Question(s)

NOTE: All done in pseudocode. I don't have an SQL server up at the moment. I currently do everything in dyplyr.

1. Write a query that returns all the IDs of providers in the Provider table whose specialty is "Cardiology".

   SELECT ProviderID FROM Provider WHERE Specialty = 'Cardiology'

2. Write a query that returns all the unique Practice IDs of providers in the Provider table whose specialty is "Primary Care" or "Endocrinology".

   SELECT ProviderID FROM Provider WHERE Specialty = 'Primary Care' OR Specialty = 'Endocrinology'

3. Write a query that returns the number of prescriptions in the Prescription table by BrandName

   SELECT BrandName, COUNT(*) FROM Prescriptions
   GROUP By BrandName

4. Write a query that returns the total number of charts created by practice

   SELECT PracticeID, SUM(NumChartsCreated) FROM Provider
   GROUP BY PracticeID

5. Write a query that returns the number of unique patients prescribed a medication by a provider whose specialty is "Primary Care" by the medication's BrandName

   SELECT pre.ProviderID, pre.BrandName , COUNT(DISTINCT(pre.ProviderID, pre.BrandName, pre.PatientID))
   FROM Prescriptions pre
   INNER JOIN Providers pro
   ON pre.ProviderId = pro.ProviderId
   WHERE pro.Specialty = 'Primary Care'
   GROUP BY pre.ProviderID, pre.BrandName, pre.PatientID

6. Let's say that providers who joined on or before 3/1/2011 are in Cohort A, that providers who joined between 3/2/2011 and 7/22/2012 inclusive are in Cohort B, and providers who joined on or after 7/22/2012 are in Cohort C. Write a query that returns the number of unique practices by cohort

   SELECT cohort, COUNT (DISTINCT(cohort,p.PracticeID))
   FROM (SELECT ProviderID, PraticeID,
   CASE
   WHEN (joindate <= 2011-3-1) then 'A' ###I know I need to change date format but so dependent on setup
   WHEN (joindate >= 2011-3-1 and joindate <= 2012-7-22) then 'B'
   WHEN joindate > 2012-7-22 then 'C'
   WHEN joindate = null then 'N'
   ELSE 'Z'

```
END as cohort
FROM provider AS p
) as f
GROUP BY cohort,p.ProviderID, P.PracticeID
```

7. Write a query that returns the number of charts created by ProviderID for providers whose first prescription was Lipitor. Assume that sorting in descending order by PrescriptionID is the same as sorting by time of prescription.

```
WITH first_prescription AS
(SELECT p.ProviderID, p.numchartscreated,a.drug, MIN(a.PrescriptionID) as first_preID
FROM Provider p
INNER JOIN Prescriptions a
ON p.ProviderID = a.ProviderID
GROUP BY p.ProviderID, p.chartscreated,a.drug
ORDERED by p.providerID
)
Lipitorfirst as
(
SELECT ProviderID, numchartscreated
FROM first_prescription
WHERE drug='Lipitor' AND first_preID = prescriptionID
)
SELECT ProviderID, SUM(numchartscreated)
FROM lipitorfirst
GROUP by ProviderID
```