Consider the following object relational database schema which records patient and hospital visit information:

> *Object types*:
> Doctor_t(regNo:char(10), name:varchar2(50), specialization:varchar2(25))
> HospitalVisit_t(hosChg:float, vDate:date, refDoc: ref doctor_t, docChg:float)
> HospitalVisit_tlb as table of HospitalVisit_t
> Patient_t(id:char(10), name:varchar2(50), dateofBirth:date, phone:char(10),
>   hospVisits HospitalVisit_tlb)
>
> *Tables*:
> Doctors of Doctor_t(regNo primary key)
> Patients of Patient_t(id primary key) nested table hospVisits store as hospVis_ntb;

Doctors table contains information about all doctors at the hospital. The attributes of doctors are registration number (regNo), name (name) and field of specialization (specialization). The Patients table contains information about the patients visiting the hospital. The attributes of Patients are identity number (id), name (name), date of birth (dob), phone number (phone) and hospital visits by the patient (hospVisits). The hospVisits attribute of patients table is a nested table of type HospitalVisit_tlb. HospitalVisit_tlb consist of a table of HospitalVisit_t objects. The attributes of the HospitalVisit_t are hospital charges (hosChg), date of visit (vDate), referring doctor (refDoc), which is a reference to an object of type doctor_t, and doctor charges (docChg).

1. Write Oracle Object SQL statements to create the object-relational database schema given above.

2. Consider the sample data given below. Write Oracle Object SQL statements to insert the data.

Doctors

regNo:char(10)	name:varchar2(50)	specialization: varchar2(25)
1223441234	Dr. K. Perera	Gynecologist
1234421131	Dr. P. Weerasinghe	Dermatologist
2342111322	Prof. S. Fernando	Pediatrician
2344114344	Dr. K. Sathgunanathan	Pediatrician

Patients

id:char(10)	name: varchar2(50)	dob: date	phone: char(10)	hospVisits			
				hosChg: float	vDate: date	refDoc: ref doctor_t	docChg: float
732821122 V	Sampath Weerasinghe	23-JAN-73	0332124222	50.00	24-MAY-06	Ref of (1223441234)	500.00
491221019 V	Dulani Perera	3-FEB-49	0112233211	75.00	25-MAY-06	Ref of (2342111322)	550.00
				90.00	29-MAY-06	Ref of (2344114344)	300.00

3. Write Oracle Object SQL statements to answer the following queries:
   a. Print the total amount spent by patient (id = 732821122V) on hospital

   b. Print the number of patients who have channeled "Prof. S. Fernando".

   c. How many patients have channeled a pediatrician?

   d. For each patient, print the total amount spent on doctor charges?

   e. Print the name of the doctor who has earned the more than Rs. 1000/- in total in doctor charges.