SQL Lab 4

1. Stored function
2. 宣告 function

delimiter //

create function dept\_count (dept\_name varchar(20))

returns int

begin

declare d\_count int;

select count(\*) into d\_count

from instructor

where instructor.dept\_name = dept\_name;

return d\_count;

end ;

//

delimiter ;

請執行

select dept\_name, budget

from department

where dept\_count (dept\_name ) > 1

請說明此function 的作用.

1. 宣告 procedure

delimiter //

create procedure dept\_count\_proc (in dept\_name varchar(20))

begin

select count(\*)

from instructor

where instructor.dept\_name = dept\_name;

end ;

//

delimiter ;

call dept\_count\_proc('Physics');

請說明此procedure 的作用.

1. Trigger

CREATE TABLE account (acct\_num INT, amount DECIMAL(10,2));

CREATE TRIGGER ins\_sum BEFORE INSERT ON account

FOR EACH ROW SET @sum = @sum + NEW.amount;

SET @sum = 0;

INSERT INTO account VALUES(137,100),(141,50),(97,-30);

SELECT @sum AS 'Total inserted';

觀察上述insert指令執行後select 的結果, 請說明此trigger ins\_sum的作用

2)

CREATE TABLE test1(a1 INT);

CREATE TABLE test2(a2 INT);

CREATE TABLE test3(a3 INT NOT NULL AUTO\_INCREMENT PRIMARY KEY);

CREATE TABLE test4(

a4 INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

b4 INT DEFAULT 0

);

delimiter //

CREATE TRIGGER testref BEFORE INSERT ON test1

FOR EACH ROW

BEGIN

INSERT INTO test2 SET a2 = NEW.a1;

DELETE FROM test3 WHERE a3 = NEW.a1;

UPDATE test4 SET b4 = b4 + 1 WHERE a4 = NEW.a1;

END

//

delimiter ;

INSERT INTO test3 (a3) VALUES

(NULL), (NULL), (NULL), (NULL), (NULL),

(NULL), (NULL), (NULL), (NULL), (NULL);

INSERT INTO test4 (a4) VALUES

(0), (0), (0), (0), (0), (0), (0), (0), (0), (0);

先觀察記錄下test1, test2, test3, 及test4 中的值,

接下來執行

INSERT INTO test1 VALUES (1), (3), (1), (7), (1), (8), (4), (4);

請觀察test1, test2, test3, 及test4 中的值有何變化

請說明此trigger 的作用

1. 請寫一個trigger, 當新增一個學生修課資料(takes), 這個trigger 會自動更新這個學生對應的總學分數 tot\_cred
2. 請寫一個trigger, 當刪除一個學生修課資料(takes), 這個trigger 會自動更新這個學生對應的總學分數 tot\_cred
3. 請寫一個trigger, 當修改一個學生修課資料(takes), 這個trigger 會自動更新這個學生對應的總學分數 tot\_cred