--a. List of medications patient's use, sorted alphabetically

SELECT P.Last, P.First, M.Medication\_Name, M.Date\_Prescribed, M.Frequency\_Used

FROM Patient AS PT

JOIN Medical\_History AS MH ON PT.SSN = MH.SSN

JOIN Medication AS M ON MH.Medical\_History\_ID = M.Medical\_History\_ID

JOIN Person AS P ON PT.SSN = P.SSN

ORDER BY P.Last, M.Medication\_Name;

--b. Display patient information for patients who currently have Delta Dental insurance policy

SELECT P.\*

FROM Person AS P

JOIN Patient AS PT ON P.SSN = PT.SSN

JOIN Person\_has\_Insurance AS PHI ON PT.SSN = PHI.SSN

JOIN Insurance AS I ON PHI.Insurance\_ID = I.INSURANCE\_ID

WHERE I.Company = 'Delta Dental';

--c Generate a list of procedures and dates of service performed by doctor Smilow.

SELECT procedure\_name, date\_performed

FROM Procedure

JOIN Practitioner\_can\_perform\_Procedure AS PccP ON Procedure.Procedure\_ID = PccP.Procedure\_ID

JOIN Practitioner as p On PccP.SSN = p.SSN

Join Employee As e on p.SSN = e.SSN

JOIN Person ON Person.SSN = e.SSN

WHERE Person.Last = 'Smilow' AND Person.first = 'Hope';

--d. Print out a list of past due invoices with patient contact information. Past due is defined as over 30 days old with a balance over $10.

SELECT p.First, p.Middle, p.Last, p.Email, p.Phone, b.Billing\_ID, b.Billing\_date, (SUM(pcb.Amount) - SUM(Standard\_Per\_Unit\_Charges)) as Remaining\_Balance

FROM Billing b

JOIN Procedure pr ON b.Procedure\_ID = pr.Procedure\_ID

JOIN Payment\_covers\_Billing pcb ON b.Billing\_ID = pcb.Billing\_ID

JOIN Payment pay ON pcb.Payment\_ID = pay.Payment\_ID

JOIN Patient pt ON pay.SSN = pt.SSN

JOIN Person p ON pt.SSN = p.SSN

WHERE (julianday('now') - julianday(b.Billing\_date)) > 30

GROUP BY b.Billing\_ID

HAVING Remaining\_Balance > 10

ORDER BY b.Billing\_date;

--e Find the patients who brought the most revenue in the past year. You can define how many records you want to display in the result of this query

SELECT pers.first, pers.LAST, sum(proc.Standard\_Per\_Unit\_Charges) AS TotalRevenue

FROM person as pers

join PATIENT p on p.ssn = pers.ssn

join Payment pay on pay.ssn = p.ssn

join Payment\_covers\_Billing pcb on pcb.Payment\_ID = pay.Payment\_ID

join Billing b on b.Billing\_ID = pcb.Billing\_ID

join Procedure proc on proc.Procedure\_ID = b.procedure\_id

WHERE pay.Payment\_date BETWEEN '2022-01-01' and '2022-12-31'

Group by pers.SSN

ORDER BY TotalRevenue DESC

LIMIT 5;

--f. Create a list of doctors who performed less than 5 procedures this year.

SELECT Person.First, Person.Last

FROM Procedure

JOIN Practitioner\_can\_perform\_Procedure AS PccP ON Procedure.Procedure\_ID = PccP.Procedure\_ID

JOIN Practitioner as p On PccP.SSN = p.SSN

Join Employee As e on p.SSN = e.SSN

JOIN Person ON Person.SSN = e.SSN

WHERE PccP.ProcedureCount < 5;

--g. Find the highest paying procedures, procedure price, and the total number of those procedures performed. Sort your list with highest paying procedures showing at the top of your list.

SELECT p.Procedure\_Name, p.Standard\_Per\_Unit\_Charges, COUNT(\*) as Total\_Procedures

FROM PROCEDURE p

JOIN BILLING b ON p.Procedure\_ID = b.Procedure\_ID

GROUP BY p.Procedure\_Name, p.Standard\_Per\_Unit\_Charges

ORDER BY p.Standard\_Per\_Unit\_Charges DESC;

--h. Create a list of all payment types accepted, number of times each of them was used, and total amount charged to that type of payment.

SELECT Payment.Type, COUNT(\*) AS NumberOfTimesUsed, SUM(Procedure.Standard\_Per\_Unit\_Charges) AS TotalAmountCharged

FROM Payment

join Payment\_covers\_Billing on Payment\_covers\_Billing.payment\_id = Payment.Payment\_ID

JOIN Billing ON Payment\_covers\_Billing.Billing\_ID = Billing.billing\_ID

join Procedure on Procedure.Procedure\_ID = Billing.Procedure\_ID

GROUP BY Payment.Type;

--i Find the name of the most popular insurance plan currently used by the patients.

Select Policy\_Name

From Insurance\_Policy\_Name as ipn

join Policy\_Naming\_Mapping as pnm on pnm.Policy\_Number = ipn.Policy\_number

join Insurance\_Policy as ip on ip.Policy\_ID = pnm.Policy\_ID

join Insurance as i on i.INSURANCE\_ID = ip.Insurance\_ID

ORDER BY 'Policy\_Name' DESC

limit 1;