5.Display all the details of deceased persons like city, hospital, ids, death reason and days stayed , sex, blood group, state.

```

SELECT  Patient.Name as Name, Death.Death_reason as
Reason,      Death.Days_stayed,      Patient.Variant_name,
Patient.DOB, Patient.Sex,
Patient.Blood_Group,      Patient.Contact as
Patient_contact, Hospital.Hospital_name, City.Name as
City_Name, City.state
from Death,patient,Hospital,City;

```

Query 1 x

Limit to 1000 rows

```
1 • SELECT Patient.Name as Name, Death.Death_reason as Reason, Death.Days_stayed, Patient.Variant_name, Patient.DOB, Patient.Sex,
2 Patient.Blood_Group, Patient.Contact as Patient_contact, Hospital.Hospital_name, City.Name as City_Name, City.state
3 from Death,patient,Hospital,City
4 where Death.patient_ID=Patient.patient_id and Patient.Hospital_ID= Hospital.Hospital_ID and Hospital.Pin=City.Pin;
5
```

Result Grid Filter Rows: Export: Wrap Cell Content:

	Name	Reason	Days_stayed	Variant_name	DOB	Sex	Blood_Group	Patient_contact	Hospital_name	City_Name	state
▶	Sharan	Cardiac arrest	13	Alpha	1990-03-22	Male	A+	8620076123	Apex Hospital	Hyderabad	Telangana
	Saketh	Multi-organ failure	21	Omicron	1982-05-17	Male	AB+	8620076130	Rainbow Hospital	Kolkata	West Bengal
	Akash	Respiratory failure	14	Delta	1990-02-04	Male	AB-	8620076137	Krishna Hospital	Chennai	Tamil Nadu
	Abhishek	Pneumonia	11	Beta	1986-03-07	Male	A+	8620076140	Yash Hospital	Chennai	Tamil Nadu
	Vamsi	gastric peptic ulcer	18	Alpha	1991-02-09	Male	B+	8620076167	Apollo Hospital	Shimla	Himachal Pradesh
	Abhinav	Cardiac arrest	7	Alpha	1996-02-19	Male	AB+	8620076107	Rudra Hospital	Gandhinagar	Gujarat
	Tarun	Respiratory failure	6	Alpha	1989-02-27	Male	AB+	8620076115	City Hospital	Ludnow	Uttar Pradesh
	Ranvijay	Cardiac arrest	15	Beta	1973-02-14	Male	A-	8620076120	Narayan Hospital	Ludnow	Uttar Pradesh
	Virender	Multi-organ failure	19	Alpha	1976-06-18	Male	B-	8620076223	Fortis Hospital	Bengaluru	Karnataka
	Biral	Respiratory failure	21	Beta	1977-06-20	Male	AB-	8620076224	Fortis Hospital	Bengaluru	Karnataka
	Nagesh	gastric peptic ulcer	27	Omicron	1979-02-24	Male	O-	8620076226	Fortis Hospital	Bengaluru	Karnataka

Result 32 x