

Project 2 and SQL

EECS 484
Winter '09

The DUAL table

```
SQL> desc dual;
```

Name	Null?	Type
DUMMY		VARCHAR2(1)

```
SQL> select * from dual;
```

```
D  
-  
X
```

```
SQL> select greatest(1,3,2) from dual;
```

```
GREATEST(1,3,2)  
-----  
3
```

```
SQL> select greatest(1,3,2) as max from dual;
```

```
MAX  
-----  
3
```

The DUAL table

```
SQL> select sysdate from dual;
```

```
SYSDATE
```

```
-----
```

```
05-FEB-09
```

```
SQL>
```

Data manipulation in triggers using DUAL

```
SELECT <seqName>.NEXTVAL  
INTO :NEW.<fieldName>  
FROM DUAL;
```

Adding a constant to tables

```
SQL> select * from userids;
```

```
USERID
```

```
-----
```

```
john
```

```
jack
```

```
kate
```

```
ben
```

```
james
```

```
SQL> select 'lost',userid from userids;
```

```
'LOS USERID
```

```
---- -----
```

```
lost john
```

```
lost jack
```

```
lost kate
```

```
lost ben
```

```
lost james
```

```
SQL>
```

Schema

Suppliers(sid, sname, address)

Parts(pid, pname, color)

Catalog(sid, pid, cost)

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

1. Find the pnames of parts for which there is some supplier

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

2. Find the pnames of parts supplied by Acme and no one else

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

3. Find the snames of suppliers who supply every part

[In other words, there should not be a part which is not sold by such suppliers.

Find these parts and use **NOT EXISTS**]

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

4. Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part)

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

5. For every supplier that only supplies green parts, print the name of the supplier and the total number of parts that he or she supplies

Suppliers(sid, sname, address)
Parts(pid, pname, color)
Catalog(sid, pid, cost)

6. For every supplier that supplies a green part and a red part, print the name and price of the most expensive part that he or she supplies

Schema

Flights(flno, from, to, distance, departs, arrives)

Aircraft(aid, aname, cruisingrange)

Certified(eid, aid)

Employees(eid, ename, salary)

Flights(flno, from, to, distance, departs, arrives, price)
Aircraft(aid, aname, cruisingrange)
Certified(eid, aid)
Employees(eid, ename, salary)

1. Find the eids of pilots certified for some Boeing aircraft.

Flights(flno, from, to, distance, departs, arrives)
Aircraft(aid, aname, cruisingrange)
Certified(eid, aid)
Employees(eid, ename, salary)

2. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruisingrange of the aircraft for which she or he is certified

Flights(flno, from, to, distance, departs, arrives)
Aircraft(aid, aname, cruisingrange)
Certified(eid, aid)
Employees(eid, ename, salary)

3. Print the names of employees who are certified only on aircrafts with cruising range longer than 1000 miles, but on at least two such aircrafts

Flights(flno, from, to, distance, departs, arrives)
Aircraft(aid, aname, cruisingrange)
Certified(eid, aid)
Employees(eid, ename, salary)

4. Print the names of employees who are certified only on aircrafts with cruising range longer than 1000 miles and who are certified on some Boeing aircraft

Flights(flno, from, to, distance, departs, arrives)

Aircraft(aid, aname, cruisingrange)

Certified(eid, aid)

Employees(eid, ename, salary)

Is there a sequence of flights from Madison to Timbuktu? Each flight in the sequence is required to depart from the city that is the destination of the previous flight; the first flight must leave Madison, the last flight must reach Timbuktu, and there is no restriction on the number of intermediate flights. Your query must determine whether a sequence of flights from Madison to Timbuktu exists for any input Flights relation instance.