Case1

1. -- create clinic table
2. create table clinic
3. (hospital\_id number(6) not null,
4. hospital\_name VARCHAR2(30),
5. hospital\_address VARCHAR2(70),
6. suburb VARCHAR2(40),
7. postcode VARCHAR2(4),
8. primary Key( hospital\_id));
9. --create table doctor
10. create table doctor
11. (staff\_id number(6) not null ,
12. staff\_name VARCHAR2(30),
13. staff\_ph VARCHAR2(10) ,
14. primary key(staff\_id));
15. -- create table patient
16. create table patient
17. (patient\_id number(6) not null,
18. patient\_name VARCHAR2(30) not null,
19. patient\_age number(3) not null,
20. patient\_ph\_no VARCHAR2(10),
21. patient\_address VARCHAR2(70),
22. patient\_nationality VARCHAR2(30) ,
23. patient\_emergency\_contact VARCHAR2(10),
24. primary key( patient\_id));
25. -- create service table
26. create table service
27. ( service\_id number(6) not null,
28. staff\_id number(6) not null,
29. hospital\_id number(6) not null,
30. service\_name VARCHAR2(30),
31. service\_cost numeric( 10,2),
32. primary key( service\_id),
33. foreign key(staff\_id) references doctor(staff\_id),
34. foreign key(hospital\_id) references clinic(hospital\_id));
35. --create table assignment
36. create table asssignment
37. ( assignment\_id number(6) not null,
38. patient\_id number(6) not null,
39. patient\_service\_start\_date date,
40. patient\_service\_end\_date date,
41. service\_id number(6) not null,
42. primary key(assignment\_id),
43. foreign key(service\_id) references service(service\_id));
44. insert into clinic values(01, 'Alfred','13 York Street',' Glen Iris', 3100);
45. insert into clinic values(02, 'Monash','31 Southern Cross',' Caulfield', 3300);
46. insert into clinic values(03, 'Caroline','11 Park Street',' Yarra', 3200);
47. insert into clinic values(04, 'RMIT','22 Isle Street',' Kilda', 3204);
48. insert into clinic values(05, 'Melbourne','6 Park Village',' Clayton', 3000);
49. insert into doctor values(11, 'Shalika', 0422356775);
50. insert into doctor values(12, 'Rashmita',434567891);
51. insert into doctor values(13, 'Rahul', 0456789111);
52. insert into doctor values(14, 'Disha', 456789123);
53. insert into doctor values(15, 'Shruti', 567891234);
54. insert into patient values(111, 'Ramey Patel', 12, 1234567890,' 12 pike ' ,'Indian', 0423456888);
55. insert into patient values(112, 'Kay Piel', 22, 0434567890,' 6 Long Isle ' ,'Chinese',04234557789);
56. insert into patient values(113, 'Athennee Jake', 34, 4434567890,' 7 kate Ln ' ,'German',0423456786);
57. insert into patient values(114, 'Park Tae', 52, 4234567890,' 11 Market Road ' ,'Korean',04234544330);
58. insert into patient values(115, 'James Bryan', 44, 6264567890,' SouthBank Avey ' ,'Australian', 0423467345);
59. insert into service values(51,11,03,'men’s health ', 40.00);
60. insert into service values(52,11,02,'mental health', 44.00);
61. insert into service values(53,12,03,'skin diseases', 30.00);
62. insert into service values(54,15,01,'paediatric health', 20.00);
63. insert into service values(55,13,04,'specialists n pathology', 30.00);
64. insert into service values(56,13,04,'general medical consultations', 30.00);
65. insert into asssignment values(201,111, TO\_DATE('22-feb-2020','DD-MON-YYYY'),TO\_DATE('24-feb-2020','DD-MON-YYYY'),51);
66. insert into asssignment values(202,112, TO\_DATE('11-mar-2020','DD-MON-YYYY'),TO\_DATE('12-mar-2020','DD-MON-YYYY'),52);
67. insert into asssignment values(203,112, TO\_DATE('02-apr-2020','DD-MON-YYYY'),TO\_DATE('7-apr-2020','DD-MON-YYYY'),53);
68. insert into asssignment values(204,113, TO\_DATE('20-mar-2020','DD-MON-YYYY'),TO\_DATE('28-mar-2020','DD-MON-YYYY'),53);
69. insert into asssignment values(205,114, TO\_DATE('06-jan-2020','DD-MON-YYYY'),TO\_DATE('10-jan-2020','DD-MON-YYYY'),55);
70. insert into asssignment values(206,115, TO\_DATE('06-jun-2019','DD-MON-YYYY'),TO\_DATE('10-jun-2019','DD-MON-YYYY'),51);
71. insert into asssignment values(207,115, TO\_DATE('16-jun-2019','DD-MON-YYYY'),TO\_DATE('20-jun-2019','DD-MON-YYYY'),53);
72. insert into asssignment values(208,115, TO\_DATE('26-jun-2019','DD-MON-YYYY'),TO\_DATE('30-jun-2019','DD-MON-YYYY'),52);
73. insert into asssignment values(209,115, TO\_DATE('24-jun-2019','DD-MON-YYYY'),TO\_DATE('29-jun-2019','DD-MON-YYYY'),56);
74. insert into asssignment values(210,115, TO\_DATE('20-jun-2019','DD-MON-YYYY'),TO\_DATE('29-jun-2019','DD-MON-YYYY'),56);
75. insert into asssignment values(212,115, TO\_DATE('02-jun-2019','DD-MON-YYYY'),TO\_DATE('29-jun-2019','DD-MON-YYYY'),56);
76. commit;

2)

A picture containing screenshot, map

Description automatically generated

3)

Case 1: Analysis of the patients.

From Age dimension point of view

|  |  |
| --- | --- |
| Age | No of Patients |
| Age<1 | 3546 |

From Location point of view

|  |  |
| --- | --- |
| Location | No of Patients |
| Suburb: Clayton | 22 |
| Postcode:3141 | 234 |

From Service point of view

|  |  |
| --- | --- |
| service | No of Patients |
| Service:General consultants | 22 |
| Service\_date:22/2/2020 | 45 |

From Time Period Point of view

|  |  |
| --- | --- |
| Time | No of Patients |
| Winter | 22 |

Please note the figures are fictious.

3)

4) --create location dimesion table

create table locationdim as

select distinct suburb, postcode from clinic ;

--DROP TABLE locationdim CASCADE CONSTRAINTS PURGE;

-- create timeperiod table

create table timeperioddim

(

timeperiod\_no number not null,

timeperiod\_name varchar2(30)

);

--DROP TABLE timeperioddim CASCADE CONSTRAINTS PURGE;

insert into timeperioddim values(91, 'Summer');

insert into timeperioddim values(92, 'Winter');

insert into timeperioddim values(93, 'Spring');

insert into timeperioddim values(94, 'Autumn');

--create table servicedim

create table servicedim as select distinct s.service\_id , s.service\_name,

a.patient\_service\_start\_date service\_time

from service s , asssignment a where s.service\_id = a.service\_id;

--DROP TABLE servicedim CASCADE CONSTRAINTS PURGE;

-- create table agedim

create table agedim

(

age\_id number not null,

age\_group varchar(20));

insert into agedim values(911, 'age infant <1');

insert into agedim values(912, ' children <18');

insert into agedim values(913, ' adult 18+');

insert into agedim values(914, ' senior 65+');

--DROP TABLE agedim CASCADE CONSTRAINTS PURGE;

-- creating temp fact

--drop table tempfact\_hospital;

create table tempfact\_hospital as

select s.service\_id, s.service\_name, s.hospital\_id, c.suburb, a.patient\_service\_start\_date , a.patient\_id, p.patient\_name,p.patient\_age , s.service\_cost

from service s , clinic c, asssignment a , patient p

where s.hospital\_id = c.hospital\_id and s.service\_id =a.service\_id and p.patient\_id = a.patient\_id;

ALTER TABLE tempfact\_hospital

ADD (age\_id NUMBER);

UPDATE tempfact\_hospital SET age\_id = 911 WHERE age\_id < 1;

UPDATE tempfact\_hospital SET age\_id = 912 WHERE patient\_age >= 1 and patient\_age < 18;

UPDATE tempfact\_hospital SET age\_id = 913 WHERE patient\_age >= 18 and patient\_age < 65;

UPDATE tempfact\_hospital SET age\_id = 914 WHERE patient\_age >= 65;

ALTER TABLE tempfact\_hospital

ADD (timeperiod\_no NUMBER);

UPDATE tempfact\_hospital SET timeperiod\_no = 91 WHERE EXTRACT(month FROM patient\_service\_start\_date) in (12,1,2);

UPDATE tempfact\_hospital SET timeperiod\_no = 92 WHERE EXTRACT(month FROM patient\_service\_start\_date) in (6,7,8);

UPDATE tempfact\_hospital SET timeperiod\_no = 93 WHERE EXTRACT(month FROM patient\_service\_start\_date) in (9,10,11);

UPDATE tempfact\_hospital SET timeperiod\_no = 94 WHERE EXTRACT(month FROM patient\_service\_start\_date) in (3,4,5);

-- Now, create the fact table,

--DROP TABLE fact\_hospital CASCADE CONSTRAINTS PURGE;

CREATE TABLE fact\_hospital AS

SELECT T.suburb, T.age\_id, T.timeperiod\_no,

T.service\_id, COUNT(t.patient\_id) AS total\_no\_patients, sum(t.service\_cost) as total\_service\_cost

FROM tempfact\_hospital T

GROUP BY T.service\_id, T.suburb, T.timeperiod\_no, T.age\_id;

5) -- Show the total number of patients making appointments during Winter.

select

t.timeperiod\_name , sum(f.total\_no\_patients) as total\_no\_of\_patients

from fact\_hospital f, timeperioddim t

where f.timeperiod\_no =t.timeperiod\_no

group by timeperiod\_name

having upper(timeperiod\_name) = upper('winter');

-- Show the total service charged for each service cost type.

select s.service\_id , sum(f.total\_service\_cost) as total\_cost\_charged\_per\_service

from fact\_hospital f, (select distinct service\_id from servicedim) s --s will have temporary results with distinct service id's

where f.service\_id =s.service\_id

group by s.service\_id;

-- Show the total number of patients by each age group (infant <1, children <18, adult 18+,senior 65+) in April 2020.

select s.service\_time,a.age\_group, sum(total\_no\_patients) total\_no\_of\_patients from

fact\_hospital h, agedim a,servicedim s where

h.service\_id = s.service\_id and h.age\_id = a.age\_id and

extract(month from s.service\_time) = 4 and extract(year from s.service\_time) = 2020

group by s.service\_time,a.age\_group;

-- Show the total service charged for general medical consultations in each suburb.

select f.suburb, s.service\_id ,sum(f.total\_service\_cost)

from fact\_hospital f, (select distinct service\_id, service\_name from servicedim where upper(service\_name) =upper('General Medical Consultations')) s --s will have temporary results with distinct service id's

where f.service\_id =s.service\_id

group by s.service\_id , f.suburb;

select \* from servicedim;