1.1)No, primary key in not responsible for ensuring the same or different physical locations of departments, moreover “dnumber” is responsible for unique number assign to each department.

1.2) Yes, it is possible two dependents have same name due to data integrity “essn” plays a role to uniquely identify the each dependent.

1.3)Yes, top management type of employees not necessarily have supervisors like CEO, but may be as per category of work some employees not have any supervisors. But in this table ”super\_ssn” is a essential field therefore every employee must have the supervisor.

1.4)Yes, the query follows all syntax and rules and also have valid data values.

1.1)Order\_details(order\_no\*,cust\_no\*,productmo,quantity,unitprice,salesrep)

1.1)Customer\_details(cust\_no\*,customer\_name,phone,address,city,state,postalcode,country)

1.2)create table order\_details (

order\_no number not null constraint order\_details\_pk primary key,

cust\_no number not null constraint cust\_fk references customer\_details (cust\_no),

productno varchar2(8) not null,

quantity number not null,

unitprice number not null,

salesrep varchar2(50)

);

alter table order\_details add constraint order\_details\_order\_no\_uq unique (order\_no);

1.2)create table customer\_details (

cust\_no number not null constraint customer\_details\_pk primary key,

customer\_name varchar2(50),

phone varchar2(15) not null,

address varchar2(100) not null,

city varchar2(10) not null,

state varchar2(5),

postalcode varchar2(10) not null,

country varchar2(20) not null

);

alter table customer\_details add constraint customer\_details\_cust\_no\_uq unique (cust\_no);

1.3)insert into customer\_details (cust\_no,customer\_name,phone, address,city,state,postalcode, country) values(1,"","","","","","","");

insert into order\_details(order\_no,cust\_no, productno, quantity,unitprice, salesrep) values(1,1,"","","","");

3.1. List the title of all research fields in the database.

select title from field;

3.2. How many academics are there in the department where deptnum=100. Return the total number.

select count(acnum) from ACADEMIC where deptnum=100

3.3. List in alphabetical order the institution name (instname) and department name (deptname) of all departments.

select instname, deptname from DEPARTMENT order by instname,deptname ASC

3.4. Return the famname and givename of academics whose acnum is in the range [200..299] or whose famname starts with “T”.

select famname, givename from ACADEMIC where famname like 'T%' and deptnum between 200 and 299

3.5. List the deptnum of departments having at least ten academics

SELECT SUM( D.DEPTNUM) FROM ACADEMIC A, DEPARTMENT D WHERE A.DEPTNUM=D.DEPTNUM GROUP BY D.DEPTNUM HAVING SUM(D.DEPTNUM) >= 10 ;

3.6. List in alphabetical order the famname, givename of academics who work for institutions in Victoria. Note: the values for “Victoria” include “VIC” or “Vic”.

SELECT A.FAMNAME,A.GIVENAME FROM ACADEMIC A, DEPARTMENT D WHERE A.DEPTNUM=D.DEPTNUM AND D.STATE LIKE '%VIC%' ORDER BY A.FAMNAME,A.GIVENAME ASC ;

3.7. Find academics who do not have any title. Give their famname and givename.

SELECT FAMNAME,GIVENAME FROM ACADEMIC WHERE TITLE IS NULL

3.8. Find authors who have interest in the field of “Logic Programming” (field.title). List their famname and givename.

select A.FAMNAME,A.GIVENAME from INTEREST I, ACADEMIC A where I.ACNUM = A.ACNUM and I.DESCRIP LIKE '%Logic Programming%';

3.9. The below query is meant to list the fieldnum and title of fields whose fieldnum is between 500 and 599 or whose title contains the word 'Data'. But it has errors. Give the correct SQL query

select panum, title

from paper

where panum >=500 and panum <=599 or upper(title) like 'Data%';

The query is meant to list paper number (panum), title and author (acnum) for papers, and research interest (fieldnum) for each author, but it has errors. Give the correct SQL query.

select p.panum, p.title

from author, interest, paper p

where author.acnum=interest.acnum

order by panum;

