(MySQL) DAY ONE (Mysql database)

1. What is MySQL?

① database used in web; ② database system runs on a server;

③ an idea for both small and large applications;

④ fast. reliable. easy; ⑤ standard SQL;

⑥ compiles on a number of platforms; ⑦ free to download and use;

⑧ developed, distributed, and supported by Oracle;

⑨ mysql is named after co-founder Monty Widenius's daughter: My

2. Database Queries:

A queries is a question or a request.

DAY TWO (MySQL connect):

① PHP connect to MySQL: via MySQLi extension, PDO (PHP Data Objects)

② Open a Connection to MySQL: Example (MySQLi Object-Oriented).

```
<?php
    $servername = "localhost";
    $username = "username";
    $password = "password";
    $conn = new mysqli($servername, $username, $password);
    if($conn->connect_error){
        die("connection failed:" . $conn->connect_error);
    }
    echo "Connected Successfully";
?>
```

③ close connection: $conn->close();

DAY THREE (create DB)

Example of MySQLi Object-oriented:

```
$sql = "CREATE DATABASE myDB";
if($conn->query($sql) == TRUE){
    echo "Database created successfully";
}else{
    echo "Error creating database:".$conn->error;
}
```

mysql > source $absolutepath

DAY FOUR (create Table)

① The data type specifies what type of data the column can hold;

② After the data type, you can specify other optional attributes:

- NOT NULL - DEFAUT value - UNSIGNED
- AUTO INCREMENT: automatically increases the value of the field by 1 each time a new record is added.
- PRIMARY KEY:

③ example:

DAY FIVE (insert Data):

Mysql format: insert into table_name(column1, ...)
values (value1, ...)

DAY SIX (Pro)

① get ID of the last inserted record: $last_id = $conn->insert_id;

② insert multiple records into MySQL: excuted with mysqli_multi_query() function, example: $conn->multi_query($sql)

③ php Prepared Statements: very useful against SQL injections.

Basically word like this:

1° Prepared: An SQL statement template is created and sent to the database. Certain values are left unspecied, call parameters (label "?")

2° DB parses, compiles, and performs query optimization on the SQL statement template, and stores the result without executing it.

3° Excute: At a later time, the app blinds the values to the parameters, and the database executes the statement,

4° example: ...

```
$stmt = $conn->prepare("insert into mytable(attri) values(?)");
$stmt->bind_param("s", $attri)
$attri = "Yourname";
$stmt->execute().
...
```

transaction: begin-rollback-commit
set AUTOCOMMIT = 0/1

```
function test_input($data){
    $data = trim($data);
    $data = stripslashes($data);
    $data = htmlspecialchars($data);
    return $data;}
```

DAY SEVEN (Data operate):

① Select data: select cloum_name from table_name; (or wildcard *)

```
eg: ... $result = $conn->query($sql);
    if($result->num_rows > 0){
        while($row = $result->fetch_assoc()){
            echo ....;
        }
    }else{
        echo "0 results"
    }
```

② Delete data: delete from table_name
where some_c = some_v

③ php update data in mySQL: update table_name
set clo1 = v1, clo2 = v2, ...
where some_c = some_v

NOTICE
* if you omit the where clause, all recoals will be updated

④ php limit data selections from MySQL: (# of records to return)

MySQL provides a LIMIT clause that is used to specify the number

Assume we wish to select all records from 1-30 (inclusive). we can:

* $sql = "SELECT * FROM ta_na LIMIT 30"

Moreover: return 10 records, start on record 16 (offset 15)th

* $sql = "SELECT * FROM ta_na LIMIT 10 OFFSET 15"

⇔ * $sql = "SELECT * FROM ta_na LIMIT 15,10