Capstone Project SQL SYNTAX

create database if not exists cost\_to\_custmr;

use cost\_to\_custmr;

show tables;

-- Rename Table and columns for sanity check

alter table cost\_to\_custmr.`hospitalisation details`

rename to hospitalisation\_details;

alter table cost\_to\_custmr.`medical examinations`

rename to medical\_examinations;

alter table hospitalisation\_details

rename column `Customer ID` to Customer\_ID;

alter table hospitalisation\_details

rename column `Hospital tier` to hospital\_tier;

alter table hospitalisation\_details

rename column `City tier` to city\_tier;

alter table hospitalisation\_details

rename column `State ID` to state\_id;

select \* from hospitalisation\_details;

select distinct 'customer\_id' , count(\*) from hospitalisation\_details;

-- Before adding Primary key , checking NUll,string'?' and Duplicate value

select \* from hospitalisation\_details

where customer\_id is null;

select \* from medical\_examinations

where customer\_id is null;

-- as no null is found , checking and delete for string '?'

select count(\*) from hospitalisation\_details

where customer\_id ='?' or state\_id = '?'or city\_tier ='?' or hospital\_tier = '?';

delete from hospitalisation\_details

where customer\_id ='?' or state\_id = '?'or city\_tier ='?' or hospital\_tier = '?';

-- modify column data type and adding constrain primary key

alter table hospitalisation\_details

modify column customer\_id varchar(255);

alter table hospitalisation\_details

add constraint primary key (customer\_id );

describe hospitalisation\_details;

-- some prior operation on table medical\_examinations

select \* from medical\_examinations;

desc medical\_examinations;

alter table medical\_examinations

rename column `Customer ID` to customer\_id;

alter table medical\_examinations

rename column `Heart Issues` to heart\_issue;

alter table medical\_examinations

rename column `Any Transplants` to any\_transplants;

alter table medical\_examinations

rename column `Cancer history` to cancer\_history;

select distinct 'customer\_id' ,count(\*) from medical\_examinations;

select \* from medical\_examinations

where smoker='?' ;

delete from medical\_examinations

where smoker='?' ;

-- modify column data type and adding constrain primary key

alter table medical\_examinations

modify column customer\_id varchar(255);

alter table medical\_examinations

add constraint primary key (customer\_id);

describe medical\_examinations;

-- merging two table for further analysis as per project requirement

SELECT \*

FROM hospitalisation\_details as HD

join medical\_examinations as ME

on HD.Customer\_ID = ME.Customer\_ID ;

SELECT distinct count(\*)

FROM hospitalisation\_details as HD

join medical\_examinations as ME

on HD.Customer\_ID = ME.Customer\_ID ;

-- 2. Retrieve information about people who are diabetic and have heart problems with their average

-- age, the average number of dependent children, average BMI, and average hospitalization costs

SELECT \*

FROM hospitalisation\_details;

select (2024-year) AS age

FROM hospitalisation\_details ;

select me.HBA1C, me.heart\_issue, avg(me.BMI),avg(HD.charges),avg(HD.children)

FROM hospitalisation\_details as HD

join medical\_examinations as ME

on HD.Customer\_ID = ME.Customer\_ID

where me.HBA1C > 6.5 and me.heart\_issue='yes'

group by me.HBA1C , me.heart\_issue;

SELECT avg(HBA1C)

FROM medical\_examinations;

select me.HBA1C, me.heart\_issue, avg(me.BMI),avg(HD.charges),avg(HD.children)

FROM hospitalisation\_details as HD

join medical\_examinations as ME

on HD.Customer\_ID = ME.Customer\_ID

where me.HBA1C > 6.5 and me.heart\_issue='yes'

group by me.HBA1C , me.heart\_issue;

-- 3. Find the average hospitalization cost for each hospital tier and each city level

select hospital\_tier,city\_tier,avg(charges)

from hospitalisation\_details

group by hospital\_tier,city\_tier;

-- 4. Determine the number of people who have had major surgery with a history of cancer

SELECT customer\_id,NumberOfMajorSurgeries,cancer\_history

FROM medical\_examinations

where cancer\_history='yes' ;

SELECT count(customer\_id) as number\_of\_ppl

FROM medical\_examinations

where cancer\_history='yes' ;

-- 5. Determine the number of tier-1 hospitals in each state

SELECT state\_id , count(hospital\_tier) as tier\_1\_hospital

FROM hospitalisation\_details

where hospital\_tier = 'tier - 1'

group by state\_id

-- END OF SQL PART OF PROJECT --