

MY SQL(DATABASE SOFTWARE)

MY SQL

MySQL is a relational database management system (RDBMS) and which runs a server, providing multi­user access to a number of databases.

MySQL is currently the most popular open

source database server in existence.

For example:

SELECT FROM table;

Where

'SELECT',

'FROM' and

'table' are in English,

but

' ' is a symbol that means all.



USES:

Many web applications use MySQL as the database component of a LAMP software stack. Its popularity for use with web applications is closely tied to the popularity of PHP, which is often combined with MySQL.

Several high­traffic web sites includes: Flickr,

Facebook,

Wikipedia, Google, Nokia and

YouTube use MySQL for data storage and

logging of user data.

BASIC QUERIES COMMANDS

CREATE Command ­ is used to create a database/table.

SELECT Command ­ is used to retrieve data from the database.

DELETE Command ­ is used to delete data from t the database.



INSERT Command ­ is used to insert data into a database.

UPDATE Command ­ is used to update the data in a table.

DROP Command ­ is used to delete or drop the database/table.



# CREATE Command :

The Create command is used to create a table by specifying the tablename, fieldnames and constraints.

# Syntax:

$createSQL=("CREATE TABLE tblName");



# SELECT Command:

It is used to select the records from a table using its field names. To select all the fields in a table, ' ' is used in the command.

# Syntax:

$selectSQL=("SELECT field\_names

FROM tablename");



# DELETE Command:

The Delete command is used to delete the records from a table using conditions as shown below:

# Syntax:

$deleteSQL=("DELETE FROM tablename WHERE condition");

# INSERT Command:

It is used to insert records into a table.

The values are assigned to the field names as shown below:

# Syntax:

$insertSQL=("INSERT INTO tblname(fieldname1,fieldname2..) VALUES(value1,value2,...) ");

# UPDATE Command:

It is used to update the field values using conditions. This is done using 'SET' and the fieldnames to assign new values to them.

# Syntax:

$updateSQL=("UPDATE Tblname SET (fieldname1=value1,fieldname2=value2,...) WHERE fldstudid=IdNumber");



# DROP Command:

The Drop command is used to delete all the records in a table using the table name as shown below:

# Syntax:

$dropSQL=("DROP tblName");

ADVANCED QUERIES

Advanced functions and queries that can be useful when building more complex applications.

Some of the Advanced queries: INNER JOIN REPLACE

LTRIM,RTRIM DATE AND TIME

SIGN SQRT

CEILING FLOOR

# INNER JOIN:

It is used to retrieve the data from all tables listed based on condition listed after keyword ON.

# REPLACE:

The REPLACE function searches a character string and replaces characters found in search string with characters listed in replacement Str.



# LTRIM:

The LTRIM function removes any leading (left­ hand) spaces in a character string.

# RTRIM:

The RTRIM function works like LTRIM, but it removes trailing spaces.

# SIGN:

The SIGN function takes in a numeric expression and returns the following values based on the sign of the input number:

Return Value Meaning

−1 Input number is negative

1. Input number is zero
2. Input number is positive Null Input number is null

# SQRT :

The SQRT function takes in a single

numeric expression and returns its square root.

# CEILING (CEIL):

The CEILING function returns the smallest integer that is greater than or equal to the value of the numeric expression provided as an input parameter.

# FLOOR:

It returns the integer that is less than or equal to the value of the numeric expression provided as an input parameter.

PROCEDURES

MySQL supports "routines" and there are two kinds of routines:

stored procedures or functions whose return values we use in other SQL statements.

A stored procedure is a procedure (like a

subprogram in a regular computing language) that is stored (in the database).

A stored procedure has a name, a parameter list, and an SQL statement, which can contain many more SQL statements.

# CREATE PROCEDURE Syntax:

The general syntax of Creating a Stored Procedure is :

CREATE PROCEDURE proc\_name ([proc\_parameter[......]]) routine\_body



**proc\_name** : procedure name **proc\_parameter** : [ IN | OUT | INOUT ] param\_name type

**routine\_body** : Valid SQL procedure statement An **IN parameter** is used to pass value into procedure.

An **INOUT parameter** is initialized by the caller and it can be modified by the procedure.

FUNCTIONS

Functions can return string, integer, or real values and can accept arguments of same types.

We can define simple functions that operate on a single row at a time, or aggregate functions that operate on groups of rows.

Information is provided to functions that enables them to check the number, types, and names of the arguments passed to them.



# CREATE FUNCTION Syntax:

CREATE FUNCTION func\_name ([func\_parameter[,...]]) RETURNS type routine\_body

func\_name : Function name func\_parameter : param\_name type type : Any valid MySQL datatype

routine\_body : Valid SQL procedure statement

The RETURN clause is mandatory for FUNCTION. It used to indicate the return type of function.

List of all important MySQL functions.

MySQL Group By Clause ­ It means of grouping the result dataset by certain database table column(s).

MySQL IN Clause ­ used alongwith any MySQL query to specify a condition.

MySQL BETWEEN Clause ­ used to specify a condition.



MySQL UNION Keyword ­ Use a UNION operation to combine multiple result sets into one.

MySQL COUNT Function ­ used to count the number of rows in a database table.

MySQL MAX Function ­ allows us to select the highest (maximum) value for a certain column.



MySQL RAND Function ­ used to generate a random number using MySQL command.

MySQL CONCAT Function­ used to concatenate any string inside any MySQL command.

MySQL DATE and Time Function ­ Complete list of MySQL Date and Time related functions.



MySQL MIN Function ­ allows us to select the lowest (minimum) value for a certain column.

MySQL AVG Function ­ selects the average value for certain table column.

MySQL SUM Function ­ allows selecting the total for a numeric column.

MySQL SQRT Function ­generate a square root of a given number.



What's the Difference Between a Stored Procedure and a Stored Function?

It is same as the difference between a subroutine and a function:

a stored procedure runs some code

stored function runs some code and then returns a result.



Why Use Stored Procedures and Stored Functions?

The real advantage to using stored procedures and stored functions is that they provide functionality which is platform and application independant.



IMPORT AND EXPORT

It can be used to back up a database or to move database information from one server to another.

1. Export A MySQL Database:

It is a good idea to export the data often as a backup.

This example shows how to export a database.

# mysqldump ­u username ­p password database\_name > FILE.sql

Replace username, password and database\_name with your MySQL username, password and database name. File FILE.sql now holds a backup of your database, download it to your computer.

1. Import A MySQL Database:

Here, we import a database. Using this to restore data from a backup or to import from another MySQL server.

Start by uploading the FILE.sql file to the server where we will be running this command.

# mysql ­u username ­p password database\_name < FILE.sql