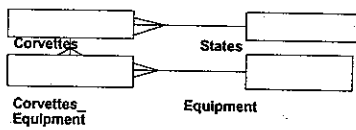


# Database Systems

## MySQL Lab Session

- Client / Server model
- MySQL access from the server machine
- Command line access from remote client
- GUI access using MySQL-Front
- Firewall special notes

- Logical model



Vette_id	Body_style	Miles	Year	State
1	coupe	18.0	1997	4
2	hatchback	58.0	1996	7
3	convertible	13.5	2001	1
4	hatchback	19.0	1995	2
5	hatchback	25.0	1991	5
6	hardtop	15.0	2000	2
7	coupe	55.0	1979	10
8	convertible	17.0	1999	5
9	hardtop	17.0	2000	5
10	hatchback	50.0	1995	7

The Corvettes table

State_id	State
1	Alabama
2	Alaska
3	Arizona
4	Arkansas
5	California
6	Colorado
7	Connecticut
8	Delaware
9	Florida
10	Georgia

The States table

Equip_id	Equipment
1	Automatic
2	4-speed
3	5-speed
4	6-speed
5	CD
6	leather

# CSC 8490-030: Database Systems

## Summer 2007

### MySQL Lab Session

This lab will cover the MySQL server access using the command line from the server machine and from a remote client. It will also show you how to use the GUI interface MySQL-Front from the CS lab machines. The last part of the lab will go over how to connect to the MySQL server from sites outside of the VU campus.

#### Part I:

Login to the `csdb.csc.villanova.edu` using your UNIX account with the ssh client.

Connect to MySQL server running on the CSDB system using your MySQL account. At the shell prompt type:

```
mysql -u yourusername -D yourDBname -p
```

and provide your password at the prompt.

After a successful login, you should have the "mysql>" prompt.

Try a few commands:

```
help ;
```

```
status ;
```

```
show tables;
```

Now let's create a few tables using the script in `/tmp/dblab.mysql`

```
source /tmp/dblab.mysql;
```

```
show tables;
```

```
describe Corvettes;
```

```
select * from Corvettes;
```

```
describe Equipment;
```

```
select * from Equipment;
```

```
describe States;
```

```
Select * from States;
```

## Part II

Open a command window on your PC.

Start --> Run -- [cmd] --> OK

In the command window type:

```
mysql -u yourusername -D yourDBname -h csdb.csc.villanova.edu -p
```

enter your password when prompted.

show tables;

Write SQL commands to:

- List cars with high mileage
- List cars sorted by "age"

(don't close this window)

(we will see how you can generate html output)

## Part III

Use the GUI MySQL-Front

Start --> All Programs --> DatabaseSoftware --> MySQL-Front

fill in "New site"

Hostname: csdb.csc.villanova.edu

User: yourusername

Password: yourpassword

Database: yourDBname

Once connected, interact with your database, and watch the SQL statements in the lower window

### Special notes:

You may get a copy of mysql (command line) and MySQL-Front from the secure download area in the CS website.

You should use the Villanova Virtual Private Network (VPN) to access the systems behind the firewall. You may use IE on your remote machine to connect to the site gateway.villanova.edu with your LDAP username/password to get a VPN connection.

```

1: # MySQL-Front Dump 2.5
2: # By Najib Nadi
3: # Host: webster.csc.villanova.edu Database: DBLab (cars)
4: # -----
5: # Server version 5.0.27
6:
7:
8: #
9: # Table structure for table 'Corvettes'
10: #
11:
12: CREATE TABLE IF NOT EXISTS Corvettes (
13:   Vette_id int(11) NOT NULL DEFAULT '' ,
14:   Body_style char(20) ,
15:   Miles float ,
16:   Year smallint(6) ,
17:   State_id int(11) ,
18:   PRIMARY KEY (Vette_id)
19: );
20:
21:
22:
23: #
24: # Dumping data for table 'Corvettes'
25: #
26:
27: INSERT INTO Corvettes VALUES("1", "coupe", "18", "1997", "4");
28: INSERT INTO Corvettes VALUES("2", "hatchback", "58", "1996", "7");
29: INSERT INTO Corvettes VALUES("3", "convertible", "13.5", "2001", "1");
30: INSERT INTO Corvettes VALUES("4", "hatchback", "19", "1995", "2");
31: INSERT INTO Corvettes VALUES("5", "hatchback", "25", "1991", "5");
32: INSERT INTO Corvettes VALUES("6", "hardtop", "15", "2000", "2");
33: INSERT INTO Corvettes VALUES("7", "coupe", "55", "1979", "10");
34: INSERT INTO Corvettes VALUES("8", "convertible", "17", "1999", "5");
35: INSERT INTO Corvettes VALUES("9", "hardtop", "17", "2000", "5");
36: INSERT INTO Corvettes VALUES("10", "hatchback", "50", "1995", "0");
37:
38:
39: #
40: # Table structure for table 'Corvettes_Equipment'
41: #
42:
43: CREATE TABLE IF NOT EXISTS Corvettes_Equipment (
44:   Vette_id int(11) ,
45:   Equip_id int(11)
46: );
47:
48:
49:
50: #
51: # Dumping data for table 'Corvettes_Equipment'
52: #
53:
54: INSERT INTO Corvettes_Equipment VALUES("10", "5");
55: INSERT INTO Corvettes_Equipment VALUES("1", "1");
56: INSERT INTO Corvettes_Equipment VALUES("1", "5");
57: INSERT INTO Corvettes_Equipment VALUES("1", "6");
58: INSERT INTO Corvettes_Equipment VALUES("2", "1");
59: INSERT INTO Corvettes_Equipment VALUES("2", "5");
60: INSERT INTO Corvettes_Equipment VALUES("2", "6");

```

```

61: INSERT INTO Corvettes_Equipment VALUES ("3", "1");
62: INSERT INTO Corvettes_Equipment VALUES ("3", "6");
63: INSERT INTO Corvettes_Equipment VALUES ("4", "2");
64: INSERT INTO Corvettes_Equipment VALUES ("4", "6");
65: INSERT INTO Corvettes_Equipment VALUES ("5", "1");
66: INSERT INTO Corvettes_Equipment VALUES ("5", "6");
67: INSERT INTO Corvettes_Equipment VALUES ("6", "2");
68: INSERT INTO Corvettes_Equipment VALUES ("7", "4");
69: INSERT INTO Corvettes_Equipment VALUES ("7", "6");
70: INSERT INTO Corvettes_Equipment VALUES ("8", "4");
71: INSERT INTO Corvettes_Equipment VALUES ("8", "5");
72: INSERT INTO Corvettes_Equipment VALUES ("8", "6");
73: INSERT INTO Corvettes_Equipment VALUES ("9", "4");
74: INSERT INTO Corvettes_Equipment VALUES ("9", "5");
75: INSERT INTO Corvettes_Equipment VALUES ("9", "6");
76: INSERT INTO Corvettes_Equipment VALUES ("10", "1");
77: INSERT INTO Corvettes_Equipment VALUES ("10", "5");
78:
79:
80: #
81: # Table structure for table 'Equipment'
82: #
83:
84: CREATE TABLE IF NOT EXISTS Equipment (
85:   Equip_id int(11) NOT NULL DEFAULT '' ,
86:   Equip_char(12) ,
87:   PRIMARY KEY (Equip_id)
88: );
89:
90:
91:
92: #
93: # Dumping data for table 'Equipment'
94: #
95:
96: INSERT INTO Equipment VALUES ("1", "Automatic");
97: INSERT INTO Equipment VALUES ("2", "4-speed");
98: INSERT INTO Equipment VALUES ("3", "5-speed");
99: INSERT INTO Equipment VALUES ("4", "6-speed");
100: INSERT INTO Equipment VALUES ("5", "CD");
101: INSERT INTO Equipment VALUES ("6", "Leather");
102:
103:
104: #
105: # Table structure for table 'States'
106: #
107:
108: CREATE TABLE IF NOT EXISTS States (
109:   State_id int(11) NOT NULL DEFAULT '' ,
110:   State char(20) ,
111:   PRIMARY KEY (State_id)
112: );
113:
114:
115:
116: #
117: # Dumping data for table 'States'
118: #
119:
120: INSERT INTO States VALUES ("10", ", \"Georgia\");

```