Ex.No. :06
Date :

Functions and Stored Procedures

Aim:

To Write a program using procedures and functions

MySQL Stored Function

A stored function is a special kind stored program that returns a single value. You use stored functions to encapsulate common formulas or business rules that are reusable among SQL statements or stored programs.

Different from a stored procedure, you can use a stored function in SQL statements wherever an expression is used. This helps improve the readability and maintainability of the procedural code.

syntax

The following illustrates the simplest syntax for creating a new stored function:

```
CREATE FUNCTION function_name(parameter 1,parameter 2,…)
RETURNS datatype
[NOT] DETERMINISTIC
Statements
```

Example

Function to concatenate two strings

```
USE `sample1`;
DROP function IF EXISTS `funcon`;
DELIMITER $$
USE `sample1`$$
CREATE DEFINER=`root`@`localhost` FUNCTION `funcon`(s CHAR(20)) RETURNS
char(50) CHARSET utf8mb4
DETERMINISTIC
BEGIN
RETURN CONCAT('Hello, ',s,'!!');
RETURN 1;
END$$
DELIMITER ;
```

Executing function

```
select funcon('world');
```

```
# funcon('world')
'Hello, world!!'
```

Stored procedure

MySQL stored procedure using CREATE PROCEDURE statement. In addition, we will show you how to call stored procedures from SQL statements.

syntax

```
DELIMITER //
CREATE PROCEDURE GetAllProducts()
BEGIN
SELECT * FROM products;
END //
DELIMITER ;
```

Example

```
create table cus(cid integer,cname char(20),address varchar(75),salary int,post varchar(20));

insert into cus values(1,'aa','77,anna salai,arcot',10000,'clerk');
insert into cus values(3,'bb','01,anna salai,chennai',15000,'staff');
insert into cus values(2,'cc','25,rajaji nagar,banglore',15000,'staff');
insert into cus values(4,'dd','02,mettu street,kochin',10000,'secretary');
insert into cus values(5,'ee','21,north street,mumbai',15000,'manager');

select* from cus;
```

Cid	cname	address	salary	post
1	aa	77,anna salai,arcot	10000	clerk
3	bb	01,anna salai,chennai	15000	staff
2	cc	25,rajaji nagar,banglore	15000	staff
4	dd	02,mettu street,kochin	10000	secretary
5	ee	21,north street,mumbai	15000	manager

Creating stored procedure

```
USE `sample1`;
DROP procedure IF EXISTS `new_pro`;
DELIMITER $$
USE `sample1`$$
CREATE DEFINER=`root`@`localhost` PROCEDURE `new_pro`()
BEGIN
UPDATE cus
SET salary = salary + 500;
END$$
DELIMITER ;
```

Executing stored procedure

```
call new_pro;
```

5 rows effected

```
SQL>select* from cus;
```

Cid	cname	address	salary	post
1	aa	77,anna salai,arcot	10500	clerk
3	bb	01,anna salai,chennai	15500	staff
2	cc	25,rajaji nagar,banglore	15500	staff
4	dd	02,mettu street,kochin	10500	secretary
5	ee	21,north street,mumbai	15500	manager

Result :

Thus the SQL functions and procedures are written and executed successfully.