



## MYSQL

- Connect

– `mysql [-h host] [-u user] [-p[password]] [dbname]`

```
>mysql -h mariadb -u wang -p
```

```
Enter password: *****
```

```
Welcome to the MySQL monitor.  Commands end with ;  
or \g.
```

```
Your MySQL connection id is 14 to server version:  
3.23.34a
```

```
Type 'help;' or '\h' for help. Type '\c' to clear  
the buffer
```

```
mysql>use wang
```

```
Mysql>database changed
```

# MYSQL

- Data definition

- **SHOW DATABASES;**
- **USE dbname;**
- **CREATE TABLE** table\_name (field\_name type,..., constraints,..);
- **SHOW TABLES;**
- **SHOW COLUMNS FROM** table\_name;
- **DROP TABLE** table\_name;

# MYSQL

- Data manipulation

- **INSERT INTO** table\_name [(field\_name,..)]  
**VALUES** (value,..);
- **DELETE FROM** table\_name  
**WHERE** condition;
- **UPDATE** table\_name  
**SET** field\_name=value,..  
[**WHERE** condition];

# MYSQL

- Data manipulation(2)
  - **SELECT** field\_name [as field\_name],..  
**FROM** table\_name  
[**WHERE** condition]  
[**ORDER BY** field\_name];
  - **=, <, >, AND, OR, NOT**  
(field\_name **LIKE** “\_%...”)

# MYSQL

- ALTER TABLE
  - **ALTER TABLE** table\_name  
[**RENAME** new\_table\_name]/  
[**ADD** field\_name type]/  
[**DROP** field\_name]/  
[**CHANGE** name new\_name new\_type];

```
mysql> show databases;
+-----+
| Database |
+-----+
| cs332a11 |
| information_schema |
+-----+
2 rows in set (0.00 sec)

mysql> use cs332a11;
Database changed
```

```
mysql> CREATE TABLE Students(
-> sid VARCHAR(9) NOT NULL,
-> sname VARCHAR(50),
-> snum INT,
-> PRIMARY KEY(sid));
Query OK, 0 rows affected (0.01 sec)
```

•Data Type :

- CHAR, VARCHAR, INT [Unsigned], FLOAT
- DATE, TEXT/BLOB, SET, ENUM

•Constraints :

- PRIMARY/FOREIGN KEY, NOT NULL

```
mysql> show tables;
+-----+
| Tables_in_cs332a11 |
+-----+
| students            |
+-----+
1 row in set (0.00 sec)
```

```
mysql> show columns from students;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sid   | varchar(8)    |      | PRI |          |       |
| sname | varchar(20)   | YES  |     | NULL    |       |
| snum  | int(11)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> INSERT INTO Students
-> VALUES ('4122', 'John Q', 2001);
Query OK, 1 row affected (0.00 sec)
...
```

```
mysql> SELECT * FROM Students;
+-----+-----+-----+
| sid   | sname          | snum |
+-----+-----+-----+
| 4122  | John Q         | 2001 |
| 3516  | Mary Chau      | 2002 |
| 6281  | Ben Patterson  | 2000 |
| 8762  | Peter Dawson   | 2000 |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> DELETE FROM Students
-> WHERE sid='4122';
Query OK, 1 row affected (0.00 sec)
```

```
mysql> UPDATE Students
      -> SET sid='4311'
      -> WHERE sid='3516';
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM Students;
+-----+-----+-----+
| sid    | sname          | snum |
+-----+-----+-----+
| 4311   | Mary Chau     | 2002 |
| 6281   | Ben Patterson | 2000 |
| 8762   | Peter Dawson  | 2000 |
+-----+-----+-----+
3 row in set (0.00 sec)
```

```
mysql> SELECT * FROM Students ORDER BY sname;
+-----+-----+-----+
| sid    | sname          | snum |
+-----+-----+-----+
| 6281   | Ben Patterson | 2000 |
| 4311   | Mary Chau     | 2002 |
| 8762   | Peter Dawson  | 2000 |
+-----+-----+-----+
3 rows in set (0.02 sec)
```

```
mysql> SELECT sname FROM Students WHERE
      -> snum=2000;
+-----+
| sname          |
+-----+
| Ben Patterson |
| Peter Dawson  |
+-----+
2 row in set (0.00 sec)
```