Given the following schema :

Doctor(DId, Dname, Specialty)
Patient(Pid, Pname, Age, Weight)
Diagnose(PId, DId, date, description)
Prescription(PId, MId, date, comment)
Medicine(Mid, MName, type)

Write down the following queries in **SQL**:

1. List the doctors who are specialist in Diabetes.
2. List the patients of Dr. Mshari
3. Retrieve the patients who were diagnosed by Dr. Mshari and Dr. Ghamdi
4. Retrieve all the medicine that were taken by "Fadh Zahrani" before 10/4/2016 and prescribed before 1/4/2016
5. Retrieve the number of patients who were diagnosed by Dr. Mshari before the 10/5/2016
6. List for each specialty and for each doctor the number of patient who were diagnosed.

1) $\sigma_{specialty = "Diabetes"}(Doctor)$

2) $\pi_{Pname}(\sigma_{Dname = "Dr. Mshari"}(Doctor) \bowtie_{DId = DId} Diagnose \bowtie_{PId = Pid} Patient)$

3) $\pi_{Pname}(\sigma_{Dname = "Dr. Mshari"}(Doctor) \bowtie_{DId = DId} Diagnose \bowtie_{PId = Pid} Patient) \cap \pi_{Pname}(\sigma_{Dname = "Dr. Ghamdi"}(Doctor) \bowtie_{DId = DId} Diagnose \bowtie_{PId = Pid} Patient)$

4) $\pi_{Mname}(\sigma_{Pname = "Fadh Zahrani"}(Patient) \bowtie_{Pid = PId} \sigma_{Date < 1/4/2016}(Prescription) \bowtie_{MId = MId} Medicine)$

5) $\gamma_{count(*)}\left(\sigma_{Oname = "Dr.\ Mshari"}(Doctor) \bowtie_{Did = Did} \sigma_{Date < 10/5/2016}(Diagnose) \bowtie_{Pid = Pid} Patient\right)$

6) $\gamma_{Specialty,\ count(*)}\left(Doctor \bowtie_{Did = Did} Diagnose \bowtie_{Pid = Pid} Patient\right)$