Lab08

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4.1 Create trigger (2 points)

> Each insertion of professor information, the data are inserted into not only professor table but also into faculty_insurance table that credit_limit value is calculated from 300% of his/her salary and ins_plan is ”Group Insurance for Instructor”.

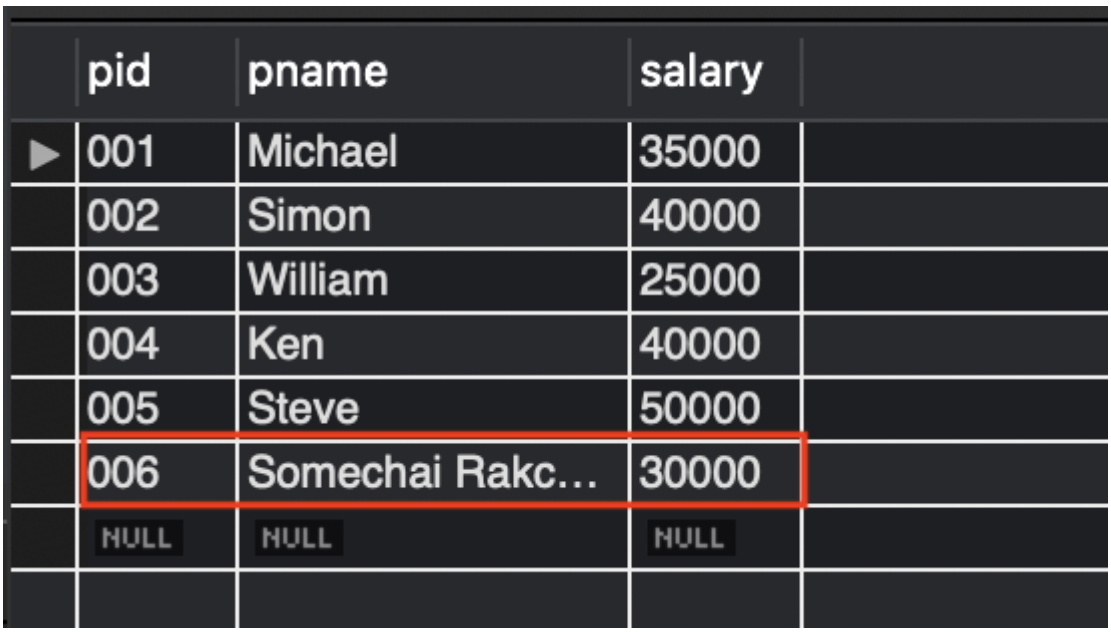
Creating trigger command

```
CREATE TRIGGER new_professor_added
AFTER INSERT ON Professor
FOR EACH ROW
    INSERT INTO faculty_insurance (ref_id,
        ins_plan, credit_limit, duedate, s_timestamp, status)
    VALUES (new.pid, "Group Insurance for Instructor”", new.salary * 3,
        DATE_ADD(SYSDATE(),INTERVAL 4 YEAR), SYSDATE(), 'A');
```

Testing command

```
INSERT INTO Professor (pid, pname, salary)
VALUES ('006','Somechai Rakchad','30000');

SELECT * FROM Professor;
SELECT * FROM faculty_insurance
```



pid	pname	salary
001	Michael	35000
002	Simon	40000
003	William	25000
004	Ken	40000
005	Steve	50000
006	Somechai Rakc…	30000
NULL	NULL	NULL

	ref_id	ins_plan	credit_li...	duedate	s_timestamp	status
▶	001	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
	002	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
	003	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
	004	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
	005	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
	006	Group Insurance for Instructor”	90000.00	2023-04-11	2019-04-11 08:45…	A
	55489317	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
	55748896	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	N
	56717931	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
	56756421	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
	57712358	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
	57723547	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
	597145…	Group Insurance for Student	100000.00	2023-04-11	2019-04-11 03:55…	A
	NULL	NULL	NULL	NULL	NULL	NULL

4.2 Create function (2 points)

> Convert the number declared in a numerical data type to other currencies using function named “fn_currency(input_number, exchange_rate, currency_name)” and return the result as string.

Creating function command

```
DELIMITER $$
CREATE FUNCTION fn_currency(input_number decimal,
    exchange_rate decimal, currency_name varchar(30))
RETURNS varchar(50) DETERMINISTIC
BEGIN
    DECLARE fullcurrency varchar(50);
    SET fullcurrency = CONCAT(input_number / exchange_rate, ' ', currency_name);
    RETURN fullcurrency;
END$$
DELIMITER ;
```

Testing command

```
SELECT fn_currency(70, 35.00, 'USD');
```

4.3 Create data stored procedure (6 points)

> Update salaryof all professors who earns salary less than 30,000 up to 10% and update credit limit of insurance up to 400 % of new salary and alsoinsert log into system_log table that stores the old salary, new salary,old credit limit and new credit limit. Finally, the data stored procedure has to print the name, old salary, new salary and credit limit of all professor information that are updated.

Create data stored procedure command

```
DELIMITER $$
CREATE PROCEDURE Proc_cal_professor_upvel()
DETERMINISTIC
BEGIN
    if(SELECT pid FROM Professor WHERE salary < 30000)>0 THEN
        CREATE TEMPORARY TABLE IF NOT EXISTS TMP_PROFESSOR(
            PID varchar(16),
            old_salary int(11) DEFAULT NULL,
            new_salary int(11) DEFAULT NULL,
            old_credit_limit decimal(10,2) DEFAULT NULL,
            new_credit_limit decimal(10,2) DEFAULT NULL
        );
        TRUNCATE TABLE TMP_PROFESSOR;

        INSERT INTO TMP_PROFESSOR (PID, old_salary, new_salary,
            old_credit_limit, new_credit_limit)
        SELECT pid, salary, salary * 1.1, credit_limit, salary * 1.1 * 4
        FROM Professor p
        INNER JOIN faculty_insurance ins ON p.pid = ins.ref_id
        WHERE salary < 30000;

        UPDATE Professor p
        INNER JOIN TMP_PROFESSOR tmp ON p.pid= tmp.PID
        SET salary = tmp.new_salary;

        UPDATE faculty_insurance ins
        INNER JOIN TMP_PROFESSOR tmp ON ins.ref_id= tmp.PID
        SET credit_limit = tmp.new_credit_limit;

        INTO system_log (user_log, remark, timestamp)
        SELECT
            PID,
            CONCAT("old_salary: ", old_salary, ", new_salary: ", new_salary,
                ", old_credit_limit: ", old_credit_limit,
                ", new_credit_limit: ", new_credit_limit) as remark,
            SYSDATE()
        FROM TMP_PROFESSOR;

        SELECT * from Professor WHERE pid in (SELECT PID FROM TMP_PROFESSOR);
    ELSE
        SELECT ' There is no professor those salary less than 30000';
    END IF;
END$$
DELIMITER ;
```

Testing command

```
CALL Proc_cal_professor_upvel();
SELECT * from Professor;
SELECT * from faculty_insurance;
SELECT * from system_log;
```

Professor Table

Change from `25000` to `27500`

pid	pname	salary
001	Michael	35000
002	Simon	40000
003	William	27500
004	Ken	40000
005	Steve	50000
006	Somechai Rakc…	30000
NULL	NULL	NULL

faculty_insurance Table

Change from `4000.00` to `110000.00`

ref_id	ins_plan	credit_limit	duedate	s_timestamp	status
001	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
002	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
003	initial value by system	110000.00	2023-04-11	2019-04-11 02:54…	A
004	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
005	initial value by system	40000.00	2023-04-11	2019-04-11 02:54…	A
006	Group Insurance for Instructor”	90000.00	2023-04-11	2019-04-11 08:45…	A
55489317	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
55748896	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	N
56717931	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
56756421	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
57712358	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
57723547	initial value by system	20000.00	2023-04-11	2019-04-11 02:55…	A
597145…	Group Insurance for Student	100000.00	2023-04-11	2019-04-11 03:55…	A
NULL	NULL	NULL	NULL	NULL	NULL

system_log Table

New system_log record added

	id	user_log	remark	timestamp
▶	1	55748896	get F	2019-04-11 08:29:14
	2	55748896	get F	2019-04-11 08:30:46
	4	003	old_salary: 25000, new_salary: 27500, old_credit_limit: 40000.00, new_credit_limit:110000.00	2019-04-11 10:20:58
	NULL	NULL	NULL	NULL